Appendix E– Greenhouse Gas Emissions Assessment

Greenhouse Gas Emissions Assessment
Block 20 Project

San Mateo, California

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
AB	Assembly Bill
ABAG	Association of Bay Area Governments
BAAQMD	Bay Area Air Quality Management District
BMR	Below Market Rate Units
CalEEMod	California Emissions Estimator Model
CalGreen	California Green Building Standards

LIST OF ACRONYMS AND ABBREVIATIONS

CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	methane
City	City of San Mateo
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	San Mateo County
EO	Executive Order
EV	electric vehicle
GDP	Gross Domestic Product
GHG	greenhouse gas
HVAC	Heating, ventilation, and air conditioning systems
IPCC	Intergovernmental Panel on Climate Change
kW	Kilowatt
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalents
N_2O	nitrous oxide
PRC	Public Resources Code
Project	Block 20 Project
RTP	Regional Transportation Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
sf	square feet
TAC	toxic air contaminant
TDM	Transportation Demand Management
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled

1.0 INTRODUCTION

This report documents the results of a Greenhouse Gas (GHG) Emissions Assessment completed for the Block 20 Project (Project), which includes the demolition of several existing structures on the Project Site and the construction of a new seven-story mixed use building with underground parking in the City of San Mateo (City), California. This assessment is based on the methodologies recommended by the City of San Mateo and the Bay Area Air Quality Management District (BAAQMD) for project-level review and was prepared with consideration of the emissions reduction actions proposed by the Project. The purpose of this assessment is to estimate Project-generated GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

1.1 Project Location & Description

The Project Site is comprised of two parcels addressed as 500 E. 4th Avenue and 524 E. 4th Avenue. The Project Area is surrounded mainly by office commercial, retail commercial, and residential uses. The Proposed Project proposes the demolition of the existing fast-food restaurant building structure and a vacant parcel. The Project then proposes to construct a new seven-story mixed use building and below grade parking garage, totaling 170,163 square feet (sf). The building would include a total of approximately 98,717 sf of office space and 72 residential units. The first three floors from ground level of the proposed building would consist of office space. The fourth, fifth, and sixth floors would consist of residential units and there would be shared residential balcony on the fourth floor. The seventh floor would consist of office space and have an office balcony. The two-story below grade parking garage would be accessible from S. Claremont Street. Additionally, the Project includes on and offsite improvements such as ground level landscaping and public right of way improvements for crosswalks surrounding the Project Site.

The City of San Mateo's Below Market Rate (BMR) Inclusionary program mandates that, for developments consisting of 11 or more units, 15 percent of the proposed units be affordable to low-income families. The Proposed Project consists of six (15%) very low-income units and six (15%) moderate income units and meets the affordability requirement. To accommodate the below grade parking garage, it is expected that construction would include the export of approximately 47,278 cubic yards of soil.

2.0 GREENHOUSE GAS EMISSIONS

2.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and N_2O. Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. More specifically, experts agree that human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020. (Intergovernmental Panel on Climate Change [IPCC] 2023).

Table 2-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Despite the sequestration of CO_2, human-caused climate

change is already causing damaging effects, including weather and climate extremes in every region across the globe (IPCC 2023).

Table 2-1. Greenhouse Gases

Greenhouse Gas	Description
CO_2	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
CH_4	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[2]
N_2O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1]U.S. Environmental Protection Agency (USEPA) 2023a, [2]USEPA 2023b, [3]USEPA2023c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of the California Environmental Quality Act (CEQA), GHG impacts on global climate change are inherently cumulative.

2.1.1 Sources of Greenhouse Gas Emissions

In 2023, the California Air Resources Board (CARB) released the 2023 edition of the California GHG inventory covering calendar year 2021 emissions. In 2021, California emitted 381.3 million gross metric tons of CO_2e including from imported electricity. This inventory is 3.4 percent higher than the State's 2020 inventory, but 5.7 percent lower than 2019 level, which aligns with the global changes, shutdowns, and economic recoveries affected by the COVID-19 pandemic. Additionally, between 2020 and 2021, California's Gross Domestic Product (GDP) increased 7.8 percent while the GHG intensity of California's economy (GHG emissions per unit GDP) decreased 4.1 percent. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2021, accounting for approximately 38.2 percent

of total GHG emissions in the state. Transportation emissions have increased 7.4 percent compared to 2020, which is most likely from light duty vehicle emissions that rebounded when COVID-19 shelter-in-place orders were lifted. Emissions from the electricity sector account for 16.4 percent of the inventory, which is an increase of 4.8 percent since 2020, despite the growth of in-state solar and imported renewable energy. California's industrial sector accounts for the second largest source of the state's GHG emissions in 2021, accounting for 19.4 percent, which saw an increase of nearly 1 percent since 2020 (CARB 2023).

2.2 Regulatory Framework

2.2.1 State

2.2.1.1 Executive Orders S-3-05 and B-30-15

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the State. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

On April 20, 2015, Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments such as the European Union, which adopted the same target in October 2014. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

2.2.1.2 Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 required CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by the year 2017.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2022 Scoping Plan Update, outlines strategies and actions to reduce greenhouse gas emissions in California. The plan focuses on achieving the state's goal of reaching carbon neutrality by 2045 and reducing greenhouse gas emissions to 40% below 1990 levels by 2030. The plan includes a range of strategies across various sectors, including transportation, industry, energy, and agriculture. Some of the key strategies include transitioning to zero-emission vehicles, expanding renewable energy sources, promoting sustainable land

use practices, implementing a low-carbon fuel standard, and reducing emissions from buildings. Additionally, the plan addresses equity and environmental justice by prioritizing investments in communities most impacted by pollution and climate change. The plan also aims to promote economic growth and job creation through the transition to a low-carbon economy.

2.2.1.3 Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

2.2.1.4 Senate Bill 100 of 2018

In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

2.2.1.5 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2022 California Building Codes include provisions related to energy efficiency to reduce energy consumption and greenhouse gas emissions from buildings. Some of the key energy efficiency components of the codes are:

1. Energy Performance Requirements: The codes specify minimum energy performance standards for the building envelope, lighting, heating and cooling systems, and other components.
2. Lighting Efficiency: The codes require that lighting systems meet minimum efficiency standards, such as the use of energy-efficient light bulbs and fixtures.
3. Heating, ventilation, and air conditioning (HVAC) Systems: The codes establish requirements for HVAC systems, including the use of high-efficiency equipment, duct sealing, and controls.
4. Building Envelope: The codes include provisions for insulation, air sealing, glazing, and other building envelope components to reduce energy loss and improve indoor comfort.
5. Renewable Energy: The codes encourage the use of renewable energy systems, such as photovoltaic panels and wind turbines, to reduce dependence on non-renewable energy sources.
6. Commissioning: The codes require the commissioning of building energy systems to ensure that they are installed and operate correctly and efficiently.

Overall, the energy efficiency provisions of the 2022 California Building Codes aim to reduce the energy consumption of buildings, lower energy costs for building owners and occupants, and reduce the environmental impact of the built environment. The 2022 Building Energy Efficiency Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The exact amount by which the 2022 Building Codes are more efficient compared to the 2019 Building Codes would depend on the specific provisions that have been updated and the specific building being considered. However, in general, the 2022 Building Codes have been updated to include increased requirements for energy efficiency, such as higher insulation and air sealing standards, which are intended to result in more efficient buildings. The 2022 standards are a major step toward meeting Zero Net Energy.

2.2.2 Local

2.2.2.1 Bay Area Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, BAAQMD CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b). On April 20, 2023, the BAAQMD 2022 CEQA Guidelines were adopted. These guidelines present a project-level operational threshold of significance for GHG emissions based on compliance with a Qualified GHG Reduction Strategy or adherence to a suite of BAAQMD performance standards for land uses projects directly related to building design, transportation and consistency with the CEQA Guidelines Section 15183.5(b). This approach for analyzing potential impacts associated with GHG emissions is endorsed by the California Supreme Court in Center for Biological Diversity v. Department of Fish & Wildlife (2015) (62 Cal.4th 204), which evaluates a project based on its effect on California's efforts to meet the state's long-term climate goals. As the Supreme Court held in that case, a project that would be consistent with meeting those goals can be found to have a less-than-significant impact on climate change under CEQA. If a project would contribute its "fair share" of what will be required to achieve those long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change (BAAQMD 2023). Applying this approach, the BAAQMD has analyzed what will be required of new land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045. The BAAQMD has found, based on this analysis, that a new land use development project being built today needs to incorporate the following design elements to do its "fair share" of implementing the goal of carbon neutrality by 2045:

1) Buildings

    a) The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).

    b) The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2) Transportation

   a) Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:

      i) Residential projects: 15 percent below the existing VMT per capita

      ii) Office projects: 15 percent below the existing VMT per employee

      iii) Retail projects: no net increase in existing VMT

   b) Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

BAAQMD Best Management Practices

Because construction emissions are temporary and variable, the BAAQMD has not developed a quantitative threshold of significance for construction related GHG emissions. In order to minimize GHG emissions and emissions of other air quality pollutants, projects should incorporate the best management practices for reducing GHG emissions listed in Table 2-2 to reduce emissions from construction-related activities.

Table 2-2. BAAQMD Best Management Practice for Construction-Related GHG Emissions
Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors or located within a BAAQMD-designated Community Air Risk Evaluation area or Assembly Bill 617 community.
Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliant engines or better as a condition of contract.
Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year 2024 or 2026, as a condition of contract.
Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (A 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations (CCR)]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.
Prohibit off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
Use California Air Resources Board–approved renewable diesel fuel in off-road construction equipment and on-road trucks.
Use USEPA SmartWay certified trucks for deliveries and equipment transport.
Require all construction equipment to be maintained and properly tuned in accordance with manufacturer's specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.
Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.
Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.
Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15 percent more by weight than the diversion requirement in Title 24.
Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products used should be certified through a sustainable forestry program.
Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.
Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.
Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities.

Source: BAAQMD 2023

2.2.2.2 Association of Bay Area Governments Final Plan Bay Area 2050

The Association of Bay Area Governments (ABAG) Plan Bay Area 2050 is the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) for the San Francisco Bay Area. Plan Bay Area 2050 estimates a 22 percent reduction of automotive GHG emissions by 2035 compared to 2005. The region's applicable GHG per capita emissions target, mandated by CARB, is a 19 percent reduction for 2035, compared to 2005. Plan Bay Area 2050 establishes means of establishing GHG reduction goals through transportation improvements, including a clean vehicle feebate and targeted transportation alternatives. According to ABAG, the San Francisco Bay Area will exceed the mandated GHG reduction target of 19 percent for 2035 by implementing Plan Bay Area (ABAG 2021).

2.2.2.3 BAAQMD 2017 Clean Air Plan

The 2017 Clean Air Plan provides a regional strategy with the goal of protecting public health and protecting the climate. The 2017 Clean Air Plan is consistent with the California GHG reduction goals. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a "post-carbon economy" without fossil fuel combustion, as needed to achieve ambitious greenhouse gas reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets (BAAQMD 2017).

The 2017 Clean Air Plan includes numerous control measures designed to reduce GHG emissions from stationary and transportation sources. The plan lays the framework for reducing Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050 (BAAQMD 2017).

2.2.2.4 The City of San Mateo Climate Action Plan

The City adopted a Technical Update to their 2020 community-wide Climate Action Plan (CAP) in 2024, which updates and consolidates the various City's GHG reduction efforts based on the vision of San Mateo residents, businesses, and local government. The Technical Update to the CAP was completed in 2023 as part of the City's General Plan 2040 update process. The City's General Plan 2040 was adopted by the City Council on March 18, 2024. The 2024 Technical Update to the CAP provides the framework for San Mateo to reduce its community wide GHG emissions in a manner consistent with state reduction targets and goals for 2030 and 2045. The 2024 CAP was prepared consistent with CEQA Guidelines for Plans for the Reduction of Greenhouse Gas Emissions (California Code of Regulations [CCR] 15183.5). This facilitates the capacity of the 2024 CAP to potentially streamline the environmental assessment of GHGs associated with future developmental initiatives within the City. The 2024 CAP is an update to the City's 2020 CAP which was a direct revision of the 2015 CAP. The 2024 CAP evaluates San Mateo's advancements thus far in the City's GHG targets and provides new insights to achieve more substantial and long-term reductions of GHGs.

A CAP is a comprehensive strategy for a community to reduce emissions of GHGs, which, according to scientific consensus, are primarily responsible for causing climate change. The CAP identifies a strategy, reduction measures, and implementation actions the City will use to achieve the targets, consistent with state recommendations, of reducing emissions 40 percent below 1990 levels by 2030 and reducing

emissions 85 percent below 1990 levels and achieve carbon neutrality by 2045. The City CAP includes five key pieces:

1. An inventory of the annual GHG emissions attributable to San Mateo based on the types of activities occurring within the community and guidance from various protocols and agencies.
2. A forecast of the amount of GHG emissions in 2030 and 2045 based on expected population and economic growth as predicted in the City's General Plan; with the consideration of major CO_2e emission reduction policies.
3. A reduction target, which identifies goals for reducing GHG emissions by 2030 and 2045.
4. Reduction strategies, which describe the actions the community intends to take to achieve the reduction target. Each strategy identifies the amount of GHGs that will be reduced once the strategy is implemented. The CAP also estimates the benefits of existing programs.
5. An implementation and monitoring program to track progress toward the reduction target and the status of the reduction strategies. A CAP consistency checklist for future development projects is included in the implementation program.

