

APPENDIX F

Greenhouse Gas Emissions Study

STOCKER STREET CREATIVE PROJECT

Greenhouse Gas Emissions Impacts Study

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The City of Los Angeles Department of City Planning

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1.0 SUMMARY OF FINDINGS

Terry A. Hayes Associates Inc. (TAHA) completed a Greenhouse Gas (GHG) Emissions Impacts Study (Study) for the proposed Stocker Street Creative Project (Project). The Study analyzes environmental impacts related to GHG emissions that would occur during construction and future operation of the Project in accordance with the California Environmental Quality Act (CEQA) Statutes and Guidelines. The determination of potentially significant impacts is framed through addressing the Environmental Checklist criteria outlined in Appendix G of the CEQA Guidelines. **Table 1-1, Summary of Impact Statements**, presents the Appendix G criteria for GHG Emissions and discloses the conclusions of the Study for the Project. Potential impacts related to GHG emissions were determined to be less-than-significant and no mitigation measures are required.

TABLE 1-1: SUMMARY OF IMPACT STATEMENTS		
Impact Criteria	Project Level of Significance	Applicable Mitigation Measures
Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less-Than-Significant Impact	None
Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less-Than-Significant Impact	None
SOURCE: TAHA, 2024.		

2.0 INTRODUCTION

2.1. STUDY PURPOSE

This Study compares the Project's characteristics with applicable regulations, plans, and policies set forth by the State of California, the Southern California Association of Governments (SCAG) and the City to reduce GHG emissions to determine whether the Project is consistent with and/or would conflict with the provisions of these plans. To assist in analyzing the Project's potential to conflict with applicable regulations, plans and policies, this section also estimates the Project's GHG emissions generated by Project construction and operations, taking into account mandatory and voluntary energy and resource conservation measures that have been incorporated into the Project to reduce GHG emissions. The City is the CEQA Lead Agency.

2.2. PROJECT DESCRIPTION

The Project consists of the demolition of five substantially unoccupied office buildings, totaling approximately 123,354 square feet and the construction of a campus for studio and sound stage production, totaling approximately 256,758 square feet exclusive of the parking garage (114,405 square feet), on an approximately five-acre site that slopes about approximately 35 feet northwest to northeast.

- Building A would be a three-story office building that would include retail space and a food court on the first floor.
- Building B would be a seven-story building studio production support facilities on the first two floors and office space above. The roof (partial 7th floor) would include an enclosed restaurant with an adjacent open/garden area that would provide outdoor seating for the restaurant and be used for special events.
- Building C would be a one-story security office that would include a restroom, breakroom and surveillance monitors and computer equipment.
- Building D would be a one-story building with studio sound stages and back-of-house facilities.
- Building E would be a one-story building with a basement and mezzanine with studio sound stages, a mill shop for set production.
- Building F would be a five-story open parking garage with 344 parking stalls, (including eight Americans with Disabilities Act (ADA) stalls and 79 electric vehicles charging stalls) a retail/community room at street level, and back-of-house facilities. Five additional car parking spaces, including one ADA stall would be provided within the Upper Service Plaza Level. Parking spaces for the restaurant would only be available after 6:00 pm, the rest of the time it would be used by tenants of Buildings A and B.
- There would also be an open space area between Buildings A, B, and F designed for community gatherings and special events.

Vehicular access for visitors and tenants would be provided from Santa Rosalia Drive to the existing alley along the northern property line and then to the parking structure/garage (Building F). All vehicular access would be controlled through a ticketed gateway prior to entering the parking garage. Access to the existing alley from Don Felipe Drive would be limited to emergency vehicles and occasional VIP access.

Delivery trucks and studio trailers would access the Project site from a right turn in only via a truck-only entry driveway off Stocker Street. The truck entry driveway would be wide enough for two semi-

trucks to pull off Stocker Street, if necessary. All trucks entering from Stocker Street would exit on Santa Rosalia Drive via the existing fire road along the northern property line. No traffic would exit Stocker Street; only emergency vehicles and occasional VIP vehicles would exit on Don Felipe Drive.

The Project would operate a movie production studio containing a mix of uses, including restaurant and retail uses open to the public. The proposed studio would have operations 24 hours per day, seven days per week, but generally occur nine months per year. Staff members would manage studio and stage operations daily from 9:00 am to 6:00 pm.

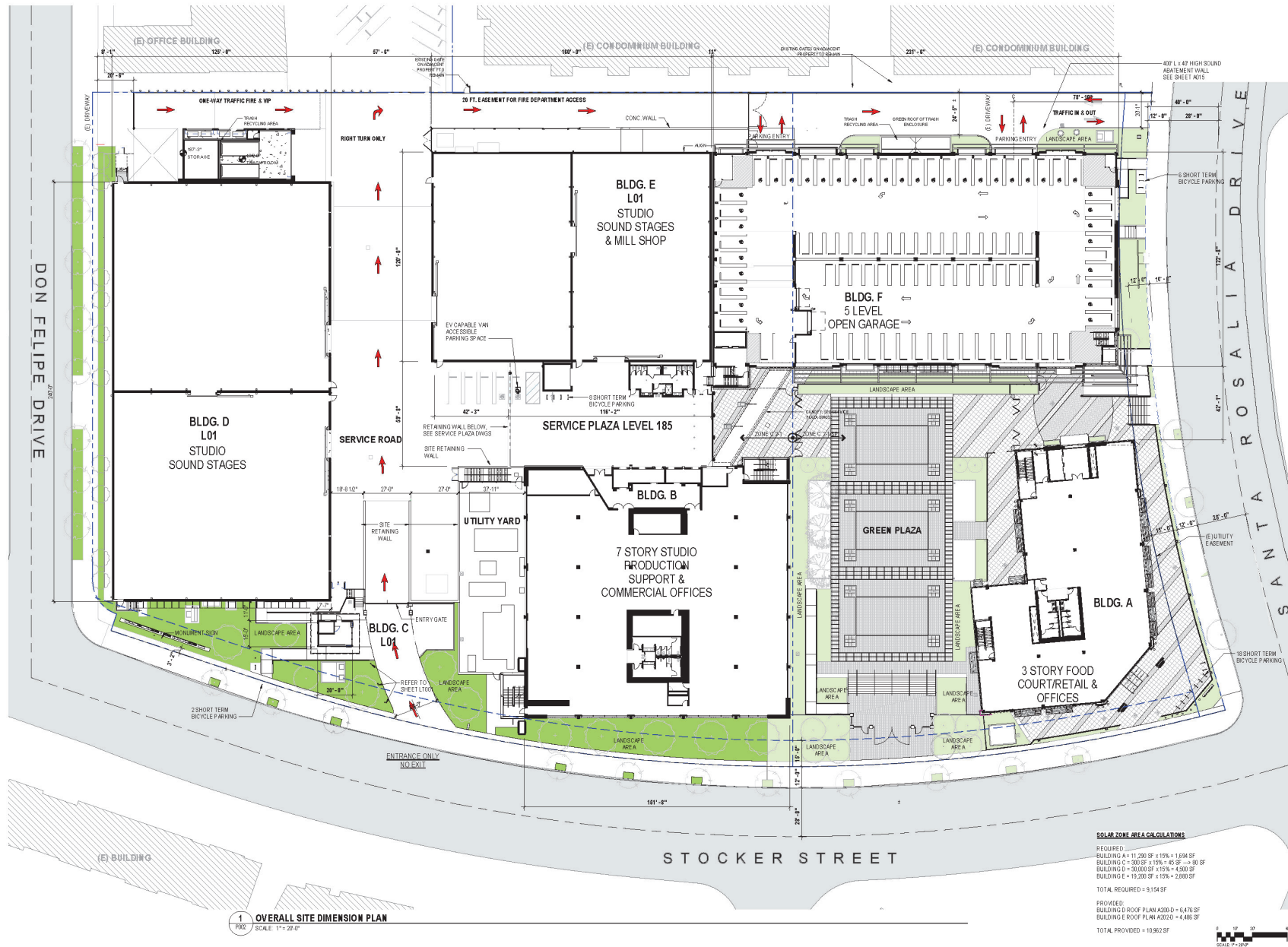
Public visitors to the campus would have (controlled) access to Building A and Building F and the Green Plaza during daytime hours. The rooftop restaurant would be open to on-site employees during daytime hours and open to the public after 6:00 pm. Access to Building D and Building E and the Upper Service Plaza Level would be restricted to on-site office tenants, movie production talent and staff, and delivery vehicles during all hours of operation. The food court in Building A would operate 12 hours per day from 8:00 am to 8:00 pm. The community room located in Building F would be open for public use between 8:00 am and 8:00 pm.

Special events for both building tenants and the public would occasionally occur within the Green Plaza. Additionally, the restaurant and green space on the rooftop of Building B could be utilized for private special events. Sound amplifying equipment during special events would be prohibited between the hours of 10:00 pm and 7:00 am.

Figure 2-1, *Regional and Site Location Map*, shows the regional Project location within Los Angeles County and surrounding streets, and **Figure 2-2, *Site Plan***, depicts the proposed site plan.



Source: TAHA, 2024.



Source: JGM Inc, 2025.

3.0 GREENHOUSE GAS EMISSIONS

This section describes the characteristics of GHGs, and the regulatory framework of applicable rules, regulations, plans, and guidance related to GHG emissions; discusses the existing GHG emissions landscape and quantifies and evaluates GHG emissions that would be generated by construction and operation of the Project.

3.1. ENVIRONMENTAL SETTING

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and severe weather events. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

Earth's natural warming process is known as the "greenhouse effect." It is called the greenhouse effect because Earth and the atmosphere surrounding it are similar to a greenhouse with glass panes in that the glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiative heat from escaping, thus warming Earth's atmosphere. Some levels of GHGs keep the average surface temperature of Earth close to a hospitable 60 degrees Fahrenheit (°F). However, as GHG from human activities increase, they build up in the atmosphere and warm the climate, leading to many other changes around the world - in the atmosphere, on land, and in the oceans, with associated adverse climatic and ecological consequences.¹

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity, and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.²

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 43 percent between 1990 and 2015. In addition, in the Global Carbon Budget 2023 report, published in December 2023, atmospheric carbon dioxide (CO₂) concentrations in 2022 were found to be 51 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.³ Global increases in CO₂ concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. Regarding emissions of non-CO₂ GHGs, these have also increased significantly since 1990.⁴ In particular, studies have concluded that it is very likely that the observed increase in methane (CH₄) concentration is predominantly due to agriculture and fossil fuel use.⁵

¹ United States Environmental Protection Agency, *Climate Change Indicators: Greenhouse Gases*, <https://www.epa.gov/climate-indicators/greenhouse-gases>, accessed April 22, 2024.

² Pew Center on Global Climate Change, *Climate Change 101: Understanding and Responding to Global Climate Change*, October 12, 2006.

³ P. Friedlingstein et al.: *Global Carbon Budget 2023*, December 5, 2023.

⁴ United States Environmental Protection Agency, *Global Greenhouse Gas Emissions Data*, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed April 22, 2024.

⁵ United States Environmental Protection Agency, *Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gas*, <https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases>, Accessed April 22, 2024.

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the “Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol,” avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol’s Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.⁶

In December 2015, the U.S. entered into the Paris Agreement, which has a goal of keeping a global temperature rise this century below 2 degrees Celsius (°C) above pre-industrial levels and limit the temperature increase further to 1.5° C. This agreement requires that all parties report regularly on emissions and implementation efforts to achieve these goals.

With regard to the adverse effects of global warming, as reported by SCAG:

Global warming poses a serious threat to the economic well-being, public health and natural environment in Southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO₂ emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO₂ emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state’s population and economic activities, is also a major contributor to the global warming problem.⁷

⁶ United Nations Framework Convention on Climate Change, *Press Release—Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change*, August 31, 2007.

⁷ Southern California Association of Governments, *The State of the Region—Measuring Regional Progress*, December 2006, p. 121.

3.1.1. GHG Fundamentals

GHGs are those compounds in Earth's atmosphere that play a critical role in determining temperature near Earth's surface. GHGs include CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).⁸ More specifically, these gases allow high-frequency shortwave solar radiation to enter Earth's atmosphere but retain some of the low frequency infrared energy, which is radiated back from Earth towards space, resulting in a warming of the atmosphere. Compounds that are regulated as GHGs are discussed in **TABLE 3-1, Description of Identified GHGs**, below.^{9,10}

TABLE 3-1: DESCRIPTION OF IDENTIFIED GHGS^{1a/}	
Greenhouse Gas	General Description
Carbon Dioxide (CO ₂)	An odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human-caused) sources of CO ₂ are burning coal, oil, natural gas, and wood.
Methane (CH ₄)	A flammable gas and the main component of natural gas. When one molecule of CH ₄ is burned in the presence of oxygen, one molecule of CO ₂ and two molecules of water are released. A natural source of CH ₄ is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH ₄ , which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.
Nitrous Oxide (N ₂ O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N ₂ O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH ₄ or ethane (C ₂ H ₆) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.

⁸ As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.

⁹ Intergovernmental Panel on Climate Change, *Second Assessment Report, Working Group I: The Science of Climate Change*, 1995.

¹⁰ Intergovernmental Panel on Climate Change, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis, Table 2.14*, 2007.

TABLE 3-1: DESCRIPTION OF IDENTIFIED GHGS ^{/a/}	
Greenhouse Gas	General Description
Sulfur Hexafluoride (SF ₆)	An inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF ₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF ₃)	An inorganic, non-toxic, odorless, non-flammable gas. NF ₃ is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.
/a/ GHGs identified in this table are identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report. SOURCES: Association of Environmental Professionals (AEP), <i>Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final</i>, June 29, 2007; USEPA, <i>Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride</i>; January 2009.	

Not all GHGs possess the same ability to induce climate change. CO₂ is the most abundant GHG in Earth's atmosphere. Other GHGs are less abundant but have higher global warming potential (GWP) than CO₂. Thus, emissions of other GHGs are commonly quantified in the units of equivalent mass of carbon dioxide (CO₂e). GWP is based on several factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO₂, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years otherwise referred to as atmospheric lifetime) relative to that of CO₂.

The larger the GWP, the more that a given gas warms Earth compared to CO₂ over that time.¹¹ These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values in its Fourth Assessment Report (AR4). The GWPs in the IPCC AR4 are used by the California Air Resources Board (CARB) for reporting Statewide GHG emissions inventories, consistent with international reporting standards. By applying the GWP ratios, Project-related CO₂e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO₂ over a 100-year period is used as a baseline.

The IPCC has issued an updated Fifth Assessment Report (AR5), which has revised down the majority of the GWP for key regulated pollutants. As CARB still uses AR4 values and the modeling software CalEEMod is built on these assumptions, AR4 GWP values are used for the Project. Generally, the changes from AR4 to AR5 are reductions in warming potential for the GHG most associated with construction and operation of typical development projects. The GWP from AR4 and AR5 and atmospheric lifetimes for key regulated GHGs are provided in **Table 3-2, Atmospheric Lifetimes and Global Warming Potentials**.

¹¹ GWPs and associated CO₂e values were developed by the Intergovernmental Panel on Climate Change (IPCC) and published in its Second Assessment Report (SAR) in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). CARB has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.

TABLE 3-2: ATMOSPHERIC LIFETIMES AND GLOBAL WARMING POTENTIALS		
Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO ₂)	50–200	1
Methane (CH ₄)	12 (+/-3)	25
Nitrous Oxide (N ₂ O)	114	298
HFC-23: Fluoroform (CHF ₃)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH ₂ FCF ₃)	14	1,430
HFC-152a: 1,1-Difluoroethane (C ₂ H ₄ F ₂)	1.4	124
PFC-14: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC-116: Hexafluoroethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800
Nitrogen Trifluoride (NF ₃)	740	17,200
SOURCE: IPCC, Climate Change 2007: <i>Working Group I: The Physical Science Basis, Direct Global Warming Potentials.</i> www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html , accessed April 21, 2021.		

3.1.2. Projected Impacts of Global Warming in California

In 2009, California adopted a Statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency (CNRA) will be updating the CAS and is responsible for preparing reports to the Governor on the status of the CAS. The CNRA has produced climate change assessments, which detail impacts of global warming in California.¹² These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion.
- The Sierra snowpack would decline between 70 and 90 percent, threatening California's water supply.
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth.
- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes, resulting in public health impacts.
- Habitat destruction and loss of ecosystems due to climate change affecting plant and wildlife habitats.
- Global warming can cause drought, warmer temperatures, and saltwater contamination, resulting in impacts to California's agricultural industry.

¹² State of California, Department of Justice, Office of the Attorney General, *Climate Change Impacts in California*, <https://oag.ca.gov/environment/impact>, Accessed April 22, 2024.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO₂; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought, secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.¹³

3.2. REGULATORY FRAMEWORK

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding GHG Emissions at the federal, state, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Federal Clean Air Act (CAA)
- Corporate Average Fuel Economy (CAFE) Standards
- Energy Independence and Security Act
- California Air Resources Board (CARB)
- California Greenhouse Gas Reduction Targets
- California Global Warming Solutions Act (AB 32)
- Climate Change Scoping Plan
- Cap-and-Trade Program
- Emissions Performance Standards
- Renewables Portfolio Standard Program
- California Climate Crisis Act (AB 1279)
- Pavley Standards
- California Low Carbon Fuel Standard
- Advanced Clean Cars Regulations
- Sustainable Communities and Climate Protection Act (SB 375)
- Senate Bill 743
- Executive Order N-79-20
- Executive Order B-55-18
- California Appliance Efficiency Regulations
- Title 24, Building Standards Code and CALGreen Code
- State CEQA Guidelines
- South Coast Air Quality Management District (SCAQMD)

¹³ Paul R. Epstein, et al., *Urban Indicators of Climate Change, Report from the Center for Health and the Global Environment*, Harvard Medical School and the Boston Public Health Commission, August 2003, unpaginated.

- Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy
- City of Los Angeles
 - Green New Deal
 - City of Los Angeles Green Building Code
 - City of Los Angeles Solid Waste Programs and Ordinances
 - City of Los Angeles General Plan
 - Traffic Study Policies and Procedures

3.2.1. Federal

3.2.1.1. Federal Clean Air Act

The USEPA is responsible for implementing federal policy to address GHGs. The United States Supreme Court (Supreme Court) ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO₂ and other GHGs are pollutants under the federal Clean Air Act (CAA), which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. In December 2009, the USEPA issued an endangerment finding for GHGs under the CAA, setting the stage for future regulation.

The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, CH₄ and other non-CO₂ gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the ENERGY STAR labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

3.2.1.2. Corporate Average Fuel Economy Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling, President George W. Bush issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. The National Highway Traffic Safety Administration (NHTSA) subsequently issued multiple final rules regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011 and later for model years 2012-2016, and 2017-2021. In March 2020, the USDOT and the USEPA issued the final Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which amends existing CAFE standards and tailpipe CO₂ emissions standards for passenger cars and light trucks and establishes new standards covering model years 2021 through 2026.¹⁴ These standards set a combined fleet wide average of 36.9 to 37 miles per gallon (mpg) for the model years affected.¹⁵ In February 2022, the USEPA issued the Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards.¹⁶ This final rule revises current GHG standards for vehicles

¹⁴ United States Environmental Protection Agency, *Final Rule for Model Year 2021 - 2026 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards*, published April 30, 2020.

¹⁵ National Highway Traffic Safety Administration (NHTSA), *Corporate Average Fuel Economy Standards*, <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>, accessed on April 22, 2024.

¹⁶ United States Environmental Protection Agency, *Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards: Regulatory Update Vol. 86, No. 248 Federal Register page 74434*, December 30, 2021.

in model year 2023 through model year 2026 and establishes the most stringent GHG standards ever set for the light-duty vehicle sector that are expected to result in average fuel economy label values of 40 miles per gallon (mpg), while the standards they replace (i.e., the SAFE rule standards) would achieve only 32 mpg in model year 2026 vehicles.¹⁷

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines. Building on the first phase of standards, in August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons.¹⁸

3.2.1.3. Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”¹⁹

¹⁷ United States Environmental Protection Agency, *Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards: Regulatory Update Vol. 86, No. 248 Federal Register page 74434*, December 30, 2021.

¹⁸ United States Environmental Protection Agency, *EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond*, August 2016.

¹⁹ A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

3.2.2. State

3.2.2.1. California Air Resources Board

The CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts. The SIP is required for the State to take over implementation of the federal CAA. CARB adopted the 2022 SIP in September 2022.²⁰ CARB also has primary responsibility for adopting regulations to meet the State's goal of reducing GHG emissions. The State has met its goals to reduce GHG emissions to 1990 levels by 2020. The State has met its goals to reduce GHG emissions to 1990 levels by 2020.²¹ Subsequent State goals include reducing GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

3.2.2.2. California Greenhouse Gas Reduction Targets

Executive Order S-3-05. Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

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

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. The CAT provides periodic reports to the Governor and Legislature on the state of GHG reductions in California, as well as strategies for mitigating and adapting to climate change.

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population.

Executive Order B-30-15. On April 29, 2015, Governor Jerry Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim Statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.

²⁰ California Air Resources Board State implementation Program, *2022 State Implementation Program*, <https://ww2.arb.ca.gov/resources/documents/2022-state-strategy-state-implementation-plan-2022-state-sip-strategy>. Accessed April 2024.

²¹ California Air Resources Board, *Final 2022 Climate Change Scoping Plan (Chapter 1)*, adopted December 2022.

- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO₂e (MMTCO₂e).

Executive Order B-55-18. Executive Order B-55-18, issued by Governor Brown in September 2018, establishes a new Statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, CARB would work with relevant State agencies to develop a framework for implementation and accounting that tracks progress towards this goal, as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

In October 2020, CARB released a study, which evaluated three scenarios that achieve carbon neutrality in California by 2045. The study was used by CARB in development of the 2022 Scoping Plan.²² More ambitious carbon reduction scenarios that achieve carbon neutrality prior to 2045 may be considered as part of future analyses by the State.

The scenarios analyzed to achieve carbon neutrality include a High Carbon Dioxide Removal (CDR) scenario, Zero Carbon Energy scenario, and a Balanced scenario. The High CDR scenario achieves GHG reductions by relying on CO₂ removal strategies. The Zero Carbon Energy scenario is based on the assumption of zero-fossil fuel emissions by 2045. The Balanced scenario represents a middle point between the High CDR scenario and Zero Carbon Energy scenario. The scenarios would achieve at least an 80-percent reduction in GHGs by 2045, relative to 1990 levels. Remaining CO₂ would be reduced to zero by applying CO₂ removal strategies, including sinks from natural and working lands and negative emissions technologies, such as direct air capture.^{23,24}

Under each of these scenarios, CARB proposed reduction strategies for various sectors that contribute GHG emissions throughout the State. Although specific details are not yet available for the GHG reduction measures discussed above, implementation of these measures would require regulations to be enforced by the State.

3.2.2.3. California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020, which the State has achieved. HSC Division 25.5 defines regulated GHGs as CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ and represents the first enforceable Statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing State actions that would achieve GHG emissions reductions.

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce Statewide GHG emissions from

²² Energy+Environmental Economics (E3), *Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board*, October 2020.

²³ Sinks are defined as natural or artificial reservoirs that accumulate and store a carbon-containing chemical compound for an indefinite period.

²⁴ Energy+Environmental Economics (E3), *Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board*, October 2020, p. 22.

stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.²⁵

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5, establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure that the benefits of State climate policies reach disadvantaged communities. The new goals outlined in SB 32 update the scoping plan requirement of AB 32 and involve increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

AB 197, signed September 8, 2016, is a bill associated with SB 32 that prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its website the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two members of the Legislature to the CARB board as ex officio, non-voting members and creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the State's programs, policies, and investments related to climate change.

3.2.2.4. Climate Change Scoping Plan

The Scoping Plan is a GHG reduction roadmap developed and updated by CARB at least once every five years, as required by AB 32. It lays out the transformations needed across various sectors to reduce GHG emissions and reach the State's climate targets. CARB adopted the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) in December 2022, as the third update to the initial plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 target of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual activities.²⁶ The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan Update (adopted in 2014) assessed progress toward achieving the 2020 target and made the case for addressing short-lived climate pollutants (SLCPs).²⁷ The 2017 Scoping Plan, shifted the focus to the newer SB 32 goal of a 40 percent reduction below 1990 levels by 2030 by laying out a detailed cost-effective and technologically feasible path to this target and also assessed progress toward achieving the AB 32 goal of returning to 1990 GHG levels by 2020.²⁸ The 2020 goal was ultimately reached in 2016, four years ahead of the schedule called for under AB 32.

The 2022 Scoping Plan is the most comprehensive and far-reaching Scoping Plan developed to date. It identifies a technologically feasible, cost-effective, and equity-focused path to achieve new targets for carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85

²⁵ California Air Resources Board's list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are (1) a low-carbon fuel standard, which reduces carbon intensity in fuels Statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.

