Greenhouse Gas Emissions Assessment
445 South B Street (Bespoke) Project

San Mateo, California

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
AB	Assembly Bill
ABAG	Association of Bay Area Governments
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association

LIST OF ACRONYMS AND ABBREVIATIONS

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
GHG	greenhouse gas
HVAC	heating, ventilation, and air conditioning systems
IPCC	Intergovernmental Panel on Climate Change
$MTCO_2e$	metric tons of carbon dioxide equivalents
N_2O	nitrous oxide
PRC	Public Resources Code
Project	445 South B Street Project
ROW	right-of-way
RTP	Regional Transportation Plan
SB	Senate Bill
sf	square feet
SCS	Sustainable Communities Strategy
TAC	toxic air contaminants
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 445 South B Street (Bespoke) Project (Project), which includes the demolition of four commercial buildings and a city-owned parking lot and the construction of one residential building and one commercial building in the City of San Mateo (City), California. This assessment is based on the methodology recommended by the City of San Mateo and the Bay Area Air Quality Management District (BAAQMD) 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 Area is located at 445 South B Street in the City of San Mateo on approximately 1.16 acres comprised of Assessor's Parcel Numbers (APNs) 034-179-010, 034-179-020, 034-179-030, 034-179-040, 034-179-050, and 034-179-060. It is bound by East 4th Avenue to the northwest, South Railroad Avenue to the northeast, South B Street to the southwest, and East 5th Avenue to the southeast. The Project Area is surrounded mainly by commercial, retail, and residential land uses. The Proposed Project proposes the demolition of four existing commercial building structures totaling 23,900 square feet (sf) and a city-owned parking lot in order to accommodate the construction of two buildings, a seven-story affordable housing building and a six-story commercial building, totaling 244,885 sf. The residential building would include 71 residential units, a subterranean parking garage, and a 5,964-sf support services center for the elderly. The commercial building would include 148,939 sf of office space and 13,995 sf of retail-restaurant space. The Proposed Project also includes on- and offsite improvements such as ground-level and terrace landscaping, a corner retail plaza, and public right-of-way (ROW) improvements.

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 nitrous oxide (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 3-1 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 toxic air contaminants (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 about 12 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] USEPA 2023c

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 2022, the California Air Resources Board (CARB) released the 2022 edition of the California GHG inventory covering calendar year 2020 emissions. In 2020, California emitted 369.2 million gross metric tons of CO_2e ($MTCO_2e$) including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2020, accounting for approximately 38 percent of total GHG emissions in the state. Continuing the downward trend from previous years, transportation emissions decreased 27 million metric tons of CO_2e in 2020, though the intensity of this decrease was most likely from light duty vehicles after shelter-in-place orders were enacted in response to the COVID-19 pandemic. Emissions from the electricity sector account for 16 percent of the inventory and have remained

at a similar level as in 2019 despite a 44 percent decrease in in-state hydropower generation (due to below average precipitation levels), which was more than compensated for by a 10 percent growth in in-state solar generation and cleaner imported electricity incentivized by California's clean energy policies. California's industrial sector accounts for the second largest source of the state's GHG emissions in 2020, accounting for 23 percent (CARB 2022).

2.2 Regulatory Framework

2.2.1 State

2.2.1.1 Executive Orders S-3-05

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.

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 percent 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.

2.2.1.4 Senate Bill 100 of 2018

In 2018, Senate Bill (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 an updated community-wide Climate Action Plan (CAP) in April 2020, which updates and consolidates the various City's GHG reduction efforts based on the vision of San Mateo residents, businesses, and local government. It is noted that at the time of this Report preparation, the CAP 2023 Technical Update was completed as part of the City's General Plan 2040 update process that updates the 2020 CAP. However, the CAP 2023 Technical Update will not be adopted until the General Plan 2040 is adopted later in 2024 (City of San Mateo 2023), and therefore the 2020 CAP is considered in this analysis. Until such time that the CAP 2023 Technical Update is adopted, the 2020 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 2050. The 2020 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 2020 CAP to facilitate and potentially streamline the environmental assessment of GHGs associated with future developmental initiatives within the City. The 2020 CAP is a direct revision of the 2015 CAP. The 2020 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 4.3 $MTCO_2e$ per person by 2030 and 1.2 $MTCO_2e$ per person by 2050. 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 what GHG emissions are likely to look like in 2030 and 2050 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 2050.
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 2020 City CAP is the most recently adopted update after the 2015 CAP and is written to align with the goals of SB 32. The CAP addresses estimate 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 15 percent below 2005 emissions levels by 2020, 4.3 $MTCO_2e$ per person by 2030, and 1.2 $MTCO_2e$ per person by 2050. 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. It is noted that at the time of this Report preparation, the CAP 2023 Technical Update was completed as part of the City's General Plan 2040 update process that updates the 2020 CAP. However, the CAP 2023 Technical Update will not be adopted until the General Plan 2040 is adopted later in 2024 (City of San Mateo 2023), and therefore the 2020 CAP is considered in this analysis. Until such time that the CAP 2023 Technical Update is adopted, the 2020 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 2050.

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 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 2022.1.1. (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 using CalEEMod model defaults for San Mateo County (County). Operational GHG emissions were based on CalEEMod model defaults for the County; the site and building square footage identified in the Project's site plans, which include 71 residential units, a subterranean parking garage with 128 parking spaces, a 5,964-sf support services center for the elderly, 148,939 sf of office space and 13,995 sf of retail-restaurant space; and design features outlined by the Project's development plans such as the provision of 42 secured bike parking spaces and all below-market rate housing units. For purposes of disclosure, projected operational emissions associated with proposed operations are compared to the existing

baseline, which includes four existing commercial building structures totaling 23,900 square feet sf and a city-owned parking lot.

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 Calendar Year 1	550
Construction Calendar Year 2	67
Total Construction Emissions	**617**

Source: CalEEMod version 2022.1.1. Refer to Attachment A for Model Data Outputs.

