Appendix B

Supporting Air Quality and Greenhouse Gas Information

1814/1820 Ogden Drive, Burlingame, CA
Air Quality, Greenhouse Gas, and Health Risk Assessment
Technical Report

Prepared by:

RCH GROUP
planning & environmental consulting

July 15, 2021

1.0 INTRODUCTION

This document presents results of an air quality analysis associated with the proposed 1814/1820 Ogden Drive Residential Project in the City of Burlingame, California. This document provides an overview of the existing air quality conditions at the project site, the air quality regulatory framework, an analysis of potential air quality impacts that would result from implementation of the proposed project, and identification of applicable mitigation measures. Other issues related to air emissions covered in this document include the assessment of emissions related to air quality health impacts (health risk assessment or HRA). Issues related to climate change and greenhouse gas (GHG) emissions are also included. The supporting information, methodology, assumptions, and detailed results used in the air quality analysis are provided in **Attachment A: CalEEMod Output Files** and **Attachment B: Health Risk Assessment Methodology and Assumptions**. **Attachment C: Climate Action Plan Consistency Checklist** contains a completed Climate Action Plan Consistency Checklist.

The HRA focuses on health impacts on existing residences from emissions of toxic air contaminants (TAC)[1] such as diesel particulate matter (DPM)[2] from diesel equipment and haul truck emissions associated with the proposed project construction activities. The HRA was conducted to determine the health impacts, in terms of excess cancer risk and non-cancer hazards, using the significance levels[3] identified by the Bay Area Air Quality Management District (BAAQMD)'s *CEQA Air Quality Guidelines*.[4] In accordance with the BAAQMD *CEQA Air Quality Guidelines*, this HRA also evaluated concentrations of particulate matter equal to or less than 2.5 micrometers (fine particulate or $PM_{2.5}$ as combustion exhaust and fugitive dust). This HRA was prepared based on the California Office of Environmental Health Hazard Assessment

[1] Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality. TAC are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., gasoline service stations, dry cleaners). TAC are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TAC are regulated at the regional, state, and federal level.

[2] In 1998, the California Air Resources Board classified diesel particulate matter as a toxic air contaminant, citing its potential to cause cancer and other health problems. The US Environmental Protection Agency concluded that long-term exposure to diesel engine exhaust is likely to pose a lung cancer hazard to humans and can also contribute to other acute and chronic health effects.

[3] In June of 2010, the Air District's adopted thresholds of significance were challenged in a lawsuit (California Building Industry Association v Bay Area Air Quality Management District). On December 15, 2015, the California Supreme Court (S213478) concluded that agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users. The proposed project includes proposed sensitive receptors and thus, an analysis of the health impacts from existing sources such as stationary sources, rail activities, and major roadways is presented within this document.

[4] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017, http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

(OEHHA)'s *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*.[5] For existing receptors, the HRA indicates less-than-significant exposures to the health impacts from the proposed project construction activities with the implementation of mitigation measures. This HRA indicates less than significant exposures for proposed residences to nearby cumulative emission sources such as permitted stationary sources, Camino Real (US 82), Trousdale Drive, and rail activities. **Attachment B: Health Risk Assessment Methodology and Assumptions** provides information concerning the nearby cumulative emission sources.

2.0 PROJECT OVERVIEW

The proposed project includes the demolition of existing structures and development of 90 residential units (with a total of 95,889 square feet) on five levels with two levels of parking (underground and at grade with a total of 145 parking spaces) on a 0.77-acre site (APN 025-121-110-10 & -20) at 1814-20 Ogden Drive in the City of Burlingame. Senior living and apartment buildings are adjacent to the project site to the east and west. The residential units would be all-electric (no natural gas) with a commitment to the Peninsula Clean Energy's ECO100 program. Several apartment buildings are located opposite of Ogden Drive to the west/southwest of the project site. Vacant land is adjacent to the project site to the north. Mills High School, Spring Valley Elementary School, and Learning Links Preschool. Demolition of two buildings of a total of 14,164 square feet would be required. Demolition/construction activities are estimated to begin in January 2022 and construction of the project is estimated to be completed in May 2023. Construction activities would be expected to occur Monday through Saturday.