²⁶ California Air Resources Board, *Climate Change Scoping Plan*, 2008

²⁷ California Air Resources Board, *First Update to the Climate Change Scoping Plan*, 2014.

²⁸ California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, 2017.

percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan.²⁹ The 2030 target is an interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The relatively longer path assessed in the 2022 Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts to reduce GHGs and air pollution, while identifying new clean technologies and energy. Given the focus on carbon neutrality, the 2022 Scoping Plan also includes discussion for the first time of the natural and working lands sectors as sources for both sequestration and carbon storage and as sources of emissions as a result of wildfires.

The estimated statewide GHG emissions reductions from the 2022 Scoping Plan are provided in **Table 3-3, *Estimated Statewide Greenhouse Gas Emissions Reductions in the 2022 Scoping Plan***. The 2022 Scoping Plan reflects existing and recent direction in the Governor’s Executive Orders and State Statutes, which identify policies, strategies, and regulations in support of and implementation of the Scoping Plan. Among these include Executive Order B-55-18 and AB 1279 (The California Climate Crisis Act), which identify the 2045 carbon neutrality and GHG reduction targets required for the Scoping Plan.

TABLE 3-3: ESTIMATED STATEWIDE GREENHOUSE GAS EMISSIONS REDUCTIONS IN THE 2022 SCOPING PLAN	
Emissions Scenario	GHG Emissions (MMTCO₂e)
2019 BASELINE	
2019 State GHG Emissions	404
2030 FORECAST YEAR	
2030 BAU Forecast	312
2030 GHG Emissions without Carbon Removal and Capture	233
2030 GHG Emissions with Carbon Removal and Capture	226
2030 Emissions Target Set by AB 32 (i.e., 1990 level by 2030)	260
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2030	52 (16.7% ^{/a/})
2045 FORECAST YEAR	
2045 BAU Forecast	266
2045 GHG Emissions without Carbon Removal and Capture	72
2045 GHG Emissions with Carbon Removal and Capture	(3)
Notes: MMTCO ₂ e = million metric tons of carbon dioxide equivalents; parenthetical numbers represent negative values. ^{/a/} 312 – 260 = 52; 52 ÷ 312 = 16.7%	
SOURCE: CARB, <i>Final 2022 Climate Change Scoping Plan for Achieving Carbon Neutrality</i> , adopted December 2022.	

Table 3-4, *Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan*, provides a summary of major climate legislation and executive orders issued since the adoption of the 2017 Scoping Plan.

²⁹ California Air Resources Board, *California’s 2017 Climate Change Scoping Plan*, 2017.

TABLE 3-4: MAJOR CLIMATE LEGISLATION AND EXECUTIVE ORDERS ENACTED SINCE THE 2017 SCOPING PLAN	
Bill/Executive Order	Summary
Assembly Bill 1279 (AB 1279) (Muratsuchi, Chapter 337, Statutes of 2022) <i>The California Climate Crisis Act</i>	AB 1279 establishes the policy of the state to achieve carbon neutrality as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045 statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. The bill requires CARB to ensure that the Scoping Plan updates identify and recommend measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable CO₂ removal solutions and carbon capture, utilization, and storage (CCUS) technologies. This bill is reflected directly in the 2022 Scoping Plan.
Senate Bill 905 (SB 905) (Caballero, Chapter 359, Statutes of 2022) <i>Carbon Capture, Removal, Utilization, and Storage Program</i>	SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate CCUS and carbon dioxide removal (CDR) projects and technology. The bill requires CARB, on or before January 1, 2025, to adopt regulations creating a unified state permitting application for approval of CCUS and CDR projects. The bill also requires the Secretary of the CNRA to publish a framework for governing agreements for two or more tracts of land overlying the same geologic storage reservoir for the purposes of a carbon sequestration project. The 2022 Scoping Plan modeling reflects both CCUS and CDR contributions to achieve carbon neutrality.
Senate Bill 846 (SB 846) (Dodd, Chapter 239, Statutes of 2022) <i>Diablo Canyon Powerplant: Extension of Operations</i>	SB 846 extends the Diablo Canyon Power Plant's sunset date by up to five additional years for each of its two units and seeks to make the nuclear power plant eligible for federal loans. The bill requires that the California Public Utilities Commission (CPUC) not include and disallow a load-serving entity from including in their adopted resource plan, the energy, capacity, or any attribute from the Diablo Canyon power plant. The 2022 Scoping Plan explains the emissions impact of this legislation.
Senate Bill 1020 (SB 1020) (Laird, Chapter 361, Statutes of 2022) <i>Clean Energy, Jobs, and Affordability Act of 2022</i>	SB 1020 adds interim renewable energy and zero carbon energy retail sales of electricity targets to California end-use customers set at 90 percent in 2035 and 95 percent in 2040. It accelerates the timeline required to have 100 percent renewable energy and zero carbon energy procured to serve State agencies from the original target year of 2045 to 2035. This bill requires each State agency to individually achieve the 100 percent goal by 2035 with specified requirements. This bill requires the CPUC, California Energy Commission (CEC), and CARB, on or before December 1, 2023, and annually thereafter, to issue a joint reliability progress report that reviews system and local reliability. The bill also modifies the requirement for CARB to hold a portion of its Scoping Plan workshops in regions of the State with the most significant exposure to air pollutants by further specifying that this includes communities with minority populations or low-income communities in areas designated as being in extreme federal non-attainment. The 2022 Scoping Plan describes the implications of this legislation on emissions.

TABLE 3-4: MAJOR CLIMATE LEGISLATION AND EXECUTIVE ORDERS ENACTED SINCE THE 2017 SCOPING PLAN	
Bill/Executive Order	Summary
Senate Bill 1137 (SB 1137) (Gonzales, Chapter 365, Statutes of 2022) <i>Oil & Gas Operations: Location Restrictions: Notice of Intention: Health protection zone: Sensitive receptors</i>	SB 1137 prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with the California Geologic Energy Management Division (CalGEM) on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data.
Senate Bill 1075 (SB 1075) (Skinner, Chapter 363, Statutes of 2022) <i>Hydrogen: Green Hydrogen: Emissions of Greenhouse Gases</i>	SB 1075 requires CARB, by June 1, 2024, to prepare an evaluation that includes policy recommendations regarding the use of hydrogen, and specifically the use of green hydrogen, in California; a description of strategies supporting hydrogen infrastructure, including identifying policies that promote the reduction of GHGs and short-lived climate pollutants; a description of other forms of hydrogen to achieve emission reductions; an analysis of curtailed electricity; an estimate of GHG and emission reductions that could be achieved through deployment of green hydrogen through a variety of scenarios; an analysis of the potential for opportunities to integrate hydrogen production and applications with drinking water supply treatment needs; policy recommendations for regulatory and permitting processes associated with transmitting and distributing hydrogen from production sites to end uses; an analysis of the life-cycle GHG emissions from various forms of hydrogen production; and an analysis of air pollution and other environmental impacts from hydrogen distribution and end uses. This bill would inform the production of hydrogen at the scale called for in the 2022 Scoping Plan.
Assembly Bill 1757 (AB 1757) (Garcia, Chapter 341, Statutes of 2022) <i>California Global Warming Solutions Act of 2006: Climate Goal: Natural and Working Lands</i>	AB 1757 requires the California Natural Resources Agency (CNRA), in collaboration with CARB, other state agencies, and an expert advisory committee, to determine a range of targets for natural carbon sequestration—and for nature-based climate solutions—that reduce GHG emissions in 2030, 2038, and 2045 by January 1, 2024. These targets must support state goals to achieve carbon neutrality and foster climate adaptation and resilience. This bill also requires CARB to develop standard methods for state agencies to consistently track GHG emissions and reductions, carbon sequestration, and additional benefits from natural and working lands over time. These methods will account for GHG emissions reductions of CO₂, methane, and nitrous oxide related to natural and working lands and the potential impacts of climate change on the ability to reduce GHG emissions and sequester carbon from natural and working lands, where feasible. This 2022 Scoping Plan describes the next steps and implications of this legislation for the natural and working lands sector.

TABLE 3-4: MAJOR CLIMATE LEGISLATION AND EXECUTIVE ORDERS ENACTED SINCE THE 2017 SCOPING PLAN	
Bill/Executive Order	Summary
Senate Bill 1206 (SB 1206) (Skinner, Chapter 884, Statutes of 2022) <i>Hydrofluorocarbon gases: sale or distribution</i>	SB 1206 mandates a stepped sales prohibition on newly produced high- GWP HFCs to transition California’s economy toward recycled and reclaimed HFCs for servicing existing HFC-based equipment. Additionally, SB 1206 also requires CARB to develop regulations to increase the adoption of very low-GWP technologies (i.e., GWP<10 and no GWP) in sectors that currently rely on higher-GWP HFCs.
Senate Bill 27 (SB 27) (Skinner, Chapter 237, Statutes of 2021) <i>Carbon Sequestration: State Goals: Natural and Working Lands: Registry of Projects</i>	SB 27 requires CNRA, in coordination with other state agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. This bill also requires CARB to establish specified CO2 removal targets for 2030 and beyond as part of its Scoping Plan. Under SB 27, CNRA is tasked to establish and maintain a registry to identify projects in the State that drive climate action on natural and working lands and are seeking funding. CNRA also must track carbon removal and GHG emission reduction benefits derived from projects funded through the registry. This bill is reflected directly in the 2022 Scoping Plan as CO2 removal targets for 2030 and 2045 in support of carbon neutrality.
Senate Bill 596 (SB 596) (Becker, Chapter 246, Statutes of 2021) <i>Greenhouse Gases: Cement Sector: Net- zero Emissions Strategy</i>	SB 596 requires CARB, by July 1, 2023, to develop a comprehensive strategy for the State’s cement sector to achieve net-zero-emissions of GHGs associated with cement used within the State as soon as possible, but no later than December 31, 2045. The bill establishes an interim target of 40 percent below the 2019 average GHG intensity of cement by December 31, 2035. Under SB 596, CARB must: • Define a metric for GHG intensity and establish a baseline from which to measure GHG intensity reductions. • Evaluate the feasibility of the 2035 interim target (40 percent reduction in GHG intensity) by July 1, 2028. • Coordinate and consult with other state agencies. • Prioritize actions that leverage state and federal incentives. • Evaluate measures to support market demand and financial incentives to encourage the production and use of cement with low GHG intensity. The 2022 Scoping Plan modeling is designed to achieve these outcomes.
Executive Order N-82-20	Governor Newsom signed Executive Order N-82-20 in October 2020 to combat the climate and biodiversity crises by setting a statewide goal to conserve at least 30 percent of California’s land and coastal waters by 2030. The Executive Order also instructed CNRA, in consultation with other state agencies, to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the State’s carbon neutrality goal and build climate resilience. In addition to setting a statewide conservation goal, the Executive Order directed CARB to update the target for natural and working lands in support of carbon neutrality as part of this Scoping Plan, and to take into consideration the NWL Climate Smart Strategy. Executive Order N-82-20 also calls on the CNRA, in consultation with other state agencies, to establish the California Biodiversity Collaborative (Collaborative). The Collaborative shall be made up of governmental partners, California Native American tribes, experts,

TABLE 3-4: MAJOR CLIMATE LEGISLATION AND EXECUTIVE ORDERS ENACTED SINCE THE 2017 SCOPING PLAN	
Bill/Executive Order	Summary
	business and community leaders, and other stakeholders from across the state. State agencies will consult the Collaborative on efforts to: • Establish a baseline assessment of California’s biodiversity that builds upon existing data and can be updated over time. • Analyze and project the impact of climate change and other stressors in California’s biodiversity. • Inventory current biodiversity efforts across all sectors and highlight opportunities for additional action to preserve and enhance biodiversity. • CNRA also is tasked with advancing efforts to conserve biodiversity through various actions, such as streamlining the State’s process to approve and facilitate projects related to environmental restoration and land management. The California Department of Food and Agriculture (CDFA) is directed to advance efforts to conserve biodiversity through measures, such as reinvigorating populations of pollinator insects, which restore biodiversity and improve agricultural production. The Natural and Working Lands Climate Smart Strategy informs the 2022 Scoping Plan.
Executive Order N-79-20	Governor Newsom signed Executive Order N-79-20 in September 2020 to establish targets for the transportation sector to support the State in its goal to achieve carbon neutrality by 2045. The targets established in this Executive Order are: • 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. • 100 percent of medium- and heavy-duty vehicles will be zero emission by 2045 for all operations where feasible, and by 2035 for drayage trucks. • 100 percent of off-road vehicles and equipment will be zero-emission by 2035 where feasible. The Executive Order also tasked CARB to develop and propose regulations that require increasing volumes of zero- electric passenger vehicles, medium- and heavy-duty vehicles, drayage trucks, and off-road vehicles toward their corresponding targets of 100 percent zero-emission by 2035 or 2045, as listed above. The 2022 Scoping Plan modeling reflects achieving these targets.
Executive Order N-19-19	Governor Newsom signed Executive Order N-19-19 in September 2019 to direct state government to redouble its efforts to reduce GHG emissions and mitigate the impacts of climate change while building a sustainable, inclusive economy. This Executive Order instructs the Department of Finance to create a Climate Investment Framework that: • Includes a proactive strategy for the State’s pension funds that reflects the increased risks to the economy and physical environment due to climate change. • Provides a timeline and criteria to shift investments to companies and industry sectors with greater growth potential based on their focus of reducing carbon emissions and adapting to the impacts of climate change.

TABLE 3-4: MAJOR CLIMATE LEGISLATION AND EXECUTIVE ORDERS ENACTED SINCE THE 2017 SCOPING PLAN	
Bill/Executive Order	Summary
	- Aligns with the fiduciary responsibilities of the California Public Employees' Retirement System, California State Teachers' Retirement System, and the University of California Retirement Program. Executive Order N-19-19 directs the State Transportation Agency to leverage more than \$5 billion in annual state transportation spending to help reverse the trend of increased fuel consumption and reduce GHG emissions associated with the transportation sector. It also calls on the Department of General Services to leverage its management and ownership of the State's 19 million square feet in managed buildings, 51,000 vehicles, and other physical assets and goods to minimize state government's carbon footprint. Finally, it tasks CARB with accelerating progress toward California's goal of five million ZEV sales by 2030 by: - Developing new criteria for clean vehicle incentive programs to encourage manufacturers to produce clean, affordable cars. - Proposing new strategies to increase demand in the primary and secondary markets for ZEVs. - Considering strengthening existing regulations or adopting new ones to achieve the necessary GHG reductions from within the transportation sector. The 2022 Scoping Plan modeling reflects efforts to accelerate ZEV deployment.
Senate Bill 576 (SB 576) (Umberg, Chapter 374, Statutes of 2019) <i>Coastal Resources: Climate Ready Program and Coastal Climate Change Adaptation, Infrastructure and Readiness Program</i>	Sea level rise, combined with storm-driven waves, poses a direct risk to the State's coastal resources, including public and private real property and infrastructure. Rising marine waters threaten sensitive coastal areas, habitats, the survival of threatened and endangered species, beaches, other recreation areas, and urban waterfronts. SB 576 mandates that the Ocean Protection Council develop and implement a coastal climate adaptation, infrastructure, and readiness program to improve the climate change resiliency of California's coastal communities, infrastructure, and habitat. This bill also instructs the State Coastal Conservancy to administer the Climate Ready Program, which addresses the impacts and potential impacts of climate change on resources within the conservancy's jurisdiction.
Assembly Bill 65 (AB 65) (Petrie- Norris, Chapter 347, Statutes of 2019) <i>Coastal Protection: Climate Adaption: Project Prioritization: Natural Infrastructure: Local General Plans</i>	This bill requires the State Coastal Conservancy, when it allocates any funding appropriated pursuant to the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018, to prioritize projects that use natural infrastructure in coastal communities to help adapt to climate change. The bill requires the conservancy to provide information to the Governor's Office of Planning and Research (OPR) on any projects funded pursuant to the above provision to be considered for inclusion into the clearinghouse for climate adaptation information. The bill authorizes the conservancy to provide technical assistance to coastal communities to better assist them with their projects that use natural infrastructure.
Executive Order B-55-18	Governor Brown signed Executive Order B-55-18 in September 2018 to establish a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. Policies and programs undertaken to achieve this goal shall:

TABLE 3-4: MAJOR CLIMATE LEGISLATION AND EXECUTIVE ORDERS ENACTED SINCE THE 2017 SCOPING PLAN	
Bill/Executive Order	Summary
	• Seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities. • Be implemented in a manner that supports climate adaptation and biodiversity, including protection of the State's water supply, water quality, and native plants and animals. This Executive Order also calls for CARB to: • Develop a framework for implementation and accounting that tracks progress toward this goal. • Ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The 2022 Scoping Plan is designed to achieve carbon neutrality no later than 2045 and the modeling includes technology and fuel transitions to achieve that outcome.
Senate Bill 100 (SB 100) (De León, Chapter 312, Statutes of 2018) <i>California Renewables Portfolio Standard Program: emissions of greenhouse gases</i>	Under SB 100, the CPUC, CEC, and CARB shall use programs under existing laws to achieve 100 percent clean electricity. The statute requires these agencies to issue a joint policy report on SB 100 every four years. The first of these reports was issued in 2021. The 2022 Scoping Plan reflects the SB 100 Core Scenario resource mix with a few minor updates.
Assembly Bill 2127 (AB 2127) (Ting, Chapter 365, Statutes of 2018) <i>Electric Vehicle Charging Infrastructure: Assessment</i>	This bill requires the CEC, working with CARB and the CPUC, to prepare and biennially update a statewide assessment of the electric vehicle charging infrastructure needed to support the levels of electric vehicle adoption required for the State to meet its goals of putting at least 5 million zero-emission vehicles (ZEV) on California roads by 2030 and of reducing emissions of GHGs to 40 percent below 1990 levels by 2030. The bill requires the CEC to regularly seek data and input from stakeholders relating to electric vehicle charging infrastructure. This bill supports the deployment of ZEVs as modeled in the 2022 Scoping Plan.
Senate Bill 30 (SB 30) (Lara, Chapter 614, Statutes of 2018) <i>Insurance: Climate Change</i>	This bill requires the Insurance Commissioner to convene a working group to identify, assess, and recommend risk transfer market mechanisms that, among other things, promote investment in natural infrastructure to reduce the risks of climate change related to catastrophic events, create incentives for investment in natural infrastructure to reduce risks to communities, and provide mitigation incentives for private investment in natural lands to lessen exposure and reduce climate risks to public safety, property, utilities, and infrastructure. The bill requires the policies recommended to address specified questions.
Assembly Bill 2061 (AB 2061) (Frazier, Chapter 580, Statutes of 2018) <i>Near-zero-emission and Zero-emission Vehicles</i>	Existing State and federal laws set specified limits on the total gross weight imposed on the highway by a vehicle with any group of two or more consecutive axles. Under existing federal law, the maximum gross vehicle weight of that vehicle may not exceed 82,000 pounds. AB 2061 authorizes a near-zero-emission vehicle or a zero-emission vehicle to exceed the weight limits on the power unit by up to 2,000 pounds. This bill supports the deployment of cleaner trucks as modeled in this 2022 Scoping Plan.

The 2022 Scoping Plan Scenario identifies the need to accelerate AB 32's 2030 target, from 40 percent to 48 percent below 1990 levels. The Cap-and-Trade Program continues to play a large factor in the reduction of near-term emissions for meeting the 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet these GHG reduction goals and achieve carbon neutrality no later than 2045. The *2022 Scoping Plan* approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology. The Scoping Plan Scenario is summarized in Table 2-1 starting on page 72 of the Scoping Plan. It includes references to relevant statutes and executive orders, although it is not comprehensive of all existing new authorities for directing or supporting the actions described. Table 2-1 identifies actions related to a variety of sectors, such as smart growth and reductions in vehicle miles traveled (VMT); light-duty vehicles (LDV) and ZEVs; truck ZEVs; reduce fossil energy, emissions, and GHGs for aviation ocean-going vessels, port operations, freight and passenger rail, oil and gas extraction; and petroleum refining; improvements in electricity generation; electrical appliances in new and existing residential and commercial buildings; electrification and emission reductions across industries, such as construction equipment, chemicals and allied products, pulp and paper, stone/clay/glass/cement, other industrial manufacturing, and agriculture; retiring of combined heat and power facilities; low carbon fuels for transportation, business, and industry; improvements in non-combustion methane emissions, and introduction of low GWP refrigerants.

Achieving the targets described in the 2022 Scoping Plan will require continued commitment to and successful implementation of existing policies and programs, and identification of new policy tools and technical solutions to go further, faster. California's Legislature and state agencies will continue to collaborate to achieve the State's climate, clean air, equity, and broader economic and environmental protection goals. It will be necessary to maintain and strengthen this collaborative effort, and to draw upon the assistance of the federal government, regional and local governments, tribes, communities, academic institutions, and the private sector to achieve the State's near-term and longer-term emission reduction goals and a more equitable future for all Californians. The 2022 Scoping Plan acknowledges that the path forward is not dependent on one agency, one state, or even one country. However, the State can lead by engaging Californians and demonstrating how actions at the state, regional, and local levels of governments, as well as action at community and individual levels, can contribute to addressing the challenge.

Aligning local jurisdiction action with state-level priorities to tackle climate change and the outcomes called for in the 2022 Scoping Plan is identified as critical to achieving the statutory targets for 2030 and 2045. The 2022 Scoping Plan discusses the role of local governments in meeting the State's GHG reductions goals. Local governments have the primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth, economic growth, and the changing needs of their jurisdictions. They also make critical decisions on how and when to deploy transportation infrastructure, and can choose to support transit, walking, bicycling, and neighborhoods that do not force people into cars. Local governments also have the option to adopt building ordinances that exceed statewide building code requirements, and play a critical role in facilitating the rollout of ZEV infrastructure. As a result, local government decisions play a critical role in supporting state-level measures to contain the growth of GHG emissions associated with the transportation system and the built environment—the two largest GHG emissions sectors over which local governments have authority. The City has taken the initiative in combating climate change by developing programs and regulations, such as *L.A.'s Green New Deal* and the *Los Angeles Green Building Code (LAGBC)*. Each of these is discussed further below.

3.2.2.5. Cap-and-Trade Program

The Climate Change Scoping Plan identified a Cap-and-Trade Program as one of the strategies California would employ to reduce GHG emissions. CARB asserts that this program will help put California on the path to meet its goal of ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under the Cap-and-Trade Program, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap will be able to trade permits to emit GHGs.

CARB designed and adopted a California Cap-and-Trade Program pursuant to its authority under AB 32.³⁰ The Cap-and-Trade Program was designed to reduce GHG emissions from public and private major sources (deemed “covered entities”) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve the State’s emission-reduction mandates. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program’s duration.³¹

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities that emit more than 25,000 MTCO₂e per year must comply with the Cap-and-Trade Program.³² Triggering of the 25,000 MTCO₂e per year “inclusion threshold” is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or MRR).³³

Each covered entity with a compliance obligation is required to surrender “compliance instruments” for each MTCO₂e of GHG they emit.³⁴ Covered entities are allocated free allowances in whole or part (if eligible), and can buy allowances at auction, purchase allowances from others, or purchase offset credits.

The Cap-and-Trade Program provides a firm cap, ensuring that the statewide emission limits will not be exceeded. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State’s emissions forecasts and the effectiveness of direct regulatory measures.

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported.³⁵ Accordingly, for projects that are subject to the CEQA, GHG emissions from electricity consumption are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program’s first compliance period.³⁶

The Cap-and-Trade Program applies to emissions that cover approximately 80 percent of the State’s GHG emissions. Demonstrating the efficacy of AB 32 policies, California achieved its 2020 GHG reduction target four years earlier than mandated. The largest reductions were the result of increased

³⁰ California Code of Regulations 17, Section 95800–96023.

³¹ California Code of Regulations 17, Sections 95811–95812.

³² California Code of Regulations 17, Section 95812.

³³ California Code of Regulations 17, Sections 95100–95158.

³⁴ Compliance instruments are permits to emit, the majority of which will be “allowances,” but entities also are allowed to use CARB-approved offset credits to meet up to 8% of their compliance obligations.

³⁵ California Code of Regulations 17, Section 95811(b).

³⁶ California Code of Regulations 17, Section 95811, 95812(d).

renewable electricity in the electricity sector, which is a covered sector in the Cap-and-Trade Program.

AB 398 was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade Program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

3.2.2.6. Energy-Related (Stationary) Sources

Emission Performance Standards. SB 1368, signed on September 29, 2006, is a companion bill to AB 32, which requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32.