As shown in Table 2-3, Project construction would result in the generation of approximately 550 $MTCO_2e$ over year one of construction and 67 $MTCO_2e$ over year two 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 to 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, includes four existing building structures totaling 23,900 sf and a city-owned parking lot. Table 2-4 summarizes all the direct and indirect annual GHG emissions associated with the Project.

Table 2-4. Annual Operational-Related Greenhouse Gas Emissions	
Emission Source	**CO_2e (Metric Tons/ Year)**
Proposed Project (Residential, Support Services, Office, Retail-Restaurant)	
Mobile	2,262
Area	8
Energy	736
Water	68
Waste	113
Refrigerants	4
Total	**3,190**
Existing Onsite Land Uses (Commercial, Retail)	
Mobile	594
Area	0
Energy	105
Water	6
Waste	14
Refrigerants	2
Total	**721**
Difference	
Mobile	+1,586
Area	+8
Energy	+626
Water	+61
Waste	+99
Refrigerants	+2
Total	**+2,469**

Source: CalEEMod version 2022.1.1. Refer to Attachments A and B for Model Data Outputs.
Notes: Emission projections predominately based on CalEEMod model defaults for San Mateo County. Operational GHG emissions were based on CalEEMod model defaults for the County; the site and building square footage identified in the Project's site plans, which include 71 residential units, a subterranean parking garage with 128 parking spaces, a 5,964-sf support services center for the elderly, 148,939 sf of office space and 13,995 sf of retail-restaurant space; and design features outlined by the Project's development plans such as the provision of 42 secured bike parking spaces and all below-market rate housing units.

As shown in Table 2-3, the Project would generate 3,190 $MTCO_2e$ annually. The increase in operational GHG emissions over the existing baseline would be 2,469 $MTCO_2e$ 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

The City's 2020 CAP is the most recently adopted update to the prior 2015 City CAP. As previously described, the CAP 2023 Technical Update has been drafted as a component of the City's General Plan 2040 update. However, the CAP 2023 Technical Update will not be adopted until the General Plan 2040 is adopted later in 2024 (City of San Mateo 2023), and therefore the 2020 CAP is considered in this analysis. Until such time that the CAP 2023 Technical Update is adopted, the 2020 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 2050. 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 (2022), 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.

The 2020 City CAP is written to align with the goals of SB 32. Specifically, the City has set a per capita emission rate of 4.3 $MTCO_2e$ per person by 2030. Therefore, to show consistency with the CAP the Project is compared to the threshold of 4.3 metric tons of CO_2e per Project service population (Project Population) per year by 2030. This approach is used to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions. An advantage of the service population approach is its application to both residential land uses and employment-oriented land uses. The per capita or per service population metrics represent the rates of emissions needed to achieve a fair share of the state's emission reduction mandate. The use of "fair share" in this instance indicates the GHG efficiency level that, if applied statewide or to a defined geographic area, would meet the 2030 emissions targets. The intent of SB 32 is to accommodate population and economic growth in California but to do so in a way that achieves a lower rate of GHG emissions, as evidenced in the statement from CARB's Scoping Plan. If projects can achieve targeted rates of emissions per the sum of residents plus jobs (i.e., service population), California can accommodate expected population growth and achieve economic development objectives, while also abiding by SB 32's emissions target.

The Project proposes two buildings, a 71-unit low-income residential building and a commercial building. The majority of the service population that would be occupying the Project Site would be workers. In order to estimate the service population of the Project Area, the following steps are considered:

- The Project proposes 71 residential units and according to the California Department of Finance (2023), households in the City average 2.47 occupants. Thus, 175 Project residents are estimated (71 x 2.47= 175).
- The Project proposes a 5,964-sf support services center for the elderly, which is expected to employ 12 workers.
- The Project proposes 148,939 sf of general office space. According to the U.S. Green Building Council (2021), general office space can be expected to employ one person per 250 square-feet. Thus, 595 office employees are estimated (148,939 ÷ 250 = ±595).
- The Project proposes 13,995 sf of retail-restaurant space. According to the U.S. Green Building Council (2021) retail-restaurant space can be expected to employ one person per 435 square-feet. Thus, 32 retail-restaurant employees are estimated (13,995 ÷ 435 = ±32).

The residential building is estimated to have a residential population of 175 and the support services center is expected to employ 12 workers. The remaining service population (Project Population) would be employees in the commercial building associated with the proposed office space and retail-restaurant uses. Per default occupancy counts provided by the U.S. Green Building Council (2021), the proposed commercial building is anticipated to accommodate a total of 627 employees (595 office workers + 32 retail-restaurant workers). Therefore, the total Project service population is 814 (175 residents + 12 support services employees + 627 office and retail-restaurant employees = 814). As shown in Table 2-5, dividing the GHG emissions by the Project service population yields a metric ton per service population ratio of 3.91.

Table 2-5. Greenhouse Gas Emissions per Service Population

Project Emissions	Service Population (Residents + Employees)	Metric Tons of CO2e/SP/Year	CAP Threshold	Exceed Threshold?
3,190	814	**3.91**	*4.3*	**No**

Source: CalEEMod version 2022.1.1. Refer to Attachment A for Model Data Outputs.

As shown in Table 2-5, the Proposed Project would not surpass the CAP's efficiency-based significance thresholds. As such, the Project would be consistent with the City's CAP.

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 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.

Mobile Source and Transportation Control Measures

The BAAQMD identifies mobile source and transportation 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 mobile source and transportation control measures because it is a redevelopment of an existing urban environment, and it is located approximately 0.2 mile from 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 Area 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 0.2 mile from the Project Area. 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), there are positive influences on the utilization of transit ridership in areas of high job density. This indicates that the greater availability of jobs available around transit stations encourages individuals to opt for those modes of commuting, rather than driving. Further, the report notes that mixed-use developments, such as that proposed by the Project, 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 to 40 percent for those living, working, and/or shopping within transit station areas. As the Proposed Project would provide accessibility to retail shops, office businesses, and employment opportunities in close proximity to the Downtown San Mateo Caltrain Station, and this may have a positive impact on the reduction of GHG emissions.