As part of the CAP, the City developed a consistency checklist for land use projects. The CAP checklist is a streamlined tool that identifies mandatory GHG reduction strategies and provides an opportunity for project applicants to demonstrate project consistency with measures and actions described in the CAP. The checklist is also an opportunity to identify additional Project characteristics that support the GHG reduction targets and programs in the CAP.

2.3 Greenhouse Gas Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to GHG emissions if it would:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases or

The Appendix G thresholds for GHG emissions do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative

analysis or other performance-based standards." (14 CCR 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines 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 15130). As a note, the CEQA Guidelines were amended in response to Senate Bill 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

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 problem within the geographic area of the project. 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 a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The local air quality agency regulating the San Francisco Bay Area Air Basin is the BAAQMD, the regional air pollution control officer for the basin. As previously stated, BAAQMD CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b) and establish thresholds of significance for impacts related to GHG emissions. The City has determined, in its discretion, that the BAAQMD recommended GHG significance thresholds are based on substantial evidence to attribute a fair share of GHG reductions necessary to reach statewide reduction goals to new land use

development projects in the BAAQMD's jurisdiction that are evaluated pursuant to CEQA. Therefore, the City uses the BAAQMD CEQA Guidelines to determine the level of impact from the project contributions of GHG emissions.

As previously described, BAAQMD's 2022 CEQA Guidelines present a project-level operational threshold of significance for GHG emissions based on compliance with a Qualified GHG Reduction Strategy or adherence to a suite of BAAQMD performance standards for land uses projects directly related to building design, transportation, and consistency with the CEQA Guidelines Section 15183.5(b). The City CAP is a Qualified GHG Reduction Strategy. The 2024 Technical Update to the 2020 CAP is written to align with the goals of SB 32. The CAP addresses emissions beyond 2020, as informed by the post-2020 GHG reduction targets of SB 32 and EO S-3-05. Specifically, the City set emission reduction goals of 40 percent below 1990 emissions levels by 2030 and 85 percent below 1990 levels by 2045. Therefore, Project compliance with the CAP adequately establishes Project compliance with statewide GHG reduction goals for the year 2030 associated with SB 32, and with statewide GHG reduction goals for the years beyond 2030.

Additionally, the Project is compared to ABAG's Plan Bay Area, the RTP/SCS for the San Francisco Bay Area, which establishes an overall GHG target for the Project region consistent with the post-2020 GHG reduction goals of SB 32. The Project is also compared to the BAAQMD 2017 Clean Air Plan, which defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG emissions reduction targets.

2.3.2 Methodology

GHG emissions-related impacts were assessed in accordance with methodologies recommended by the BAAQMD and the City of San Mateo. Where GHG emission quantification was required, emissions were modeled using the California Air Pollution Control Officers Association (CAPCOA) California Emissions Estimator Model (CalEEMod), version 2022.1. (CAPCOA 2022). CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction generated GHG emissions were calculated primarily using CalEEMod model defaults for San Mateo County (County). To accommodate the below grade parking garage, it is expected that construction would include the export of approximately 47,278 cubic yards of soil. Operational GHG emissions were based on CalEEMod model defaults for the County, the site and building square footage identified in the Project Site plans, construction timeline and design features outlined by the Project's development plans and Project CAP consistency checklist, and default traffic trip generation rates. For the purposes of this analysis, projected operational emissions associated with proposed operations are compared to the existing baseline, which includes the existing building structure on the site.

2.3.3 Generation of GHG Emissions

2.3.3.1 Construction of Proposed Project

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 2-3 illustrates the specific construction generated GHG emissions that would result from construction of the Project. Once construction is complete, the generation of these GHG emissions would cease.

Table 2-3. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Construction Calander Year 1	520
Construction Calander Year 2	543
Construction Calendar Year 3	60
Total Construction Emissions	**1,123**

Source: CalEEMod version 2022.1.1.14. Refer to Attachment A for Model Data Outputs.
Notes: Construction emissions account for the export of approximately 47,278 cubic yards of soil.

As shown in Table 2-3, Project construction would result in the generation of approximately 1,123 metric tons of CO_2e ($MTCO_2e$) over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. As previously stated, there are no adopted thresholds of significance for construction related GHG emissions. GHG emissions generated by the construction sector have been declining in recent years. For instance, construction equipment engine efficiency has continued to improve year after year. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 horsepower and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. Tier 3 engine standards reduce precursor and subset GHG emissions such as nitrogen oxide by as much as 60 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which were phased in over the period of 2008-2015. The Tier 4 standards require that emissions of nitrogen oxide be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

2.3.3.2 Operation of Proposed Project

Operation of the Project would result in GHG emissions. Projected GHG emissions associated with proposed operations are quantified and compared to the existing baseline, which, as previously stated, include a fast-food restaurant and a vacant parcel. Table 2-4 summarizes all the direct and indirect annual GHG emissions associated with the Project.

Table 2-4. Operational-Related Greenhouse Gas Emissions	
Emission Source	**CO_2e (Metric Tons/ Year)**
Proposed Project (Mixed-Use Commercial, Office Space, Residential)	
Mobile	646
Area	5
Energy	289
Water	40
Waste	45
Refrigerants	0
Total	**1,025**
Existing Onsite Land Uses (Fast Food Restaurant and Vacant Lot)	
Mobile	925
Area	0
Energy	24
Water	1
Waste	8
Refrigerants	1
Total	**959**
Difference	
Mobile	-279
Area	+5
Energy	+265
Water	+39
Waste	+37
Refrigerants	-1
Total	**+66**

Source: CalEEMod version 2022.1.1.14. Refer to Attachments A and B for Model Data Outputs.
Notes: Existing operational emission projections predominately based on CalEEMod model defaults for San Mateo County. Proposed operational emissions account for several GHG reduction measures which were applied in accordance with the Proposed Project's design features and location efficiency.

As shown in Table 2-4, the Project would generate 1,025 $MTCO_2e$ annually. The increase in operational GHG emissions over the existing baseline would be 66 $MTCO_2e$ per year as a result of the Project.

2.3.4 Impact Analysis

2.3.4.1 Generation of Greenhouse Gas Emissions Resulting in Conflicts with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

City of San Mateo Climate Action Plan

At the time of preparation of this report, the 2024 Technical Update to the City CAP (2020) is the most recent update to the prior 2015 City CAP. The CAP is a strategic planning document that identifies sources of GHG emissions within the City's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic programs, policies, and projects to reduce emissions from the energy, transportation, land use, water use, and waste sectors. The CAP includes GHG reduction measures in the form of GHG reduction programs, policies, projects, and strategies. The BAAQMD Qualified Greenhouse Gas Emissions Reduction Program criteria, in conjunction with the BAAQMD's CEQA Guidelines, guided the development of the emissions reduction program developed by the City. All three guidelines comply with the requirements of statewide GHG-reduction targets and achieve the goals of the Scoping Plan.

As previously stated, the 2024 Technical Update of the 2020 City CAP is written to align with the goals of SB 32. The CAP strategies consist of measures and actions to support the reductions of GHG emissions within San Mateo. Specifically, the CAP provides a Consistency Checklist to ensure that all development will adhere to the policies and goals of the CAP. This approach is used to determine whether a project would substantially conflict with existing California legislation adopted to reduce statewide GHG emissions. The CAP specifically directs project-specific environmental documents that consider the CAP for its cumulative impact analysis must identify specific GHG reduction measures applicable to the project and demonstrate the project's incorporation of the measures. The CAP further notes that applicable measures that are not otherwise binding and enforceable must be incorporated as mitigation measures for the project.

A specific project proposal is considered consistent with the City CAP if it complies with the "required" GHG reduction measures in the adopted CAP. A CAP consistency checklist has been completed by the Project applicant and the responses to the checklist questions are summarized below. Refer to Attachment C for the completed CAP Consistency Checklist. The following are required GHG reduction measures applicable to the Proposed Project as mandated by the City's CAP.

> **Reduction Measure BE 1.** *All new development: The project does not have natural gas connections and does not have any natural gas appliances or other equipment installed*.
>
> The Project proposes all electric systems and no natural gas appliances are proposed. The Project is compliant with this reduction measure.
>
> **Reduction Measure RE 2 (a).** *All new developments with residential units: The project includes an on-site renewable energy system that meets or exceeds the minimum requirements of the California State Building Code*.

The Project proposes an 8 kilowatt (kW) photovoltaic system, which would consist of a 5kW system for the non-residential portion of the building and a 3kW system for the multifamily residential portion of the Project. Furthermore, the Project is required, per California state law, to meet the minimum requirements of the most recent California State Building Code.

Reduction Measure RE 2 (b). *All new developments with residential units: The project includes an on-site energy storage system, such as a battery*.

The Proposed Project will not provide an on-site energy storage system. The photovoltaic infrastructure system for energy generation will not provide enough energy to warrant on-site energy storage.

Reduction Measure EE 3. *All new developments with residential units: The project includes trees that provide shade to residences*.

The Proposed Project cannot comply with the above requirements. The Proposed Project is an infill mixed use project, with the proposed residential units located on the upper building levels. As such, there is not an opportunity to provide a substantial number of trees and the resulting shade to these residential units. Thus, this measure is infeasible to implement.

Reduction Measure CF 1 (a). *All new development with dedicated off-street parking: The project includes parking spaces with installed electric vehicle (EV) chargers or are pre-wired for EV chargers, consistent with state and any local regulations*.

The Project does not offer any off-street public parking, in accordance with California AB 2097. AB 2097 eliminates parking mandates for commercial buildings located near transit. However, the Project would provide a total of 160 parking spaces for both employees and future residents that work or live at the Proposed Project. The Proposed Project would not offer any public parking, in accordance with AB 2097. Of the residential and employee parking spaces, 32 of these spaces would be EV stalls. Furthermore, the Project would provide bicycle parking spaces, with 90 long-term and 12 short-term bicycle parking spaces. The Project complies with this reduction measure.

Reduction Measure CF 1 (b). *The project includes parking spaces with installed EV chargers that are accessible by members of the public beyond those who live and/or work at the project*.

As stated for reduction measure CF 1 (a), the Proposed Project will not include any public parking spaces, in accordance with AB 2097.

Reduction Measure ST 6. *New developments of at least six multifamily units and or 10,000 square feet of nonresidential space: Implement TDM strategies to comply with the appropriate trip reduction target identified in applicable area plans and San Mateo Citywide TDM Plan*.

A Transportation Demand Management (TDM) Plan is a series of strategies that involve encouragement of services, incentives, facilities, and actions to reduce single-occupant vehicle trips. This helps to relieve traffic congestion, parking demand, and air pollutants, including GHG

emissions. The purpose of TDM is to promote more efficient utilization of existing transportation facilities, and to ensure that new developments are designed to maximize the potential for sustainable transportation usage.

The Project will comply with the above regulation and a Project TDM Plan will be prepared. It is noted that the Project is located in downtown San Mateo, and thus within easy access to restaurants, local grocery stores, a movie theater, and other services in the vicinity of the Project's surrounding area. The Project itself would offer several services and offices, which would serve both future residents of the Proposed Project and local community members. The Project also includes plentiful long-term and short-term bike storage, which would encourage residents and visitors to bike rather than drive, when feasible. Finally, the Project would be in close proximity to the Caltrain, which encourages both residents and visitors to utilize the train as a mode of transportation, rather than individual vehicle use. These design features and location efficient aspects of the Proposed Project are all vehicle reducing measures and will be considered in the preparation of the Project's TDM Plan.

Reduction Measure ST 7. *All new development: Be located along El Camino Real, within one-half mile of any Caltrain station, or in the Rail Corridor Transit Oriented Development or Hillsdale Station Area Plan areas*.

The Proposed Project Site is located less than 0.23 mile from the Caltrain Downtown San Mateo Station. The Project complies with this reduction measure.

Reduction Measure SW 1. *All developments with multifamily units or nonresidential space: Provide an area of sufficient space to store and allow access to a compost bin*.

The Proposed Project will comply with this reduction measure. Composting chutes are to be included at the residential levels of the building.

Reduction Measure WW 3. *All new development: Include a greywater system*.

The Proposed Project cannot comply with the above requirements. There is a lack of infrastructure for greywater in downtown San Mateo. Furthermore, the Proposed Project would not produce enough greywater internally to feasibly require the Project to construct the needed infrastructure in downtown San Mateo. Thus, it is considered infeasible for the Project until such time that the infrastructure for greywater exists in downtown San Mateo.