Renewables Portfolio Standard. SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017 as a Renewables Portfolio Standard (RPS). Subsequent amendments provided additional targets throughout the years. On October 7, 2015, SB 350 (Chapter 547, Statutes of 2015), also known as the Clean Energy and Pollution Reduction Act, further increased the RPS to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 also requires the State to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. The 2017 Scoping Plan incorporated the SB 350 standards and estimated the GHG reductions would account for approximately 21 percent of the Scoping Plan reductions.³⁷ On September 10, 2018, SB 100, provided additional RPS targets of 44 percent by 2024, 52 percent by 2027, and 60 percent by 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by 2045.³⁸

Assembly Bill 1279 (The California Climate Crisis Act). The California Legislature enacted AB 1279, The California Climate Crisis Act, on September 16, 2022.³⁹ AB 1279 establishes the policy of the State to achieve net zero GHG emissions, carbon neutrality, as soon as possible, but no later than 2045 and achieve and maintain net negative GHG emissions thereafter.⁴⁰ Additionally, AB 1279 ensures that by 2045, statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. SB 1279 also requires CARB to ensure that the 2022 Scoping Plan identified and recommended measures to achieve carbon neutrality and to identify and implement policies and strategies for CO₂ removal solutions and carbon capture, utilization, and storage technologies. It also requires CARB to submit an annual report on progress in achieving the 2022 Scoping Plan's goals.

³⁷ California Air Resources Board, *California's 2017 Climate Change Scoping Plan, Table 3, p. 31*, November 2017. Calculated as: $(108 - 53) / 260 = 21$ percent.

³⁸ California Legislative Information, *SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases*.

³⁹ California Legislative Information, *AB 1279 The California Climate Crisis Act, 2022*.
https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB1279, accessed April 2024.

⁴⁰ *Carbon neutrality* means "net zero" emissions of GHGs. In other words, it means that GHG emissions generated by sources such as transportation, power plants, and industrial processes must be less than or equal to the amount of carbon dioxide that is stored, both in natural sinks and through mechanical sequestration. AB 1279 uses the terminology net zero and the 2022 Scoping Plan Update uses the terminology carbon neutrality or carbon neutral. These terms mean the same thing and are used interchangeably.

3.2.2.7. Mobile Sources

Pavley Standards. AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In 2004, CARB approved the Pavley regulation to require automakers to control GHG emissions from new passenger vehicles for the 2009 through 2016 model years. Upon adoption of subsequent federal GHG standards by the USEPA that preserved the benefits of the Pavley regulations, the Pavley regulations were revised to accept compliance with the federal standards as compliance with California's standards in the 2012 through 2016 model years. This is referred to as the "deemed to comply" option.

In January 2012, CARB approved GHG emission regulations, which require further reductions in passenger GHG emissions for 2017 and subsequent vehicle model years. As noted above, in August 2012, the USEPA and USDOT adopted GHG emission standards for model year 2017 through 2025 vehicles.⁴¹ On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017-2025 national standards to meet state law. Automobile manufacturers generally comply with these standards through a combination of improved energy efficiency in vehicle equipment (e.g., air conditioning systems) and engines, as well as sleeker aerodynamics, use of strong but lightweight materials, and lower-rolling resistance tires.⁴²

In 2018, the USEPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE), which would roll back fuel economy standards and revoke California's waiver. The rule amended certain average fuel economy and GHG standards for passenger cars covering model years 2021 through 2026. On March 30, 2020, the SAFE Rule was finalized and published in the Federal Register, commencing a review period. Subsequent legal challenges from a coalition of states, including California, and private industry groups were issued. However, in December 2021, the NHTSA repealed the SAFE Vehicle Rule Part One. Although the SAFE Vehicle Rule Part One has been repealed, GHG modeling contained in regional plans, such as SCAG's 2020–2045 RTP/SCS, have not been updated to account for this repeal.

Subsequently, on March 20, 2024, USEPA announced new, more protective final standards to further reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027. The final rule builds upon USEPA's standards for federal greenhouse gas emissions standards for passenger cars and light trucks for model years 2023 through 2026, established in 2021. These standards will phase in over model years 2027 through 2032.

California Low Carbon Fuel Standard. Executive Order S-01-07 was enacted by Governor Arnold Schwarzenegger on January 18, 2007. The order mandates the following: (1) that a Statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established in California. The final regulation was approved by the State's Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.⁴³

The development of the 2017 Scoping Plan has identified LCFS as a regulatory measure to reduce GHG emissions to meet the 2030 emissions target. In September 2018, the standards were

⁴¹ United States Environmental Protection Agency, 2012.

⁴² California Air Resources Board, *California's Advanced Clean Cars Midterm Review*, pp. ES-17, C-9.

⁴³ California Air Resources Board, *Low Carbon Fuel Standard - About*, <https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about>, <https://www.arb.ca.gov/fuels/lcfs/lcfs.htm>. Accessed April 15, 2024.

amended by CARB to require a 20-percent reduction in carbon intensity by 2030, aligning with California's 2030 targets set by SB 32.⁴⁴

Advanced Clean Cars Regulations. In 2012, CARB approved the Advanced Clean Cars program, an emissions-control program for model years 2015–2025.⁴⁵ The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the ZEV regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.⁴⁶ During the March 2017 midterm review, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV program for cars and light trucks sold in California through 2025.⁴⁷

In addition, Governor Gavin Newsom signed an executive order (Executive Order No. N-79-20) on September 23, 2020, that would phase out sales of new gas-powered passenger cars by 2035 in California with an additional 10-year transition period for heavy vehicles. The State would not restrict used car sales or forbid residents from owning gas-powered vehicles. In accordance with the executive order, the 2020 Mobile Source Strategy was developed by CARB, a comprehensive analysis that presents scenarios for possible strategies to reduce the carbon, toxic and unhealthy pollution from cars, trucks, equipment, and ships. The Mobile Source Strategy was heard by the CARB Board on October 28, 2021. The 2020 Mobile Source Strategy will be forwarded to the appropriate policy and fiscal committees of the California Legislature as required by California Senate Bill 44. The programs and concepts in the 2020 Mobile Source Strategy support other planning efforts, such as the State Implementation Plans (SIP), the 2022 Climate Change Scoping Plan Update, and community emissions reduction plans, with the state planning efforts incorporating the Mobile Source Strategy as they are developed. CARB has begun development of the 2025 Mobile Source Strategy beginning outreach in January 2024.

The primary mechanism for achieving the ZEV target for passenger cars and light trucks is CARB's Advanced Clean Cars II (ACC II) Program. The ACC II regulations will focus on post-2025 model year light-duty vehicles, as requirements are already in place for new vehicles through the 2025 model year. A rulemaking for ACC II regulations was adopted on November 30, 2022.

Sustainable Communities and Climate Protection Act (Senate Bill 375). The Sustainable Communities and Climate Protection Act of 2008, or SB 375 (Chapter 728, Statutes of 2008), which was adopted by the State on September 30, 2008, establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. SB 375 finds that the "transportation sector is the single largest contributor of greenhouse gases of any sector."⁴⁸ Under SB 375, CARB is required, in consultation with the Metropolitan Planning Organizations (MPOs), to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. SCAG is the MPO in which the City of Los Angeles is located. CARB set targets for 2020 and 2035 for each of the 18 MPO regions in 2010 and updated them in 2018.⁴⁹ In March 2018, CARB updated

⁴⁴ California Air Resources Board, *CARB amends Low Carbon Fuel Standard for wider impact*, 2018, <https://ww2.arb.ca.gov/index.php/news/carb-amends-low-carbon-fuel-standard-wider-impact>. Accessed April 15, 2024.

⁴⁵ California Air Resources Board, *Advanced Clean Cars Program - About*, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about>, Accessed April 15, 2024.

⁴⁶ *Ibid.*

⁴⁷ California Air Resources Board, News Release: *CARB finds vehicle standards are achievable and cost-effective*, ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective, Accessed April 15, 2024.

⁴⁸ State of California, Senate Bill No. 375, September 30, 2008.

⁴⁹ California Air Resources Board, *Sustainable Communities & Climate Protection Program – About*, <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-climate-protection-program/about>. Accessed April 16, 2024.

the SB 375 targets for the SCAG region to require an 8-percent reduction by 2020 and a 19-percent reduction by 2035 in per capita passenger vehicle GHG emissions.⁵⁰ As discussed further below, SCAG adopted an updated Regional Transportation Plan/Sustainable Community Strategies (2020-2045 RTP/SCS) subsequent to the update of the emission targets. The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the State’s GHG emission reduction goals.⁵¹

Under SB 375, the target must be incorporated within that region’s RTP, which is used for long-term transportation planning, in an SCS. Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land and further provides that local land use plans and policies (e.g., general plans) are not required to be consistent with either the RTP or SCS.

Senate Bill 743. Governor Brown signed SB 743 in 2013, which creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 required OPR to amend the CEQA Guidelines to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” Measurements of transportation impacts may include “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.”

3.2.2.8. Building Standards and Other Regulations

California Appliance Efficiency Regulations. The Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608), adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24, Building Standards Code and CALGreen Code. The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code and was developed to help the State achieve its GHG reduction goals under HSC Division 25.5 (e.g., AB 32) by codifying standards for reducing building-related energy, water, and resource demand, which in turn reduces GHG emissions from energy, water, and resource demand. The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality.”⁵² The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any

⁵⁰ California Air Resources Board, *SB 375 Regional Greenhouse Gas Emissions Reduction Targets*, 2018.

⁵¹ Southern California Association of Governments, *Final 2020–2045 RTP/SCS, Chapter 0: Making Connections*, p. 5, 2020.

⁵² California Building Standards Commission, *2010 California Green Building Standards Code*, 2010.

green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.⁵³

On August 11, 2021, the CEC adopted the 2022 Title 24 Standards, which went into effect on January 1, 2023. The 2022 standards continue to improve upon the previous (2019) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.⁵⁴ The 2022 Title 24 Standards ensure that builders use the most energy efficient and energy conserving technologies and construction practices. The 2022 Title 24 standards encourage use of electric heat pumps, requiring newly constructed residences to be electric-ready and introduces solar and battery storage standards as an optional measure to achieve compliance and increases minimum ventilation requirements to improve air quality. Compliance with Title 24 is enforced through the building permit process.

CEQA Guidelines. In August 2007, the California State Legislature adopted SB 97 (Chapter 185, Statutes of 2007), requiring OPR to prepare and transmit new CEQA Guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the Resources Agency by July 1, 2009. In response to SB 97, the OPR adopted the new guidelines that became effective on March 18, 2010. In late 2018, OPR finalized amendments to the CEQA Guidelines, including changes to CEQA Guidelines Section 15064.4, which addresses the analysis of GHG emissions. The amendments became effective on December 28, 2018. However, neither a threshold of significance nor any specific mitigation measures are included or provided in the CEQA Guidelines.⁵⁵ The CEQA Guidelines require a lead agency to make a good-faith effort, to the extent possible based on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Discretion is given to the lead agency whether to (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, three factors are identified that should be considered in the evaluation of the significance of GHG emissions:

- The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and,
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.⁵⁶

The administrative record for the amendments to the CEQA Guidelines clarifies “that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act’s requirements for cumulative impact analysis.”⁵⁷

⁵³ California Building Standards Commission, *2010 California Green Building Standards Code*, 2010.

⁵⁴ California Energy Commission, *2022 Building Energy Efficiency Standards*, 2022.

⁵⁵ See 14 Cal. Code Regs. Sections 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).

⁵⁶ 14 Cal. Code Regs. § 15064.4(b).

⁵⁷ Letter from Cynthia Bryant, Director of the Governor’s Office of Planning and Research to Mike Chrisman, California Secretary for Natural Resources, dated April 13, 2009.

3.2.3. Regional

3.2.3.1. South Coast Air Quality Management District

The City of Los Angeles is located in the South Coast Air Basin (Air Basin), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Geronio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) is responsible for air quality planning in the Air Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished through air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.⁵⁸ A GHG Significance Threshold Working Group was formed to further evaluate potential GHG significance thresholds.⁵⁹ The SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 MTCO₂e per year. Under this proposal, commercial/residential projects that emit fewer than 3,000 MTCO₂e per year would be assumed to have a less-than-significant impact on climate change. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 MTCO₂e per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects). The Working Group has been inactive since 2011, and SCAQMD has not formally adopted any GHG significance threshold for other jurisdictions.

3.2.3.2. SCAG Regional Transportation Plan/Sustainable Communities Strategy

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the *Connect SoCal 2020–2045 RTP/SCS* in September 2020. The vision for the region incorporates a range of best practices for increasing transportation choices, reducing dependence on personal automobiles, further improving air quality, and encouraging growth in walkable, mixed-use communities with ready access to transit infrastructure and employment. More and varied housing types and employment opportunities would be located in and near job centers, transit stations and walkable neighborhoods where goods and services are easily accessible via shorter trips. To support shorter trips, people would have the choice of using neighborhood bike networks, car share or micro-mobility services, such as shared bicycles or scooters. For longer commutes, people would have expanded regional transit services and more employer incentives to carpool or vanpool. Other longer trips would be supported by on-demand services, such as micro-transit, carshare, and citywide partnerships with ride hailing services. For those that choose to drive, hotspots of congestion would be less difficult to navigate due to cordon pricing and using an electric vehicle will be easier due to an expanded regional charging network.

The 2020–2045 RTP/SCS states that the SCAG region was home to about 18.8 million people in 2016 and currently includes approximately 6.0 million homes and 8.4 million jobs.⁶⁰ By 2045, the

⁵⁸ South Coast Air Quality Management District, *Board Meeting, December 5, 2008, Agenda No. 31*, <http://www3.aqmd.gov/hb/2008/December/081231a.htm>, accessed April 16, 2024.

⁵⁹ South Coast Air Quality Management District, *Greenhouse Gases (GHG) CEQA Significance Thresholds*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds>, accessed April 16, 2024.

⁶⁰ 2020–2045 RTP/SCS population growth forecast methodology includes data for years 2010, 2010, 2016, and 2045.

integrated growth forecast estimates that these figures will increase by 3.7 million people, with nearly 1.6 million more homes and 1.6 million more jobs. Transit Priority Areas (TPAs) will account for less than 1 percent of regional total land but are projected to accommodate 30 percent of future household growth between 2016 and 2045.⁶¹ The 2020–2045 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's TPAs. TPAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the State's GHG emission reduction goals.⁶² Due to fuel economy and efficiency improvements, GHG emission rates of model year 2017 vehicles have decreased by 15 to 20 percent when compared to model year 2008 and earlier vehicles. However, for purposes of SB 375 emissions reduction targets, the fuel economy improvements have been largely excluded from the reduction calculation. The SB 375 target focuses on the amount of vehicle travel per capita. OPR recommended that achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals (i.e., SB 375 goal). The reductions generated by fuel economy improvements are already included as part of the State's GHG emissions reduction program and are not double-counted in the SB 375 target calculation.

3.2.4. Local

3.2.4.1. L.A.'s Green New Deal

The City of Los Angeles addressed the issue of global climate change in *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming* (LA Green Plan/ClimateLA) in 2007. This document outlines the goals and actions the City has established to reduce the generation and emission of GHGs from both public and private activities.

Subsequently on April 8, 2015, Mayor Eric Garcetti released the Sustainable City pLAN, which includes both short-term and long-term aspirations through the year 2035 in various topic areas, including water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others.⁶³ Specific targets included the construction of new housing units within 1,500 feet of transit by 2017, reducing VMT per capita by 5-percent by 2025, and increasing trips made by walking, biking or transit by at least 35 percent by 2025. The Sustainable City pLAN was intended to be updated every four years.

In April 2019, the Sustainability City pLAN was updated and renamed as *L.A.'s Green New Deal*, which consists of a program of actions designed to create sustainability-based performance targets through 2050 to advance economic, environmental, and equity objectives.⁶⁴ *L.A.'s Green New Deal* augments, expands, and elaborates on the City's vision for a sustainable future and tackles the climate emergency with accelerated targets and new aggressive goals.

⁶¹ Defined by the 2020–2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a major transit stop (rail or bus rapid transit station) with 15-minute or less service frequency during peak commute hours.

⁶² Southern California Association of Governments, *Final Connect SoCal 2020–2045 RTP/SCS, Chapter 0: Making Connections*, p. 5, 2020.

⁶³ City of Los Angeles, *Sustainable City pLAN*, April 2015.

⁶⁴ City of Los Angeles, *L.A.'s Green New Deal*, 2019.

While not a plan adopted solely to reduce GHG emissions, within the Green New Deal, “Climate Mitigation”—or reduction of GHG—is one of eight explicit benefits that help define its strategies and goals. These include reducing GHG emissions through near-term outcomes:

- Reduce potable water use per capita by 22.5 percent by 2025, 25 percent by 2035, and maintain or reduce 2035 per capita water use through 2050.
- Reduce building energy use per square feet for all building types 22 percent by 2025, 34 percent by 2035, and 44 percent by 2050 (from a baseline of 68 thousand British thermal units [kBtu] per square foot in 2015).
- All new buildings will be net zero carbon by 2030, and 100 percent of buildings will be net zero carbon by 2050.
- Increase cumulative new housing unit construction to 150,000 by 2025 and 275,000 units by 2035.
- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025 and 75 percent by 2035.
- Increase the percentage of all trips made by walking, biking, micro-mobility/matched rides, or transit to at least 35 percent by 2025, 50 percent by 2035, and maintain at least 50 percent by 2050.
- Reduce VMT per capita by at least 13 percent by 2025, 39 percent by 2035, and 45 percent by 2050.
- Increase the percentage of electric and zero emission vehicles in the city to 25 percent by 2025, 80 percent by 2035, and 100 percent by 2050.
- Increase landfill diversion rate to 90 percent by 2025, 95 percent by 2035, and 100 percent by 2050.
- Reduce municipal solid waste generation per capita by at least 15 percent by 2030, including phasing out single-use plastics by 2028 (from a baseline of 17.85 pounds of waste generated per capita per day in 2011).
- Eliminate organic waste going to landfill by 2028.
- Reduce urban/rural temperature differential by at least 1.7 degrees by 2025 and 3 degrees by 2035.
- Ensure the proportion of Angelenos living within 0.5 mile of a park or open space is at least 65 percent by 2025, 75 percent by 2035, and 100 percent by 2050.

3.2.4.2. City of Los Angeles Green Building Code

On December 10, 2020, the Los Angeles City Council approved Ordinance No. 187,719, which amended Chapter IX of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, by adding a new Article 9 to incorporate various provisions of the 2022 CALGreen Code. Projects filed on or after January 1, 2023, must comply with the provisions of the Los Angeles Green Building Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. Article 9, Division 5 includes mandatory measures for newly constructed nonresidential and high-rise residential buildings.

- **City of Los Angeles All-Electric Building Requirement**

Chapter IX of the LAMC, Sections 99.02.202, 99.04.106.8, and 99.05.106.14, requires that all new buildings be all-electric buildings, with some exceptions. Equipment typically powered by natural gas, such as space heating, water heating, cooking appliances and clothes drying, would need to be powered by electricity for new construction. Exceptions are made for commercial restaurants, hospitals, laboratories, and research and development uses. 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.

3.2.4.3. City of Los Angeles Solid Waste Programs and Ordinances

The recycling of solid waste materials also contributes to reduced energy consumption. Specifically, when products are manufactured using recycled materials, the amount of energy that would have otherwise been consumed to extract and process virgin source materials is reduced as well as disposal energy averted. In 1989, California enacted AB 939, the California Integrated Waste Management Act, which establishes a hierarchy for waste management practices, such as source reduction, recycling, and environmentally safe land disposal.

The City has developed and is in the process of implementing the Solid Waste Integrated Resources Plan, also referred to as the Zero Waste Plan, whose goal is to lead the City towards being a “zero waste” City by 2030. These waste reduction plans, policies, and regulations, along with Mayoral and City Council directives, have increased the level of waste diversion for the City to 76 percent as of 2013.⁶⁵ In addition, the City adopted the Recovering Energy, Natural Resources, and Economic Benefit from Waste for Los Angeles (RENEW LA) Plan in 2006, which aims to achieve a zero waste goal through reducing, reusing, recycling, or converting the resources not going to disposal and achieving a diversion rate of 90 percent or more by 2025.⁶⁶ The City also approved the Waste Hauler Permit Program (Ordinance No. 181,519, LAMC Chapter VI, Article 6, Section 66.32-66.32.5), which requires private waste haulers to obtain AB 939 Compliance Permits to transport construction and demolition waste to City-certified construction and demolition waste processors. The City’s Exclusive Franchise System Ordinance (Ordinance No. 182,986), among other requirements, sets a maximum annual disposal level and diversion requirements for franchised waste haulers to promote waste diversion from landfills and support the City’s zero waste goals. These programs reduce the number of trips to haul solid waste and, therefore, reduce the amount of petroleum-based fuels and energy used to process solid waste.

3.2.4.4. City of Los Angeles General Plan

The City does not have a General Plan Element specific to climate change and GHG emissions, but several stated goals, objectives, or policies in the City’s General Plan Air Quality Element, Plan for Healthy LA, and the Mobility Plan encourage the reduction in GHG emissions. More specifically, the following five goals from the City’s General Plan Air Quality Element would lead to GHG emission reductions:⁶⁷

⁶⁵ City of Los Angeles, Department of Public Works, LA Sanitation, *Recycling*, https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r?_adf.ctrl-state=kq9mn3h5a_188. Accessed April 16, 2024.

⁶⁶ City of Los Angeles, *RENEW LA, Five-Year Milestone Report*, 2011.

⁶⁷ City of Los Angeles, *Air Quality Element*, June 1991, pages IV-1 to IV-4.

- Less reliance on single-occupancy vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implement of conservation measures, including passive measures, such as site orientation and tree planting; and,
- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

3.2.4.5. Housing Element (Housing Needs Assessment)

The Housing Element of the General Plan is prepared pursuant to state law and provides planning guidance in meeting housing needs identified in the SCAG Regional Housing Needs Assessment (RHNA). The Housing Element identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing and growth strategy, and provides the array of programs the City intends to implement to create and preserve sustainable, mixed-income neighborhoods across the City.

The Housing Needs Assessment chapter of the Housing Element discusses the City's population and housing stock to identify housing needs for a variety of household types across the City. The current RHNA goal for affordable housing within the City is approximately 40 percent of new construction. However, the City's projections show affordable housing comprising 20 percent of new construction, which falls short of the 40 percent RHNA goal. In order to address this shortfall in affordable housing, the Housing Element provides measures to streamline and incentivize development of affordable housing. Such measures include revising density bonuses for affordable housing; identifying locations, which are ideal for funding programs to meet low-income housing goals; and rezoning areas to encourage low-income housing. With implementation of such measures to increase affordable housing, the Housing Element predicts a significant increase in housing production at all income ranges compared to previous cycles.

The Housing Element also promotes sustainability and resilience, and environmental justice through housing, as well as the need to reduce displacement. It encourages the utilization of alternatives to current parking standards that lower the cost of housing, support GHG and VMT goals and recognize the emergence of shared and alternative mobility. The Housing Element also identifies housing strategies for energy conservation, water conservation, alternative energy sources and sustainable development which support conservation and reduce demand.

3.2.4.6. Mobility Plan 2035

In August 2015, the City Council adopted Mobility Plan 2035 (Mobility Plan), which serves as the City's General Plan circulation element. The City Council has adopted several amendments to the Mobility Plan since its initial adoption, including the latest amendment on September 7, 2016.⁶⁸ The Mobility Plan incorporates "complete streets" principles and lays the policy foundation for how the City's residents interact with their streets. While the Mobility Plan mainly relates to transportation, certain components would serve to reduce VMT and mobile source GHG emissions. One component

⁶⁸ Los Angeles Department of City Planning, *Mobility Plan 2035: An Element of the General Plan*, approved by City Planning Commission on June 23, 2016, and adopted by City Council on September 7, 2016.

of the Mobility Plan is a GHG emission tracking program to establish compliance with SB 375, AB 32, and the region's SCS.

3.2.4.7. Los Angeles Transportation Study Policies and Procedures

The City of Los Angeles Department of Transportation (LADOT) has developed the City Transportation Assessment Guidelines (TAG) (July 2019, updated July 2020 and August 2022) to provide the public, private consultants, and City staff with standards, guidelines, objectives, and criteria to be used in the preparation of a transportation assessment. The TAG establishes the reduction of vehicle trips and VMT as the threshold for determining transportation impacts and, thus, is an implementing mechanism of the City's strategy to reduce land use transportation-related GHG emissions consistent with AB 32, SB 32, and SB 375.

3.3. EXISTING SETTING

3.3.1. Statewide Greenhouse Gas Emissions Inventory

CARB is responsible for preparing, adopting, and updating California's GHG emissions inventory under AB 1803 (2006). The State's annual GHG emissions inventory provides an important tool for establishing historical emissions trends and tracking California's progress in reducing GHGs. The 2023 edition of the CARB GHG inventory includes emissions of seven GHGs identified in AB 32 for the years 2000–2021. **Table 3-5, California Greenhouse Gas Emissions Inventory Trend**, displays the statewide GHG emissions from 2011 to 2021 categorized by economic sector as defined in the 2008 Scoping Plan. Generally, California's GHG emissions have followed a declining trend over the past decade. In 2021, emissions from routine emitting activities statewide were approximately 56.5 MMTCO₂e (13 percent) lower than 2011 levels, and approximately 50 MMTCO₂e below the 1990 level (431 MMTCO₂e), which was the State's 2020 GHG target.