Additionally, 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 surrounded by many existing retail, commercial, and restaurant developments. The Project would locate additional retail and business office land uses within a walkable distance to the Caltrain Downtown San Mateo station. Therefore, the Project would provide community members with greater work opportunities and commercial service options in close proximity to transit and in 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.

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.

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 energy, 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 voluntary approaches to reduce the heat-island effect by increasing shade in urban and suburban areas through the planting of trees. The Proposed Project would increase landscaping throughout the Project Area which would help reduce the urban heat-island effect. Additionally, the Project would be constructed consistent with the standards of the 2022 Building and Efficiency Standards, which include provisions related to energy efficiency to reduce energy consumption and GHG emissions from buildings. 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 GHG 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 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 2021).

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 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, areas outside of the existing urban footprint or in areas that are at a very high risk of wildfire are identified as areas where additional construction should be deprioritized (ABAG 2021).

Plan Bay Area 2050 considers development locations within close proximity to high-quality transit, such as the Proposed Project, 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 and land use diversity in the vicinity over current conditions. Increased employment 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 four single-story commercial buildings to two multi-story buildings: one residential and one mixed-use commercial-retail building space.

For these reasons, the Project is consistent with Plan Bay Area. Based on the Project's proximity to public transportation and its 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.

3.0 REFERENCES

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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 A

CalEEMod Output Files – Greenhouse Gas Emissions – Proposed Project

445 South B Street - Proposed Project Custom Report

Table of Contents

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	445 South B Street - Proposed Project
Construction Start Date	4/2/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.60
Precipitation (days)	16.8
Location	445 S B St, San Mateo, CA 94401, USA
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	2022.1.1.21

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

Apartments Mid Rise	71.0	Dwelling Unit	0.56	68,160	0.00	—	204	—
General Office Building	149	1000sqft	0.69	148,939	0.00	—	—	—
General Office Building	5.96	1000sqft	0.00	5,964	0.00	—	—	—
High Turnover (Sit Down Restaurant)	14.0	1000sqft	0.00	13,995	0.00	—	—	—
Enclosed Parking with Elevator	128	Space	0.00	51,200	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Transportation	T-4	Integrate A ordable and Below Market Rate Housing

2. Emissions Summary

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2024	—	66,077	66,077	9.84	10.4	125	69,534
Daily - Winter (Max)	—	—	—	—	—	—	—
2024	—	4,100	4,100	0.23	0.24	0.18	4,178
2025	—	4,054	4,054	0.22	0.23	0.17	4,130
Average Daily	—	—	—	—	—	—	—
2024	—	3,230	3,230	0.29	0.30	2.40	3,329
2025	—	396	396	0.02	0.02	0.26	403
Annual	—	—	—	—	—	—	—

2024	—	535	535	0.05	0.05	0.40	551
2025	—	65.6	65.6	< 0.005	< 0.005	0.04	66.8

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2024	—	66,077	66,077	9.84	10.4	125	69,534
Daily - Winter (Max)	—	—	—	—	—	—	—
2024	—	4,100	4,100	0.23	0.24	0.18	4,178
2025	—	4,054	4,054	0.22	0.23	0.17	4,130
Average Daily	—	—	—	—	—	—	—
2024	—	3,230	3,230	0.29	0.30	2.40	3,329
2025	—	396	396	0.02	0.02	0.26	403
Annual	—	—	—	—	—	—	—
2024	—	535	535	0.05	0.05	0.40	551
2025	—	65.6	65.6	< 0.005	< 0.005	0.04	66.8

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	—	25,168	25,168	0.96	0.85	92.9	25,538
Area	0.00	940	940	0.02	< 0.005	—	941
Energy	—	4,413	4,413	0.57	0.05	—	4,443
Water	65.8	124	190	6.77	0.16	—	408
Waste	196	0.00	196	19.6	0.00	—	684

Refrig.	—	—	—	—	—	22.7	22.7
Total	261	30,645	30,907	27.9	1.06	116	32,036
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	—	24,040	24,040	1.08	0.94	2.41	24,349
Area	0.00	890	890	0.02	< 0.005	—	890
Energy	—	4,413	4,413	0.57	0.05	—	4,443
Water	65.8	124	190	6.77	0.16	—	408
Waste	196	0.00	196	19.6	0.00	—	684
Refrig.	—	—	—	—	—	22.7	22.7
Total	261	29,466	29,728	28.0	1.15	25.2	30,797
Average Daily	—	—	—	—	—	—	—
Mobile	—	13,781	13,781	0.59	0.52	22.9	13,973
Area	0.00	46.7	46.7	< 0.005	< 0.005	—	46.8
Energy	—	4,413	4,413	0.57	0.05	—	4,443
Water	65.8	124	190	6.77	0.16	—	408
Waste	196	0.00	196	19.6	0.00	—	684
Refrig.	—	—	—	—	—	22.7	22.7
Total	261	18,365	18,626	27.5	0.73	45.7	19,578
Annual	—	—	—	—	—	—	—
Mobile	—	2,282	2,282	0.10	0.09	3.80	2,313
Area	0.00	7.72	7.72	< 0.005	< 0.005	—	7.74
Energy	—	731	731	0.09	0.01	—	736
Water	10.9	20.6	31.5	1.12	0.03	—	67.5
Waste	32.4	0.00	32.4	3.24	0.00	—	113
Refrig.	—	—	—	—	—	3.77	3.77
Total	43.3	3,041	3,084	4.55	0.12	7.56	3,241