All development in the City, including the Project, is required to adhere to all applicable City-adopted policy provisions, including those contained in the adopted CAP. The Project applicant has completed the checklist to confirm consistency with the CAP to the satisfaction of City staff (Attachment C). The Project complies with the applicable reduction measures summarized above. The City ensures all provisions of the CAP are incorporated into projects and their permits through development review and applications of conditions of approval as applicable. As previously mentioned, the Project cannot comply with Reduction Measures RE 2(b), EE 3, or WW 3. In the case of these Reduction Measures, the explanations above render these provisions infeasible due to the nature of the Proposed Project's design and/or location. The explanations above offer

rationale for the Project's noncompliance with these CAP Reduction Measures, however the CAP Consistency Checklist is reviewed by City staff to ensure adherence with all applicable CAP measures. Furthermore, if the City staff determines that the Project must adhere to the above provisions, the Project will need to comply with all feasible provisions as a condition of approval, as mandated by the City staff.

BAAQMD Plan 2017 Clean Air Plan

The 2017 Clean Air Plan (BAAQMD 2017) provides a regional strategy to protect public health and the climate. The 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG emissions reduction targets. The 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions of CH_4 and other 'super GHGs' in the near term, and to decrease emissions of CO_2 by reducing fossil-fuel combustion.

The 2017 Clean Air Plan includes a diverse range of control measures designed to decrease GHG emissions. Consistency of the Proposed Project with 2017 Clean Air Plan is demonstrated by assessing whether the Project supports all of the Project-applicable Clean Air Plan control measures for GHG emissions. The GHG-related control strategies of the Clean Air Plan include *Mobile Source Measures*, *Transportation Control Measures* and *Energy and Climate Measures*.

Note, the *Land Use and Local Impact Measure*s of the 2017 Clean Air Plan address the exposure of sensitive receptors to toxic air contaminants and is thereby not applicable to this impact discussion of GHG emissions. Additionally, the *Stationary Source Measures* in the Clean Air Plan such as those implemented to control emissions from metal melting facilities, cement kilns, refineries, and glass furnaces are not applicable to the Proposed Project.

Transportation and Mobile Source Control Measures

The BAAQMD identifies transportation and mobile source control measures as part of the Clean Air Plan to reduce emissions from these sources. The transportation control measures are designed to reduce emissions from motor vehicles by reducing vehicle trips and vehicle miles traveled (VMT) in addition to vehicle idling and traffic congestion. The Proposed Project is consistent with the Clean Air Plan's transportation and mobile source control measures because it is a redevelopment of an existing urban environment, and it is located in direct proximity to the Downtown San Mateo Caltrain Station. The Project is considered "infill development" as it proposes to redevelop a built-out property and enhance the physical design of the urban environment. Under Public Resources Code (PRC) section 21061.3, an "infill site" is defined as a site that "has been previously developed for qualified urban uses." In turn, a "qualified urban use" is defined, pursuant to PRC section 21072, as "a residential, commercial, or public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses." Additionally, the Project Site is located in an "urbanized area," which is defined under PRC section 21071 as "an incorporated city" that meets the criteria of having a population of at least 100,000 persons.

According to the USEPA, infill development can reduce development pressure on outlying areas and when it occurs near existing transit infrastructure, employment centers, and other destinations, it can help reduce

the amount that people drive, thus improving air quality and reducing GHG emissions (USEPA 2014). Furthermore, the Caltrain Downtown San Mateo Station is less than 0.23 mile from the Project Site. The Proposed Project's proximity to the Caltrain Station may also help to reduce GHG emissions. According to a report by the Bay Area Council Economic Institute (2022), in areas of high job density, there are positive influences on the utilization of transit ridership. This indicates that the greater availability of jobs available around transit stations encourages individuals to opt for those modes of commuting, rather than driving. Even further, the report notes that mixed-use developments oriented around public transit have been found to reduce household GHG emissions by 2.5 to 3.7 tons per year and lower annual household rates of driving 20-40 percent for those living, working, and/or shopping within transit station areas. As the Proposed Project would provide accessibility to commercial/retail businesses, other office spaces, and employment opportunities in close proximity to the Downtown San Mateo and the Caltrain Station, this may have a positive impact on the reduction of GHG emissions. Finally, the Proposed Project would provide bicycle parking spaces, with 90 long-term and 12 short-term bicycle parking spaces. The Proposed Project's plans for introducing an improved place of residence and employment are located in such a way so that access for employees and residents may be achieved via walking, biking, or Caltrain, which will further reduce VMT.

These aspects of the Project would result in the generation of a reduced amount of GHG emissions. As a result, the Proposed Project would not conflict with the identified transportation and mobile source control measures of the Clean Air Plan.

Land Use and Local Impact Measures

The BAAQMD Clean Air Plan includes *Land Use and Local Impact Measures* to ensure that planned growth is focused on a way that protects the people and environment from exposure of emissions associated with stationary and mobile sources and to promote mixed-use, compact development to reduce motor vehicle travel. The *Land Use and Local Impact Measures* identified by the BAAQMD are not specifically applicable to the Proposed Project as they relate to actions the BAAQMD will take to reduce impacts from goods movement and health risks in affected communities at the plan level. The measures also detail new regulatory actions the BAAQMD will undertake related to land use, including updates to the CEQA Air Quality Guidelines, and indirect source review.

However, the Proposed Project would be a redevelopment infill Project in support of these measures. For instance, the Project can be identified for its "location efficiency." Location efficiency describes the location of the Project relative to the type of urban landscape its proposed to fit within, such as an "urban area," "compact infill," or "suburban center." The Project Area represents an urban/compact infill location within an area of the city developed with residential and commercial uses. The Project Area is within an active urban center of Downtown San Mateo and is surrounded by retail, commercial, and restaurant developments. The Project would locate additional office space and residential land uses within Downtown San Mateo and near the Caltrain Station. Therefore, the Project would provide community members with a place to live and work that is in close proximity to transit and an urban developed area. Additionally, the Project would locate potential employment opportunities for future residents of the Project, or existing residents already living in the vicinity. The location efficiency of the Project Area would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reduction of transportation related GHG emissions.

Energy and Climate Control Measures

The Clean Air Plan also includes Energy and Climate Control Measures, which are designed to reduce ambient concentrations of emissions of CO_2. Implementation of these measures is intended to promote energy conservation and efficiency in buildings throughout the community, promote renewable forms of energy production, reduce the "urban heat island" effect by increasing reflectivity of roofs and parking lots, promote the planting of (low volatile organic compound-emitting) trees to reduce biogenic emissions, lower air temperatures, provide shade, and absorb air pollutants.

The measures include emphasis on green building techniques and sustainable energy generation. The Project would be designed for energy efficiency and water conservation in accordance with the standards of the latest California Green Building Standards (CalGreen). CalGreen standards focus on the reduction of greenhouse gas emissions associated with building construction and operation, through water efficiency, material conservation, waste reduction, indoor air quality, and more. Furthermore, the Proposed Project's building energy efficiency would exceed the minimum standards by CalGreen. The proposed photovoltaic panels that would be installed on the rooftop offer sustainable energy generation to the residents and employees that would be associated with the Project. This complies with the Clean Air Plan's Energy and Climate Control Measures.

The Project is consistent with the 2017 Clean Air Plan. The Proposed Project would conform to the Project-applicable control measures in the Clean Air Plan and would not disrupt or hinder the implementation of any other control measures.

ABAG Final Plan Bay Area 2050

ABAG's Plan Bay Area is the RTP/SCS for the San Francisco Bay Area. Plan Bay Area establishes GHG emissions goals for automobiles and light-duty trucks, a potent source of GHG emissions attributable to land use development. As previously described, ABAG was tasked by CARB to achieve a 19 percent reduction of passenger car and light truck automotive GHG emissions by 2035 compared to 2005. Plan Bay Area 2050 establishes an overall mechanism to achieve these GHG targets for the Project region consistent with the target date of SB 32. According to ABAG, the San Francisco Bay Area will exceed the mandated GHG reduction target of 19 percent for 2035 by implementing Plan Bay Area (ABAG 2020).

The RTP/SCS contains thousands of individual transportation projects, including highway improvements, railway electrification, bicycle lanes, new transit hubs, and replacement bridges. These future investments seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently.

Plan Bay Area 2050's core strategy is "focused growth" in existing communities along the existing transportation network. This strategy allows the best efficiency in achieving key regional economic, environmental, and equity goals: it builds upon existing community characteristics, efficiently leverages

existing infrastructure, and mitigates impacts on areas with less development. Plan Bay Area 2050's Growth Geographies identify a mix of locally identified Priority Development Areas, areas near high quality transit and areas of high opportunity as communities poised to accommodate additional growth. Priority Development Areas are defined as areas generally near existing job centers or frequent transit that are locally identified (i.e., identified by towns, cities, or counties) for housing and job growth. Meanwhile, Plan Bay Area 2050 identifies areas outside of the existing urban footprint or in areas that are at a very high risk of wildfire as areas where additional construction should be deprioritized.

Plan Bay Area 2050 considers development locations within close proximity to high-quality transit and locations that are able to accommodate additional growth as ideal places to encourage urban growth. Furthermore, the Project is proposed within a built environment (infill development). The Project will increase employment density, residential density, and land use diversity in the vicinity over current conditions. Increased employment and residential density, measured in terms of persons, jobs, or building square footage, as well as increased land use diversity, potentially reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies such as enhanced transit services. The Project would increase the Project Area density from the existing buildings on site to a multiple story mixed-use office residential building space.

For these reasons, the Project is consistent with Plan Bay Area. Based on the Project's proximity to public transportation, availability of bike storage space and redevelopment of existing areas, it can be assumed that regional mobile emissions will decrease in line with the goals of Plan Bay Area with implementation of the Proposed Project. Implementing ABAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, and the Proposed Project will not obstruct the achievement of Plan Bay Area's emission reduction targets.

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LIST OF ATTACHMENTS

Attachment A – CalEEMod Output File for Greenhouse Gas Emissions – Proposed Project

Attachment B – CalEEMod Output File for Greenhouse Gas Emissions – Existing Conditions

Attachment C – Completed CAP Consistency Checklist

ATTACHMENT A

CalEEMod Output Files – Greenhouse Gas Emissions – Proposed Project

Block 20 Mixed Use - Proposed Detailed Report

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7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Block 20 Mixed Use - Proposed
Construction Start Date	6/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.60
Precipitation (days)	32.0
Location	37.56583829836612, -122.31928576249871
County	San Mateo
City	San Mateo
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1239
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.19

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Office Building	138	1000sqft	1.16	137,912	207	—	—	—
Enclosed Parking with Elevator	270	Space	0.00	108,000	—	—	—	—
Strip Mall	1.57	1000sqft	0.00	1,574	—	—	—	—
Apartments High Rise	86.0	Dwelling Unit	0.00	82,560	—	—	248	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Transportation	T-1	Increase Residential Density
Transportation	T-3	Provide Transit-Oriented Development
Transportation	T-4	Integrate A ordable and Below Market Rate Housing
Transportation	T-10	Provide End-of-Trip Bicycle Facilities
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power
Energy	E-12-B	Install Electric Space Heater in Place of Natural Gas Heaters in Residences
Energy	E-13	Install Electric Ranges in Place of Gas Ranges
Water	W-5	Design Water-Efficient Landscapes

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.34	35.8	29.2	0.07	1.59	19.8	21.4	1.46	10.1	11.6	—	6,816	6,816	0.78	0.76	9.16	7,070

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	176	44.7	44.1	0.12	1.49	9.88	11.4	1.37	4.13	5.50	—	12,771	12,771	1.10	1.04	0.45	13,110
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.34	13.8	18.7	0.03	0.46	3.34	3.76	0.42	1.53	1.92	—	4,222	4,222	0.23	0.20	2.38	4,289
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.34	2.52	3.41	0.01	0.08	0.61	0.69	0.08	0.28	0.35	—	699	699	0.04	0.03	0.39	710

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.34	35.8	29.2	0.07	1.59	19.8	21.4	1.46	10.1	11.6	—	6,816	6,816	0.78	0.76	9.16	7,070
2025	2.27	19.3	26.7	0.04	0.64	1.62	2.26	0.59	0.39	0.98	—	5,977	5,977	0.30	0.24	7.71	6,063
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.09	44.7	44.1	0.12	1.49	9.88	11.4	1.37	4.13	5.50	—	12,771	12,771	1.10	1.04	0.45	13,110
2025	2.26	19.4	26.3	0.04	0.64	1.62	2.26	0.59	0.39	0.98	—	5,908	5,908	0.30	0.28	0.20	5,998
2026	176	18.3	25.8	0.04	0.54	1.62	2.16	0.50	0.39	0.89	—	5,856	5,856	0.29	0.28	0.18	5,947
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.05	11.6	10.6	0.03	0.42	3.34	3.76	0.39	1.53	1.92	—	2,737	2,737	0.23	0.20	1.37	2,805
2025	1.61	13.8	18.7	0.03	0.46	1.13	1.59	0.42	0.27	0.70	—	4,222	4,222	0.21	0.20	2.38	4,289
2026	7.34	1.39	2.08	< 0.005	0.05	0.10	0.15	0.04	0.03	0.07	—	438	438	0.02	0.02	0.19	444

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.19	2.11	1.93	< 0.005	0.08	0.61	0.69	0.07	0.28	0.35	—	453	453	0.04	0.03	0.23	464
2025	0.29	2.52	3.41	0.01	0.08	0.21	0.29	0.08	0.05	0.13	—	699	699	0.04	0.03	0.39	710
2026	1.34	0.25	0.38	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	72.5	72.5	< 0.005	< 0.005	0.03	73.5