TABLE 3-5: CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY TREND											
Sector	CO₂e Emissions (Million Metric Tons, MMTCO₂e)										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Transportation	159.5	156.9	156.9	157.6	161.2	165.0	166.4	165.2	162.3	135.6	145.6
Electric Power	89.2	99.4	94.0	90.3	86.3	70.8	64.4	65.0	60.2	59.5	62.4
Industrial	85.8	80.7	82.7	85.0	82.7	81.2	81.4	82.0	80.8	73.3	73.9
Commercial & Residential	46.0	39.1	39.0	35.5	37.2	37.7	38.3	37.5	40.6	38.9	38.8
Agriculture	34.2	35.2	33.7	33.7	32.6	32.1	31.6	32.1	31.3	31.5	30.9
High GWP	14.8	15.8	17.0	17.9	18.8	19.4	20.1	20.5	20.7	21.3	21.3
Recycling & Waste	8.2	8.4	8.3	8.1	8.1	7.9	8.2	8.3	8.4	8.6	8.4
Annual Emissions Total	437.8	435.5	431.6	428.2	426.9	414.2	410.4	410.7	404.4	368.7	381.3
SOURCE: CARB, GHG Emissions Inventory (GHG EI) 2000–2021, 2023, available at https://ww2.arb.ca.gov/ghg-inventory-data .											

As shown in **Table 3-5, California Greenhouse Gas Emissions Inventory Trend**, the transportation sector remains the largest source of statewide GHG emissions. The CARB data indicates that direct emissions from vehicle exhaust, off-road transportation mobile sources, intrastate aviation, rail, and watercraft account for approximately 38 percent of California's emissions in 2021. Emissions from the electricity sector account for approximately 16 percent of the inventory. The industrial sector has been relatively flat in recent years, representing approximately 20 percent of the total inventory. Emissions of high-GWP gases have continued to increase as they replace ozone depleting

substances banned under the 1987 Montreal Protocol. Emissions from other sectors have remained relatively constant in recent years, despite statewide population growth.

In 2021, emissions from GHG emitting activities statewide were 381.3 MMTCO₂e, which was 12.6 MMTCO₂e (3.4 percent) higher than 2020 (368.7 MMTCO₂e), but 23.1 MMTCO₂e (5.7 percent) lower than 2019 levels (404.4 MMTCO₂e). Both the 2019 to 2020 decrease and the 2020 to 2021 increase in emissions were likely attributed in large part to the impacts of the COVID-19 pandemic that were felt globally. Emissions levels in 2020 are anomalous to the long-term trend, and the one-year increase from 2020 to 2021 should be considered in the broader context of the pandemic and subsequent economic recovery that took place over 2021.

Of note, between October 23, 2015, and February 18, 2016, an exceptional natural gas leak event occurred at the Aliso Canyon natural gas storage facility that resulted in unexpected GHG emissions of considerable magnitude. The exceptional incident released approximately 109,000 metric tons of CH₄, which equated to approximately 1.96 MMTCO₂e of unanticipated emissions in 2015 and an additional 0.52 MMTCO₂e in 2016. According to the CARB, these emissions will be mitigated in the future through projects funded by the Southern California Gas Company based on legal settlement and are tracked separately from routine inventory emissions.^{69,70} Emissions associated with the transportation sector in 2017 were similar to those in 2009 despite substantial statewide growth, demonstrating improvements made in fuel economy to reduce average vehicle emissions.

3.3.2. Existing Project Site Greenhouse Gas Emissions

The Project site is located in the West Adams – Baldwin Hills – Leimert Community Plan area of the City, and currently features five substantially unoccupied buildings totaling 123,534 square feet of building floor area. Existing uses on the Project site have been predominantly vacant since the COVID-19 pandemic and were assumed not to contain or involve any source of GHG emissions.

3.4. IMPACT ANALYSIS

This section describes the applicable thresholds of significance and the methodological approach and analyzes potential Project impacts related to GHG emissions.

3.4.1. Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to GHG if it would:

- [a] Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or,**
- [b] Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.**

Section 15064.4 of the CEQA Guidelines recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project: the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which

⁶⁹ California Air Resources Board, *California Greenhouse Gas Inventory for 2000-2015 – Trends of Emissions and Other Indicators*, June 2017.

⁷⁰ California Air Resources Board, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.

the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (See CEQA Guidelines Section 15064.7(c)). Section 15064.4 of the CEQA Guidelines provides that a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project.

It also states that the lead agency shall have the discretion to determine, in the context of a particular project, whether to: (1) quantify greenhouse gas emissions resulting from a project; and/or (2) rely on a qualitative analysis or performance based standards. Lead agencies should consider several factors when determining of significance of GHG emissions from a project: (a) the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting; (b) whether a project exceeds a significance threshold that the lead agency determines applies to the project; and (c) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional or local plan for the reduction or mitigation of greenhouse gas emissions.

The CEQA Guidelines amendments also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15103(f)). Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative impacts within the geographic area of the project.⁷¹ To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include, "air quality attainment or maintenance plans... [and] plans or regulations for the reduction of greenhouse gas emissions."⁷²

The SCAQMD has not established a quantitative threshold for GHG emissions from proposed land use development projects for which it is not the Lead Agency. The City also has not adopted a numeric significance threshold for the analysis of GHG impacts. In the absence of any applicable adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2020–2045 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long-term climate goals. This analysis also considers consistency with regulations or requirements adopted by the AB 32 2008 *Climate Change Scoping Plan* and subsequent updates, and L.A.'s *Green New Deal*.

For the reasons set forth above, the City considers whether the Project is consistent with AB 32 and SB 375 (through demonstration of conformance with the 2020–2045 RTP/SCS), the *Climate Scoping Plan*, and L.A.'s *Green New Deal* to answer both of the Appendix G threshold questions. As

⁷¹ Title 14 CCR § 15064(h)(3).

⁷² *Ibid.*

discussed above, OPR has noted that lead agencies “should make a good-faith effort to calculate or estimate GHG emissions” from a project.”⁷³ Therefore, GHG emissions are also quantified below, consistent with OPR guidelines.

3.4.2. Methodology

Consistent with existing CEQA Guidelines Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. If a qualitative analysis is used, this section recommends certain factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. Nor have the SCAQMD, OPR, CARB, CAPCOA, or any other state or regional agency adopted a numerical significance threshold for assessing GHG emissions that the City has adopted that would be applicable to the Project. Since the City has not adopted any numerical threshold of significance for GHG emissions, the methodology for evaluating the Project’s impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the Project’s GHG-related impacts on the environment consistent with CEQA Guidelines Section 15064.4.

Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described below. The primary purpose of quantifying the Project’s GHG emissions is to satisfy State CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the Project’s incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions.

3.4.2.1. Consistency with Applicable Plans and Policies

As described above, the impact assessment focuses on an evaluation of the Project’s consistency with—or otherwise lack of interference or obstruction towards—plans and policies that have been adopted to reduce GHG emissions. The most directly applicable plans and policies include the *Climate Change Scoping Plan* (state level), *Connect SoCal* (regional level), and *L.A.’s Green New Deal* (local level). In the 2017 Scoping Plan Update, CARB established a statewide target of six MTCO_{2e} per capita by 2030 and two MTCO_{2e} per capita by 2050 from light and medium duty autos and trucks. SCAG adopted regional GHG reduction targets set by CARB for light and medium duty autos and trucks of eight percent by 2020 and 19 percent by 2035 in its *Connect SoCal Growth Vision*. *L.A.’s Green New Deal* (the *2019 Sustainable City pLAN*) incorporates statewide and regional planning initiatives to reduce GHG emissions and was designed to be consistent with the *Climate Change Scoping Plan* and the *RTP/SCS*. Thus, if the Project is designed in accordance with these plans, policies, regulations, and requirements, the Project would result in a less than significant impact because it would be consistent with the overarching state, regional, and local plans for GHG reduction.

The City’s TAG establishes the reduction of vehicle trips and VMT as the threshold for determining transportation impacts and thus is an implementing mechanism of the City’s strategy to reduce land

⁷³ California Office of Planning and Research, *Technical Advisory – CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review*, p. 5, June 2008.

use transportation-related GHG emissions consistent with AB 32, SB 32, and SB 375. The Project is located in South LA Area Planning Commission (APC) jurisdiction, and the TAG identify a daily work VMT per employee impact threshold of 11.6 for nonresidential development projects within the South LA APC, which represents 15 percent below existing APC average at the time of the TAG preparation (13.7 work VMT per capita).⁷⁴

Consistency with plans and policies is evaluated by discussing Project design features related to energy efficiency, renewable energy, infill development, transit accessibility, water conservation, and per capita VMT and emissions. All of these elements have beneficial effects related to minimizing and reducing GHG emissions associated with land use development. The discussion of Project consistency with applicable plans and policies considers the Project location and land use, per capita VMT, mandatory compliance with the Green Building Code, provision of on-site renewable energy, water conservation through plumbing fixtures and irrigation, and accessibility to transit.

3.4.2.2. Emissions Quantification

In accordance with Section 15064.4(c), GHG emissions that will be generated by the Project were estimated using the California Emissions Estimator Model (CalEEMod, Version 2020.4.0), which is the preferred regulatory tool recommended by SCAQMD for estimating GHG emissions from proposed land use development projects. CalEEMod relies on an emissions factors database compiled from the CARB Emission FACTor (EMFAC) on-road mobile source emissions inventory model and the CARB OFFROAD off-road equipment model, as well as regional survey data for energy resource consumption, water use, and solid waste generation. The following discussions describe sources of GHG emissions during temporary construction activities and future long-term operations.

Construction

Sources of GHG emissions during Project construction will include heavy-duty off-road diesel equipment and vehicular travel to and from the Project site. GHG emissions that would be generated during Project construction were estimated using CalEEMod. The construction emissions analysis was based on a combination of detailed information provided by the Project team and CalEEMod default assumptions related to typical construction activities. Details of modeling assumptions and emissions factors are provided in the **Appendix**.

Construction Equipment Exhaust Emissions

Construction of the Project would result in short-term GHG emissions produced by construction equipment exhaust. CalEEMod calculates emissions of CO₂, CH₄, and N₂O from construction equipment using the following equation, where the emission factors (EFs) for CO₂, CH₄, and N₂O are populated from the CARB OFFROAD model and incorporated into CalEEMod for each type of equipment:

$$Emission_{DieselEx}[MTCO_2e] = \frac{\sum_i (EF_i \times GWP \times Pop_i \times AvgHp_i \times Load_i \times Activity_i)}{10^6}$$

⁷⁴ Los Angeles Department of Transportation, *Transportation Assessment Guidelines (Table 2.2-1: VMT Impact Criteria [15% Below APC Average])*, July 2020.

Where:

EF_i	=	Emission factor in grams per horsepower-hour [g/hp-hr.] from OFFROAD2017
GWP	=	Global Warming Potential Value ($CO_2 = 1$, $CH_4 = 25$, $N_2O = 298$)
Pop_i	=	Population, or number of pieces of equipment
$AvgHP_i$	=	Maximum rated average horsepower [HP]
$Load_i$	=	Load factor (average ratio of actual output to the maximum output, unitless)
$Activity_i$	=	Hours of operation
I	=	Equipment type
10^{-6}	=	Conversion factor [g/MT]

The OFFROAD model is the statewide emissions inventory for off-road equipment compiled by the CARB; factors from OFFROAD are built into the CalEEMod software based on the Project location. CalEEMod provides options for specifying equipment types, horsepower ratings, load factors, and operational hours per day during each activity. Construction equipment inventories were provided by the Applicant for each phase of construction, and default average equipment horsepower and default load factors derived from the statewide inventory for each type of equipment were relied upon to estimate daily emissions. Daily emissions from construction equipment during each phase were estimated using the equation above and converted from grams to pounds.

On-Road Vehicle Trips Mobile Source Emissions

Additionally, construction activities generate GHG emissions from on-road vehicle trips from personal vehicles for worker commuting, vendor deliveries of equipment and materials, and trucks for soil and debris hauling. These GHG emissions are based on the number of trips and the vehicle miles traveled (VMT), along with emission factors from EMFAC for CO_2 , CH_4 , and N_2O . CalEEMod accounts for running exhaust and evaporative emissions, as well as vehicle starts. Running exhaust GHG emissions are estimated in CalEEMod using the following equation:

$$Emissions_{Pollutant}[MTCO_2e] = \frac{VMT \times EF_{running,pollutant} \times GWP}{10^6}$$

Where:

VMT	=	Vehicle miles traveled [miles]
$Emissions_{pollutant}$	=	Emissions from vehicle running for each pollutant [grams]
$EF_{running,pollutant}$	=	Emission factor for running exhaust emissions in grams per mile [g/mi]
GWP	=	Global Warming Potential Value ($CO_2 = 1$, $CH_4 = 25$, $N_2O = 298$)
10^{-6}	=	Conversion factor [g/MT]

The CalEEMod program contains default trip lengths for workers, vendors, and material hauling based on regional survey data when project-specific information is not available. VMT are estimated multiplying the total vehicle trips by the average trip length.

Operations

Sources of GHG emissions during Project operation will include energy consumption, landscaping equipment, residential vehicular travel, water use, and waste generation.

Emissions from Energy Consumption

GHG emissions from electricity and natural gas use are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the utility provider, and the GWP values for the pollutants analyzed. Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors corresponding to the utility companies serving the Project. CalEEMod contains default CH₄ and N₂O intensity factors of 0.049 lbs./MWh and 0.0069 lbs./MWh, respectively, and the CO₂ intensity factor was estimated to be approximately 567 lbCO₂e/MWh for the baseline year of 2027 using the LADWP 2022 Power Content Label. Electricity emissions were generally estimated in CalEEMod using the following equation:

$$\text{Annual Emissions [MTCO}_2\text{e]} = \frac{\sum_i (\text{Units} \times D_E \times EF_E \times \text{GWP})}{2,204.62}$$

Where:

- Units = Number of land use units [dwelling units (DU) or 1,000-sq.ft. (ksf), depending on use]
- D_E = Electrical demand factor [MWh/DU or MWh/ksf, depending on use]
- EF_E = GHG emission factor (lb./MWh)
- GWP = Global Warming Potential Value (CO₂ = 1, CH₄ = 25, N₂O = 298)
- i* = Summation index
- 2,204.62 = Conversion factor [lb./MT]

Building electricity and natural gas consumption is separated into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as plug-in appliances. CalEEMod calculates electricity consumption from systems covered by Title 24 (e.g., heating, ventilation, and air conditioning system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources are not covered by Title 24 or lighting. CalEEMod electricity and natural gas usage rates are based on the California Commercial End-Use Survey and California Residential Appliance Saturation Survey studies sponsored by the California Energy Commission.

The Project will be subject to the 2022 Title 24 standards that will be even more efficient than the 2019 standards, which are the most recently adopted standards accounted for in CalEEMod. Therefore, operational electricity and natural gas use calculated for the Project—and corresponding GHG emissions—represent conservative estimates relative to expected energy use in 2027 when operations begin. CalEEMod contains natural gas usage factors for end uses regulated by Title 24 standards and those that are not, by land use type. Annual GHG emissions from natural gas consumption are generally calculated using the following equation:

$$\text{Annual Emissions [MTCO}_2\text{e]} = \frac{\sum_i (\text{Units} \times D_{NG} \times EF_{NG} \times GWP)}{2,204.62}$$

Where:

- Units = Number of land use units [dwelling units (DU) or 1,000-sq.ft. (ksf)]
- D_E = Electrical demand factor [MMBtu/DU or MMBtu/ksf, depending on use]
- EF_E = GHG emission factor (lb./MMBtu)
- GWP = Global Warming Potential Value (CO₂ = 1, CH₄ = 25, N₂O = 298)
- i* = Summation index
- 2,204.62 = Conversion factor [lbs./MT]

Emissions from Mobile Vehicle Trips

A *Transportation Assessment* was prepared for the Project that included an analysis of daily vehicle trips and VMT during future operation and for existing uses on the site after an initial Transportation Assessment Memorandum of Understanding (MOU) was submitted to LADOT. Annual GHG emissions associated with mobile vehicle trips and VMT were estimated in CalEEMod for the Project.

Emissions from Water Use

Emissions related to water usage and wastewater generation were calculated using CalEEMod emission inventory model which multiplies an estimate of the water usage by the applicable energy intensity factor to determine the embodied energy necessary to supply potable water. GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, the emissions are generally indirect emissions from the production of electricity to power these systems. GHG emissions are then calculated based on the amount of electricity consumed multiplied by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for LADWP were selected in CalEEMod.

Emissions from Solid Waste Disposal

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors, provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each applicable land use type were selected for this analysis.

3.4.2.3. Project Design Features

The Project would incorporate several features to reduce energy demands and associated GHG emissions. Primarily, the entire campus will be constructed to the LEED Gold Standard, exceeding the energy efficiency requirements established by Title 24 and the LAGBC. Furthermore, the Project would comply with all applicable state and local regulatory requirements, including the provisions set forth in the Green Building Code. The Project would comply with the CalGreen Code and City's EV charging requirements. Finally, water conservation strategies including drought-tolerant, native landscaping features and water-efficient irrigation systems would reduce outdoor water use.

3.4.3. Analysis of Project Impacts

[a] Would the Proposed generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (Less-Than-Significant Impact)

Impact Analysis

The quantitative estimation of the amount of GHG emissions that would be attributable to construction and long-term operation of the Project using recommended air quality models is described below. The primary purpose of quantifying the Project's GHG emissions is to satisfy State CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate a project's GHG emissions. Again, however, the significance of the Project's GHG emissions is not based on the mass quantity of emissions generated but rather its consistency with applicable plans and reduction strategies, as well as per-capita VMT. The Project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water/wastewater, off-road equipment supporting production studio activities, and temporary emissions from construction equipment.

Construction

Construction activities are anticipated to begin in the second quarter of 2025 and last for approximately 27.5 months, with phases roughly following the preliminary schedule presented in **Table 3-6, Construction Schedule Summary**. The table also shows daily equipment and vehicle inventories that would be required during each phase of construction. Because impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. Therefore, the SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies.⁷⁵

TABLE 3-6: CONSTRUCTION SCHEDULE SUMMARY					
Phase Description	Duration (Months)	Maximum Daily Equipment	Maximum Daily One-Way Trips*		
			Workers	Haul Trucks	Vendor Deliveries
Demolition & Clearing	3.5	16	80	80	16
Excavation & Grading	3.5	15	80	120	16
Building Construction*	20.5	6	160	0	64
Paving & Finishing*	2	15	40	0	16
Note: Emissions modeling assumed simultaneous overlap of building construction and paving/finishing/landscaping activities. SOURCE: Jenkins Gales and Martinez, Inc. Architects, November 2023.					

The construction-related GHG emissions were included in the analysis based on a 30-year amortization rate as recommended by SCAQMD staff to the GHG Working Group. The construction-related GHG emissions were calculated using CalEEMod and information provided by the Applicant outlining the forecasted construction schedule and off-road equipment and on-road vehicle inventories required to construct the Project. Construction of the Project would generate a total of 3,347 metric tons of carbon dioxide equivalents (MTCO₂e), which would equate to 112 MTCO₂e

⁷⁵ South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.

annually over a 30-year operational period. The amortized annual rate associated with construction-related sources is included in **Table 3-7, Estimated Annual Greenhouse Gas Emissions**. Detailed construction inputs can be found in the CalEEMod detailed report included in Appendix E.

TABLE 3-7: ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS		
Emissions Source	Source Type	Project Annual GHG Emissions (MTCO₂e)
Construction Emissions Amortized ^{/a/}	Direct	111.6
Area Source Emissions	Direct	7.2
Energy Source Emissions	Indirect	1,336.7
Mobile Source Emissions	Direct	2,542.5
Waste Disposal Emissions	Indirect	117.5
Water Conveyance Emissions	Indirect	161.8
Refrigerants	Direct	5.5
Total Emissions		4,733.0
^{/a/} Based on SCAQMD guidance, the emissions summary includes construction emissions amortized over a 30-year span. SOURCE: TAHA, 2022.		

Operations

CalEEMod was used to prepare estimates of annual GHG emissions for Project operations in 2027. **Table 3-7, Estimated Annual Greenhouse Gas Emissions**, presents the estimated emissions of GHGs that would be released to the atmosphere on an annual basis for the Project and existing conditions. Detailed CalEEMod output files for the Project and 2019 existing uses are provided in the **Appendix**. The results shown for Project emissions in **Table 3-7, Estimated Annual Greenhouse Gas Emissions**, are conservative, as they do not account for the 2022 Title 24 energy efficiency standards, nor do they account for the design elements that collectively satisfy the LEED Gold Certification standard. Estimates of the Project's GHG emissions have been quantified in accordance with the CEQA Guidelines and are presented for informational purposes only.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

The impact determination is made based on consistency with applicable plans related to the reduction of GHG emissions at the state, regional, and local levels.

[b] Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? (Less-Than-Significant Impact)

Impact Analysis

As stated above, the City has determined to assess the significance of the Project's GHG emissions based on its consistency with statewide, regional, and local plans and policies adopted for the purpose of reducing and/or mitigating GHG emissions as the sole basis for determining whether the Project's GHG emissions would be cumulatively considerable. Applicable plans adopted for the purpose of reducing GHG emissions include the CARB 2022 Scoping Plan, the *Connect SoCal* 2020–2045 RTP/SCS, and the City of Los Angeles Sustainable City pLAn/Green New Deal, as discussed below.

CARB's Climate Change Scoping Plan

The Scoping Plan includes a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a Cap-and-Trade system, and an AB 32 implementation fee to fund the program. The following discussion demonstrates how the pertinent reduction actions relate to and reduce Project-related GHG emissions.

The following analysis describes the extent to which the Project complies with or does not conflict with adopted plans and policies to reduce GHG emissions, including Executive Orders S-3-05 and B-30-15, the AB 32 *Climate Change Scoping Plan*, SCAG's *Connect SoCal* 2020–2045 RTP/SCS, the *Sustainable City pLAn*, and the *Los Angeles Green Building Code (LAGBC)*. As shown below, the Project would be consistent with and would not conflict with the applicable GHG reduction plans, policies and regulations.

Generally Applicable Regulations. The following applicable mandatory reduction actions and strategies would serve to reduce Project GHG emissions:

- ***Renewable Portfolio Standard (RPS) and Senate Bill (SB) 2X:*** The California RPS program (Updated under Senate Bill (SB) 2X) requires both public and investor-owned utilities in California to receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 350 further requires 50 percent renewables by 2030. In 2022, LADWP indicated that 35 percent of its electricity came from eligible renewable resources when combined with the in-basin renewable energy generation sources. Under SB 100, LADWP is required to generate electricity that would increase renewable energy resources 50 percent by 2026, 60 percent by 2030, and 100 percent by 2045. The Project complies with these interim renewable energy targets because it would rely entirely on power provided by LADWP, and would not interfere with LADWP's initiatives to expand its renewable energy portfolio. LADWP achieved and exceeded the GHG emission reduction target set by SB 32 to reduce GHG emissions to 40 percent below 1990 levels by 2030 in 2016, 14 years ahead of schedule. Given LADWP's demonstrated progress towards meeting and exceeding the established targets, as well as potential penalties for non-compliance, it is reasonably assumed that LADWP will comply.
- ***SB 350:*** As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation. The Project would further support this action/strategy because it includes energy-efficient light-emitting diode (LED) lighting as well as Energy Star-labeled appliances for the Project.

- **Cap-and-Trade Program:** The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to the Project. That being said, while not quantified in this analysis, the Project would benefit from this regulatory program in that the GHG emissions associated with the Project's electricity usage per year presented in Section VI, Energy, would indirectly be covered by the Cap-and-Trade Program.
- **Advanced Clean Cars Program:** In 2012, CARB approved the Advanced Clean Cars Program, which establishes an emissions control program for model years 2017 through 2025 and increases the number of zero emission vehicles manufactured in the 2018 through 2025 model years. Standards under the Advanced Clean Cars Program apply to all passenger vehicles and light duty trucks within California and indirectly used by employees and deliveries to the Project. Since the CalEEMod model default fleet mix for the South Coast Air Basin does not yet account for this regulation, the Project's mobile source GHG emissions provided in **Table 3-7, Estimated Annual Greenhouse Gas Emissions**, above are conservative because they could not be adjusted to include this additional 34-percent reduction, even though the Project's emissions would be reduced as a result of this Program. The Project would further support this regulation since the Applicant would provide 22 parking spaces with electric vehicle (EV) charging stations.
- **Los Carbon Fuel Standard (LCFS):** The current LCFS requires a reduction of at least 8.75 percent in the carbon intensity (CI) of California's transportation fuels by 2021. The LCFS was amended in September 2018 to target a 20 percent reduction in CI from a 2010 baseline by 2030. The Project's emissions inventory conservatively does not take credit for additional GHG reductions due to the more recent LCFS requirements, but this additional 10-percent reduction in CI would indirectly reduce the Project's mobile source emissions.
- **California Integrated Waste Management Act of 1989:** The regulation requires each jurisdiction's source reduction and recycling element to include a diversion of 50 percent of all solid waste by 2000. AB 341 (2011) amended the regulation to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter. The Project would comply with these percentage recycling requirements inasmuch as the Project is served by the City of Los Angeles, which currently achieves a diversion rate of at least 76 percent. The Applicant must also only contract for waste disposal services with a company that recycles solid waste in compliance with AB 34. In addition, the Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass and other recyclable material. Consistent with CALGreen requirements, the Project would recycle and/or salvage at least 65 percent of non-hazardous construction and demolition debris, and the Applicant would prepare a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials would be sorted on-site or comingled.