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	—	24,847	24,847	0.94	0.84	91.7	25,211
Area	0.00	940	940	0.02	< 0.005	—	941
Energy	—	4,413	4,413	0.57	0.05	—	4,443
Water	65.8	124	190	6.77	0.16	—	408
Waste	196	0.00	196	19.6	0.00	—	684
Refrig.	—	—	—	—	—	22.7	22.7
Total	261	30,324	30,585	27.9	1.05	114	31,710
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	—	23,733	23,733	1.06	0.93	2.38	24,037
Area	0.00	890	890	0.02	< 0.005	—	890
Energy	—	4,413	4,413	0.57	0.05	—	4,443
Water	65.8	124	190	6.77	0.16	—	408
Waste	196	0.00	196	19.6	0.00	—	684
Refrig.	—	—	—	—	—	22.7	22.7
Total	261	29,159	29,421	28.0	1.14	25.1	30,485
Average Daily	—	—	—	—	—	—	—
Mobile	—	13,473	13,473	0.58	0.51	22.4	13,661
Area	0.00	46.7	46.7	< 0.005	< 0.005	—	46.8
Energy	—	4,413	4,413	0.57	0.05	—	4,443
Water	65.8	124	190	6.77	0.16	—	408
Waste	196	0.00	196	19.6	0.00	—	684
Refrig.	—	—	—	—	—	22.7	22.7
Total	261	18,057	18,318	27.5	0.72	45.2	19,265

Annual	—	—	—	—	—	—	—
Mobile	—	2,231	2,231	0.10	0.08	3.71	2,262
Area	0.00	7.72	7.72	< 0.005	< 0.005	—	7.74
Energy	—	731	731	0.09	0.01	—	736
Water	10.9	20.6	31.5	1.12	0.03	—	67.5
Waste	32.4	0.00	32.4	3.24	0.00	—	113
Refrig.	—	—	—	—	—	3.77	3.77
Total	43.3	2,990	3,033	4.55	0.12	7.48	3,190

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	—	—

Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	105	105	< 0.005	< 0.005	0.38	107
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	1,978	1,978	0.30	0.32	3.88	2,085
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	—	5.47	5.47	< 0.005	< 0.005	0.01	5.54
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	108	108	0.02	0.02	0.09	114
Annual	—	—	—	—	—	—	—
Worker	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.92
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	17.9	17.9	< 0.005	< 0.005	0.02	18.9

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	2,064	2,064	0.08	0.02	—	2,071
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—

Off-Road Equipment	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	1.87	1.87	< 0.005	< 0.005	—	1.88
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	63.2	63.2	< 0.005	< 0.005	0.23	64.1
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	63,560	63,560	9.74	10.3	125	67,007
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.33
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	348	348	0.05	0.06	0.29	367
Annual	—	—	—	—	—	—	—
Worker	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.06
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	57.7	57.7	0.01	0.01	0.05	60.7

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	2,454	2,454	0.10	0.02	—	2,462
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	26.9	26.9	< 0.005	< 0.005	—	27.0
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	4.45	4.45	< 0.005	< 0.005	—	4.47
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	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
Hauling	—	63,539	63,539	9.74	10.3	125	66,986
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	—	0.87	0.87	< 0.005	< 0.005	< 0.005	0.89
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	696	696	0.11	0.11	0.59	733
Annual	—	—	—	—	—	—	—
Worker	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.15
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	—	115	115	0.02	0.02	0.10	121

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	832	832	0.03	0.01	—	835
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	138	138	0.01	< 0.005	—	138
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	1,079	1,079	0.02	0.04	3.94	1,095
Vendor	—	1,280	1,280	0.13	0.19	3.15	1,342
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	1,019	1,019	0.03	0.04	0.10	1,032
Vendor	—	1,280	1,280	0.13	0.19	0.08	1,339
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—
Worker	—	472	472	0.01	0.02	0.79	479
Vendor	—	591	591	0.06	0.09	0.62	619
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	78.2	78.2	< 0.005	< 0.005	0.13	79.3
Vendor	—	97.9	97.9	0.01	0.01	0.10	102
Hauling	—	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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	159	159	0.01	< 0.005	—	159
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	26.3	26.3	< 0.005	< 0.005	—	26.4
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	997	997	0.02	0.04	0.09	1,010

Vendor	—	1,257	1,257	0.13	0.18	0.08	1,313
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	—	88.0	88.0	< 0.005	< 0.005	0.13	89.3
Vendor	—	111	111	0.01	0.02	0.12	116
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	14.6	14.6	< 0.005	< 0.005	0.02	14.8
Vendor	—	18.3	18.3	< 0.005	< 0.005	0.02	19.2
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	992	992	0.04	0.01	—	995
Paving	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	27.2	27.2	< 0.005	< 0.005	—	27.3
Paving	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	4.50	4.50	< 0.005	< 0.005	—	4.51
Paving	—	—	—	—	—	—	—

Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	97.3	97.3	< 0.005	< 0.005	0.01	98.5
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.71
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.45
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	3.66	3.66	< 0.005	< 0.005	—	3.67

Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	199	199	< 0.005	0.01	0.02	202
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	—	5.48	5.48	< 0.005	< 0.005	0.01	5.56
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.92
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	1,123	1,123	0.05	0.04	4.10	1,141
General Office Building	—	9,510	9,510	0.36	0.32	35.1	9,649
High Turnover (Sit Down Restaurant)	—	14,535	14,535	0.55	0.49	53.7	14,748
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	25,168	25,168	0.96	0.85	92.9	25,538
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	1,074	1,074	0.06	0.05	0.11	1,089
General Office Building	—	9,083	9,083	0.40	0.35	0.91	9,199
High Turnover (Sit Down Restaurant)	—	13,883	13,883	0.61	0.54	1.39	14,061
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	24,040	24,040	1.08	0.94	2.41	24,349
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	178	178	0.01	0.01	0.29	181
General Office Building	—	1,077	1,077	0.05	0.04	1.79	1,092
High Turnover (Sit Down Restaurant)	—	1,027	1,027	0.04	0.04	1.71	1,041
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	2,282	2,282	0.10	0.09	3.80	2,313