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.34	35.8	29.2	0.07	1.59	19.8	21.4	1.46	10.1	11.6	—	6,816	6,816	0.78	0.76	9.16	7,070
2025	2.27	19.3	26.7	0.04	0.64	1.62	2.26	0.59	0.39	0.98	—	5,977	5,977	0.30	0.24	7.71	6,063
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.09	44.7	44.1	0.12	1.49	9.88	11.4	1.37	4.13	5.50	—	12,771	12,771	1.10	1.04	0.45	13,110
2025	2.26	19.4	26.3	0.04	0.64	1.62	2.26	0.59	0.39	0.98	—	5,908	5,908	0.30	0.28	0.20	5,998
2026	176	18.3	25.8	0.04	0.54	1.62	2.16	0.50	0.39	0.89	—	5,856	5,856	0.29	0.28	0.18	5,947
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.05	11.6	10.6	0.03	0.42	3.34	3.76	0.39	1.53	1.92	—	2,737	2,737	0.23	0.20	1.37	2,805
2025	1.61	13.8	18.7	0.03	0.46	1.13	1.59	0.42	0.27	0.70	—	4,222	4,222	0.21	0.20	2.38	4,289
2026	7.34	1.39	2.08	< 0.005	0.05	0.10	0.15	0.04	0.03	0.07	—	438	438	0.02	0.02	0.19	444
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.19	2.11	1.93	< 0.005	0.08	0.61	0.69	0.07	0.28	0.35	—	453	453	0.04	0.03	0.23	464
2025	0.29	2.52	3.41	0.01	0.08	0.21	0.29	0.08	0.05	0.13	—	699	699	0.04	0.03	0.39	710
2026	1.34	0.25	0.38	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	72.5	72.5	< 0.005	< 0.005	0.03	73.5

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.4	4.07	54.1	0.11	0.15	9.95	10.1	0.14	2.52	2.66	158	14,183	14,340	16.7	0.54	33.1	14,952
Mit.	10.9	3.08	41.9	0.08	0.13	6.80	6.93	0.12	1.72	1.84	158	10,794	10,951	16.6	0.42	22.9	11,515
% Reduced	12%	24%	22%	30%	12%	32%	31%	12%	32%	31%	—	24%	24%	1%	21%	31%	23%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.2	4.48	38.3	0.11	0.13	9.95	10.1	0.12	2.52	2.64	158	13,658	13,815	16.7	0.58	1.77	14,408
Mit.	8.65	3.32	26.1	0.07	0.11	6.80	6.91	0.11	1.72	1.83	158	10,417	10,574	16.6	0.45	1.51	11,125
% Reduced	15%	26%	32%	30%	15%	32%	31%	14%	32%	31%	—	24%	23%	1%	22%	15%	23%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.2	2.84	36.8	0.08	0.06	7.78	7.84	0.05	1.97	2.02	158	10,603	10,761	16.6	0.49	12.0	11,333
Mit.	9.00	1.93	27.3	0.05	0.04	5.25	5.30	0.04	1.33	1.37	158	7,939	8,097	16.5	0.38	8.43	8,632
% Reduced	12%	32%	26%	32%	26%	32%	32%	27%	32%	32%	—	25%	25%	1%	21%	30%	24%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.87	0.52	6.72	0.01	0.01	1.42	1.43	0.01	0.36	0.37	26.1	1,755	1,782	2.75	0.08	1.99	1,876
Mit.	1.64	0.35	4.97	0.01	0.01	0.96	0.97	0.01	0.24	0.25	26.1	1,314	1,340	2.73	0.06	1.40	1,429
% Reduced	12%	32%	26%	32%	26%	32%	32%	27%	32%	32%	—	25%	25%	1%	21%	30%	24%

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.71	3.08	38.1	0.10	0.06	9.95	10.0	0.05	2.52	2.57	—	10,665	10,665	0.41	0.36	32.2	10,815
Area	7.72	0.99	16.0	0.01	0.09	—	0.09	0.08	—	0.08	0.00	1,135	1,135	0.02	< 0.005	—	1,136
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,283	2,283	0.37	0.04	—	2,305
Water	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Waste	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Total	12.4	4.07	54.1	0.11	0.15	9.95	10.1	0.14	2.52	2.66	158	14,183	14,340	16.7	0.54	33.1	14,952
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.63	3.63	37.9	0.10	0.06	9.95	10.0	0.05	2.52	2.57	—	10,197	10,197	0.46	0.40	0.83	10,328
Area	5.52	0.85	0.36	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,077	1,077	0.02	< 0.005	—	1,079
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,283	2,283	0.37	0.04	—	2,305
Water	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Waste	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Total	10.2	4.48	38.3	0.11	0.13	9.95	10.1	0.12	2.52	2.64	158	13,658	13,815	16.7	0.58	1.77	14,408
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.67	2.75	29.1	0.08	0.05	7.78	7.83	0.04	1.97	2.01	—	8,165	8,165	0.35	0.31	11.1	8,277
Area	6.55	0.09	7.72	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	54.8	54.8	< 0.005	< 0.005	—	55.0
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,283	2,283	0.37	0.04	—	2,305
Water	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329

Waste	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Total	10.2	2.84	36.8	0.08	0.06	7.78	7.84	0.05	1.97	2.02	158	10,603	10,761	16.6	0.49	12.0	11,333
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.67	0.50	5.31	0.01	0.01	1.42	1.43	0.01	0.36	0.37	—	1,352	1,352	0.06	0.05	1.84	1,370
Area	1.20	0.02	1.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.08	9.08	< 0.005	< 0.005	—	9.10
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	378	378	0.06	0.01	—	382
Water	—	—	—	—	—	—	—	—	—	—	8.80	16.6	25.4	0.91	0.02	—	54.6
Waste	—	—	—	—	—	—	—	—	—	—	17.3	0.00	17.3	1.73	0.00	—	60.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	1.87	0.52	6.72	0.01	0.01	1.42	1.43	0.01	0.36	0.37	26.1	1,755	1,782	2.75	0.08	1.99	1,876

2.6. Operations Emissions by Sector, Mitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.18	2.10	25.9	0.07	0.04	6.80	6.84	0.04	1.72	1.76	—	7,284	7,284	0.28	0.25	22.0	7,386
Area	7.72	0.99	16.0	0.01	0.09	—	0.09	0.08	—	0.08	0.00	1,135	1,135	0.02	< 0.005	—	1,136
Energy	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	2,275	2,275	0.37	0.04	—	2,297
Water	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Waste	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Total	10.9	3.08	41.9	0.08	0.13	6.80	6.93	0.12	1.72	1.84	158	10,794	10,951	16.6	0.42	22.9	11,515
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.13	2.47	25.8	0.07	0.04	6.80	6.84	0.04	1.72	1.76	—	6,964	6,964	0.31	0.27	0.57	7,054

Area	5.52	0.85	0.36	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,077	1,077	0.02	< 0.005	—	1,079
Energy	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	2,275	2,275	0.37	0.04	—	2,297
Water	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Waste	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Total	8.65	3.32	26.1	0.07	0.11	6.80	6.91	0.11	1.72	1.83	158	10,417	10,574	16.6	0.45	1.51	11,125
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.44	1.84	19.5	0.05	0.03	5.25	5.28	0.03	1.33	1.36	—	5,509	5,509	0.23	0.21	7.49	5,584
Area	6.55	0.09	7.72	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	54.8	54.8	< 0.005	< 0.005	—	55.0
Energy	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	2,275	2,275	0.37	0.04	—	2,297
Water	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Waste	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Total	9.00	1.93	27.3	0.05	0.04	5.25	5.30	0.04	1.33	1.37	158	7,939	8,097	16.5	0.38	8.43	8,632
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.45	0.34	3.56	0.01	0.01	0.96	0.96	0.01	0.24	0.25	—	912	912	0.04	0.03	1.24	925
Area	1.20	0.02	1.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.08	9.08	< 0.005	< 0.005	—	9.10
Energy	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	377	377	0.06	0.01	—	380
Water	—	—	—	—	—	—	—	—	—	—	8.80	16.6	25.4	0.91	0.02	—	54.5
Waste	—	—	—	—	—	—	—	—	—	—	17.3	0.00	17.3	1.73	0.00	—	60.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	1.64	0.35	4.97	0.01	0.01	0.96	0.97	0.01	0.24	0.25	26.1	1,314	1,340	2.73	0.06	1.40	1,429

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.68	26.9	24.1	0.03	1.16	—	1.16	1.07	—	1.07	—	3,528	3,528	0.14	0.03	—	3,540
Demolition	—	—	—	—	—	0.70	0.70	—	0.11	0.11	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.10	0.99	< 0.005	0.05	—	0.05	0.04	—	0.04	—	145	145	0.01	< 0.005	—	145
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.20	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.03	0.42	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	105	105	< 0.005	< 0.005	0.38	107
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.96	0.63	0.01	0.01	0.14	0.15	0.01	0.04	0.04	—	606	606	0.09	0.10	1.19	639
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.10	4.10	< 0.005	< 0.005	0.01	4.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.9	24.9	< 0.005	< 0.005	0.02	26.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.68	0.68	< 0.005	< 0.005	< 0.005	0.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.12	4.12	< 0.005	< 0.005	< 0.005	4.34

3.2. Demolition (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.68	26.9	24.1	0.03	1.16	—	1.16	1.07	—	1.07	—	3,528	3,528	0.14	0.03	—	3,540
Demolition	—	—	—	—	—	0.70	0.70	—	0.11	0.11	—	—	—	—	—	—	—
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.10	0.99	< 0.005	0.05	—	0.05	0.04	—	0.04	—	145	145	0.01	< 0.005	—	145
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.20	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.42	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	105	105	< 0.005	< 0.005	0.38	107
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.96	0.63	0.01	0.01	0.14	0.15	0.01	0.04	0.04	—	606	606	0.09	0.10	1.19	639
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.10	4.10	< 0.005	< 0.005	0.01	4.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.9	24.9	< 0.005	< 0.005	0.02	26.2

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.68	0.68	< 0.005	< 0.005	< 0.005	0.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.12	4.12	< 0.005	< 0.005	< 0.005	4.34

3.3. Site Preparation (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.29	35.7	28.6	0.04	1.59	—	1.59	1.46	—	1.46	—	4,106	4,106	0.17	0.03	—	4,120
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	2.55	2.04	< 0.005	0.11	—	0.11	0.10	—	0.10	—	292	292	0.01	< 0.005	—	293
Dust From Material Movement	—	—	—	—	—	1.40	1.40	—	0.72	0.72	—	—	—	—	—	—	—
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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.46	0.37	< 0.005	0.02	—	0.02	0.02	—	0.02	—	48.4	48.4	< 0.005	< 0.005	—	48.6
Dust From Material Movement	—	—	—	—	—	0.26	0.26	—	0.13	0.13	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.59	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	147	147	< 0.005	0.01	0.54	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.95	9.95	< 0.005	< 0.005	0.02	10.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.65	1.65	< 0.005	< 0.005	< 0.005	1.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.29	35.7	28.6	0.04	1.59	—	1.59	1.46	—	1.46	—	4,106	4,106	0.17	0.03	—	4,120
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	2.55	2.04	< 0.005	0.11	—	0.11	0.10	—	0.10	—	292	292	0.01	< 0.005	—	293
Dust From Material Movement	—	—	—	—	—	1.40	1.40	—	0.72	0.72	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.46	0.37	< 0.005	0.02	—	0.02	0.02	—	0.02	—	48.4	48.4	< 0.005	< 0.005	—	48.6
Dust From Material Movement	—	—	—	—	—	0.26	0.26	—	0.13	0.13	—	—	—	—	—	—	—
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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.59	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	147	147	< 0.005	0.01	0.54	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.95	9.95	< 0.005	< 0.005	0.02	10.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.65	1.65	< 0.005	< 0.005	< 0.005	1.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	16.4	12.1	0.02	0.69	—	0.69	0.63	—	0.63	—	2,216	2,216	0.09	0.02	—	2,224

Dust From Material Movement	—	—	—	—	—	7.14	7.14	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	16.4	12.1	0.02	0.69	—	0.69	0.63	—	0.63	—	2,216	2,216	0.09	0.02	—	2,224
Dust From Material Movement	—	—	—	—	—	7.14	7.14	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	3.28	2.43	< 0.005	0.14	—	0.14	0.13	—	0.13	—	443	443	0.02	< 0.005	—	445
Dust From Material Movement	—	—	—	—	—	1.43	1.43	—	0.69	0.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.60	0.44	< 0.005	0.03	—	0.03	0.02	—	0.02	—	73.4	73.4	< 0.005	< 0.005	—	73.6
Dust From Material Movement	—	—	—	—	—	0.26	0.26	—	0.13	0.13	—	—	—	—	—	—	—
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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	84.2	84.2	< 0.005	< 0.005	0.31	85.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	7.15	4.68	0.05	0.05	1.04	1.09	0.05	0.29	0.33	—	4,516	4,516	0.69	0.73	8.85	4,760
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.31	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.6	79.6	< 0.005	< 0.005	0.01	80.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	7.51	4.68	0.05	0.05	1.04	1.09	0.05	0.29	0.34	—	4,515	4,515	0.69	0.73	0.23	4,751
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.0	16.0	< 0.005	< 0.005	0.03	16.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.48	0.93	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	903	903	0.14	0.15	0.76	951
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.64	2.64	< 0.005	< 0.005	< 0.005	2.68
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.27	0.17	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	150	150	0.02	0.02	0.13	157