Applicable Scoping Plan Measures. Further evaluation of specific applicable policies and measures in the Scoping Plan is provided below. As shown below, the Project would not conflict with the policies included in the Scoping Plan.

- **CCR, Title 24, Building Standards Code:** The 2022 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The Project would not conflict with these regulatory requirements as the Project must comply with applicable provisions of the 2020 LAGBC that in turn require compliance with mandatory standards included in the California Green Building Standards such as automatic lighting controls, electric vehicle

charging requirements and reduced flow rate of plumbing fixtures to conserve water.⁷⁶ The Project would further support this regulation since the Project would incorporate energy-efficient LED lighting throughout the Project, reducing overall energy usage compared to baseline conditions. In addition, lighting and energy usage for new structures would comply with 2022 Title 24 standards.

- **SB 375:** SB 375 requires integration of planning processes for transportation, land- use and housing. Under SB 375, each Metropolitan Planning Organization (MPO) would be required to adopt an SCS to encourage compact development that reduces passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. The Project represents an infill development on a site located within an existing urbanized area that would introduce new employment within both a Transit Priority Area (TPA) and a Neighborhood Mobility Area (NMA), consistent with the overall growth pattern encouraged in the RTP/SCS. As a general principle, SCAG acknowledges that being in multiple PDAs indicates a greater alignment with *Connect SoCal* policies and goals. The Project site is also well served by public transportation and the Project provides the required short- and long- term bicycle parking spaces in compliance with the requirements of the LAMC. These and other Project characteristics would further promote a reduction in VMT and subsequent reduction in GHG emissions. Therefore, the Project would be consistent with SB 375 and the reduction in passenger vehicle GHG emissions provided in the 2020–2045 RTP/SCS.
- **SB X7-7:** The Water Conservation Act of 2009 set an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The state was required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This senate bill was an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy and the associated emissions necessary to convey, treat, and distribute the water; it also reduces emissions from wastewater treatment. The Project would comply with the LAGBC, which requires a 20 percent reduction in water usage.⁷⁷

As shown above, the Project would be consistent with the applicable measures established in the Scoping Plan.

SCAG *Connect SoCal* RTP/SCS

The purpose of SB 375 is to implement the state's GHG emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel. Reflecting that purpose, the primary goal of the *Connect SoCal* RTP/SCS is to provide a framework for future growth that will decrease per capita GHG emissions from cars and light-duty trucks based on land use planning and transportation options. To accomplish this goal, the *Connect SoCal* RTP/SCS identifies various strategies to reduce per capita VMT. The *Connect SoCal* RTP/SCS is expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita passenger vehicle GHG emissions for specified target years.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB—a reduction of at least 19 percent in light duty vehicle per capita GHG emissions relative to 2005 levels by 2035—the *Connect SoCal* RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the *Connect SoCal* RTP/SCS would result in more complete

⁷⁶ Los Angeles Municipal Code (LAMC), Chapter IX, Article 9.

⁷⁷ Los Angeles Municipal Code (LAMC), Section 99.04.303.

communities with a variety of transportation and housing choices, while reducing automobile use. With regard to individual developments, such as the Project, strategies and policies set forth in the *Connect SoCal* RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency. These strategies and policies are addressed below. Also, as explained immediately below, the Project is consistent with applicable growth forecasts.

Consistency with the Integrated Growth Forecast

The *Connect SoCal* RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. As discussed in Response to Checklist Question XIV.A, Population and Housing, below, the 889 employees generated by the Project is consistent with the regional growth projections for the Los Angeles Subregion. Additionally, the Project would increase job density on a site that is located in both a TPA and NMA, signifying that future employees and patrons would have several options to access the proposed land uses via public transportation. The Project would satisfy the objectives of the *Connect SoCal* plan to concentrate new growth in areas that would decrease reliance on single-occupancy vehicles.

Consistency with VMT Reduction Strategies and Policies

The Project is designed and would be constructed to incorporate features to support and promote environmental sustainability. The Project represents an infill development within an existing urbanized area that is well served by public transportation and located adjacent to several Metro bus stops. As discussed in Response to Checklist XVII.A, Transportation, below, the Project is estimated to generate lower VMT per employee for employees than the average for the area. Additionally, the Project incorporates several TDM measures (e.g., provide required short- and long-term bicycle parking spaces in compliance with the requirements of the LAMC) to reduce the number of single occupancy vehicle trips to the Project site. Trip generation and VMT were calculated using the LADOT VMT Calculator which accounts for project features such as increased density and proximity to transit. As shown in Appendix E, incorporation of reduction features applicable to the Project results in reduction in overall VMT and resultant GHG emissions, which is consistent with the GHG reduction strategies provided in the *Connect SoCal* RTP/SCS. The Project would also be consistent with the following key GHG reduction strategies in the 2020–2045 RTP/SCS, which are based on changing the region's land use and travel patterns:

- New housing and job growth focused in proximity to transit;
- Limit total acreage of greenfield or otherwise rural land uses converted to urban use; and,
- Reduce VMT per capita.

The Project's *Transportation Assessment* was prepared in accordance with the City TAG to analyze vehicle trips and VMT and evaluate reductions that would result from design features and the TDM strategies, as well as the Metro K Line rail station located on Crenshaw Boulevard. Based on the Project location and TDM strategies including provision of bicycle parking and pedestrian network improvements, the *Transportation Assessment* determined that the Project would generate approximately 2,935 daily vehicle trips and 26,618 VMT. The Project's work VMT per capita would be approximately 10.4, which is approximately 10 percent lower than the South LA APC screening threshold of 11.6 that represents a 15 percent reduction from the TAG baseline. Therefore, the Project would be consistent with regional VMT reduction strategies.

As discussed above, the Project represents an infill development within an existing urbanized area that would introduce new employment, in an area that is well served by public transportation. Furthermore, the Project VMT per capita would be well below the APC average designated for the Project area. The Project would also provide required short- and long-term bicycle parking spaces in compliance with the requirements of the LAMC. These and other measures would further promote a reduction in VMT and subsequent reduction in GHG emissions, which would be consistent with the goals of the 2020–2045 RTP/SCS.

Increase Use of Alternative Fueled Vehicles Policy Initiative

The second goal of the 2020–2045 RTP/SCS, with regard to individual development projects such as the Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. The 2020–2045 RTP/SCS policy initiative focuses on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. Implementation of the Project would not interfere with the market penetration of alternatively fueled vehicles, and would provide 22 parking spaces equipped with electric vehicles charging stations.

Energy Efficiency Strategies and Policies

The third important goal within the 2020–2045 RTP/SCS for individual developments, such as the Project, involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2020–2045 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. As discussed above, the Project has been designed and would be constructed to incorporate environmentally sustainable building features and construction protocols required by the LAGBC and CALGreen Code. These standards would reduce energy and water usage and waste and, thereby, reduce associated GHG emissions and help minimize the impact on natural resources and infrastructure. The sustainability features to be incorporated into the Project would include, but not limited to; high-performance glazing as well as enhanced façade, roof and deck insulation values. The air conditioning system would be comprised of highly efficient Variable Refrigerant Flow (VRF) systems allowing for minimal electrical consumption, particularly when the building is lightly occupied. The building systems would increase the filtration of outside air being delivered to the occupied areas, and operable windows and large expanses of sliding glass doors would improve the natural ventilation whenever weather conditions permit. The glazing features would also promote daylighting and access to quality views, both of which are essential for occupant wellness and productivity.

Indoor water usage would be minimized via the use of low-flow plumbing fixtures installed throughout the Project. The irrigation system would be designed to meet or exceed the state Model Water Efficient Landscape Ordinance (MWELO). The irrigation system would utilize a dedicated landscape water meter and automatic weather-based controllers with electronically operated control valves and seasonal irrigation schedules. All areas would include high efficiency irrigation emitters, including micro spray and drip irrigation.

Land Use Assumptions

At the regional level, the 2020–2045 RTP/SCS is a plan adopted for the purpose of reducing GHGs. In order to assess the Project's consistency with the 2020–2045 RTP/SCS, this IS/MND also analyzes the Project's land use characteristics for consistency with those utilized by SCAG in its SCS. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as the 2020–2045 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. As discussed in Response to Checklist Question XI.B, Land Use and Planning,

below, the Project is consistent with the land use goals and principles set forth in the 2020–2045 RTP/SCS that pertain to GHG emissions.

The Project site is located within an HQTAs as designated by the 2016 RTP/SCS. As discussed previously, the Project site is an urban center location close to jobs, off-site housing, shopping and entertainment uses and in close proximity to public transit stops, which would result in reduced VMT, as compared to a project of similar size and land uses at a location without close and walkable access to off-site destinations and public transit stops. The 2020-2045 RTP/SCS projects that these urban center/infill areas, while comprising only four percent of land area in the region make up 58.2 percent of household growth and 45.2 percent of job growth.

Further, the vertical integration of land uses on the Project Site would produce substantial reductions in auto mode share to and from the Project Site that would help the region accommodate growth and promote public transit ridership that would minimize GHG emission increases and reduce per capita emissions consistent with the 2020–2045 RTP/SCS, shown in the Transportation Assessment. Additionally, the inclusion of electric vehicle charging infrastructure (per LAGBC) will support the penetration of electric zero-emission vehicles into the vehicle fleet.

Additionally, the Project would be located on an infill site in an area well-served by public transit. Specifically, there is a Metro 102 bus stop on Stocker Street in front of the southern boundary of the Project site (Stocker Street/Don Felipe Drive) for westbound travel, and across the street to the south for eastbound travel. There is also a Crenshaw Clockwise DASH north-south stop at the eastern corner of the Project site at Santa Rosalia Drive/Stocker Street. The Project would also include bicycle facilities and would create a pedestrian-friendly environment by providing landscaped walkways. The Project site is located adjacent to a mature network of streets that include vehicular, pedestrian and bicycle facilities. Development of the Project within this established community would promote a variety of travel choices and would create new employment and housing opportunities in the area. The Project would not conflict with RTP/SCS goals to maximize mobility and accessibility for all people and goods in the region, ensure travel safety and reliability, preserve and ensure a sustainable regional transportation system, protect the environment, encourage energy efficiency and facilitate the use of alternative modes of transportation.

As demonstrated above, the Project would be consistent with the applicable goals, including those pertaining to reductions in GHG emissions, in the 2020–2045 RTP/SCS. The Project is the type of land use development that is encouraged by the 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the state’s long-term climate policies. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with state regulatory requirements.

Sustainable City pLAn/L.A.’s Green New Deal

On April 8, 2015, Los Angeles released the Sustainable City pLAn, which covers a multitude of environmental, social, and economic sustainability issues related to GHG emission reduction either specifically or by association. Applicable goals include increasing the green building standard for new construction, creating a benchmarking policy for building energy use, developing “blue, green, and black” waste bin infrastructure, reducing water use by 20 percent, and possibly requiring LEED Silver or better certification for new construction. While not a plan adopted solely to reduce GHG emissions or directly applicable to private development projects, within L.A.’s Green New Deal (Sustainable City pLAn, 2019), climate mitigation is one of eight explicit benefits that help define its strategies and goals.

The 2019 pLAn, L.A.'s New Green Deal, was the first four-year update to the Sustainable City pLAn. It augments, expands, and elaborates in more detail the City's vision for a sustainable future, and it addresses the climate emergency with accelerated targets and new aggressive goals. The Project would contribute toward the attainment of the aspirations and goals by:

- Obtaining power from a utility provider that supplies 55 percent renewable energy by 2025.
- Including components that will reduce building energy use per square foot 22 percent by 2025.
- Reducing VMT per capita by at least 13 percent by 2025.
- Ensuring 57 percent of new housing units are built within 1,500 feet of transit.

Through the Green New Deal, the City would reduce an additional 30 percent in GHG emissions above and beyond the 2015 pLAn and ensure that the City stays within its carbon budget between 2020 and 2050. The Project would use energy from the LADWP, which currently provides approximately 35 percent of electricity via renewable sources and has committed to providing an increasing percentage from renewable sources that exceed the RPS requirements by providing 50 percent by 2025, 55 percent by 2030, and 65 percent by 2036. Therefore, by the time the Project is operational in 2027, it is reasonable to assume that LADWP's delivered power mix will be comprised of at least 50 percent renewably-derived electricity. The Project would be designed and constructed to meet LAGBC standards, where applicable, by including several measures designed to reduce energy consumption. The Project would include Energy Star® appliances where applicable and would be a modern development with energy efficient heaters and air conditioning systems. As such, the Project would be consistent with the goals and initiatives in the Sustainable City pLAn/L.A.'s Green New Deal.

A discussion of the Project's consistency with the Sustainable City pLAn/Green New Deal targets is provided below in **Table 3-8, Project Consistency with the Sustainable City pLAn.**

TABLE 3-8: PROJECT CONSISTENCY WITH THE SUSTAINABLE CITY PLAN	
Targets/Goals	Project Consistency
Local Water. Achieve a 20 percent reduction in water use per capita by 2017; 22.5 percent reduction by 2025; and 25 percent reduction by 2035.	No Conflict. The Project would be consistent with the LAMC to reduce water consumption by 20 percent. The Project is required to follow CALGreen Standards which mandates a 20 percent reduction in indoor water use. Therefore, the Project would also be consistent with the LA Sustainable City pLAn/Green New Deal.
Solar Power. Increase cumulative total megawatts of local solar photovoltaic power to between 900-1,500 megawatts by 2025 and 1,500 to 1,800 megawatts by 2035 as well as increasing the cumulative total megawatts of energy storage capacity to at least 1,654 to 1,750 megawatts by 2025.	No Conflict. The Project design would comply with the LAGBC and CALGreen Code—as well as qualifying for LEED Gold certification or equivalent—ensuring that applicable energy efficiency standards are met and/or exceeded. The Project would feature an air-tight and insulated building envelope for all structures, Low-E windows, Energy Star appliances, and LED lighting. Implementation of the Project would not interfere with City or LADWP programs involving the development of additional solar energy installations. Therefore, the Project would also be consistent with the LA Sustainable City pLAn/Green New Deal.

TABLE 3-8: PROJECT CONSISTENCY WITH THE SUSTAINABLE CITY PLAN

Targets/Goals	Project Consistency
Energy Efficient Buildings. Reduce energy use per square foot below 2013 baseline levels for all building types by at least 14 percent by 2025 and 30 percent by 2035, and use energy efficiency to deliver 15 percent of all of the City's projected electricity needs by 2020.	No Conflict. The Project design would comply with the LAGBC and CALGreen Code, ensuring that it would meet energy efficiency requirements. The Project would feature an air-tight and insulated building envelope for all structures, Low-E windows, Energy Star appliances, and LED lighting. Implementation of the Project would not interfere with City or LADWP programs involving the development of additional solar energy installations. Therefore, the Project would also be consistent with the LA Sustainable City pLAn/Green New Deal.
Carbon and Climate Leadership. Reduce GHG emissions below 1990 baseline by at least 45 percent by 2025, 60 percent by 2035, and 80 percent by 2050. Improve GHG efficiency of the City from 2009 levels by 55 percent by 2025 and 75 percent by 2035.	No Conflict. The Project would be designed to incorporate energy and water efficient design that meet or exceed the 2022 Title 24 Building Energy Efficiency Standards and CALGreen Code standards and incorporate energy and water efficiency measures. The Project would employ measures which comply with Code measures that will assist in the reduction of Project-related GHG emissions. Some of these measures include enhanced energy-efficiency via high-performance glazing as well as enhanced façade, roof and deck insulation values. The glazing features would also promote daylighting and access to quality views, both of which are essential for occupant wellness and productivity. Indoor water usage would be minimized via the use of ultra-low flow plumbing fixtures installed throughout the Project. The irrigation system would be designed to meet or exceed the state MWELO. The irrigation system would utilize a dedicated landscape water meter and automatic weather-based controllers with electronically operated control valves and seasonal irrigation schedules. All areas would include high efficiency irrigation emitters, including micro spray and drip irrigation. Bubblers may be used for trees or shrubs where drip irrigation is not feasible. Irrigation valves would be located in inconspicuous areas, and would be parallel to adjacent structures and paving.
Waste and Landfills. Increase landfill diversion rates to at least 90 percent by 2025 and 95 percent by 2035, as well as increasing proportion of waste products and recyclable commodities productively reused and repurposed within the County of Los Angeles to at least 25 percent by 2025 and 50 percent by 2035.	No Conflict. The Project would be required to implement recycling programs that reduce waste to landfills by a minimum of 75 percent (per AB 341). The Project would be served by a solid waste collection and recycling service that may include mixed-waste processing, and that yields waste diversion results comparable to source separation and consistent with citywide recycling targets. The Project would also comply with the City of Los Angeles Space Allocation Ordinance (171,687) which requires that developments include a recycling area or a room of a specified size on the Project Site.
Housing and Development. Increase cumulative new housing unit construction to 100,000 by 2021, 150,000 by 2025, and 275,000 by 2035. Ensure proportion of new housing units built within 1,500 feet of transit is at least 57 percent by 2025 and 65 percent by 2035.	No Conflict. The project's infill location would promote the concentration of development in an urban location with extensive infrastructure and access to public transit facilities, which would reduce vehicle miles traveled for the office space.
Mobility and Transit. Reduce daily VMT per capita by at least 5 percent by 2025 and 10 percent by 2035. Increase the percentage of all trips made by walking, biking, or transit to at least 35 percent by 2025 and 50 percent by 2035.	No Conflict. The Project is an urban center/infill development located in close proximity to transit. The Project's development on a site in an infill location would promote the concentration of development in an urban location with extensive infrastructure and access to diverse uses and public transit facilities, which would promote multi-modal travel and reduce vehicle miles traveled for the office and retail spaces.

TABLE 3-8: PROJECT CONSISTENCY WITH THE SUSTAINABLE CITY PLAN	
Targets/Goals	Project Consistency
Air Quality. Increase the percentage of electric and zero emissions vehicles in the city to 10 percent by 2025 and 25 percent by 2035 as well as increasing the percentage of port-related goods movement trips that use zero-emissions technology to at least 15 percent in 2025 and 25 percent in 2035.	No Conflict. The Project will comply with applicable LAGBC provisions pertaining to building code requirements for charging station prewiring and installation of charging stations at workplaces. Therefore, the Project would also be consistent with the Sustainable City pLAn/Green New Deal.
SOURCE: City of Los Angeles, 2019; TAHA, 2024.	

The analysis above describes the consistency of the Project with the City's Sustainable City pLAn. As discussed in **Table 3-8, *Project Consistency with the Sustainable City pLAn***, generally the Project's consistency with the plans and policies is shown through a combination of regulatory compliance (green building code etc.) as well as Project- specific characteristics (water conservation, energy conservation, and other features consistent with these plans). Therefore, the Project would be consistent with the City's applicable plans, policies, or regulations for the reduction of GHG emissions.

As discussed above, the Project would comply with the LAGBC and CALGreen Code which would ensure energy efficiency and installation of water conserving fixtures. Moreover, the Project site would utilize electricity and water from LADWP, which is actively increasing its use of renewable sources. The Project would locate a production studio and creative office campus close to transit opportunities. The Project site is located in an area well-served by public transit. The Project would provide long-term and short-term bicycle parking spaces and lockers for employees of the commercial, retail, and studio spaces. The Project would create a pedestrian-friendly environment by providing landscaped walkways along all street frontages. The Project site is located adjacent to a mature network of streets that include vehicular, pedestrian and bicycle facilities. Therefore, the Project would be consistent with the goals of the LA Green New Deal/Sustainable City pLAn.

Conclusion

As demonstrated above, the Project would be consistent with the 2022 Scoping Plan, the 2020–2045 RTP/SCS, and the *Sustainable City pLAn/L.A.'s Green New Deal*. Thus, the Project would be consistent with these applicable regulatory plans and policies intended to reduce GHG emissions. Therefore, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The Project also would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not be cumulatively considerable or result in a significant impact on the environment. Project-specific impacts with respect to GHG emissions would be less than significant, and no mitigation measures are required.

Mitigation Measures

no mitigation measures are required.

Level of Significance After Mitigation

Project impacts would be less than significant without mitigation.

3.4.4. Cumulative Impacts

The primary focus of many of the statewide and regional plans, policies, and regulations is to address issues related to global climate change. Due to the complex physical and chemical mechanisms involved in how GHG emissions influence climate change at the global scale, there is no contextual basis for determining the extent to which the Project's net increase in GHG emissions would affect climate patterns. The emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG emissions from more than one project and many sources in the atmosphere that may result in global climate change. The consequences of climate change can cause adverse environmental effects. A project's GHG emissions typically would be very small in comparison to State or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change.

Pursuant to CEQA Guidelines Section 15064(h)(3) a project's incremental contribution to cumulative impacts can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem with the geographic area of the project. The State has mandated a goal of reducing statewide emissions to 1990 levels by 2020, even though statewide population and commerce is predicted to continue to expand. AB 32 has acknowledged that GHG emissions are a statewide impact. Emissions generated by the Project in combination with past, present, and reasonably probable future related projects could contribute to this impact. The CEQA Guidelines emphasize that the effects of GHG emissions are cumulative in nature and should be analyzed in the context of CEQA's existing cumulative impacts analysis. The Office of Planning and Research acknowledges that although climate change is cumulative in nature, not every individual Project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. As discussed above, the Project's incremental contribution to the statewide cumulative impact would not be cumulatively considerable.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Cumulative impacts would be less than significant without mitigation.