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	802	802	0.04	0.03	2.93	815
General Office Building	—	9,510	9,510	0.36	0.32	35.1	9,649
High Turnover (Sit Down Restaurant)	—	14,535	14,535	0.55	0.49	53.7	14,748
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	24,847	24,847	0.94	0.84	91.7	25,211
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	767	767	0.04	0.03	0.08	778
General Office Building	—	9,083	9,083	0.40	0.35	0.91	9,199
High Turnover (Sit Down Restaurant)	—	13,883	13,883	0.61	0.54	1.39	14,061
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	23,733	23,733	1.06	0.93	2.38	24,037
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	127	127	0.01	0.01	0.21	129
General Office Building	—	1,077	1,077	0.05	0.04	1.79	1,092
High Turnover (Sit Down Restaurant)	—	1,027	1,027	0.04	0.04	1.71	1,041
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	2,231	2,231	0.10	0.08	3.71	2,262

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	135	135	0.02	< 0.005	—	137
General Office Building	—	1,833	1,833	0.30	0.04	—	1,851
High Turnover (Sit Down Restaurant)	—	355	355	0.06	0.01	—	358
Enclosed Parking with Elevator	—	106	106	0.02	< 0.005	—	107
Total	—	2,428	2,428	0.39	0.05	—	2,452
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	135	135	0.02	< 0.005	—	137
General Office Building	—	1,833	1,833	0.30	0.04	—	1,851
High Turnover (Sit Down Restaurant)	—	355	355	0.06	0.01	—	358
Enclosed Parking with Elevator	—	106	106	0.02	< 0.005	—	107
Total	—	2,428	2,428	0.39	0.05	—	2,452
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	22.4	22.4	< 0.005	< 0.005	—	22.6
General Office Building	—	303	303	0.05	0.01	—	306
High Turnover (Sit Down Restaurant)	—	58.8	58.8	0.01	< 0.005	—	59.3
Enclosed Parking with Elevator	—	17.5	17.5	< 0.005	< 0.005	—	17.7
Total	—	402	402	0.07	0.01	—	406

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Apartments Mid Rise	—	135	135	0.02	< 0.005	—	137
General Office Building	—	1,833	1,833	0.30	0.04	—	1,851
High Turnover (Sit Down Restaurant)	—	355	355	0.06	0.01	—	358
Enclosed Parking with Elevator	—	106	106	0.02	< 0.005	—	107
Total	—	2,428	2,428	0.39	0.05	—	2,452
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	135	135	0.02	< 0.005	—	137
General Office Building	—	1,833	1,833	0.30	0.04	—	1,851
High Turnover (Sit Down Restaurant)	—	355	355	0.06	0.01	—	358
Enclosed Parking with Elevator	—	106	106	0.02	< 0.005	—	107
Total	—	2,428	2,428	0.39	0.05	—	2,452
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	22.4	22.4	< 0.005	< 0.005	—	22.6
General Office Building	—	303	303	0.05	0.01	—	306
High Turnover (Sit Down Restaurant)	—	58.8	58.8	0.01	< 0.005	—	59.3
Enclosed Parking with Elevator	—	17.5	17.5	< 0.005	< 0.005	—	17.7
Total	—	402	402	0.07	0.01	—	406

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	200	200	0.02	< 0.005	—	201

General Office Building	—	1,179	1,179	0.10	< 0.005	—	1,182
High Turnover (Sit Down Restaurant)	—	605	605	0.05	< 0.005	—	607
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	1,985	1,985	0.18	< 0.005	—	1,990
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	200	200	0.02	< 0.005	—	201
General Office Building	—	1,179	1,179	0.10	< 0.005	—	1,182
High Turnover (Sit Down Restaurant)	—	605	605	0.05	< 0.005	—	607
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	1,985	1,985	0.18	< 0.005	—	1,990
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	33.2	33.2	< 0.005	< 0.005	—	33.3
General Office Building	—	195	195	0.02	< 0.005	—	196
High Turnover (Sit Down Restaurant)	—	100	100	0.01	< 0.005	—	100
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	329	329	0.03	< 0.005	—	329

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	200	200	0.02	< 0.005	—	201
General Office Building	—	1,179	1,179	0.10	< 0.005	—	1,182

High Turnover (Sit Down Restaurant)	—	605	605	0.05	< 0.005	—	607
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	1,985	1,985	0.18	< 0.005	—	1,990
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	200	200	0.02	< 0.005	—	201
General Office Building	—	1,179	1,179	0.10	< 0.005	—	1,182
High Turnover (Sit Down Restaurant)	—	605	605	0.05	< 0.005	—	607
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	1,985	1,985	0.18	< 0.005	—	1,990
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	33.2	33.2	< 0.005	< 0.005	—	33.3
General Office Building	—	195	195	0.02	< 0.005	—	196
High Turnover (Sit Down Restaurant)	—	100	100	0.01	< 0.005	—	100
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	329	329	0.03	< 0.005	—	329

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Hearths	0.00	890	890	0.02	< 0.005	—	890
Consumer Products	—	—	—	—	—	—	—

Architectural Coatings	—	—	—	—	—	—	—
Landscape Equipment	—	50.1	50.1	< 0.005	< 0.005	—	50.3
Total	0.00	940	940	0.02	< 0.005	—	941
Daily, Winter (Max)	—	—	—	—	—	—	—
Hearths	0.00	890	890	0.02	< 0.005	—	890
Consumer Products	—	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—	—
Total	0.00	890	890	0.02	< 0.005	—	890
Annual	—	—	—	—	—	—	—
Hearths	0.00	3.63	3.63	< 0.005	< 0.005	—	3.64
Consumer Products	—	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—	—
Landscape Equipment	—	4.09	4.09	< 0.005	< 0.005	—	4.11
Total	0.00	7.72	7.72	< 0.005	< 0.005	—	7.74