3.6. Grading (2024) - Mitigated

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

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

Off-Road Equipment	1.51	16.4	12.1	0.02	0.69	—	0.69	0.63	—	0.63	—	2,216	2,216	0.09	0.02	—	2,224
Dust From Material Movement	—	—	—	—	—	7.14	7.14	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	16.4	12.1	0.02	0.69	—	0.69	0.63	—	0.63	—	2,216	2,216	0.09	0.02	—	2,224
Dust From Material Movement	—	—	—	—	—	7.14	7.14	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	3.28	2.43	< 0.005	0.14	—	0.14	0.13	—	0.13	—	443	443	0.02	< 0.005	—	445
Dust From Material Movement	—	—	—	—	—	1.43	1.43	—	0.69	0.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.60	0.44	< 0.005	0.03	—	0.03	0.02	—	0.02	—	73.4	73.4	< 0.005	< 0.005	—	73.6
Dust From Material Movement	—	—	—	—	—	0.26	0.26	—	0.13	0.13	—	—	—	—	—	—	—

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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	84.2	84.2	< 0.005	< 0.005	0.31	85.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	7.15	4.68	0.05	0.05	1.04	1.09	0.05	0.29	0.33	—	4,516	4,516	0.69	0.73	8.85	4,760
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.31	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.6	79.6	< 0.005	< 0.005	0.01	80.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	7.51	4.68	0.05	0.05	1.04	1.09	0.05	0.29	0.34	—	4,515	4,515	0.69	0.73	0.23	4,751
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.0	16.0	< 0.005	< 0.005	0.03	16.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.48	0.93	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	903	903	0.14	0.15	0.76	951
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.64	2.64	< 0.005	< 0.005	< 0.005	2.68
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.27	0.17	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	150	150	0.02	0.02	0.13	157

3.7. Building Construction (2024) - Unmitigated

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

Location	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	2.00	18.1	20.9	0.04	0.73	—	0.73	0.67	—	0.67	—	3,294	3,294	0.13	0.03	—	3,305
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.72	3.15	0.01	0.11	—	0.11	0.10	—	0.10	—	496	496	0.02	< 0.005	—	498
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.50	0.58	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.2	82.2	< 0.005	< 0.005	—	82.4
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.42	4.77	0.00	0.00	1.26	1.26	0.00	0.29	0.29	—	1,209	1,209	0.03	0.05	0.12	1,224
Vendor	0.06	2.28	1.31	0.01	0.02	0.36	0.38	0.02	0.10	0.12	—	1,459	1,459	0.15	0.21	0.09	1,526
Hauling	0.00	0.00	0.00	0.00	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	0.06	0.06	0.70	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	183	183	< 0.005	0.01	0.30	185
Vendor	0.01	0.34	0.20	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	220	220	0.02	0.03	0.23	230
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.2	30.2	< 0.005	< 0.005	0.05	30.7
Vendor	< 0.005	0.06	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.4	36.4	< 0.005	0.01	0.04	38.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

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

Location	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	2.00	18.1	20.9	0.04	0.73	—	0.73	0.67	—	0.67	—	3,294	3,294	0.13	0.03	—	3,305
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.72	3.15	0.01	0.11	—	0.11	0.10	—	0.10	—	496	496	0.02	< 0.005	—	498
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.50	0.58	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.2	82.2	< 0.005	< 0.005	—	82.4

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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.42	4.77	0.00	0.00	1.26	1.26	0.00	0.29	0.29	—	1,209	1,209	0.03	0.05	0.12	1,224
Vendor	0.06	2.28	1.31	0.01	0.02	0.36	0.38	0.02	0.10	0.12	—	1,459	1,459	0.15	0.21	0.09	1,526
Hauling	0.00	0.00	0.00	0.00	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	0.06	0.06	0.70	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	183	183	< 0.005	0.01	0.30	185
Vendor	0.01	0.34	0.20	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	220	220	0.02	0.03	0.23	230
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.2	30.2	< 0.005	< 0.005	0.05	30.7
Vendor	< 0.005	0.06	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.4	36.4	< 0.005	0.01	0.04	38.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. 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	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	1.85	16.9	20.7	0.04	0.62	—	0.62	0.57	—	0.57	—	3,294	3,294	0.13	0.03	—	3,305
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	16.9	20.7	0.04	0.62	—	0.62	0.57	—	0.57	—	3,294	3,294	0.13	0.03	—	3,305
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32	12.1	14.8	0.03	0.44	—	0.44	0.41	—	0.41	—	2,353	2,353	0.10	0.02	—	2,361
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.21	2.69	< 0.005	0.08	—	0.08	0.07	—	0.07	—	389	389	0.02	< 0.005	—	391
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.28	4.73	0.00	0.00	1.26	1.26	0.00	0.29	0.29	—	1,251	1,251	0.02	0.01	4.14	1,259
Vendor	0.05	2.05	1.25	0.01	0.02	0.36	0.38	0.02	0.10	0.12	—	1,432	1,432	0.14	0.20	3.57	1,500
Hauling	0.00	0.00	0.00	0.00	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	0.36	0.37	4.38	0.00	0.00	1.26	1.26	0.00	0.29	0.29	—	1,182	1,182	0.03	0.05	0.11	1,198

Vendor	0.05	2.14	1.27	0.01	0.02	0.36	0.38	0.02	0.10	0.12	—	1,432	1,432	0.14	0.20	0.09	1,496
Hauling	0.00	0.00	0.00	0.00	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	0.26	0.23	3.03	0.00	0.00	0.88	0.88	0.00	0.21	0.21	—	847	847	0.02	0.04	1.28	859
Vendor	0.03	1.51	0.90	0.01	0.01	0.25	0.27	0.01	0.07	0.08	—	1,023	1,023	0.10	0.14	1.10	1,070
Hauling	0.00	0.00	0.00	0.00	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	0.05	0.04	0.55	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	140	140	< 0.005	0.01	0.21	142
Vendor	0.01	0.28	0.16	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	169	169	0.02	0.02	0.18	177
Hauling	0.00	0.00	0.00	0.00	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 (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	16.9	20.7	0.04	0.62	—	0.62	0.57	—	0.57	—	3,294	3,294	0.13	0.03	—	3,305
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	16.9	20.7	0.04	0.62	—	0.62	0.57	—	0.57	—	3,294	3,294	0.13	0.03	—	3,305
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32	12.1	14.8	0.03	0.44	—	0.44	0.41	—	0.41	—	2,353	2,353	0.10	0.02	—	2,361
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.21	2.69	< 0.005	0.08	—	0.08	0.07	—	0.07	—	389	389	0.02	< 0.005	—	391
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.28	4.73	0.00	0.00	1.26	1.26	0.00	0.29	0.29	—	1,251	1,251	0.02	0.01	4.14	1,259
Vendor	0.05	2.05	1.25	0.01	0.02	0.36	0.38	0.02	0.10	0.12	—	1,432	1,432	0.14	0.20	3.57	1,500
Hauling	0.00	0.00	0.00	0.00	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	0.36	0.37	4.38	0.00	0.00	1.26	1.26	0.00	0.29	0.29	—	1,182	1,182	0.03	0.05	0.11	1,198
Vendor	0.05	2.14	1.27	0.01	0.02	0.36	0.38	0.02	0.10	0.12	—	1,432	1,432	0.14	0.20	0.09	1,496
Hauling	0.00	0.00	0.00	0.00	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	0.26	0.23	3.03	0.00	0.00	0.88	0.88	0.00	0.21	0.21	—	847	847	0.02	0.04	1.28	859
Vendor	0.03	1.51	0.90	0.01	0.01	0.25	0.27	0.01	0.07	0.08	—	1,023	1,023	0.10	0.14	1.10	1,070
Hauling	0.00	0.00	0.00	0.00	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	0.05	0.04	0.55	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	140	140	< 0.005	0.01	0.21	142

Vendor	0.01	0.28	0.16	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	169	169	0.02	0.02	0.18	177
Hauling	0.00	0.00	0.00	0.00	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 (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.72	16.0	20.5	0.04	0.53	—	0.53	0.48	—	0.48	—	3,293	3,293	0.13	0.03	—	3,305
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.91	1.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	187	187	0.01	< 0.005	—	188
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.9	30.9	< 0.005	< 0.005	—	31.0
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.33	4.05	0.00	0.00	1.26	1.26	0.00	0.29	0.29	—	1,158	1,158	0.02	0.05	0.09	1,174
Vendor	0.05	2.02	1.23	0.01	0.02	0.36	0.38	0.02	0.10	0.12	—	1,405	1,405	0.13	0.20	0.09	1,469
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.22	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.09	66.9
Vendor	< 0.005	0.11	0.07	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.7	79.7	0.01	0.01	0.08	83.4
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.01	13.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. 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	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	1.72	16.0	20.5	0.04	0.53	—	0.53	0.48	—	0.48	—	3,293	3,293	0.13	0.03	—	3,305
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.91	1.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	187	187	0.01	< 0.005	—	188
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.9	30.9	< 0.005	< 0.005	—	31.0
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.33	4.05	0.00	0.00	1.26	1.26	0.00	0.29	0.29	—	1,158	1,158	0.02	0.05	0.09	1,174
Vendor	0.05	2.02	1.23	0.01	0.02	0.36	0.38	0.02	0.10	0.12	—	1,405	1,405	0.13	0.20	0.09	1,469
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.22	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.09	66.9
Vendor	< 0.005	0.11	0.07	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.7	79.7	0.01	0.01	0.08	83.4
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.01	13.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	6.67	11.7	0.02	0.32	—	0.32	0.29	—	0.29	—	1,959	1,959	0.08	0.02	—	1,966
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.27	0.48	< 0.005	0.01	—	0.01	0.01	—	0.01	—	80.5	80.5	< 0.005	< 0.005	—	80.8
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.3	13.3	< 0.005	< 0.005	—	13.4
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.33	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.3	95.3	< 0.005	< 0.005	0.01	96.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.93	3.93	< 0.005	< 0.005	0.01	3.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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 (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	6.67	11.7	0.02	0.32	—	0.32	0.29	—	0.29	—	1,959	1,959	0.08	0.02	—	1,966
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.27	0.48	< 0.005	0.01	—	0.01	0.01	—	0.01	—	80.5	80.5	< 0.005	< 0.005	—	80.8
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.3	13.3	< 0.005	< 0.005	—	13.4
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.33	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.3	95.3	< 0.005	< 0.005	0.01	96.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.93	3.93	< 0.005	< 0.005	0.01	3.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.66

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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 (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	1.81	2.39	< 0.005	0.05	—	0.05	0.04	—	0.04	—	281	281	0.01	< 0.005	—	282
Architectural Coatings	175	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.6	11.6	< 0.005	< 0.005	—	11.6
Architectural Coatings	7.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.91	1.91	< 0.005	< 0.005	—	1.92

Architectu Coatings	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.81	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	< 0.005	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.55	9.55	< 0.005	< 0.005	0.01	9.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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 (2026) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	1.81	2.39	< 0.005	0.05	—	0.05	0.04	—	0.04	—	281	281	0.01	< 0.005	—	282
Architectural Coatings	175	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.6	11.6	< 0.005	< 0.005	—	11.6
Architectural Coatings	7.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.91	1.91	< 0.005	< 0.005	—	1.92
Architectural Coatings	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.81	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	< 0.005	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.55	9.55	< 0.005	< 0.005	0.01	9.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	3.55	2.38	29.5	0.08	0.04	7.80	7.84	0.04	1.98	2.02	—	8,349	8,349	0.31	0.28	25.2	8,466

Enclosed 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	0.00	0.00
Strip Mall	0.18	0.12	1.53	< 0.005	< 0.005	0.41	0.41	< 0.005	0.10	0.10	—	434	434	0.02	0.01	1.31	440
Apartments High Rise	0.98	0.58	7.05	0.02	0.01	1.74	1.76	0.01	0.44	0.45	—	1,882	1,882	0.08	0.07	5.64	1,910
Total	4.71	3.08	38.1	0.10	0.06	9.95	10.0	0.05	2.52	2.57	—	10,665	10,665	0.41	0.36	32.2	10,815
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	3.49	2.80	29.2	0.08	0.04	7.80	7.84	0.04	1.98	2.02	—	7,982	7,982	0.35	0.31	0.65	8,083
Enclosed 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	0.00	0.00
Strip Mall	0.18	0.15	1.52	< 0.005	< 0.005	0.41	0.41	< 0.005	0.10	0.10	—	415	415	0.02	0.02	0.03	420
Apartments High Rise	0.96	0.68	7.18	0.02	0.01	1.74	1.76	0.01	0.44	0.45	—	1,800	1,800	0.09	0.07	0.15	1,825
Total	4.63	3.63	37.9	0.10	0.06	9.95	10.0	0.05	2.52	2.57	—	10,197	10,197	0.46	0.40	0.83	10,328
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.47	0.37	3.87	0.01	0.01	1.06	1.06	0.01	0.27	0.27	—	1,003	1,003	0.04	0.04	1.37	1,016
Enclosed 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	0.00	0.00
Strip Mall	0.03	0.02	0.24	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	63.0	63.0	< 0.005	< 0.005	0.09	63.8