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Stocker Street Creative Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Stocker Street Creative
Construction Start Date	5/12/2025
Operational Year	2027
Lead Agency	City of Los Angeles
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	18.4
Location	34.00694939890681, -118.33858716362877
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4449
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
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Office Park	44.4	1000sqft	0.55	44,400	0.00	0.00	—	BLDG B Support
Unenclosed Parking with Elevator	122	1000sqft	0.67	122,200	0.00	0.00	—	BLDG F
Strip Mall	0.50	1000sqft	0.01	500	0.00	0.00	—	BLDG A
Arena	32.0	1000sqft	0.75	32,000	0.00	0.00	—	BLDG D
General Office Building	90.1	1000sqft	0.00	90,060	0.00	0.00	—	BLDG B Office
High Turnover (Sit Down Restaurant)	9.50	1000sqft	0.22	9,500	0.00	0.00	—	BLDG A
High Turnover (Sit Down Restaurant)	9.00	1000sqft	0.00	9,000	2,500	2,500	—	BLDG B Rooftop Restaurant
Office Park	0.30	1000sqft	0.01	300	0.00	0.00	—	BLDG C
Arena	19.2	1000sqft	0.44	19,200	0.00	0.00	—	BLDG E Studio
Manufacturing	13.0	1000sqft	0.00	13,000	0.00	0.00	—	BLDG E Workshop
Office Park	7.60	1000sqft	0.00	7,600	0.00	0.00	—	BLDG E Support
Strip Mall	3.00	1000sqft	0.00	3,000	0.00	0.00	—	BLDG F Retail
Office Park	2.70	1000sqft	0.00	2,700	0.00	0.00	—	BLDG F Support
Other Non-Asphalt Surfaces	81.5	1000sqft	1.87	0.00	23,500	23,500	—	Ground level hardscape

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-4*	Use Local and Sustainable Building Materials
Transportation	T-14*	Provide Electric Vehicle Charging Infrastructure
Transportation	T-31-A*	Locate Project in Area with High Destination Accessibility
Transportation	T-32*	Orient Project Toward Transit, Bicycle, or Pedestrian Facility
Transportation	T-34*	Provide Bike Parking
Transportation	T-53*	Electrify Loading Docks

Energy	E-1	Buildings Exceed 2019 Title 24 Building Envelope Energy Efficiency Standards
Energy	E-2	Require Energy Efficient Appliances
Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes

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

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.76	29.8	54.0	81.4	0.14	1.63	6.14	6.75	1.50	1.17	2.31	—	16,598	16,598	0.68	1.44	24.8	16,786
Mit.	7.76	29.8	54.0	81.4	0.14	1.63	6.14	6.75	1.50	1.17	2.31	—	16,598	16,598	0.68	1.44	24.8	16,786
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.06	5.03	40.6	56.2	0.10	1.30	4.68	5.70	1.19	1.02	1.96	—	13,248	13,248	0.66	1.45	0.64	13,696
Mit.	6.06	5.03	40.6	56.2	0.10	1.30	4.68	5.70	1.19	1.02	1.96	—	13,248	13,248	0.66	1.45	0.64	13,696
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.10	5.54	27.9	39.8	0.07	0.84	1.91	2.70	0.76	0.45	1.21	—	8,622	8,622	0.36	0.43	3.93	8,726
Mit.	4.10	5.54	27.9	39.8	0.07	0.84	1.91	2.70	0.76	0.45	1.21	—	8,622	8,622	0.36	0.43	3.93	8,726

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.75	1.01	5.09	7.26	0.01	0.15	0.35	0.49	0.14	0.08	0.22	—	1,428	1,428	0.06	0.07	0.65	1,445
Mit.	0.75	1.01	5.09	7.26	0.01	0.15	0.35	0.49	0.14	0.08	0.22	—	1,428	1,428	0.06	0.07	0.65	1,445
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.60	2.61	29.4	32.6	0.09	1.02	6.14	6.75	0.94	1.17	1.96	—	13,302	13,302	0.66	1.44	24.8	13,774
2026	5.74	4.75	38.8	56.8	0.10	1.17	2.64	3.81	1.07	0.64	1.71	—	12,153	12,153	0.50	0.43	12.7	12,305

2027	7.76	29.8	54.0	81.4	0.14	1.63	3.40	5.03	1.50	0.81	2.31	—	16,598	16,598	0.68	0.53	14.7	16,786
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	6.06	5.03	40.6	56.2	0.10	1.30	4.68	5.70	1.19	1.02	1.96	—	13,248	13,248	0.66	1.45	0.64	13,696
2026	5.74	4.74	39.0	55.3	0.10	1.17	2.64	3.81	1.07	0.64	1.71	—	12,041	12,041	0.50	0.43	0.33	12,181
2027	5.51	4.56	37.8	54.4	0.10	1.05	2.64	3.69	0.97	0.64	1.61	—	11,962	11,962	0.44	0.41	0.30	12,096
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.55	1.19	12.1	14.5	0.03	0.42	1.91	2.32	0.38	0.39	0.78	—	4,728	4,728	0.23	0.43	3.47	4,866
2026	4.10	3.39	27.9	39.8	0.07	0.84	1.86	2.70	0.76	0.45	1.21	—	8,622	8,622	0.36	0.30	3.93	8,726
2027	3.02	5.54	20.8	30.3	0.05	0.59	1.43	2.02	0.54	0.35	0.89	—	6,539	6,539	0.24	0.22	2.75	6,614
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.28	0.22	2.21	2.64	0.01	0.08	0.35	0.42	0.07	0.07	0.14	—	783	783	0.04	0.07	0.57	806
2026	0.75	0.62	5.09	7.26	0.01	0.15	0.34	0.49	0.14	0.08	0.22	—	1,428	1,428	0.06	0.05	0.65	1,445
2027	0.55	1.01	3.80	5.54	0.01	0.11	0.26	0.37	0.10	0.06	0.16	—	1,083	1,083	0.04	0.04	0.45	1,095

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.60	2.61	29.4	32.6	0.09	1.02	6.14	6.75	0.94	1.17	1.96	—	13,302	13,302	0.66	1.44	24.8	13,774
2026	5.74	4.75	38.8	56.8	0.10	1.17	2.64	3.81	1.07	0.64	1.71	—	12,153	12,153	0.50	0.43	12.7	12,305
2027	7.76	29.8	54.0	81.4	0.14	1.63	3.40	5.03	1.50	0.81	2.31	—	16,598	16,598	0.68	0.53	14.7	16,786
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	6.06	5.03	40.6	56.2	0.10	1.30	4.68	5.70	1.19	1.02	1.96	—	13,248	13,248	0.66	1.45	0.64	13,696

2026	5.74	4.74	39.0	55.3	0.10	1.17	2.64	3.81	1.07	0.64	1.71	—	12,041	12,041	0.50	0.43	0.33	12,181
2027	5.51	4.56	37.8	54.4	0.10	1.05	2.64	3.69	0.97	0.64	1.61	—	11,962	11,962	0.44	0.41	0.30	12,096
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.55	1.19	12.1	14.5	0.03	0.42	1.91	2.32	0.38	0.39	0.78	—	4,728	4,728	0.23	0.43	3.47	4,866
2026	4.10	3.39	27.9	39.8	0.07	0.84	1.86	2.70	0.76	0.45	1.21	—	8,622	8,622	0.36	0.30	3.93	8,726
2027	3.02	5.54	20.8	30.3	0.05	0.59	1.43	2.02	0.54	0.35	0.89	—	6,539	6,539	0.24	0.22	2.75	6,614
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.28	0.22	2.21	2.64	0.01	0.08	0.35	0.42	0.07	0.07	0.14	—	783	783	0.04	0.07	0.57	806
2026	0.75	0.62	5.09	7.26	0.01	0.15	0.34	0.49	0.14	0.08	0.22	—	1,428	1,428	0.06	0.05	0.65	1,445
2027	0.55	1.01	3.80	5.54	0.01	0.11	0.26	0.37	0.10	0.06	0.16	—	1,083	1,083	0.04	0.04	0.45	1,095

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.5	18.6	24.0	110	0.21	0.77	15.3	16.1	0.72	3.89	4.61	311	29,574	29,885	33.2	1.06	84.2	31,115
Mit.	14.5	18.6	24.0	110	0.21	0.77	15.3	16.1	0.72	3.89	4.61	302	29,239	29,541	32.2	1.04	84.2	30,739
% Reduced	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%	—	< 0.5%	< 0.5%	—	< 0.5%	3%	1%	1%	3%	3%	—	1%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.7	16.0	24.5	89.9	0.21	0.75	15.3	16.1	0.70	3.89	4.59	311	28,817	29,128	33.2	1.10	34.3	30,320
Mit.	11.7	16.0	24.4	89.9	0.20	0.74	15.3	16.1	0.70	3.89	4.59	302	28,482	28,784	32.2	1.07	34.3	29,943
% Reduced	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%	—	< 0.5%	< 0.5%	—	< 0.5%	3%	1%	1%	3%	2%	—	1%

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.3	16.6	19.5	90.4	0.19	0.61	14.1	14.7	0.57	3.57	4.15	311	26,789	27,101	33.1	1.04	53.5	28,291
Mit.	12.3	16.6	19.5	90.4	0.19	0.61	14.1	14.7	0.57	3.57	4.14	302	26,455	26,757	32.1	1.01	53.5	27,915
% Reduced	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%	—	< 0.5%	< 0.5%	—	< 0.5%	3%	1%	1%	3%	3%	—	1%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.24	3.03	3.56	16.5	0.03	0.11	2.57	2.68	0.10	0.65	0.76	51.6	4,435	4,487	5.48	0.17	8.86	4,684
Mit.	2.24	3.03	3.56	16.5	0.03	0.11	2.57	2.68	0.10	0.65	0.76	50.0	4,380	4,430	5.32	0.17	8.86	4,622
% Reduced	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%	< 0.5%	—	< 0.5%	3%	1%	1%	3%	3%	—	1%
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes

Mit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-----

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.82	8.99	6.03	69.6	0.16	0.10	15.3	15.4	0.10	3.89	3.99	—	16,790	16,790	0.84	0.68	51.2	17,065
Area	2.74	8.08	0.13	15.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	63.2	63.2	< 0.005	< 0.005	—	63.4
Energy	0.21	0.10	1.87	1.57	0.01	0.14	—	0.14	0.14	—	0.14	—	8,309	8,309	0.72	0.08	—	8,350
Water	—	—	—	—	—	—	—	—	—	—	—	109	606	715	11.2	0.27	—	1,076
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Off-Road	1.75	1.47	16.0	23.6	0.04	0.50	—	0.50	0.46	—	0.46	—	3,806	3,806	0.15	0.03	—	3,819
Total	14.5	18.6	24.0	110	0.21	0.77	15.3	16.1	0.72	3.89	4.61	311	29,574	29,885	33.2	1.06	84.2	31,115
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.72	8.88	6.59	64.8	0.16	0.10	15.3	15.4	0.10	3.89	3.99	—	16,096	16,096	0.88	0.71	1.33	16,332
Area	—	5.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.21	0.10	1.87	1.57	0.01	0.14	—	0.14	0.14	—	0.14	—	8,309	8,309	0.72	0.08	—	8,350
Water	—	—	—	—	—	—	—	—	—	—	—	109	606	715	11.2	0.27	—	1,076
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Off-Road	1.75	1.47	16.0	23.6	0.04	0.50	—	0.50	0.46	—	0.46	—	3,806	3,806	0.15	0.03	—	3,819
Total	11.7	16.0	24.5	89.9	0.21	0.75	15.3	16.1	0.70	3.89	4.59	311	28,817	29,128	33.2	1.10	34.3	30,320
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	8.96	8.18	6.17	61.5	0.15	0.10	14.1	14.2	0.09	3.57	3.66	—	15,120	15,120	0.81	0.66	20.5	15,359
Area	1.87	7.28	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.3	43.3	< 0.005	< 0.005	—	43.5
Energy	0.21	0.10	1.87	1.57	0.01	0.14	—	0.14	0.14	—	0.14	—	8,309	8,309	0.72	0.08	—	8,350
Water	—	—	—	—	—	—	—	—	—	—	—	109	606	715	11.2	0.27	—	1,076
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Off-Road	1.25	1.05	11.4	16.8	0.03	0.36	—	0.36	0.33	—	0.33	—	2,711	2,711	0.11	0.02	—	2,720
Total	12.3	16.6	19.5	90.4	0.19	0.61	14.1	14.7	0.57	3.57	4.15	311	26,789	27,101	33.1	1.04	53.5	28,291
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.63	1.49	1.13	11.2	0.03	0.02	2.57	2.58	0.02	0.65	0.67	—	2,503	2,503	0.13	0.11	3.40	2,543
Area	0.34	1.33	0.02	1.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.17	7.17	< 0.005	< 0.005	—	7.19
Energy	0.04	0.02	0.34	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,376	1,376	0.12	0.01	—	1,382
Water	—	—	—	—	—	—	—	—	—	—	—	18.0	100	118	1.85	0.05	—	178
Waste	—	—	—	—	—	—	—	—	—	—	—	33.6	0.00	33.6	3.36	0.00	—	117
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.46	5.46
Off-Road	0.23	0.19	2.08	3.06	< 0.005	0.07	—	0.07	0.06	—	0.06	—	449	449	0.02	< 0.005	—	450
Total	2.24	3.03	3.56	16.5	0.03	0.11	2.57	2.68	0.10	0.65	0.76	51.6	4,435	4,487	5.48	0.17	8.86	4,684

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.82	8.99	6.03	69.6	0.16	0.10	15.3	15.4	0.10	3.89	3.99	—	16,790	16,790	0.84	0.68	51.2	17,065
Area	2.74	8.08	0.13	15.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	63.2	63.2	< 0.005	< 0.005	—	63.4
Energy	0.20	0.10	1.84	1.54	0.01	0.14	—	0.14	0.14	—	0.14	—	8,034	8,034	0.70	0.08	—	8,074
Water	—	—	—	—	—	—	—	—	—	—	—	99.3	547	646	10.2	0.25	—	976

Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Off-Road	1.75	1.47	16.0	23.6	0.04	0.50	—	0.50	0.46	—	0.46	—	3,806	3,806	0.15	0.03	—	3,819
Total	14.5	18.6	24.0	110	0.21	0.77	15.3	16.1	0.72	3.89	4.61	302	29,239	29,541	32.2	1.04	84.2	30,739
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.72	8.88	6.59	64.8	0.16	0.10	15.3	15.4	0.10	3.89	3.99	—	16,096	16,096	0.88	0.71	1.33	16,332
Area	—	5.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.20	0.10	1.84	1.54	0.01	0.14	—	0.14	0.14	—	0.14	—	8,034	8,034	0.70	0.08	—	8,074
Water	—	—	—	—	—	—	—	—	—	—	—	99.3	547	646	10.2	0.25	—	976
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Off-Road	1.75	1.47	16.0	23.6	0.04	0.50	—	0.50	0.46	—	0.46	—	3,806	3,806	0.15	0.03	—	3,819
Total	11.7	16.0	24.4	89.9	0.20	0.74	15.3	16.1	0.70	3.89	4.59	302	28,482	28,784	32.2	1.07	34.3	29,943
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.96	8.18	6.17	61.5	0.15	0.10	14.1	14.2	0.09	3.57	3.66	—	15,120	15,120	0.81	0.66	20.5	15,359
Area	1.87	7.28	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.3	43.3	< 0.005	< 0.005	—	43.5
Energy	0.20	0.10	1.84	1.54	0.01	0.14	—	0.14	0.14	—	0.14	—	8,034	8,034	0.70	0.08	—	8,074
Water	—	—	—	—	—	—	—	—	—	—	—	99.3	547	646	10.2	0.25	—	976
Waste	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Off-Road	1.25	1.05	11.4	16.8	0.03	0.36	—	0.36	0.33	—	0.33	—	2,711	2,711	0.11	0.02	—	2,720
Total	12.3	16.6	19.5	90.4	0.19	0.61	14.1	14.7	0.57	3.57	4.14	302	26,455	26,757	32.1	1.01	53.5	27,915
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.63	1.49	1.13	11.2	0.03	0.02	2.57	2.58	0.02	0.65	0.67	—	2,503	2,503	0.13	0.11	3.40	2,543
Area	0.34	1.33	0.02	1.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.17	7.17	< 0.005	< 0.005	—	7.19
Energy	0.04	0.02	0.34	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,330	1,330	0.12	0.01	—	1,337

Water	—	—	—	—	—	—	—	—	—	—	—	16.4	90.6	107	1.69	0.04	—	162
Waste	—	—	—	—	—	—	—	—	—	—	—	33.6	0.00	33.6	3.36	0.00	—	117
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.46	5.46
Off-Road	0.23	0.19	2.08	3.06	< 0.005	0.07	—	0.07	0.06	—	0.06	—	449	449	0.02	< 0.005	—	450
Total	2.24	3.03	3.56	16.5	0.03	0.11	2.57	2.68	0.10	0.65	0.76	50.0	4,380	4,430	5.32	0.17	8.86	4,622

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.51	2.09	18.8	24.2	0.04	0.81	—	0.81	0.74	—	0.74	—	3,535	3,535	0.14	0.03	—	3,547
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.03	0.03	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.57	0.57	< 0.005	0.06	0.06	—	16.9	16.9	< 0.005	< 0.005	0.03	17.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.09	3.97	0.01	0.13	—	0.13	0.12	—	0.12	—	581	581	0.02	< 0.005	—	583

Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	0.20	0.20	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.78	2.78	< 0.005	< 0.005	< 0.005	2.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.56	0.72	< 0.005	0.02	—	0.02	0.02	—	0.02	—	96.2	96.2	< 0.005	< 0.005	—	96.5
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.35	5.57	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	1,106	1,106	0.05	0.04	4.05	1,123
Vendor	0.04	0.01	0.58	0.28	< 0.005	0.01	0.14	0.14	< 0.005	0.04	0.04	—	508	508	0.02	0.07	1.39	531
Hauling	0.17	0.03	2.72	1.06	0.01	0.03	0.59	0.62	0.03	0.16	0.19	—	2,217	2,217	0.12	0.35	5.15	2,329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.07	0.81	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	175	175	0.01	0.01	0.29	177
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.5	83.5	< 0.005	0.01	0.10	87.1

Hauling	0.03	0.01	0.47	0.17	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	364	364	0.02	0.06	0.36	382
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.0	29.0	< 0.005	< 0.005	0.05	29.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	14.4
Hauling	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.3	60.3	< 0.005	0.01	0.06	63.3

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.51	2.09	18.8	24.2	0.04	0.81	—	0.81	0.74	—	0.74	—	3,535	3,535	0.14	0.03	—	3,547
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.03	0.03	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.57	0.57	< 0.005	0.06	0.06	—	16.9	16.9	< 0.005	< 0.005	0.03	17.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.09	3.97	0.01	0.13	—	0.13	0.12	—	0.12	—	581	581	0.02	< 0.005	—	583

Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	0.20	0.20	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.78	2.78	< 0.005	< 0.005	< 0.005	2.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.56	0.72	< 0.005	0.02	—	0.02	0.02	—	0.02	—	96.2	96.2	< 0.005	< 0.005	—	96.5
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.35	5.57	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	1,106	1,106	0.05	0.04	4.05	1,123
Vendor	0.04	0.01	0.58	0.28	< 0.005	0.01	0.14	0.14	< 0.005	0.04	0.04	—	508	508	0.02	0.07	1.39	531
Hauling	0.17	0.03	2.72	1.06	0.01	0.03	0.59	0.62	0.03	0.16	0.19	—	2,217	2,217	0.12	0.35	5.15	2,329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.07	0.81	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	175	175	0.01	0.01	0.29	177
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.5	83.5	< 0.005	0.01	0.10	87.1

Hauling	0.03	0.01	0.47	0.17	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	364	364	0.02	0.06	0.36	382
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.0	29.0	< 0.005	< 0.005	0.05	29.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	14.4
Hauling	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.3	60.3	< 0.005	0.01	0.06	63.3

3.3. Site Preparation (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.69	1.41	12.5	16.4	0.02	0.53	—	0.53	0.49	—	0.49	—	2,419	2,419	0.10	0.02	—	2,428
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	2.48	2.48	—	0.38	0.38	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.86	0.86	< 0.005	0.09	0.09	—	16.9	16.9	< 0.005	< 0.005	0.03	17.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.51	0.67	< 0.005	0.02	—	0.02	0.02	—	0.02	—	99.4	99.4	< 0.005	< 0.005	—	99.8

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.70	0.70	< 0.005	< 0.005	< 0.005	0.73
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.5
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.12
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.35	5.57	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	1,106	1,106	0.05	0.04	4.05	1,123
Vendor	0.04	0.01	0.58	0.28	< 0.005	0.01	0.14	0.14	< 0.005	0.04	0.04	—	508	508	0.02	0.07	1.39	531
Hauling	0.43	0.09	6.80	2.65	0.04	0.07	1.48	1.55	0.07	0.41	0.48	—	5,542	5,542	0.30	0.87	12.9	5,822
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.7	43.7	< 0.005	< 0.005	0.07	44.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.9	20.9	< 0.005	< 0.005	0.02	21.8

Hauling	0.02	< 0.005	0.29	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	228	228	0.01	0.04	0.23	239
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.24	7.24	< 0.005	< 0.005	0.01	7.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.45	3.45	< 0.005	< 0.005	< 0.005	3.61
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.7	37.7	< 0.005	0.01	0.04	39.6

3.4. Site Preparation (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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.69	1.41	12.5	16.4	0.02	0.53	—	0.53	0.49	—	0.49	—	2,419	2,419	0.10	0.02	—	2,428
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	2.48	2.48	—	0.38	0.38	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.86	0.86	< 0.005	0.09	0.09	—	16.9	16.9	< 0.005	< 0.005	0.03	17.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.51	0.67	< 0.005	0.02	—	0.02	0.02	—	0.02	—	99.4	99.4	< 0.005	< 0.005	—	99.8

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.70	0.70	< 0.005	< 0.005	< 0.005	0.73
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.5
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.12
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.35	5.57	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	1,106	1,106	0.05	0.04	4.05	1,123
Vendor	0.04	0.01	0.58	0.28	< 0.005	0.01	0.14	0.14	< 0.005	0.04	0.04	—	508	508	0.02	0.07	1.39	531
Hauling	0.43	0.09	6.80	2.65	0.04	0.07	1.48	1.55	0.07	0.41	0.48	—	5,542	5,542	0.30	0.87	12.9	5,822
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.7	43.7	< 0.005	< 0.005	0.07	44.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.9	20.9	< 0.005	< 0.005	0.02	21.8

Hauling	0.02	< 0.005	0.29	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	228	228	0.01	0.04	0.23	239
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.24	7.24	< 0.005	< 0.005	0.01	7.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.45	3.45	< 0.005	< 0.005	< 0.005	3.61
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.7	37.7	< 0.005	0.01	0.04	39.6

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.53	2.12	18.3	22.7	0.03	0.90	—	0.90	0.83	—	0.83	—	3,358	3,358	0.14	0.03	—	3,370
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.86	0.86	< 0.005	0.09	0.09	—	16.9	16.9	< 0.005	< 0.005	0.03	17.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.53	2.12	18.3	22.7	0.03	0.90	—	0.90	0.83	—	0.83	—	3,358	3,358	0.14	0.03	—	3,370
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.86	0.86	< 0.005	0.09	0.09	—	17.0	17.0	< 0.005	< 0.005	< 0.005	17.8

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.44	3.75	4.67	0.01	0.19	—	0.19	0.17	—	0.17	—	690	690	0.03	0.01	—	692
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	—	3.48	3.48	< 0.005	< 0.005	< 0.005	3.66
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.68	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	—	114	114	< 0.005	< 0.005	—	115
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.61
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.35	5.57	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	1,106	1,106	0.05	0.04	4.05	1,123
Vendor	0.04	0.01	0.58	0.28	< 0.005	0.01	0.14	0.14	< 0.005	0.04	0.04	—	508	508	0.02	0.07	1.39	531
Hauling	0.65	0.13	10.2	3.97	0.06	0.11	2.22	2.33	0.11	0.61	0.71	—	8,313	8,313	0.45	1.30	19.3	8,732
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.38	4.72	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	1,048	1,048	0.05	0.04	0.10	1,062
Vendor	0.04	0.01	0.60	0.29	< 0.005	0.01	0.14	0.14	< 0.005	0.04	0.04	—	508	508	0.02	0.07	0.04	530
Hauling	0.63	0.12	10.6	4.01	0.06	0.11	2.22	2.33	0.11	0.61	0.71	—	8,316	8,316	0.45	1.30	0.50	8,717

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.02	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	219	219	0.01	0.01	0.36	222
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	< 0.005	0.01	0.12	109
Hauling	0.13	0.03	2.20	0.82	0.01	0.02	0.45	0.47	0.02	0.12	0.15	—	1,708	1,708	0.09	0.27	1.71	1,792
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.2	36.2	< 0.005	< 0.005	0.06	36.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.0
Hauling	0.02	< 0.005	0.40	0.15	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	283	283	0.02	0.04	0.28	297

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.53	2.12	18.3	22.7	0.03	0.90	—	0.90	0.83	—	0.83	—	3,358	3,358	0.14	0.03	—	3,370
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.86	0.86	< 0.005	0.09	0.09	—	16.9	16.9	< 0.005	< 0.005	0.03	17.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.53	2.12	18.3	22.7	0.03	0.90	—	0.90	0.83	—	0.83	—	3,358	3,358	0.14	0.03	—	3,370

Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.86	0.86	< 0.005	0.09	0.09	—	17.0	17.0	< 0.005	< 0.005	< 0.005	17.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.44	3.75	4.67	0.01	0.19	—	0.19	0.17	—	0.17	—	690	690	0.03	0.01	—	692
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	—	3.48	3.48	< 0.005	< 0.005	< 0.005	3.66
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.68	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	—	114	114	< 0.005	< 0.005	—	115
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.61
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.35	5.57	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	1,106	1,106	0.05	0.04	4.05	1,123
Vendor	0.04	0.01	0.58	0.28	< 0.005	0.01	0.14	0.14	< 0.005	0.04	0.04	—	508	508	0.02	0.07	1.39	531
Hauling	0.65	0.13	10.2	3.97	0.06	0.11	2.22	2.33	0.11	0.61	0.71	—	8,313	8,313	0.45	1.30	19.3	8,732
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.38	0.34	0.38	4.72	0.00	0.00	1.05	1.05	0.00	0.25	0.25	—	1,048	1,048	0.05	0.04	0.10	1,062
Vendor	0.04	0.01	0.60	0.29	< 0.005	0.01	0.14	0.14	< 0.005	0.04	0.04	—	508	508	0.02	0.07	0.04	530
Hauling	0.63	0.12	10.6	4.01	0.06	0.11	2.22	2.33	0.11	0.61	0.71	—	8,316	8,316	0.45	1.30	0.50	8,717
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.02	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	219	219	0.01	0.01	0.36	222
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	< 0.005	0.01	0.12	109
Hauling	0.13	0.03	2.20	0.82	0.01	0.02	0.45	0.47	0.02	0.12	0.15	—	1,708	1,708	0.09	0.27	1.71	1,792
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.2	36.2	< 0.005	< 0.005	0.06	36.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.0
Hauling	0.02	< 0.005	0.40	0.15	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	283	283	0.02	0.04	0.28	297