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Hearths	0.00	890	890	0.02	< 0.005	—	890
Consumer Products	—	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—	—
Landscape Equipment	—	50.1	50.1	< 0.005	< 0.005	—	50.3
Total	0.00	940	940	0.02	< 0.005	—	941
Daily, Winter (Max)	—	—	—	—	—	—	—
Hearths	0.00	890	890	0.02	< 0.005	—	890
Consumer Products	—	—	—	—	—	—	—

Architectural Coatings	—	—	—	—	—	—	—
Total	0.00	890	890	0.02	< 0.005	—	890
Annual	—	—	—	—	—	—	—
Hearths	0.00	3.63	3.63	< 0.005	< 0.005	—	3.64
Consumer Products	—	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—	—
Landscape Equipment	—	4.09	4.09	< 0.005	< 0.005	—	4.11
Total	0.00	7.72	7.72	< 0.005	< 0.005	—	7.74

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	4.93	9.32	14.3	0.51	0.01	—	30.6
General Office Building	52.8	99.6	152	5.43	0.13	—	327
High Turnover (Sit Down Restaurant)	8.14	15.4	23.5	0.84	0.02	—	50.4
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	65.8	124	190	6.77	0.16	—	408
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	4.93	9.32	14.3	0.51	0.01	—	30.6
General Office Building	52.8	99.6	152	5.43	0.13	—	327
High Turnover (Sit Down Restaurant)	8.14	15.4	23.5	0.84	0.02	—	50.4
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	65.8	124	190	6.77	0.16	—	408
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	0.82	1.54	2.36	0.08	< 0.005	—	5.06
General Office Building	8.73	16.5	25.2	0.90	0.02	—	54.1
High Turnover (Sit Down Restaurant)	1.35	2.55	3.89	0.14	< 0.005	—	8.35
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	10.9	20.6	31.5	1.12	0.03	—	67.5

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	4.93	9.32	14.3	0.51	0.01	—	30.6
General Office Building	52.8	99.6	152	5.43	0.13	—	327
High Turnover (Sit Down Restaurant)	8.14	15.4	23.5	0.84	0.02	—	50.4
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	65.8	124	190	6.77	0.16	—	408
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	4.93	9.32	14.3	0.51	0.01	—	30.6
General Office Building	52.8	99.6	152	5.43	0.13	—	327
High Turnover (Sit Down Restaurant)	8.14	15.4	23.5	0.84	0.02	—	50.4
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	65.8	124	190	6.77	0.16	—	408

Annual	—	—	—	—	—	—	—
Apartments Mid Rise	0.82	1.54	2.36	0.08	< 0.005	—	5.06
General Office Building	8.73	16.5	25.2	0.90	0.02	—	54.1
High Turnover (Sit Down Restaurant)	1.35	2.55	3.89	0.14	< 0.005	—	8.35
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	10.9	20.6	31.5	1.12	0.03	—	67.5

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	28.2	0.00	28.2	2.82	0.00	—	98.8
General Office Building	77.6	0.00	77.6	7.76	0.00	—	272
High Turnover (Sit Down Restaurant)	89.8	0.00	89.8	8.97	0.00	—	314
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	196	0.00	196	19.6	0.00	—	684
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	28.2	0.00	28.2	2.82	0.00	—	98.8
General Office Building	77.6	0.00	77.6	7.76	0.00	—	272
High Turnover (Sit Down Restaurant)	89.8	0.00	89.8	8.97	0.00	—	314
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	196	0.00	196	19.6	0.00	—	684

Annual	—	—	—	—	—	—	—
Apartments Mid Rise	4.67	0.00	4.67	0.47	0.00	—	16.4
General Office Building	12.9	0.00	12.9	1.28	0.00	—	45.0
High Turnover (Sit Down Restaurant)	14.9	0.00	14.9	1.49	0.00	—	52.0
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	32.4	0.00	32.4	3.24	0.00	—	113

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	28.2	0.00	28.2	2.82	0.00	—	98.8
General Office Building	77.6	0.00	77.6	7.76	0.00	—	272
High Turnover (Sit Down Restaurant)	89.8	0.00	89.8	8.97	0.00	—	314
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	196	0.00	196	19.6	0.00	—	684
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	28.2	0.00	28.2	2.82	0.00	—	98.8
General Office Building	77.6	0.00	77.6	7.76	0.00	—	272
High Turnover (Sit Down Restaurant)	89.8	0.00	89.8	8.97	0.00	—	314
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	196	0.00	196	19.6	0.00	—	684
Annual	—	—	—	—	—	—	—

Apartments Mid Rise	4.67	0.00	4.67	0.47	0.00	—	16.4
General Office Building	12.9	0.00	12.9	1.28	0.00	—	45.0
High Turnover (Sit Down Restaurant)	14.9	0.00	14.9	1.49	0.00	—	52.0
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	32.4	0.00	32.4	3.24	0.00	—	113

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	0.49	0.49
General Office Building	—	—	—	—	—	0.38	0.38
High Turnover (Sit Down Restaurant)	—	—	—	—	—	21.9	21.9
Total	—	—	—	—	—	22.7	22.7
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	0.49	0.49
General Office Building	—	—	—	—	—	0.38	0.38
High Turnover (Sit Down Restaurant)	—	—	—	—	—	21.9	21.9
Total	—	—	—	—	—	22.7	22.7
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	0.08	0.08
General Office Building	—	—	—	—	—	0.06	0.06

High Turnover (Sit Down Restaurant)	—	—	—	—	—	3.62	3.62
Total	—	—	—	—	—	3.77	3.77

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	4/2/2024	4/30/2024	5.00	20.0	—
Site Preparation	Site Preparation	5/1/2024	5/3/2024	5.00	2.00	—
Grading	Grading	5/4/2024	5/9/2024	5.00	4.00	—
Building Construction	Building Construction	5/10/2024	2/14/2025	5.00	200	—
Paving	Paving	2/15/2025	3/1/2025	5.00	10.0	—
Architectural Coating	Architectural Coating	3/2/2025	3/16/2025	5.00	10.0	—