Apartments High Rise	0.17	0.11	1.19	< 0.005	< 0.005	0.30	0.30	< 0.005	0.08	0.08	—	286	286	0.01	0.01	0.39	290
Total	0.67	0.50	5.31	0.01	0.01	1.42	1.43	0.01	0.36	0.37	—	1,352	1,352	0.06	0.05	1.84	1,370

4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	2.57	1.72	21.4	0.06	0.03	5.65	5.68	0.03	1.43	1.46	—	6,050	6,050	0.22	0.20	18.3	6,134
Enclosed 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	0.00	0.00
Strip Mall	0.13	0.09	1.11	< 0.005	< 0.005	0.29	0.30	< 0.005	0.07	0.08	—	314	314	0.01	0.01	0.95	319
Apartments High Rise	0.48	0.28	3.45	0.01	0.01	0.85	0.86	< 0.005	0.22	0.22	—	920	920	0.04	0.03	2.76	934
Total	3.18	2.10	25.9	0.07	0.04	6.80	6.84	0.04	1.72	1.76	—	7,284	7,284	0.28	0.25	22.0	7,386
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	2.53	2.03	21.2	0.06	0.03	5.65	5.68	0.03	1.43	1.46	—	5,784	5,784	0.25	0.22	0.47	5,857
Enclosed 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	0.00	0.00
Strip Mall	0.13	0.11	1.10	< 0.005	< 0.005	0.29	0.30	< 0.005	0.07	0.08	—	300	300	0.01	0.01	0.02	304

Apartment High Rise	0.47	0.33	3.51	0.01	0.01	0.85	0.86	< 0.005	0.22	0.22	—	880	880	0.04	0.04	0.07	893
Total	3.13	2.47	25.8	0.07	0.04	6.80	6.84	0.04	1.72	1.76	—	6,964	6,964	0.31	0.27	0.57	7,054
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.26	2.80	0.01	< 0.005	0.76	0.77	< 0.005	0.19	0.20	—	727	727	0.03	0.03	0.99	736
Enclosed 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	0.00	0.00
Strip Mall	0.02	0.02	0.18	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	45.6	45.6	< 0.005	< 0.005	0.06	46.3
Apartments High Rise	0.08	0.06	0.58	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	140	140	0.01	0.01	0.19	142
Total	0.45	0.34	3.56	0.01	0.01	0.96	0.96	0.01	0.24	0.25	—	912	912	0.04	0.03	1.24	925

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,789	1,789	0.29	0.04	—	1,807
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	223	223	0.04	< 0.005	—	225
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	9.32	9.32	< 0.005	< 0.005	—	9.41

Apartment High Rise	—	—	—	—	—	—	—	—	—	—	—	262	262	0.04	0.01	—	264
Total	—	—	—	—	—	—	—	—	—	—	—	2,283	2,283	0.37	0.04	—	2,305
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,789	1,789	0.29	0.04	—	1,807
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	223	223	0.04	< 0.005	—	225
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	9.32	9.32	< 0.005	< 0.005	—	9.41
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	262	262	0.04	0.01	—	264
Total	—	—	—	—	—	—	—	—	—	—	—	2,283	2,283	0.37	0.04	—	2,305
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	296	296	0.05	0.01	—	299
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	36.9	36.9	0.01	< 0.005	—	37.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54	< 0.005	< 0.005	—	1.56
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	43.3	43.3	0.01	< 0.005	—	43.7
Total	—	—	—	—	—	—	—	—	—	—	—	378	378	0.06	0.01	—	382

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,781	1,781	0.29	0.03	—	1,799
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	223	223	0.04	< 0.005	—	225
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	9.32	9.32	< 0.005	< 0.005	—	9.41
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	262	262	0.04	0.01	—	265
Total	—	—	—	—	—	—	—	—	—	—	—	2,275	2,275	0.37	0.04	—	2,298
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,781	1,781	0.29	0.03	—	1,799
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	223	223	0.04	< 0.005	—	225
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	9.32	9.32	< 0.005	< 0.005	—	9.41
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	262	262	0.04	0.01	—	265
Total	—	—	—	—	—	—	—	—	—	—	—	2,275	2,275	0.37	0.04	—	2,298
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	295	295	0.05	0.01	—	298

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	36.9	36.9	0.01	< 0.005	—	37.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54	< 0.005	< 0.005	—	1.56
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	43.4	43.4	0.01	< 0.005	—	43.8
Total	—	—	—	—	—	—	—	—	—	—	—	377	377	0.06	0.01	—	380

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed 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
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments High Rise	0.00	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	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Enclosed 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
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments High Rise	0.00	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	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed 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
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments High Rise	0.00	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	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Enclosed 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
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments High Rise	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	-0.84	-0.84	> -0.005	> -0.005	—	-0.84
Total	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	-0.84	-0.84	> -0.005	> -0.005	—	-0.84
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed 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
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments High Rise	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	-0.84	-0.84	> -0.005	> -0.005	—	-0.84
Total	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	-0.84	-0.84	> -0.005	> -0.005	—	-0.84
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed 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
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Apartments High Rise	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	-0.14	-0.14	> -0.005	> -0.005	—	-0.14
Total	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005	> -0.005	—	> -0.005	—	-0.14	-0.14	> -0.005	> -0.005	—	-0.14

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.05	0.85	0.36	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,077	1,077	0.02	< 0.005	—	1,079
Consumer Products	4.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.20	0.14	15.6	< 0.005	0.02	—	0.02	0.02	—	0.02	—	57.3	57.3	< 0.005	< 0.005	—	57.5
Total	7.72	0.99	16.0	0.01	0.09	—	0.09	0.08	—	0.08	0.00	1,135	1,135	0.02	< 0.005	—	1,136
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.05	0.85	0.36	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,077	1,077	0.02	< 0.005	—	1,079
Consumer Products	4.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	5.52	0.85	0.36	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,077	1,077	0.02	< 0.005	—	1,079
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	4.40	4.40	< 0.005	< 0.005	—	4.40
Consumer Products	0.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.20	0.01	1.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.68	4.68	< 0.005	< 0.005	—	4.70
Total	1.20	0.02	1.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.08	9.08	< 0.005	< 0.005	—	9.10

4.3.2. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.05	0.85	0.36	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,077	1,077	0.02	< 0.005	—	1,079
Consumer Products	4.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.20	0.14	15.6	< 0.005	0.02	—	0.02	0.02	—	0.02	—	57.3	57.3	< 0.005	< 0.005	—	57.5

Total	7.72	0.99	16.0	0.01	0.09	—	0.09	0.08	—	0.08	0.00	1,135	1,135	0.02	< 0.005	—	1,136
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.05	0.85	0.36	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,077	1,077	0.02	< 0.005	—	1,079
Consumer Products	4.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	5.52	0.85	0.36	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,077	1,077	0.02	< 0.005	—	1,079
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	4.40	4.40	< 0.005	< 0.005	—	4.40
Consumer Products	0.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.20	0.01	1.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.68	4.68	< 0.005	< 0.005	—	4.70
Total	1.20	0.02	1.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.08	9.08	< 0.005	< 0.005	—	9.10

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	47.0	88.7	136	4.83	0.12	—	291
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.22	0.42	0.65	0.02	< 0.005	—	1.38
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	5.98	11.3	17.3	0.61	0.01	—	37.0
Total	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	47.0	88.7	136	4.83	0.12	—	291
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.22	0.42	0.65	0.02	< 0.005	—	1.38
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	5.98	11.3	17.3	0.61	0.01	—	37.0
Total	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	7.78	14.7	22.5	0.80	0.02	—	48.2

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.04	0.07	0.11	< 0.005	< 0.005	—	0.23
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	0.99	1.87	2.86	0.10	< 0.005	—	6.13
Total	—	—	—	—	—	—	—	—	—	—	8.80	16.6	25.4	0.91	0.02	—	54.6

4.4.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	47.0	88.7	136	4.83	0.12	—	291
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.22	0.42	0.65	0.02	< 0.005	—	1.38
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	5.98	11.3	17.3	0.61	0.01	—	37.0
Total	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	47.0	88.7	136	4.83	0.12	—	291

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.22	0.42	0.65	0.02	< 0.005	—	1.38
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	5.98	11.3	17.3	0.61	0.01	—	37.0
Total	—	—	—	—	—	—	—	—	—	—	53.2	100	154	5.47	0.13	—	329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	7.78	14.7	22.5	0.80	0.02	—	48.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.04	0.07	0.11	< 0.005	< 0.005	—	0.23
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	0.99	1.87	2.86	0.10	< 0.005	—	6.13
Total	—	—	—	—	—	—	—	—	—	—	8.80	16.6	25.4	0.91	0.02	—	54.5

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

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

General Office Building	—	—	—	—	—	—	—	—	—	—	69.1	0.00	69.1	6.91	0.00	—	242
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.89	0.00	0.89	0.09	0.00	—	3.12
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	34.3	0.00	34.3	3.43	0.00	—	120
Total	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	69.1	0.00	69.1	6.91	0.00	—	242
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.89	0.00	0.89	0.09	0.00	—	3.12
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	34.3	0.00	34.3	3.43	0.00	—	120
Total	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	11.4	0.00	11.4	1.14	0.00	—	40.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Strip Mall	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	0.01	0.00	—	0.52
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	5.68	0.00	5.68	0.57	0.00	—	19.9
Total	—	—	—	—	—	—	—	—	—	—	17.3	0.00	17.3	1.73	0.00	—	60.4

4.5.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	69.1	0.00	69.1	6.91	0.00	—	242
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.89	0.00	0.89	0.09	0.00	—	3.12
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	34.3	0.00	34.3	3.43	0.00	—	120
Total	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	69.1	0.00	69.1	6.91	0.00	—	242
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Strip Mall	—	—	—	—	—	—	—	—	—	—	0.89	0.00	0.89	0.09	0.00	—	3.12
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	34.3	0.00	34.3	3.43	0.00	—	120
Total	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	365
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	11.4	0.00	11.4	1.14	0.00	—	40.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	0.01	0.00	—	0.52
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	5.68	0.00	5.68	0.57	0.00	—	19.9
Total	—	—	—	—	—	—	—	—	—	—	17.3	0.00	17.3	1.73	0.00	—	60.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.34	0.34
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.34	0.34
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16

4.6.2. Mitigated

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

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

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.34	0.34
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.34	0.34
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.94	0.94
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	6/1/2024	6/21/2024	5.00	15.0	—
Site Preparation	Site Preparation	7/1/2024	8/5/2024	5.00	26.0	—
Grading	Grading	8/6/2024	11/14/2024	5.00	73.0	—
Building Construction	Building Construction	10/16/2024	1/29/2026	5.00	337	—
Paving	Paving	1/30/2026	2/19/2026	5.00	15.0	—
Architectural Coating	Architectural Coating	2/2/2026	2/22/2026	5.00	15.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	158	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	247	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	81.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	97.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	247	0.40
Building Construction	Cranes	Diesel	Average	1.00	7.00	231	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	89.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	84.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	97.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	1.00	8.00	130	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	132	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	80.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	78.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	158	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	247	0.40

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	81.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	97.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	247	0.40
Building Construction	Cranes	Diesel	Average	1.00	7.00	231	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	89.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	84.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	97.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	1.00	8.00	130	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	132	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	80.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	78.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	7.53	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	56.2	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	152	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	49.8	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.4	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	7.53	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	56.2	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	152	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	49.8	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	30.4	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	167,184	55,728	209,229	69,743	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	9,791	—
Site Preparation	—	—	39.0	0.00	—
Grading	—	37,000	73.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Enclosed Parking with Elevator	0.00	100%
Strip Mall	0.00	0%
Apartments High Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	1,343	305	96.5	371,134	11,082	2,515	796	3,061,982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	69.8	66.2	32.2	23,314	576	546	265	192,352
Apartments High Rise	383	390	309	136,188	2,435	2,479	1,965	866,628

5.9.2. Mitigated

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

General Office Building	973	221	69.9	268,913	8,030	1,822	577	2,218,623
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	50.5	47.9	23.3	16,893	417	396	192	139,373
Apartments High Rise	187	191	151	66,606	1,191	1,212	961	423,849

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments High Rise	—
Wood Fireplaces	0
Gas Fireplaces	44
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	42
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments High Rise	—

Wood Fireplaces	0
Gas Fireplaces	44
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	42
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
167184	55,728	209,229	69,743	—