3.7. Building Construction (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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.16	4.29	37.4	45.6	0.09	1.28	—	1.28	1.17	—	1.17	—	7,989	7,989	0.32	0.06	—	8,017
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.17	0.14	1.25	1.52	< 0.005	0.04	—	0.04	0.04	—	0.04	—	266	266	0.01	< 0.005	—	267
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.0	44.0	< 0.005	< 0.005	—	44.2
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	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.68	0.77	9.44	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,097	2,097	0.10	0.08	0.21	2,123
Vendor	0.14	0.06	2.41	1.14	0.01	0.03	0.55	0.58	0.01	0.15	0.17	—	2,031	2,031	0.08	0.28	0.14	2,119
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.33	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	70.8	70.8	< 0.005	< 0.005	0.12	71.7
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	67.6	67.6	< 0.005	0.01	0.08	70.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.01	11.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.16	4.29	37.4	45.6	0.09	1.28	—	1.28	1.17	—	1.17	—	7,989	7,989	0.32	0.06	—	8,017
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.25	1.52	< 0.005	0.04	—	0.04	0.04	—	0.04	—	266	266	0.01	< 0.005	—	267
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.0	44.0	< 0.005	< 0.005	—	44.2
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	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.68	0.77	9.44	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,097	2,097	0.10	0.08	0.21	2,123
Vendor	0.14	0.06	2.41	1.14	0.01	0.03	0.55	0.58	0.01	0.15	0.17	—	2,031	2,031	0.08	0.28	0.14	2,119

Hauling	0.00	0.00	0.00	0.00	0.00	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	0.33	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	70.8	70.8	< 0.005	< 0.005	0.12	71.7
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	67.6	67.6	< 0.005	0.01	0.08	70.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.01	11.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.93	4.10	36.0	45.4	0.09	1.14	—	1.14	1.05	—	1.05	—	7,990	7,990	0.32	0.06	—	8,017
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.93	4.10	36.0	45.4	0.09	1.14	—	1.14	1.05	—	1.05	—	7,990	7,990	0.32	0.06	—	8,017
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.52	2.93	25.7	32.4	0.06	0.82	—	0.82	0.75	—	0.75	—	5,707	5,707	0.23	0.05	—	5,727
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	4.69	5.92	0.01	0.15	—	0.15	0.14	—	0.14	—	945	945	0.04	0.01	—	948
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.66	0.59	0.62	10.3	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,168	2,168	0.09	0.08	7.33	2,200
Vendor	0.14	0.06	2.20	1.06	0.01	0.03	0.55	0.58	0.01	0.15	0.17	—	1,995	1,995	0.08	0.28	5.39	2,088
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.66	0.59	0.70	8.82	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,055	2,055	0.09	0.08	0.19	2,080
Vendor	0.14	0.06	2.30	1.09	0.01	0.03	0.55	0.58	0.01	0.15	0.17	—	1,996	1,996	0.08	0.28	0.14	2,083
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.47	0.42	0.54	6.59	0.00	0.00	1.48	1.48	0.00	0.35	0.35	—	1,490	1,490	0.07	0.05	2.27	1,510
Vendor	0.10	0.04	1.65	0.77	0.01	0.02	0.39	0.41	0.01	0.11	0.12	—	1,426	1,426	0.06	0.20	1.66	1,489
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.09	0.08	0.10	1.20	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	247	247	0.01	0.01	0.38	250
Vendor	0.02	0.01	0.30	0.14	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	236	236	0.01	0.03	0.28	247
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.93	4.10	36.0	45.4	0.09	1.14	—	1.14	1.05	—	1.05	—	7,990	7,990	0.32	0.06	—	8,017
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.93	4.10	36.0	45.4	0.09	1.14	—	1.14	1.05	—	1.05	—	7,990	7,990	0.32	0.06	—	8,017
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	2.93	25.7	32.4	0.06	0.82	—	0.82	0.75	—	0.75	—	5,707	5,707	0.23	0.05	—	5,727
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	4.69	5.92	0.01	0.15	—	0.15	0.14	—	0.14	—	945	945	0.04	0.01	—	948
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.66	0.59	0.62	10.3	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,168	2,168	0.09	0.08	7.33	2,200
Vendor	0.14	0.06	2.20	1.06	0.01	0.03	0.55	0.58	0.01	0.15	0.17	—	1,995	1,995	0.08	0.28	5.39	2,088
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.66	0.59	0.70	8.82	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,055	2,055	0.09	0.08	0.19	2,080
Vendor	0.14	0.06	2.30	1.09	0.01	0.03	0.55	0.58	0.01	0.15	0.17	—	1,996	1,996	0.08	0.28	0.14	2,083
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.47	0.42	0.54	6.59	0.00	0.00	1.48	1.48	0.00	0.35	0.35	—	1,490	1,490	0.07	0.05	2.27	1,510
Vendor	0.10	0.04	1.65	0.77	0.01	0.02	0.39	0.41	0.01	0.11	0.12	—	1,426	1,426	0.06	0.20	1.66	1,489
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.09	0.08	0.10	1.20	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	247	247	0.01	0.01	0.38	250
Vendor	0.02	0.01	0.30	0.14	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	236	236	0.01	0.03	0.28	247
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2027) - Unmitigated

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

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

Off-Road Equipment	4.74	3.95	34.9	45.2	0.09	1.04	—	1.04	0.95	—	0.95	—	7,989	7,989	0.32	0.06	—	8,016
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.74	3.95	34.9	45.2	0.09	1.04	—	1.04	0.95	—	0.95	—	7,989	7,989	0.32	0.06	—	8,016
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.90	16.8	21.8	0.04	0.50	—	0.50	0.46	—	0.46	—	3,846	3,846	0.16	0.03	—	3,859
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	3.07	3.97	0.01	0.09	—	0.09	0.08	—	0.08	—	637	637	0.03	0.01	—	639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.57	0.55	9.61	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,126	2,126	0.09	0.08	6.63	2,158
Vendor	0.13	0.06	2.11	1.00	0.01	0.01	0.55	0.56	0.01	0.15	0.17	—	1,957	1,957	0.08	0.27	5.10	2,044
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.64	0.56	0.69	8.14	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,016	2,016	0.03	0.08	0.17	2,039

Vendor	0.13	0.06	2.19	1.03	0.01	0.01	0.55	0.56	0.01	0.15	0.17	—	1,958	1,958	0.08	0.27	0.13	2,041
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.31	0.27	0.33	4.12	0.00	0.00	0.99	0.99	0.00	0.23	0.23	—	985	985	0.01	0.04	1.37	997
Vendor	0.06	0.03	1.06	0.49	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	942	942	0.04	0.13	1.06	983
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.06	0.05	0.06	0.75	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	163	163	< 0.005	0.01	0.23	165
Vendor	0.01	0.01	0.19	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.18	163
Hauling	0.00	0.00	0.00	0.00	0.00	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 Construction (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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.74	3.95	34.9	45.2	0.09	1.04	—	1.04	0.95	—	0.95	—	7,989	7,989	0.32	0.06	—	8,016
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.74	3.95	34.9	45.2	0.09	1.04	—	1.04	0.95	—	0.95	—	7,989	7,989	0.32	0.06	—	8,016
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.90	16.8	21.8	0.04	0.50	—	0.50	0.46	—	0.46	—	3,846	3,846	0.16	0.03	—	3,859
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	3.07	3.97	0.01	0.09	—	0.09	0.08	—	0.08	—	637	637	0.03	0.01	—	639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.57	0.55	9.61	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,126	2,126	0.09	0.08	6.63	2,158
Vendor	0.13	0.06	2.11	1.00	0.01	0.01	0.55	0.56	0.01	0.15	0.17	—	1,957	1,957	0.08	0.27	5.10	2,044
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.64	0.56	0.69	8.14	0.00	0.00	2.09	2.09	0.00	0.49	0.49	—	2,016	2,016	0.03	0.08	0.17	2,039
Vendor	0.13	0.06	2.19	1.03	0.01	0.01	0.55	0.56	0.01	0.15	0.17	—	1,958	1,958	0.08	0.27	0.13	2,041
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.31	0.27	0.33	4.12	0.00	0.00	0.99	0.99	0.00	0.23	0.23	—	985	985	0.01	0.04	1.37	997
Vendor	0.06	0.03	1.06	0.49	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	942	942	0.04	0.13	1.06	983
Hauling	0.00	0.00	0.00	0.00	0.00	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	0.06	0.05	0.06	0.75	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	163	163	< 0.005	0.01	0.23	165

Vendor	0.01	0.01	0.19	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.18	163
Hauling	0.00	0.00	0.00	0.00	0.00	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. Paving (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.05	1.72	15.8	22.9	0.04	0.58	—	0.58	0.53	—	0.53	—	3,505	3,505	0.14	0.03	—	3,517
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.01	0.01	—	—	—	—	—	—	—
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.95	2.82	< 0.005	0.07	—	0.07	0.07	—	0.07	—	432	432	0.02	< 0.005	—	434
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.52	< 0.005	0.01	—	0.01	0.01	—	0.01	—	71.5	71.5	< 0.005	< 0.005	—	71.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.40	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	532	532	0.02	0.02	1.66	539
Vendor	0.03	0.01	0.53	0.25	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	—	489	489	0.02	0.07	1.28	511
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.0	63.0	< 0.005	< 0.005	0.09	63.9
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.3	60.3	< 0.005	0.01	0.07	62.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.99	9.99	< 0.005	< 0.005	0.01	10.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Paving (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.05	1.72	15.8	22.9	0.04	0.58	—	0.58	0.53	—	0.53	—	3,505	3,505	0.14	0.03	—	3,517
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.01	0.01	—	—	—	—	—	—	—
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.95	2.82	< 0.005	0.07	—	0.07	0.07	—	0.07	—	432	432	0.02	< 0.005	—	434
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.52	< 0.005	0.01	—	0.01	0.01	—	0.01	—	71.5	71.5	< 0.005	< 0.005	—	71.8

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.40	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	532	532	0.02	0.02	1.66	539
Vendor	0.03	0.01	0.53	0.25	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	—	489	489	0.02	0.07	1.28	511
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.0	63.0	< 0.005	< 0.005	0.09	63.9
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.3	60.3	< 0.005	0.01	0.07	62.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.99	9.99	< 0.005	< 0.005	0.01	10.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2027) - Unmitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.46	4.30	4.51	0.01	0.10	—	0.10	0.09	—	0.09	—	707	707	0.03	0.01	—	709
Architect ural Coatings	—	24.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.53	0.56	< 0.005	0.01	—	0.01	0.01	—	0.01	—	87.2	87.2	< 0.005	< 0.005	—	87.5
Architect ural Coatings	—	3.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Architect ural Coatings	—	0.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.16	0.14	0.14	2.40	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	532	532	0.02	0.02	1.66	539
Vendor	0.03	0.01	0.53	0.25	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	—	489	489	0.02	0.07	1.28	511
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.0	63.0	< 0.005	< 0.005	0.09	63.9
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.3	60.3	< 0.005	0.01	0.07	62.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.99	9.99	< 0.005	< 0.005	0.01	10.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.46	4.30	4.51	0.01	0.10	—	0.10	0.09	—	0.09	—	707	707	0.03	0.01	—	709
Architect ural Coatings	—	24.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.53	0.56	< 0.005	0.01	—	0.01	0.01	—	0.01	—	87.2	87.2	< 0.005	< 0.005	—	87.5
Architect ural Coatings	—	3.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Architect ural Coatings	—	0.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.40	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	532	532	0.02	0.02	1.66	539
Vendor	0.03	0.01	0.53	0.25	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	—	489	489	0.02	0.07	1.28	511
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.0	63.0	< 0.005	< 0.005	0.09	63.9

Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.3	60.3	< 0.005	0.01	0.07	62.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.99	9.99	< 0.005	< 0.005	0.01	10.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	1,361	1,361	0.12	0.02	—	1,369

Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	535	535	0.05	0.01	—	538
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	54.1	54.1	< 0.005	< 0.005	—	54.4
Arena	—	—	—	—	—	—	—	—	—	—	—	—	770	770	0.07	0.01	—	775
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2,228	2,228	0.19	0.03	—	2,241
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	936	936	0.08	0.01	—	941
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.02	< 0.005	—	197
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	6,080	6,080	0.52	0.07	—	6,116
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	1,361	1,361	0.12	0.02	—	1,369
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	535	535	0.05	0.01	—	538
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	54.1	54.1	< 0.005	< 0.005	—	54.4
Arena	—	—	—	—	—	—	—	—	—	—	—	—	770	770	0.07	0.01	—	775
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2,228	2,228	0.19	0.03	—	2,241

High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	—	936	936	0.08	0.01	—	941
Manufact uring	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.02	< 0.005	—	197
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	6,080	6,080	0.52	0.07	—	6,116
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	225	225	0.02	< 0.005	—	227
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	88.6	88.6	0.01	< 0.005	—	89.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96	< 0.005	< 0.005	—	9.01
Arena	—	—	—	—	—	—	—	—	—	—	—	—	128	128	0.01	< 0.005	—	128
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	369	369	0.03	< 0.005	—	371
High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	—	155	155	0.01	< 0.005	—	156
Manufact uring	—	—	—	—	—	—	—	—	—	—	—	—	32.4	32.4	< 0.005	< 0.005	—	32.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,007	1,007	0.09	0.01	—	1,013

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	1,324	1,324	0.11	0.02	—	1,332
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	535	535	0.05	0.01	—	538
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	52.5	52.5	< 0.005	< 0.005	—	52.8
Arena	—	—	—	—	—	—	—	—	—	—	—	—	751	751	0.06	0.01	—	755
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2,168	2,168	0.19	0.03	—	2,181
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	819	819	0.07	0.01	—	824
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.02	< 0.005	—	192
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	5,840	5,840	0.50	0.07	—	5,874
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	1,324	1,324	0.11	0.02	—	1,332

Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	535	535	0.05	0.01	—	538
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	52.5	52.5	< 0.005	< 0.005	—	52.8
Arena	—	—	—	—	—	—	—	—	—	—	—	—	751	751	0.06	0.01	—	755
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2,168	2,168	0.19	0.03	—	2,181
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	819	819	0.07	0.01	—	824
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.02	< 0.005	—	192
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	5,840	5,840	0.50	0.07	—	5,874
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	219	219	0.02	< 0.005	—	221
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	88.6	88.6	0.01	< 0.005	—	89.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	8.69	8.69	< 0.005	< 0.005	—	8.74
Arena	—	—	—	—	—	—	—	—	—	—	—	—	124	124	0.01	< 0.005	—	125
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	359	359	0.03	< 0.005	—	361

High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	—	136	136	0.01	< 0.005	—	136
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	31.6	31.6	< 0.005	< 0.005	—	31.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	967	967	0.08	0.01	—	973

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.03	0.02	0.30	0.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	354	354	0.03	< 0.005	—	355
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.52	5.52	< 0.005	< 0.005	—	5.54
Arena	0.05	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	580	580	0.05	< 0.005	—	581
General Office Building	0.05	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	580	580	0.05	< 0.005	—	582
High Turnover (Sit Down Restaurant)	0.05	0.03	0.47	0.40	< 0.005	0.04	—	0.04	0.04	—	0.04	—	562	562	0.05	< 0.005	—	563

Manufact	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	147	147	0.01	< 0.005	—	148
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.21	0.10	1.87	1.57	0.01	0.14	—	0.14	0.14	—	0.14	—	2,228	2,228	0.20	< 0.005	—	2,234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.03	0.02	0.30	0.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	354	354	0.03	< 0.005	—	355
Unenclos ed Parking with Elevator	0.00	0.00	0.00	0.00	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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.52	5.52	< 0.005	< 0.005	—	5.54
Arena	0.05	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	580	580	0.05	< 0.005	—	581
General Office Building	0.05	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	580	580	0.05	< 0.005	—	582
High Turnover (Sit Down Restaurart)	0.05	0.03	0.47	0.40	< 0.005	0.04	—	0.04	0.04	—	0.04	—	562	562	0.05	< 0.005	—	563
Manufact uring	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	147	147	0.01	< 0.005	—	148
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.21	0.10	1.87	1.57	0.01	0.14	—	0.14	0.14	—	0.14	—	2,228	2,228	0.20	< 0.005	—	2,234
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.6	58.6	0.01	< 0.005	—	58.8

Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.91	0.91	< 0.005	< 0.005	—	0.92
Arena	0.01	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.0	96.0	0.01	< 0.005	—	96.3
General Office Building	0.01	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.0	96.0	0.01	< 0.005	—	96.3
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	93.0	93.0	0.01	< 0.005	—	93.2
Manufacturing	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.4	24.4	< 0.005	< 0.005	—	24.4
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.34	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	369	369	0.03	< 0.005	—	370

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.03	0.02	0.29	0.24	< 0.005	0.02	—	0.02	0.02	—	0.02	—	343	343	0.03	< 0.005	—	344
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.51	5.51	< 0.005	< 0.005	—	5.52
Arena	0.05	0.03	0.48	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	576	576	0.05	< 0.005	—	577
General Office Building	0.05	0.03	0.47	0.40	< 0.005	0.04	—	0.04	0.04	—	0.04	—	562	562	0.05	< 0.005	—	564
High Turnover (Sit Down Restaurant)	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	561	561	0.05	< 0.005	—	562
Manufacturing	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	146	146	0.01	< 0.005	—	147
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.20	0.10	1.84	1.54	0.01	0.14	—	0.14	0.14	—	0.14	—	2,194	2,194	0.19	< 0.005	—	2,200
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.03	0.02	0.29	0.24	< 0.005	0.02	—	0.02	0.02	—	0.02	—	343	343	0.03	< 0.005	—	344
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.51	5.51	< 0.005	< 0.005	—	5.52
Arena	0.05	0.03	0.48	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	576	576	0.05	< 0.005	—	577
General Office Building	0.05	0.03	0.47	0.40	< 0.005	0.04	—	0.04	0.04	—	0.04	—	562	562	0.05	< 0.005	—	564
High Turnover (Sit Down Restaurant)	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	561	561	0.05	< 0.005	—	562

Manufacturing	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	146	146	0.01	< 0.005	—	147
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.20	0.10	1.84	1.54	0.01	0.14	—	0.14	0.14	—	0.14	—	2,194	2,194	0.19	< 0.005	—	2,200
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	56.8	56.8	0.01	< 0.005	—	57.0
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.91	0.91	< 0.005	< 0.005	—	0.91
Arena	0.01	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.3	95.3	0.01	< 0.005	—	95.6
General Office Building	0.01	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	93.1	93.1	0.01	< 0.005	—	93.3
High Turnover (Sit Down Restaurant)	0.01	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	92.8	92.8	0.01	< 0.005	—	93.1
Manufacturing	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.2	24.2	< 0.005	< 0.005	—	24.3
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.34	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	363	363	0.03	< 0.005	—	364

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.74	2.52	0.13	15.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	63.2	63.2	< 0.005	< 0.005	—	63.4
Total	2.74	8.08	0.13	15.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	63.2	63.2	< 0.005	< 0.005	—	63.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	5.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipment	0.34	0.32	0.02	1.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.17	7.17	< 0.005	< 0.005	—	7.19
Total	0.34	1.33	0.02	1.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.17	7.17	< 0.005	< 0.005	—	7.19

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.74	2.52	0.13	15.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	63.2	63.2	< 0.005	< 0.005	—	63.4
Total	2.74	8.08	0.13	15.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	63.2	63.2	< 0.005	< 0.005	—	63.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	5.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	0.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.34	0.32	0.02	1.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.17	7.17	< 0.005	< 0.005	—	7.19
Total	0.34	1.33	0.02	1.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.17	7.17	< 0.005	< 0.005	—	7.19

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	18.7	103	122	1.93	0.05	—	184
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.50	2.74	3.24	0.05	< 0.005	—	4.89
Arena	—	—	—	—	—	—	—	—	—	—	—	42.3	233	275	4.35	0.11	—	416
General Office Building	—	—	—	—	—	—	—	—	—	—	—	30.7	169	200	3.16	0.08	—	302

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	10.8	60.0	70.8	1.11	0.03	—	107
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	5.76	31.8	37.6	0.59	0.01	—	56.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	6.04	6.04	< 0.005	< 0.005	—	6.07
Total	—	—	—	—	—	—	—	—	—	—	—	109	606	715	11.2	0.27	—	1,076
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	18.7	103	122	1.93	0.05	—	184
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.50	2.74	3.24	0.05	< 0.005	—	4.89
Arena	—	—	—	—	—	—	—	—	—	—	—	42.3	233	275	4.35	0.11	—	416
General Office Building	—	—	—	—	—	—	—	—	—	—	—	30.7	169	200	3.16	0.08	—	302
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	10.8	60.0	70.8	1.11	0.03	—	107
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	5.76	31.8	37.6	0.59	0.01	—	56.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	6.04	6.04	< 0.005	< 0.005	—	6.07
Total	—	—	—	—	—	—	—	—	—	—	—	109	606	715	11.2	0.27	—	1,076

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	3.10	17.1	20.2	0.32	0.01	—	30.5
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.08	0.45	0.54	0.01	< 0.005	—	0.81
Arena	—	—	—	—	—	—	—	—	—	—	—	7.00	38.6	45.6	0.72	0.02	—	68.9
General Office Building	—	—	—	—	—	—	—	—	—	—	—	5.08	28.0	33.1	0.52	0.01	—	50.0
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.78	9.94	11.7	0.18	< 0.005	—	17.6
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	0.95	5.26	6.22	0.10	< 0.005	—	9.38
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.00	1.00	< 0.005	< 0.005	—	1.01
Total	—	—	—	—	—	—	—	—	—	—	—	18.0	100	118	1.85	0.05	—	178

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	17.0	93.8	111	1.75	0.04	—	167

Unenclosed	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.45	2.49	2.94	0.05	< 0.005	—	4.44
Arena	—	—	—	—	—	—	—	—	—	—	—	38.3	212	250	3.95	0.10	—	377
General Office Building	—	—	—	—	—	—	—	—	—	—	—	27.9	154	182	2.88	0.07	—	275
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	9.76	54.5	64.3	1.01	0.02	—	96.7
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	5.76	31.8	37.6	0.59	0.01	—	56.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	-1.42	-1.42	> -0.005	> -0.005	—	-1.43
Total	—	—	—	—	—	—	—	—	—	—	—	99.3	547	646	10.2	0.25	—	976
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	17.0	93.8	111	1.75	0.04	—	167
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.45	2.49	2.94	0.05	< 0.005	—	4.44
Arena	—	—	—	—	—	—	—	—	—	—	—	38.3	212	250	3.95	0.10	—	377
General Office Building	—	—	—	—	—	—	—	—	—	—	—	27.9	154	182	2.88	0.07	—	275

High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	9.76	54.5	64.3	1.01	0.02	—	96.7
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	5.76	31.8	37.6	0.59	0.01	—	56.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	-1.42	-1.42	> -0.005	> -0.005	—	-1.43
Total	—	—	—	—	—	—	—	—	—	—	—	99.3	547	646	10.2	0.25	—	976
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	2.81	15.5	18.3	0.29	0.01	—	27.7
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.07	0.41	0.49	0.01	< 0.005	—	0.73
Arena	—	—	—	—	—	—	—	—	—	—	—	6.35	35.0	41.4	0.65	0.02	—	62.5
General Office Building	—	—	—	—	—	—	—	—	—	—	—	4.63	25.5	30.2	0.48	0.01	—	45.5
High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	1.62	9.03	10.6	0.17	< 0.005	—	16.0
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	0.95	5.26	6.22	0.10	< 0.005	—	9.38
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	-0.24	-0.24	> -0.005	> -0.005	—	-0.24
Total	—	—	—	—	—	—	—	—	—	—	—	16.4	90.6	107	1.69	0.04	—	162

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	27.6	0.00	27.6	2.76	0.00	—	96.4
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.98	0.00	1.98	0.20	0.00	—	6.93
Arena	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.66
General Office Building	—	—	—	—	—	—	—	—	—	—	—	45.1	0.00	45.1	4.51	0.00	—	158
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	119	0.00	119	11.9	0.00	—	415
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	8.69	0.00	8.69	0.87	0.00	—	30.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Office Park	—	—	—	—	—	—	—	—	—	—	—	27.6	0.00	27.6	2.76	0.00	—	96.4
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.98	0.00	1.98	0.20	0.00	—	6.93
Arena	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.66
General Office Building	—	—	—	—	—	—	—	—	—	—	—	45.1	0.00	45.1	4.51	0.00	—	158
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	119	0.00	119	11.9	0.00	—	415
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	8.69	0.00	8.69	0.87	0.00	—	30.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.33	0.00	0.33	0.03	0.00	—	1.15
Arena	—	—	—	—	—	—	—	—	—	—	—	0.13	0.00	0.13	0.01	0.00	—	0.44
General Office Building	—	—	—	—	—	—	—	—	—	—	—	7.47	0.00	7.47	0.75	0.00	—	26.1

High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	19.6	0.00	19.6	1.96	0.00	—	68.7
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	1.44	0.00	1.44	0.14	0.00	—	5.03
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	33.6	0.00	33.6	3.36	0.00	—	117