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	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	24.6	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—

Site Preparation	Worker	7.50	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	791	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	790	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	128	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	43.7	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	25.6	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

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

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	138,024	46,008	253,347	84,449	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,966	—
Site Preparation	—	12,642	1.88	0.00	—
Grading	—	25,284	4.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
General Office Building	0.00	0%
General Office Building	0.00	0%
High Turnover (Sit Down Restaurant)	0.00	0%
Enclosed Parking with Elevator	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	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
Apartments Mid Rise	226	226	226	82,410	1,429	1,429	1,429	521,554
General Office Building	1,066	0.00	0.00	278,027	9,992	0.00	0.00	2,604,948
General Office Building	239	0.00	0.00	62,258	2,237	0.00	0.00	583,323
High Turnover (Sit Down Restaurant)	503	1,712	1,995	324,457	4,714	16,039	18,692	3,039,971
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	161	161	161	58,841	1,020	1,020	1,020	372,390
General Office Building	1,066	0.00	0.00	278,027	9,992	0.00	0.00	2,604,948
General Office Building	239	0.00	0.00	62,258	2,237	0.00	0.00	583,323
High Turnover (Sit Down Restaurant)	503	1,712	1,995	324,457	4,714	16,039	18,692	3,039,971
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	36
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	35
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)
138024	46,008	253,347	84,449	—

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)
Apartments Mid Rise	242,213	204	0.0330	0.0040	625,089
General Office Building	3,152,835	204	0.0330	0.0040	3,537,344
General Office Building	126,250	204	0.0330	0.0040	141,647
High Turnover (Sit Down Restaurant)	635,076	204	0.0330	0.0040	1,888,218
Enclosed Parking with Elevator	189,001	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)
Apartments Mid Rise	242,213	204	0.0330	0.0040	625,089
General Office Building	3,152,835	204	0.0330	0.0040	3,537,344
General Office Building	126,250	204	0.0330	0.0040	141,647

High Turnover (Sit Down Restaurant)	635,076	204	0.0330	0.0040	1,888,218
Enclosed Parking with Elevator	189,001	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	2,574,914	0.00
General Office Building	26,471,487	0.00
General Office Building	1,060,004	0.00
High Turnover (Sit Down Restaurant)	4,247,954	0.00
Enclosed Parking with Elevator	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	2,574,914	0.00
General Office Building	26,471,487	0.00
General Office Building	1,060,004	0.00
High Turnover (Sit Down Restaurant)	4,247,954	0.00
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	52.4	—

General Office Building	139	—
General Office Building	5.55	—
High Turnover (Sit Down Restaurant)	167	—
Enclosed Parking with Elevator	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid 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 Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
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
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

ATTACHMENT B

CalEEMod Output Files – Greenhouse Gas Emissions – Existing Conditions

445 South B Street - Baseline Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	445 South B Street - Baseline
Operational Year	2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.60
Precipitation (days)	16.8
Location	445 S B St, San Mateo, CA 94401, USA
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	2022.1.1.21

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	3.40	1000sqft	0.08	3,400	0.00	—	—	—
Quality Restaurant	5.70	1000sqft	0.13	5,700	0.00	—	—	—
Parking Lot	17.5	1000sqft	0.40	0.00	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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.46	2.47	2.09	20.1	0.05	0.06	4.59	4.65	0.05	1.16	1.22	29.2	5,820	5,849	3.21	0.20	35.1	6,023
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.43	2.43	2.41	19.7	0.05	0.06	4.59	4.65	0.05	1.16	1.22	29.2	5,586	5,615	3.23	0.22	14.8	5,775
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.72	1.78	1.73	13.6	0.04	0.05	3.25	3.29	0.05	0.82	0.87	29.2	4,182	4,211	3.16	0.15	20.7	4,357
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.31	0.32	0.32	2.48	0.01	0.01	0.59	0.60	0.01	0.15	0.16	4.83	692	697	0.52	0.03	3.42	721

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.42	2.23	1.76	19.8	0.05	0.03	4.59	4.62	0.03	1.16	1.19	—	5,177	5,177	0.20	0.18	20.9	5,256
Area	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.33	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	633	633	0.07	0.01	—	636
Water	—	—	—	—	—	—	—	—	—	—	—	5.29	10.00	15.3	0.54	0.01	—	32.8
Waste	—	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	14.2
Total	2.46	2.47	2.09	20.1	0.05	0.06	4.59	4.65	0.05	1.16	1.22	29.2	5,820	5,849	3.21	0.20	35.1	6,023
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.39	2.19	2.08	19.5	0.05	0.03	4.59	4.62	0.03	1.16	1.19	—	4,943	4,943	0.22	0.20	0.54	5,008
Area	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.33	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	633	633	0.07	0.01	—	636
Water	—	—	—	—	—	—	—	—	—	—	—	5.29	10.00	15.3	0.54	0.01	—	32.8
Waste	—	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	14.2
Total	2.43	2.43	2.41	19.7	0.05	0.06	4.59	4.65	0.05	1.16	1.22	29.2	5,586	5,615	3.23	0.22	14.8	5,775
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.68	1.53	1.40	13.3	0.03	0.02	3.25	3.27	0.02	0.82	0.84	—	3,539	3,539	0.15	0.14	6.45	3,590
Area	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.33	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	633	633	0.07	0.01	—	636
Water	—	—	—	—	—	—	—	—	—	—	—	5.29	10.00	15.3	0.54	0.01	—	32.8
Waste	—	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	14.2
Total	1.72	1.78	1.73	13.6	0.04	0.05	3.25	3.29	0.05	0.82	0.87	29.2	4,182	4,211	3.16	0.15	20.7	4,357
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.31	0.28	0.26	2.43	0.01	< 0.005	0.59	0.60	< 0.005	0.15	0.15	—	586	586	0.03	0.02	1.07	594
Area	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	105	105	0.01	< 0.005	—	105
Water	—	—	—	—	—	—	—	—	—	—	—	0.88	1.66	2.53	0.09	< 0.005	—	5.43
Waste	—	—	—	—	—	—	—	—	—	—	—	3.96	0.00	3.96	0.40	0.00	—	13.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.36	2.36
Total	0.31	0.32	0.32	2.48	0.01	0.01	0.59	0.60	0.01	0.15	0.16	4.83	692	697	0.52	0.03	3.42	721