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	3,201,439	204	0.0330	0.0040	0.00
Enclosed Parking with Elevator	398,675	204	0.0330	0.0040	0.00
Strip Mall	16,669	204	0.0330	0.0040	0.00
Apartments High Rise	468,079	204	0.0330	0.0040	0.00

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	3,187,429	204	0.0330	0.0040	0.00
Enclosed Parking with Elevator	398,675	204	0.0330	0.0040	0.00
Strip Mall	16,669	204	0.0330	0.0040	0.00
Apartments High Rise	468,718	204	0.0330	0.0040	-2,608

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	24,511,617	1,716
Enclosed Parking with Elevator	0.00	0.00
Strip Mall	116,590	0.00
Apartments High Rise	3,118,910	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	24,511,617	805
Enclosed Parking with Elevator	0.00	0.00
Strip Mall	116,590	0.00
Apartments High Rise	3,118,910	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	128	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	1.65	—
Apartments High Rise	63.7	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	128	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	1.65	—
Apartments High Rise	63.7	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
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
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
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
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.57	annual days of extreme heat
Extreme Precipitation	6.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	10.6
AQ-PM	24.5
AQ-DPM	79.7
Drinking Water	23.4

Lead Risk Housing	64.0
Pesticides	0.00
Toxic Releases	35.4
Traffic	75.6
Effect Indicators	—
CleanUp Sites	58.2
Groundwater	95.7
Haz Waste Facilities/Generators	94.9
Impaired Water Bodies	83.0
Solid Waste	63.7
Sensitive Population	—
Asthma	51.6
Cardio-vascular	27.2
Low Birth Weights	23.7
Socioeconomic Factor Indicators	—
Education	47.8
Housing	39.7
Linguistic	65.2
Poverty	28.4
Unemployment	18.3

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	66.93186193
Employed	79.81521879

Median HI	57.94944181
Education	—
Bachelor's or higher	66.39291672
High school enrollment	1.591171564
Preschool enrollment	80.84178109
Transportation	—
Auto Access	20.53124599
Active commuting	91.64634929
Social	—
2-parent households	79.72539458
Voting	76.77402797
Neighborhood	—
Alcohol availability	12.19042731
Park access	81.35506224
Retail density	97.69023483
Supermarket access	85.87193635
Tree canopy	65.69998717
Housing	—
Homeownership	28.53843193
Housing habitability	32.54202489
Low-inc homeowner severe housing cost burden	37.41819582
Low-inc renter severe housing cost burden	82.29180033
Uncrowded housing	40.60053895
Health Outcomes	—
Insured adults	29.96278712
Arthritis	17.5
Asthma ER Admissions	42.4

High Blood Pressure	37.6
Cancer (excluding skin)	12.2
Asthma	72.9
Coronary Heart Disease	21.3
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	58.5
Life Expectancy at Birth	68.2
Cognitively Disabled	29.3
Physically Disabled	54.0
Heart Attack ER Admissions	91.9
Mental Health Not Good	73.6
Chronic Kidney Disease	27.1
Obesity	70.8
Pedestrian Injuries	98.2
Physical Health Not Good	60.5
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	61.9
Current Smoker	74.7
No Leisure Time for Physical Activity	54.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	32.3
Children	55.0
Elderly	13.4
English Speaking	26.0
Foreign-born	78.6

Outdoor Workers	23.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	13.7
Traffic Density	75.4
Traffic Access	72.4
Other Indices	—
Hardship	46.0
Other Decision Support	—
2016 Voting	77.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	48.0
Healthy Places Index Score for Project Location (b)	62.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
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
Construction: Trips and VMT	4100 haul trips during grading for the excavation of the site. 4100 trips/73 days of grading phase = 56.16 trips/day
Land Use	Square footages based on Project Description. Site acreage is zero for all land uses except commercial to represent that the Project is a 6 story mixed use building. Landscaping square footage calculated from tree placement.
Operations: Energy Use	No natural gas usage, as required by the CAP consistency checklist requirements. Per natural gas to electricity conversion calculations (from Sac Metro conversion metric), an additional 282,030 kwh/year is added to the general office building, 3,219 kwh/year is added to the strip mall, and 178,106 kwh/year is added to the apartments.

ATTACHMENT B

CalEEMod Output Files – Greenhouse Gas Emissions – Existing Conditions

Block 20 Mixed Use - Existing Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Block 20 Mixed Use - Existing
Operational Year	2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.60
Precipitation (days)	32.0
Location	37.56583829836612, -122.31928576249871
County	San Mateo
City	San Mateo
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1239
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.19

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

Fast Food Restaurant w/o Drive Thru	1.74	1000sqft	0.04	1,743	0.00	—	—	—
Single Family Housing	1.00	Dwelling Unit	0.32	1,950	11,713	—	3.00	—
Day-Care Center	4.36	1000sqft	0.17	4,356	0.00	—	—	—
Other Asphalt Surfaces	0.47	Acre	0.47	0.00	0.00	—	—	—
Library	1.74	1000sqft	0.04	1,742	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.14	3.61	39.2	0.10	0.07	8.59	8.66	0.07	2.17	2.24	16.7	9,971	9,988	2.11	0.36	41.8	10,188
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.98	4.23	38.8	0.09	0.07	8.59	8.65	0.07	2.17	2.24	16.7	9,533	9,550	2.17	0.39	3.78	9,725
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.28	2.62	24.0	0.06	0.05	5.39	5.44	0.05	1.37	1.41	16.7	6,216	6,232	1.98	0.25	13.6	6,369
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.60	0.48	4.39	0.01	0.01	0.98	0.99	0.01	0.25	0.26	2.76	1,029	1,032	0.33	0.04	2.25	1,054

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.83	3.46	38.6	0.10	0.06	8.59	8.64	0.05	2.17	2.23	—	9,721	9,721	0.41	0.35	39.1	9,875
Area	0.30	0.01	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.77	5.77	< 0.005	< 0.005	—	5.78
Energy	0.01	0.14	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	241	241	0.03	< 0.005	—	242
Water	—	—	—	—	—	—	—	—	—	—	1.55	3.25	4.79	0.16	< 0.005	—	9.91
Waste	—	—	—	—	—	—	—	—	—	—	15.1	0.00	15.1	1.51	0.00	—	53.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.76	2.76
Total	5.14	3.61	39.2	0.10	0.07	8.59	8.66	0.07	2.17	2.24	16.7	9,971	9,988	2.11	0.36	41.8	10,188
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.73	4.08	38.7	0.09	0.06	8.59	8.64	0.05	2.17	2.23	—	9,285	9,285	0.47	0.39	1.01	9,413
Area	0.24	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	4.21	4.21	< 0.005	< 0.005	—	4.22
Energy	0.01	0.14	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	241	241	0.03	< 0.005	—	242
Water	—	—	—	—	—	—	—	—	—	—	1.55	3.25	4.79	0.16	< 0.005	—	9.91
Waste	—	—	—	—	—	—	—	—	—	—	15.1	0.00	15.1	1.51	0.00	—	53.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.76	2.76
Total	4.98	4.23	38.8	0.09	0.07	8.59	8.65	0.07	2.17	2.24	16.7	9,533	9,550	2.17	0.39	3.78	9,725
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.00	2.48	23.7	0.06	0.04	5.39	5.43	0.03	1.37	1.40	—	5,971	5,971	0.29	0.24	10.8	6,060
Area	0.27	< 0.005	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.87	0.87	< 0.005	< 0.005	—	0.87

Energy	0.01	0.14	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	241	241	0.03	< 0.005	—	242
Water	—	—	—	—	—	—	—	—	—	—	1.55	3.25	4.79	0.16	< 0.005	—	9.91
Waste	—	—	—	—	—	—	—	—	—	—	15.1	0.00	15.1	1.51	0.00	—	53.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.76	2.76
Total	3.28	2.62	24.0	0.06	0.05	5.39	5.44	0.05	1.37	1.41	16.7	6,216	6,232	1.98	0.25	13.6	6,369
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.55	0.45	4.33	0.01	0.01	0.98	0.99	0.01	0.25	0.26	—	989	989	0.05	0.04	1.79	1,003
Area	0.05	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.14	0.14	< 0.005	< 0.005	—	0.14
Energy	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.9	39.9	< 0.005	< 0.005	—	40.1
Water	—	—	—	—	—	—	—	—	—	—	0.26	0.54	0.79	0.03	< 0.005	—	1.64
Waste	—	—	—	—	—	—	—	—	—	—	2.51	0.00	2.51	0.25	0.00	—	8.77
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46
Total	0.60	0.48	4.39	0.01	0.01	0.98	0.99	0.01	0.25	0.26	2.76	1,029	1,032	0.33	0.04	2.25	1,054

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	3.77	2.79	31.2	0.08	0.05	7.04	7.09	0.04	1.78	1.83	—	7,959	7,959	0.33	0.28	32.0	8,083

Single Family Housing	0.03	0.02	0.20	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	48.6	48.6	< 0.005	< 0.005	0.19	49.4
Day-Care Center	0.59	0.33	3.60	0.01	0.01	0.69	0.70	< 0.005	0.18	0.18	—	798	798	0.04	0.03	3.15	813
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Library	0.43	0.32	3.59	0.01	0.01	0.81	0.82	0.01	0.21	0.21	—	915	915	0.04	0.03	3.68	930
Total	4.83	3.46	38.6	0.10	0.06	8.59	8.64	0.05	2.17	2.23	—	9,721	9,721	0.41	0.35	39.1	9,875
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	3.70	3.29	31.1	0.07	0.05	7.04	7.09	0.04	1.78	1.83	—	7,600	7,600	0.37	0.31	0.83	7,704
Single Family Housing	0.03	0.02	0.21	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	46.5	46.5	< 0.005	< 0.005	0.01	47.2
Day-Care Center	0.58	0.39	3.82	0.01	0.01	0.69	0.70	< 0.005	0.18	0.18	—	764	764	0.05	0.04	0.08	776
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Library	0.43	0.38	3.58	0.01	0.01	0.81	0.82	0.01	0.21	0.21	—	874	874	0.04	0.04	0.10	886
Total	4.73	4.08	38.7	0.09	0.06	8.59	8.64	0.05	2.17	2.23	—	9,285	9,285	0.47	0.39	1.01	9,413
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	0.40	0.34	3.26	0.01	0.01	0.76	0.76	< 0.005	0.19	0.20	—	758	758	0.04	0.03	1.38	769
Single Family Housing	< 0.005	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	7.54	7.54	< 0.005	< 0.005	0.01	7.66

Day-Care Center	0.08	0.05	0.50	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.03	—	98.3	98.3	0.01	< 0.005	0.18	100.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Library	0.07	0.06	0.54	< 0.005	< 0.005	0.12	0.13	< 0.005	0.03	0.03	—	125	125	0.01	< 0.005	0.23	127
Total	0.55	0.45	4.33	0.01	0.01	0.98	0.99	0.01	0.25	0.26	—	989	989	0.05	0.04	1.79	1,003

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	44.2	44.2	0.01	< 0.005	—	44.6
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.46	3.46	< 0.005	< 0.005	—	3.49
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	10.8	10.8	< 0.005	< 0.005	—	10.9
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	10.6	10.6	< 0.005	< 0.005	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	69.1	69.1	0.01	< 0.005	—	69.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	44.2	44.2	0.01	< 0.005	—	44.6
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.46	3.46	< 0.005	< 0.005	—	3.49
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	10.8	10.8	< 0.005	< 0.005	—	10.9
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	10.6	10.6	< 0.005	< 0.005	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	69.1	69.1	0.01	< 0.005	—	69.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	7.32	7.32	< 0.005	< 0.005	—	7.39
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.57	0.57	< 0.005	< 0.005	—	0.58
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	1.79	1.79	< 0.005	< 0.005	—	1.81
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	1.76	1.76	< 0.005	< 0.005	—	1.78
Total	—	—	—	—	—	—	—	—	—	—	—	11.4	11.4	< 0.005	< 0.005	—	11.6

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	75.4	75.4	0.01	< 0.005	—	75.6
Single Family Housing	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.8	14.8	< 0.005	< 0.005	—	14.9
Day-Care Center	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	57.3	57.3	0.01	< 0.005	—	57.5
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.4	24.4	< 0.005	< 0.005	—	24.5
Total	0.01	0.14	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	172	172	0.02	< 0.005	—	172
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	75.4	75.4	0.01	< 0.005	—	75.6
Single Family Housing	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.8	14.8	< 0.005	< 0.005	—	14.9
Day-Care Center	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	57.3	57.3	0.01	< 0.005	—	57.5
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.4	24.4	< 0.005	< 0.005	—	24.5
Total	0.01	0.14	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	172	172	0.02	< 0.005	—	172
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant w/o Drive Thru	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.5	12.5	< 0.005	< 0.005	—	12.5
Single Family Housing	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.45	2.45	< 0.005	< 0.005	—	2.46
Day-Care Center	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.49	9.49	< 0.005	< 0.005	—	9.52
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.05	4.05	< 0.005	< 0.005	—	4.06
Total	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.5	28.5	< 0.005	< 0.005	—	28.5

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	4.21	4.21	< 0.005	< 0.005	—	4.22
Consumer Products	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.55	1.55	< 0.005	< 0.005	—	1.56