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	27.6	0.00	27.6	2.76	0.00	—	96.4
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.98	0.00	1.98	0.20	0.00	—	6.93
Arena	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.66
General Office Building	—	—	—	—	—	—	—	—	—	—	—	45.1	0.00	45.1	4.51	0.00	—	158
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	119	0.00	119	11.9	0.00	—	415

Manufact	—	—	—	—	—	—	—	—	—	—	—	8.69	0.00	8.69	0.87	0.00	—	30.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	27.6	0.00	27.6	2.76	0.00	—	96.4
Unenclos ed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.98	0.00	1.98	0.20	0.00	—	6.93
Arena	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.66
General Office Building	—	—	—	—	—	—	—	—	—	—	—	45.1	0.00	45.1	4.51	0.00	—	158
High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	119	0.00	119	11.9	0.00	—	415
Manufact uring	—	—	—	—	—	—	—	—	—	—	—	8.69	0.00	8.69	0.87	0.00	—	30.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0

Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.33	0.00	0.33	0.03	0.00	—	1.15
Arena	—	—	—	—	—	—	—	—	—	—	—	0.13	0.00	0.13	0.01	0.00	—	0.44
General Office Building	—	—	—	—	—	—	—	—	—	—	—	7.47	0.00	7.47	0.75	0.00	—	26.1
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	19.6	0.00	19.6	1.96	0.00	—	68.7
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	1.44	0.00	1.44	0.14	0.00	—	5.03
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	33.6	0.00	33.6	3.36	0.00	—	117

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.9	28.9
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.9	28.9
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.79	4.79
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.46	5.46

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.9	28.9
Manufacturing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.32	0.32
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.9	28.9
Manufact uring	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Arena	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
High Turnover (Sit Down Restaurart)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.79	4.79
Manufact uring	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.46	5.46

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.94	0.79	7.47	12.4	0.02	0.32	—	0.32	0.30	—	0.30	—	1,829	1,829	0.07	0.01	—	1,836
Rough Terrain Forklifts	0.27	0.23	3.29	6.53	0.01	0.07	—	0.07	0.06	—	0.06	—	1,074	1,074	0.04	0.01	—	1,078
Aerial Lifts	0.18	0.15	2.89	3.09	0.01	0.02	—	0.02	0.02	—	0.02	—	590	590	0.02	< 0.005	—	592
Generator Sets	0.36	0.29	2.36	1.56	< 0.005	0.09	—	0.09	0.09	—	0.09	—	312	312	0.01	< 0.005	—	313
Total	1.75	1.47	16.0	23.6	0.04	0.50	—	0.50	0.46	—	0.46	—	3,806	3,806	0.15	0.03	—	3,819
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.94	0.79	7.47	12.4	0.02	0.32	—	0.32	0.30	—	0.30	—	1,829	1,829	0.07	0.01	—	1,836
Rough Terrain Forklifts	0.27	0.23	3.29	6.53	0.01	0.07	—	0.07	0.06	—	0.06	—	1,074	1,074	0.04	0.01	—	1,078
Aerial Lifts	0.18	0.15	2.89	3.09	0.01	0.02	—	0.02	0.02	—	0.02	—	590	590	0.02	< 0.005	—	592
Generator Sets	0.36	0.29	2.36	1.56	< 0.005	0.09	—	0.09	0.09	—	0.09	—	312	312	0.01	< 0.005	—	313
Total	1.75	1.47	16.0	23.6	0.04	0.50	—	0.50	0.46	—	0.46	—	3,806	3,806	0.15	0.03	—	3,819

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.12	0.10	0.97	1.61	< 0.005	0.04	—	0.04	0.04	—	0.04	—	216	216	0.01	< 0.005	—	216
Rough Terrain Forklifts	0.04	0.03	0.43	0.85	< 0.005	0.01	—	0.01	0.01	—	0.01	—	127	127	0.01	< 0.005	—	127
Aerial Lifts	0.02	0.02	0.38	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.6	69.6	< 0.005	< 0.005	—	69.9
Generato r Sets	0.05	0.04	0.31	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.7	36.7	< 0.005	< 0.005	—	36.9
Total	0.23	0.19	2.08	3.06	< 0.005	0.07	—	0.07	0.06	—	0.06	—	449	449	0.02	< 0.005	—	450

4.7.2. Mitigated

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

Equipme nt Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.94	0.79	7.47	12.4	0.02	0.32	—	0.32	0.30	—	0.30	—	1,829	1,829	0.07	0.01	—	1,836
Rough Terrain Forklifts	0.27	0.23	3.29	6.53	0.01	0.07	—	0.07	0.06	—	0.06	—	1,074	1,074	0.04	0.01	—	1,078
Aerial Lifts	0.18	0.15	2.89	3.09	0.01	0.02	—	0.02	0.02	—	0.02	—	590	590	0.02	< 0.005	—	592
Generato r Sets	0.36	0.29	2.36	1.56	< 0.005	0.09	—	0.09	0.09	—	0.09	—	312	312	0.01	< 0.005	—	313
Total	1.75	1.47	16.0	23.6	0.04	0.50	—	0.50	0.46	—	0.46	—	3,806	3,806	0.15	0.03	—	3,819
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Forklifts	0.94	0.79	7.47	12.4	0.02	0.32	—	0.32	0.30	—	0.30	—	1,829	1,829	0.07	0.01	—	1,836
Rough Terrain Forklifts	0.27	0.23	3.29	6.53	0.01	0.07	—	0.07	0.06	—	0.06	—	1,074	1,074	0.04	0.01	—	1,078
Aerial Lifts	0.18	0.15	2.89	3.09	0.01	0.02	—	0.02	0.02	—	0.02	—	590	590	0.02	< 0.005	—	592
Generator Sets	0.36	0.29	2.36	1.56	< 0.005	0.09	—	0.09	0.09	—	0.09	—	312	312	0.01	< 0.005	—	313
Total	1.75	1.47	16.0	23.6	0.04	0.50	—	0.50	0.46	—	0.46	—	3,806	3,806	0.15	0.03	—	3,819
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.12	0.10	0.97	1.61	< 0.005	0.04	—	0.04	0.04	—	0.04	—	216	216	0.01	< 0.005	—	216
Rough Terrain Forklifts	0.04	0.03	0.43	0.85	< 0.005	0.01	—	0.01	0.01	—	0.01	—	127	127	0.01	< 0.005	—	127
Aerial Lifts	0.02	0.02	0.38	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.6	69.6	< 0.005	< 0.005	—	69.9
Generator Sets	0.05	0.04	0.31	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.7	36.7	< 0.005	< 0.005	—	36.9
Total	0.23	0.19	2.08	3.06	< 0.005	0.07	—	0.07	0.06	—	0.06	—	449	449	0.02	< 0.005	—	450

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

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

4.8.2. Mitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)

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

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

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	5/19/2025	8/8/2025	5.00	60.0	Demolish existing buildings & hardscape.
Site Preparation	Site Preparation	8/11/2025	8/29/2025	5.00	15.0	Shoring.
Grading	Grading	9/1/2025	12/12/2025	5.00	75.0	Earthwork.
Building Construction	Building Construction	12/15/2025	9/3/2027	5.00	450	Construct buildings.
Paving	Paving	5/3/2027	7/2/2027	5.00	45.0	Pave access & service areas.
Architectural Coating	Architectural Coating	7/5/2027	9/3/2027	5.00	45.0	Apply coatings & finishes to structures.

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	Concrete/Industrial Saws	Diesel	Average	2.00	7.00	33.0	0.73
Demolition	Excavators	Diesel	Average	2.00	7.00	36.0	0.38
Demolition	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	4.00	7.00	84.0	0.37
Demolition	Rough Terrain Forklifts	Diesel	Average	2.00	7.00	96.0	0.40
Demolition	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Demolition	Air Compressors	Diesel	Average	2.00	7.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	7.00	84.0	0.37
Site Preparation	Excavators	Diesel	Average	2.00	7.00	36.0	0.38
Site Preparation	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Site Preparation	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Site Preparation	Air Compressors	Diesel	Average	2.00	7.00	37.0	0.48
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Grading	Tractors/Loaders/Backhoes	Diesel	Average	4.00	7.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Grading	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Grading	Plate Compactors	Diesel	Average	1.00	7.00	8.00	0.43
Grading	Generator Sets	Diesel	Average	2.00	7.00	14.0	0.74
Grading	Air Compressors	Diesel	Average	2.00	7.00	37.0	0.48
Building Construction	Cranes	Diesel	Average	3.00	7.00	367	0.29
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Backh	Diesel	Average	4.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	10.0	7.00	46.0	0.45
Building Construction	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Building Construction	Rough Terrain Forklifts	Diesel	Average	4.00	7.00	96.0	0.40
Building Construction	Cement and Mortar Mixers	Diesel	Average	3.00	7.00	10.0	0.56
Building Construction	Plate Compactors	Diesel	Average	1.00	6.00	8.00	0.43
Building Construction	Air Compressors	Diesel	Average	3.00	7.00	37.0	0.48
Building Construction	Generator Sets	Diesel	Average	3.00	7.00	14.0	0.74
Paving	Pavers	Diesel	Average	2.00	7.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	7.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Air Compressors	Diesel	Average	2.00	7.00	37.0	0.48
Paving	Generator Sets	Diesel	Average	2.00	7.00	14.0	0.74
Paving	Plate Compactors	Diesel	Average	1.00	7.00	8.00	0.43
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	7.00	10.0	0.56
Paving	Excavators	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Paving	Graders	Diesel	Average	1.00	6.00	148	0.41
Paving	Rough Terrain Forklifts	Diesel	Average	2.00	7.00	96.0	0.40
Architectural Coating	Air Compressors	Diesel	Average	2.00	6.00	37.0	0.48
Architectural Coating	Generator Sets	Diesel	Average	2.00	7.00	14.0	0.74
Architectural Coating	Aerial Lifts	Diesel	Average	2.00	7.00	46.0	0.31

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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Demolition	Concrete/Industrial Saws	Diesel	Average	2.00	7.00	33.0	0.73
Demolition	Excavators	Diesel	Average	2.00	7.00	36.0	0.38
Demolition	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Demolition	Tractors/Loaders/Backh oes	Diesel	Average	4.00	7.00	84.0	0.37
Demolition	Rough Terrain Forklifts	Diesel	Average	2.00	7.00	96.0	0.40
Demolition	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Demolition	Air Compressors	Diesel	Average	2.00	7.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Site Preparation	Tractors/Loaders/Backh oes	Diesel	Average	4.00	7.00	84.0	0.37
Site Preparation	Excavators	Diesel	Average	2.00	7.00	36.0	0.38
Site Preparation	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Site Preparation	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Site Preparation	Air Compressors	Diesel	Average	2.00	7.00	37.0	0.48
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Grading	Tractors/Loaders/Backh oes	Diesel	Average	4.00	7.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Grading	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Grading	Plate Compactors	Diesel	Average	1.00	7.00	8.00	0.43
Grading	Generator Sets	Diesel	Average	2.00	7.00	14.0	0.74
Grading	Air Compressors	Diesel	Average	2.00	7.00	37.0	0.48
Building Construction	Cranes	Diesel	Average	3.00	7.00	367	0.29
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	4.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	10.0	7.00	46.0	0.45
Building Construction	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Building Construction	Rough Terrain Forklifts	Diesel	Average	4.00	7.00	96.0	0.40
Building Construction	Cement and Mortar Mixers	Diesel	Average	3.00	7.00	10.0	0.56
Building Construction	Plate Compactors	Diesel	Average	1.00	6.00	8.00	0.43
Building Construction	Air Compressors	Diesel	Average	3.00	7.00	37.0	0.48
Building Construction	Generator Sets	Diesel	Average	3.00	7.00	14.0	0.74
Paving	Pavers	Diesel	Average	2.00	7.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	7.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Air Compressors	Diesel	Average	2.00	7.00	37.0	0.48
Paving	Generator Sets	Diesel	Average	2.00	7.00	14.0	0.74
Paving	Plate Compactors	Diesel	Average	1.00	7.00	8.00	0.43
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	7.00	10.0	0.56
Paving	Excavators	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Paving	Graders	Diesel	Average	1.00	6.00	148	0.41
Paving	Rough Terrain Forklifts	Diesel	Average	2.00	7.00	96.0	0.40
Architectural Coating	Air Compressors	Diesel	Average	2.00	6.00	37.0	0.48
Architectural Coating	Generator Sets	Diesel	Average	2.00	7.00	14.0	0.74
Architectural Coating	Aerial Lifts	Diesel	Average	2.00	7.00	46.0	0.31

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	80.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	16.0	10.2	HHDT,MHDT
Demolition	Hauling	32.0	20.0	HHDT
Demolition	Onsite truck	2.00	2.00	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	80.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	16.0	10.2	HHDT,MHDT
Site Preparation	Hauling	80.0	20.0	HHDT
Site Preparation	Onsite truck	2.00	2.00	HHDT
Grading	—	—	—	—
Grading	Worker	80.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	16.0	10.2	HHDT,MHDT
Grading	Hauling	120	20.0	HHDT
Grading	Onsite truck	2.00	2.00	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	160	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	64.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	0.00	HHDT
Paving	—	—	—	—
Paving	Worker	40.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	16.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	0.00	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	40.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	16.0	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	80.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	16.0	10.2	HHDT,MHDT
Demolition	Hauling	32.0	20.0	HHDT
Demolition	Onsite truck	2.00	2.00	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	80.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	16.0	10.2	HHDT,MHDT
Site Preparation	Hauling	80.0	20.0	HHDT
Site Preparation	Onsite truck	2.00	2.00	HHDT
Grading	—	—	—	—
Grading	Worker	80.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	16.0	10.2	HHDT,MHDT
Grading	Hauling	120	20.0	HHDT
Grading	Onsite truck	2.00	2.00	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	160	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	64.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	0.00	0.00	HHDT
Paving	—	—	—	—
Paving	Worker	40.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	16.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	0.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	40.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	16.0	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	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%
Limit vehicle speeds on unpaved roads to 25 mph	57%	57%

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	348,203	115,776	6,641

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	60.0	123,000	—
Site Preparation	0.00	2,840	7.50	2,840	—
Grading	0.00	69,000	113	0.00	—
Paving	0.00	0.00	16.9	0.00	2.54

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
Office Park	0.00	0%
Unenclosed Parking with Elevator	0.67	0%
Strip Mall	0.00	0%
Arena	0.00	0%
General Office Building	0.00	0%
High Turnover (Sit Down Restaurant)	0.00	0%
High Turnover (Sit Down Restaurant)	0.00	0%
Office Park	0.00	0%
Arena	0.00	0%
Manufacturing	0.00	0%
Office Park	0.00	0%
Strip Mall	0.00	0%
Office Park	0.00	0%

Other Non-Asphalt Surfaces	1.87	50%
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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	567	0.05	0.01
2026	0.00	567	0.05	0.01
2027	0.00	567	0.05	0.01

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	2,953	2,215	2,215	1,000,882	21,618	16,214	16,214	7,327,010

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	2,953	2,215	2,215	1,000,882	21,618	16,214	16,214	7,327,010

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	348,203	115,776	6,641

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Office Park	707,236	567	0.0489	0.0069	892,079
Unenclosed Parking with Elevator	344,360	567	0.0489	0.0069	0.00
Strip Mall	4,978	567	0.0489	0.0069	2,462
Arena	309,960	567	0.0489	0.0069	1,130,768
General Office Building	1,434,543	567	0.0489	0.0069	1,809,473
High Turnover (Sit Down Restaurant)	309,416	567	0.0489	0.0069	899,932

High Turnover (Sit Down Restaurant)	293,131	567	0.0489	0.0069	852,567
Office Park	4,779	567	0.0489	0.0069	6,028
Arena	185,976	567	0.0489	0.0069	678,461
Manufacturing	125,921	567	0.0489	0.0069	459,374
Office Park	121,058	567	0.0489	0.0069	152,698
Strip Mall	29,870	567	0.0489	0.0069	14,772
Office Park	43,008	567	0.0489	0.0069	54,248
Other Non-Asphalt Surfaces	0.00	567	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)
Office Park	688,167	567	0.0489	0.0069	864,867
Unenclosed Parking with Elevator	344,360	567	0.0489	0.0069	0.00
Strip Mall	4,827	567	0.0489	0.0069	2,455
Arena	302,009	567	0.0489	0.0069	1,122,499
General Office Building	1,395,862	567	0.0489	0.0069	1,754,278
High Turnover (Sit Down Restaurant)	270,734	567	0.0489	0.0069	898,412
High Turnover (Sit Down Restaurant)	256,485	567	0.0489	0.0069	851,127
Office Park	4,650	567	0.0489	0.0069	5,844
Arena	181,205	567	0.0489	0.0069	673,499
Manufacturing	122,691	567	0.0489	0.0069	456,015
Office Park	117,794	567	0.0489	0.0069	148,040
Strip Mall	28,963	567	0.0489	0.0069	14,732
Office Park	41,848	567	0.0489	0.0069	52,593

Other Non-Asphalt Surfaces	0.00	567	0.0489	0.0069	0.00
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5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Office Park	7,891,378	0.00
Unenclosed Parking with Elevator	0.00	0.00
Strip Mall	37,036	0.00
Arena	13,784,644	0.00
General Office Building	16,006,701	0.00
High Turnover (Sit Down Restaurant)	2,883,570	0.00
High Turnover (Sit Down Restaurant)	2,731,803	77,914
Office Park	53,320	0.00
Arena	8,270,786	0.00
Manufacturing	3,006,250	0.00
Office Park	1,350,776	0.00
Strip Mall	222,218	0.00
Office Park	479,881	0.00
Other Non-Asphalt Surfaces	0.00	732,395

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Office Park	7,157,480	0.00
Unenclosed Parking with Elevator	0.00	0.00
Strip Mall	33,607	0.00
Arena	12,508,186	0.00

General Office Building	14,582,105	0.00
High Turnover (Sit Down Restaurant)	2,616,552	0.00
High Turnover (Sit Down Restaurant)	2,478,838	77,914
Office Park	48,361	0.00
Arena	7,504,911	0.00
Manufacturing	3,006,250	0.00
Office Park	1,225,154	0.00
Strip Mall	201,640	0.00
Office Park	435,252	0.00
Other Non-Asphalt Surfaces	0.00	-172,771

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Office Park	41.3	—
Unenclosed Parking with Elevator	0.00	—
Strip Mall	0.53	—
Arena	0.88	—
General Office Building	83.8	—
High Turnover (Sit Down Restaurant)	113	—
High Turnover (Sit Down Restaurant)	107	—
Office Park	0.28	—
Arena	0.53	—
Manufacturing	16.1	—
Office Park	7.07	—
Strip Mall	3.15	—

Office Park	2.51	—
Other Non-Asphalt Surfaces	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Office Park	41.3	—
Unenclosed Parking with Elevator	0.00	—
Strip Mall	0.53	—
Arena	0.88	—
General Office Building	83.8	—
High Turnover (Sit Down Restaurant)	113	—
High Turnover (Sit Down Restaurant)	107	—
Office Park	0.28	—
Arena	0.53	—
Manufacturing	16.1	—
Office Park	7.07	—
Strip Mall	3.15	—
Office Park	2.51	—
Other Non-Asphalt Surfaces	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
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	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
Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
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
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
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
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Manufacturing	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	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
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	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
Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
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
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
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
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Arena	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Arena	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Arena	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Manufacturing	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	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
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Forklifts	Diesel	Average	12.0	8.00	82.0	0.20
Rough Terrain Forklifts	Diesel	Average	4.00	6.00	96.0	0.40
Aerial Lifts	Diesel	Average	4.00	8.00	46.0	0.31
Generator Sets	Diesel	Average	4.00	6.00	14.0	0.74

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Forklifts	Diesel	Average	12.0	8.00	82.0	0.20
Rough Terrain Forklifts	Diesel	Average	4.00	6.00	96.0	0.40
Aerial Lifts	Diesel	Average	4.00	8.00	46.0	0.31
Generator Sets	Diesel	Average	4.00	6.00	14.0	0.74

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
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5.16.2. Process Boilers

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

Equipment Type	Fuel Type
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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
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5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

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

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.47	annual days of extreme heat
Extreme Precipitation	5.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth

Wildfire	0.00	annual hectares burned
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Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	3	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	2	1
Wildfire	2	2	2	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	1	2	1

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

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	4	1

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	2	1
Wildfire	2	2	2	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	3	1

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

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

6.4.1. Temperature and Extreme Heat

User Selected Measures	Co-Benefits Achieved	Exposure Reduction	Sensitivity Reduction	Adaptive Capacity Increase
D-3: Install Drought Resistant Landscaping	Water Conservation	—	1.00	1.00
EH-4: Enhance Building Envelope Efficiency	Energy and Fuel Savings, Improved Air Quality, Improved Public Health, Social Equity	—	—	1.00
EH-9: Expand Urban Tree Canopy	Energy and Fuel Savings, Improved Air Quality, Improved Public Health, Social Equity	1.00	1.00	—
EH-10: Install Covered Parking	Improved Air Quality, Improved Public Health	—	—	1.00

6.4.2. Air Quality Degradation

User Selected Measures	Co-Benefits Achieved	Exposure Reduction	Sensitivity Reduction	Adaptive Capacity Increase
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EH-4: Enhance Building Envelope Efficiency	Energy and Fuel Savings, Improved Air Quality, Improved Public Health, Social Equity	—	—	1.00
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7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	40.0
AQ-PM	73.9
AQ-DPM	30.1
Drinking Water	92.5
Lead Risk Housing	86.1
Pesticides	38.3
Toxic Releases	82.4
Traffic	28.4
Effect Indicators	—
CleanUp Sites	20.5
Groundwater	50.1
Haz Waste Facilities/Generators	64.6
Impaired Water Bodies	0.00
Solid Waste	9.67
Sensitive Population	—
Asthma	95.7
Cardio-vascular	71.3
Low Birth Weights	98.3

Socioeconomic Factor Indicators	—
Education	61.7
Housing	98.4
Linguistic	56.3
Poverty	82.4
Unemployment	94.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	22.98216348
Employed	17.64403952
Median HI	0.731425638
Education	—
Bachelor's or higher	50.28872065
High school enrollment	100
Preschool enrollment	17.78519184
Transportation	—
Auto Access	1.924804312
Active commuting	80.85461311
Social	—
2-parent households	3.926600796
Voting	10.6249198
Neighborhood	—
Alcohol availability	63.18490953
Park access	81.35506224

Retail density	78.8399846
Supermarket access	43.15411267
Tree canopy	55.97330938
Housing	—
Homeownership	9.162068523
Housing habitability	22.0069293
Low-inc homeowner severe housing cost burden	85.34582317
Low-inc renter severe housing cost burden	15.10329783
Uncrowded housing	69.47260362
Health Outcomes	—
Insured adults	43.44924933
Arthritis	3.0
Asthma ER Admissions	7.0
High Blood Pressure	1.0
Cancer (excluding skin)	25.9
Asthma	3.8
Coronary Heart Disease	5.2
Chronic Obstructive Pulmonary Disease	6.6
Diagnosed Diabetes	0.9
Life Expectancy at Birth	5.2
Cognitively Disabled	7.9
Physically Disabled	2.9
Heart Attack ER Admissions	51.9
Mental Health Not Good	24.7
Chronic Kidney Disease	1.7
Obesity	5.4
Pedestrian Injuries	97.4

Physical Health Not Good	14.8
Stroke	0.9
Health Risk Behaviors	—
Binge Drinking	97.9
Current Smoker	26.1
No Leisure Time for Physical Activity	21.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	51.6
Elderly	12.6
English Speaking	23.3
Foreign-born	31.7
Outdoor Workers	87.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	15.7
Traffic Density	65.8
Traffic Access	87.4
Other Indices	—
Hardship	70.0
Other Decision Support	—
2016 Voting	12.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	90.0
Healthy Places Index Score for Project Location (b)	8.00

Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	Source: LADWP 2022 Power Content Label
Land Use	Project elements obtained from Site Plan & Project Description.
Construction: Construction Phases	Schedule provided by Applicant.
Construction: Off-Road Equipment	Equipment inventories provided by Applicant.
Construction: Dust From Material Movement	Demolition and Paving phases added due to ground-disturbing equipment.
Construction: Trips and VMT	Conservative estimates of construction trips.
Construction: On-Road Fugitive Dust	Vehicle speeds on unpaved surfaces limited to 15 mph per SCAQMD Rule 403 (57% reduction based on Table XI-A).
Construction: Paving	Parking structure will not be asphalt; Portions of service roads will be.
Construction: Electricity	Source: LADWP 2022 Power Content Label
Construction: Demolition	Existing hardscape (asphalt & concrete) to be removed during site preparation.
Operations: Off-Road Equipment	On-site operational equipment supporting studio productions & mill shop.
Construction: Architectural Coatings	SCAQMD Rule 1113 requires a VOC content less than or equal to 50 g/L effective January 1, 2019.