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	0.99	0.91	0.72	8.10	0.02	0.01	1.88	1.89	0.01	0.48	0.49	—	2,114	2,114	0.08	0.07	8.54	2,147
Quality Restaurant	1.43	1.32	1.04	11.7	0.03	0.02	2.72	2.74	0.02	0.69	0.71	—	3,063	3,063	0.12	0.11	12.4	3,109
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Total	2.42	2.23	1.76	19.8	0.05	0.03	4.59	4.62	0.03	1.16	1.19	—	5,177	5,177	0.20	0.18	20.9	5,256
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	0.98	0.89	0.85	7.95	0.02	0.01	1.88	1.89	0.01	0.48	0.49	—	2,019	2,019	0.09	0.08	0.22	2,045
Quality Restaurant	1.42	1.29	1.23	11.5	0.03	0.02	2.72	2.74	0.02	0.69	0.71	—	2,924	2,924	0.13	0.12	0.32	2,962
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.39	2.19	2.08	19.5	0.05	0.03	4.59	4.62	0.03	1.16	1.19	—	4,943	4,943	0.22	0.20	0.54	5,008
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	0.13	0.11	0.10	0.99	< 0.005	< 0.005	0.24	0.24	< 0.005	0.06	0.06	—	239	239	0.01	0.01	0.44	243
Quality Restaurant	0.18	0.17	0.15	1.44	< 0.005	< 0.005	0.35	0.35	< 0.005	0.09	0.09	—	347	347	0.01	0.01	0.63	352
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.31	0.28	0.26	2.43	0.01	< 0.005	0.59	0.60	< 0.005	0.15	0.15	—	586	586	0.03	0.02	1.07	594

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	86.2	86.2	0.01	< 0.005	—	87.1
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	145	145	0.02	< 0.005	—	146
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.57	8.57	< 0.005	< 0.005	—	8.65
Total	—	—	—	—	—	—	—	—	—	—	—	—	239	239	0.04	< 0.005	—	242
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	86.2	86.2	0.01	< 0.005	—	87.1
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	145	145	0.02	< 0.005	—	146
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.57	8.57	< 0.005	< 0.005	—	8.65
Total	—	—	—	—	—	—	—	—	—	—	—	—	239	239	0.04	< 0.005	—	242
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	14.3	14.3	< 0.005	< 0.005	—	14.4
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	23.9	23.9	< 0.005	< 0.005	—	24.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1.42	1.42	< 0.005	< 0.005	—	1.43

Total	—	—	—	—	—	—	—	—	—	—	—	—	39.6	39.6	0.01	< 0.005	—	40.0

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	147	147	0.01	< 0.005	—	147
Quality Restaurant	0.02	0.01	0.21	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	246	246	0.02	< 0.005	—	247
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.33	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	393	393	0.03	< 0.005	—	395
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	147	147	0.01	< 0.005	—	147
Quality Restaurant	0.02	0.01	0.21	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	246	246	0.02	< 0.005	—	247
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.33	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	393	393	0.03	< 0.005	—	395
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant w/o Drive Thru	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.3	24.3	< 0.005	< 0.005	—	24.4
Quality Restaurant	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40.8	40.8	< 0.005	< 0.005	—	40.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.1	65.1	0.01	< 0.005	—	65.3

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	1.98	3.73	5.71	0.20	< 0.005	—	12.3
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	3.32	6.26	9.58	0.34	0.01	—	20.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.29	10.00	15.3	0.54	0.01	—	32.8

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	1.98	3.73	5.71	0.20	< 0.005	—	12.3
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	3.32	6.26	9.58	0.34	0.01	—	20.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.29	10.00	15.3	0.54	0.01	—	32.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	0.33	0.62	0.95	0.03	< 0.005	—	2.03
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	0.55	1.04	1.59	0.06	< 0.005	—	3.40
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.88	1.66	2.53	0.09	< 0.005	—	5.43

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

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

Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	21.1	0.00	21.1	2.11	0.00	—	73.8
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	2.80	0.00	2.80	0.28	0.00	—	9.81
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	21.1	0.00	21.1	2.11	0.00	—	73.8
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	2.80	0.00	2.80	0.28	0.00	—	9.81
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	3.49	0.00	3.49	0.35	0.00	—	12.2
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	0.46	0.00	0.46	0.05	0.00	—	1.62
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.96	0.00	3.96	0.40	0.00	—	13.8

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.32	5.32
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.91	8.91
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	14.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.32	5.32
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.91	8.91
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	14.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.88	0.88

Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.48	1.48
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.36	2.36

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

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	285	0.00	0.00	74,221	2,667	0.00	0.00	695,405
Quality Restaurant	412	0.00	0.00	107,502	3,863	0.00	0.00	1,007,235
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	13,650	4,550	1,050

5.10.3. Landscape Equipment

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

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	154,288	204	0.0330	0.0040	458,731
Quality Restaurant	258,659	204	0.0330	0.0040	769,049
Parking Lot	15,330	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Fast Food Restaurant w/o Drive Thru	1,032,015	0.00
Quality Restaurant	1,730,142	0.00
Parking Lot	0.00	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	39.2	—
Quality Restaurant	5.20	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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
Fast Food Restaurant w/o Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Quality Restaurant	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Quality Restaurant	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Quality Restaurant	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. 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	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	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
Operations: Vehicle Data	Vehicle data updated per trip generation report for the Proposed Project.