Total	0.30	0.01	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.77	5.77	< 0.005	< 0.005	—	5.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	4.21	4.21	< 0.005	< 0.005	—	4.22
Consumer Products	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.24	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	4.21	4.21	< 0.005	< 0.005	—	4.22
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.02	0.02	< 0.005	< 0.005	—	0.02
Consumer Products	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.13	0.13	< 0.005	< 0.005	—	0.13
Total	0.05	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.14	0.14	< 0.005	< 0.005	—	0.14

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	1.01	1.91	2.93	0.10	< 0.005	—	6.28
Single Family Housing	—	—	—	—	—	—	—	—	—	—	0.07	0.46	0.53	0.01	< 0.005	—	0.76
Day-Care Center	—	—	—	—	—	—	—	—	—	—	0.36	0.68	1.03	0.04	< 0.005	—	2.22
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	0.10	0.20	0.30	0.01	< 0.005	—	0.65
Total	—	—	—	—	—	—	—	—	—	—	1.55	3.25	4.79	0.16	< 0.005	—	9.91
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	1.01	1.91	2.93	0.10	< 0.005	—	6.28
Single Family Housing	—	—	—	—	—	—	—	—	—	—	0.07	0.46	0.53	0.01	< 0.005	—	0.76
Day-Care Center	—	—	—	—	—	—	—	—	—	—	0.36	0.68	1.03	0.04	< 0.005	—	2.22
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	0.10	0.20	0.30	0.01	< 0.005	—	0.65
Total	—	—	—	—	—	—	—	—	—	—	1.55	3.25	4.79	0.16	< 0.005	—	9.91
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	0.17	0.32	0.48	0.02	< 0.005	—	1.04
Single Family Housing	—	—	—	—	—	—	—	—	—	—	0.01	0.08	0.09	< 0.005	< 0.005	—	0.13
Day-Care Center	—	—	—	—	—	—	—	—	—	—	0.06	0.11	0.17	0.01	< 0.005	—	0.37
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	0.02	0.03	0.05	< 0.005	< 0.005	—	0.11
Total	—	—	—	—	—	—	—	—	—	—	0.26	0.54	0.79	0.03	< 0.005	—	1.64

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	10.8	0.00	10.8	1.08	0.00	—	37.9
Single Family Housing	—	—	—	—	—	—	—	—	—	—	0.40	0.00	0.40	0.04	0.00	—	1.39
Day-Care Center	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.31	0.00	—	10.7

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	0.86	0.00	0.86	0.09	0.00	—	3.02
Total	—	—	—	—	—	—	—	—	—	—	15.1	0.00	15.1	1.51	0.00	—	53.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	10.8	0.00	10.8	1.08	0.00	—	37.9
Single Family Housing	—	—	—	—	—	—	—	—	—	—	0.40	0.00	0.40	0.04	0.00	—	1.39
Day-Care Center	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.31	0.00	—	10.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	0.86	0.00	0.86	0.09	0.00	—	3.02
Total	—	—	—	—	—	—	—	—	—	—	15.1	0.00	15.1	1.51	0.00	—	53.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	1.79	0.00	1.79	0.18	0.00	—	6.27
Single Family Housing	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.23
Day-Care Center	—	—	—	—	—	—	—	—	—	—	0.51	0.00	0.51	0.05	0.00	—	1.77
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Library	—	—	—	—	—	—	—	—	—	—	0.14	0.00	0.14	0.01	0.00	—	0.50
Total	—	—	—	—	—	—	—	—	—	—	2.51	0.00	2.51	0.25	0.00	—	8.77

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.72	2.72
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.76	2.76
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.72	2.72
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.76	2.76
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.45	0.45
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Fast Food Restaurant w/o Drive Thru	603	1,213	872	266,034	4,979	10,009	7,190	2,194,871
Single Family Housing	9.44	9.54	8.55	3,404	60.1	60.7	54.4	21,664
Day-Care Center	207	27.1	25.4	56,820	985	224	210	279,491
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Library	126	140	73.3	43,820	1,036	1,151	605	361,534

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
3948.75	1,316	11,762	3,921	1,228

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Fast Food Restaurant w/o Drive Thru	79,095	204	0.0330	0.0040	235,167
Single Family Housing	6,185	204	0.0330	0.0040	46,222
Day-Care Center	19,329	204	0.0330	0.0040	178,861
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
Library	19,005	204	0.0330	0.0040	76,281

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Fast Food Restaurant w/o Drive Thru	529,059	0.00
Single Family Housing	36,266	118,681
Day-Care Center	186,827	0.00
Other Asphalt Surfaces	0.00	0.00
Library	54,505	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Fast Food Restaurant w/o Drive Thru	20.1	—

Single Family Housing	0.74	—
Day-Care Center	5.66	—
Other Asphalt Surfaces	0.00	—
Library	1.60	—

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
Fast Food Restaurant w/o Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant w/o Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant w/o Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Day-Care Center	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Day-Care Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Day-Care Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Day-Care Center	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Library	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

Library	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Library	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Library	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.57	annual days of extreme heat
Extreme Precipitation	6.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	1	1	3
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	10.6
AQ-PM	24.5
AQ-DPM	79.7
Drinking Water	23.4
Lead Risk Housing	64.0
Pesticides	0.00
Toxic Releases	35.4
Traffic	75.6
Effect Indicators	—
CleanUp Sites	58.2
Groundwater	95.7
Haz Waste Facilities/Generators	94.9

Impaired Water Bodies	83.0
Solid Waste	63.7
Sensitive Population	—
Asthma	51.6
Cardio-vascular	27.2
Low Birth Weights	23.7
Socioeconomic Factor Indicators	—
Education	47.8
Housing	39.7
Linguistic	65.2
Poverty	28.4
Unemployment	18.3

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	66.93186193
Employed	79.81521879
Median HI	57.94944181
Education	—
Bachelor's or higher	66.39291672
High school enrollment	1.591171564
Preschool enrollment	80.84178109
Transportation	—
Auto Access	20.53124599
Active commuting	91.64634929

Social	—
2-parent households	79.72539458
Voting	76.77402797
Neighborhood	—
Alcohol availability	12.19042731
Park access	81.35506224
Retail density	97.69023483
Supermarket access	85.87193635
Tree canopy	65.69998717
Housing	—
Homeownership	28.53843193
Housing habitability	32.54202489
Low-inc homeowner severe housing cost burden	37.41819582
Low-inc renter severe housing cost burden	82.29180033
Uncrowded housing	40.60053895
Health Outcomes	—
Insured adults	29.96278712
Arthritis	17.5
Asthma ER Admissions	42.4
High Blood Pressure	37.6
Cancer (excluding skin)	12.2
Asthma	72.9
Coronary Heart Disease	21.3
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	58.5
Life Expectancy at Birth	68.2
Cognitively Disabled	29.3

Physically Disabled	54.0
Heart Attack ER Admissions	91.9
Mental Health Not Good	73.6
Chronic Kidney Disease	27.1
Obesity	70.8
Pedestrian Injuries	98.2
Physical Health Not Good	60.5
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	61.9
Current Smoker	74.7
No Leisure Time for Physical Activity	54.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	32.3
Children	55.0
Elderly	13.4
English Speaking	26.0
Foreign-born	78.6
Outdoor Workers	23.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	13.7
Traffic Density	75.4
Traffic Access	72.4
Other Indices	—
Hardship	46.0
Other Decision Support	—

2016 Voting	77.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	48.0
Healthy Places Index Score for Project Location (b)	62.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Estimated square footage/acreage for existing land uses from map.

ATTACHMENT C

Completed CAP Consistency Checklist

APPENDIX 3

Development Checklist

Project Description Characteristics

Please identify the applicable land uses included in the proposed project and provide a brief description of the proposed project (or the project description to be used for the associated environmental document).

1) What is the size of the project (in acres)?

1.16 acres

2) Identify the applicable land uses:

- [x] Residential
- [x] Commercial
- [ ] Industrial
- [ ] Manufacturing
- [ ] Other

3) If there is a residential component to the project, how many units are being proposed?

Single-family residences:	:
Multi-family residences:	total of 86 dwelling units: (52) Studios/ (25) 1-Bdrm units/ (9) 2-Brdrm units

4) Please provide a brief project description, including the square footage of conditioned space by land use:

This is a new 201,650 sq.ft. 6-story building which includes 5-story office and 3-story residential building with below grade 2 level parking structure on a 50,499 s.f. lot. Scope of work includes the construction of the building core and shell, complete build out of residential dwelling units as well as site improvements such as sidewalks, curb, short-term bike racks, street trees and landscape.

5) Does the project require any amendments to the General Plan or specific plans?

Yes [x] No

If yes, please explain:

6) Is the project located in a specific plan area?

[Yes] No

If so, which one? The project is located within the 2009 Downtown Area Plan.

7) Please complete the following table to identify project compliance with any applicable CAP measures.

Standards for CAP Consistency – New Development

Reduction Measure and Applicable Standard	Does the Project Comply?	Notes & Comments
BE 1: All new development: The project does not have natural gas connections, and does not have any natural gas appliances or other equipment installed	[Yes] No N/A	Additional notes: All electric
RE 2. All new developments with residential units: The project includes an on-site renewable energy system that meets or exceeds the minimum requirements of the California State Building Code	[Yes] No N/A	If yes, what is the kW potential of the renewable energy system 8kW photo voltaic system (5kW new non-residential greater than 10,000 s.f. & 3kW new multifamily four stories or more) Additional notes: per SMMC 23.24.030
RE 2. All new developments with residential units: The project includes an on-site energy storage system, such as a battery.	Yes [No] N/A	If yes, how much electricity does the system store? Additional notes:
RE 3. All new developments with nonresidential space: The project includes an on-site renewable energy system that meets or exceeds the minimum requirements of the California State Building Code	[Yes] No N/A	If yes, what is the kW potential of the renewable energy system? 8kW photo voltaic system (5kW new non-residential greater than 10,000 s.f. & 3kW new multifamily four stories or more) Additional notes: Per SMMC 23.24.030

APPENDIX 3

Reduction Measure and Applicable Standard	Does the Project Comply?	Notes & Comments
RE 3. All new developments with nonresidential space: The project includes an on-site energy storage system, such as a battery.	Yes No N/A	If yes, how much electricity does the system store? Additional notes: The current planned infrastructure for energy generation will not provide enough to include on-site energy storage.
EE 3. All new developments with residential units: The project includes trees that provide shade to residences.	Yes No N/A	If yes, how many residences are shaded by newly planted trees? Additional notes: The project is an infill mixed-used project with proposed residential units provided on the upper building levels. As such, there is not an opportunity to provide substantial (shade) trees for the units.
CF 1. All new development with dedicated off-street parking: The project includes parking spaces with installed EV chargers or are pre-wired for EV chargers, consistent with state and any local regulations.	Yes No N/A	If yes, how many spaces include installed EV chargers? If yes, how many spaces are pre-wired for EV chargers? Additional notes:
CF 1. All new development with dedicated off-street parking: The project includes parking spaces with installed EV chargers that are accessible by members of the public beyond those who live and/or work at the project.	Yes No N/A	If yes, how many spaces with installed EV chargers are accessible by members of the public? n/a If yes, how many Level 3 chargers installed as part of this project are publicly accessible? n/a Additional notes:

Reduction Measure and Applicable Standard	Does the Project Comply?	Notes & Comments
ST 6. New developments of at least six multi-family units and/or 10,000 square feet of nonresidential space: Implement TDM strategies to comply with the appropriate trip reduction target identified in applicable area plans and San Mateo Citywide TDM Plan.	[Yes] No N/A	If yes, what is the trip reduction target for the project? % short-term commute trip reduction % long-term commute trip reduction What strategies will the project use to achieve these trip reduction targets? Additional notes: A project TDM Plan will be prepared.
ST 6. Projects of at least 20 multi-family units and/or 50,000 square feet of nonresidential space undergoing additions or alterations (as defined in San Mateo Municipal Code Section 23.06.012): Implement TDM strategies consistent with the targets in relevant area plans and the San Mateo Citywide TDM Plan.	Yes [No] N/A	If yes, what is the trip reduction target for the project? % short-term commute trip reduction % long-term commute trip reduction What strategies will the project use to achieve these trip reduction targets? Additional notes:
ST 7. All new development: Be located along El Camino Real, within one-half mile of any Caltrain station, or in the Rail Corridor Transit Oriented Development or Hillsdale Station Area Plan areas.	[Yes] No N/A	Additional notes:

APPENDIX 3

Reduction Measure and Applicable Standard	Does the Project Comply?	Notes & Comments
SW 1. All developments with multifamily units or nonresidential space: Provide an area of sufficient space to store and allow access to a compost bin.	[Yes] No N/A	Does the project participate in any composting programs? Composting chutes are included at residential levels Does the project compost on-site? Additional notes: Per City of San Mateo and Recology requirements
WW 3. All new development: Include a greywater system.	Yes [No] N/A	If yes, is the greywater system "laundry-to-landscape" or another type of system? n/a Additional notes: The lack of infrastructure for greywater in downtown San Mateo and that fact the building will not produce enough greywater internally for use makes this prohibitive.