3.0 ANALYSIS METHODOLGY

Intermittent (short-term construction emissions that occur from activities, such as removal of structures, site-grading, and building construction) and long-term air quality impacts related to the operation of the proposed project were evaluated. The analysis focuses on daily and annual emissions from construction and operational (mobile, area, stationary, and fugitive sources) activities. This air quality analysis is consistent with the methods described in the BAAQMD *CEQA Air Quality Guidelines* (dated June 2010, updated in May 2011, revised in May 2012, and updated in May 2017).[6] Mitigation measures are presented to reduce impacts to less than significant.

[5] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

[6] The Air District's June 2010 adopted thresholds of significance were challenged in a lawsuit. Although the BAAQMD's adoption of significance thresholds for air quality analysis has been subject to judicial actions, the lead agency has determined that BAAQMD's Revised Draft Options and Justification Report (October 2009) provide substantial

The air quality analysis includes a review of criteria pollutant[7] emissions such as carbon monoxide (CO)[8], nitrogen oxides (NO_x), sulfur dioxide (SO_2), volatile organic compounds (VOC) as reactive organic gases (ROG)[9], particulate matter less than 10 micrometers (coarse or PM_{10}), particulate matter less than 2.5 micrometers (fine or $PM_{2.5}$).[10]

Regulatory models used to estimate air quality impacts include:

- California Air Pollution Control Officers Association (CAPCOA) CalEEMod (California Emissions Estimator Model Version 2016.3.2)[11] land use emissions model estimates construction emissions due to demolition and construction activities and operations.
- AERMOD (American Meteorological Society/USEPA Regulatory Model, Version 19191) is an atmospheric dispersion model which can simulate point, area, volume, and line emissions sources and has the capability to include simple, intermediate, and complex terrain along with meteorological conditions and multiple receptor locations.[12,13] AERMOD is commonly executed to yield 1-hour maximum and annual average concentrations (in $\mu g/m^3$) at each receptor.

4.0 EXISTING CONDITIONS

The project site is located within the San Francisco Bay Area Air Basin (Air Basin), which encompasses Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin, and Napa Counties, and the southern portions of Solano and Sonoma Counties. The Air Basin is

---

evidence to support the BAAQMD recommended thresholds. Therefore, the lead agency has determined the BAAQMD recommended thresholds are appropriate for use in this analysis.

[7] Criteria air pollutants refer to those air pollutants for which the USEPA and CARB has established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) under the Federal Clean Air Act (CAA).

[8] CO is a non–reactive pollutant that is a product of incomplete combustion of organic material, and is mostly associated with motor vehicle traffic, and in wintertime, with wood–burning stoves and fireplaces.

[9] VOC means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. ROG are any reactive compounds of carbon, excluding methane, CO, CO_2 carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. The terms VOC and ROG are often used interchangeably.

[10] PM_{10} and $PM_{2.5}$ consists of airborne particles that measure 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects.

[11] California Air Pollution Control Officers Association, *California Emissions Estimator Model User's Guide*, November 9, 2017.

[12] US Environmental Protection Agency Preferred/Recommended Models, *AERMOD Modeling System*, https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod

[13] Title 40 CFR Part 51, *Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule,* http://www.epa.gov/ttn/scram/guidance/guide/appw_05.pdf

characterized by complex terrain which distorts normal wind flow patterns, consisting of coastal mountain ranges, inland valleys, and bays.

Regional Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and San Francisco Bay), determine the effect of air pollutant emissions on local air quality.

The climate of the greater San Francisco Bay Area, including Burlingame, is a Mediterranean-type climate characterized by warm, dry summers and mild, wet winters. The climate is determined largely by a high-pressure system that is often present over the eastern Pacific Ocean off the West Coast of North America. In winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the region. During summer and fall, air emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are favorable to the formation of photochemical pollutants, such as ozone and secondary particulates, such as sulfates and nitrates.

The proposed project lies in the Peninsula climatological sub-region of the Bay Area. The Peninsula sub-region extends from northwest of San Jose to the Golden Gate. The Santa Cruz Mountains run up the center of the peninsula, with elevations exceeding 2,000 feet at the southern end, decreasing to 500 feet in South San Francisco. Coastal towns experience a high incidence of cool, foggy weather in the summer. Cities in the southeastern peninsula experience warmer temperatures and fewer foggy days because the marine layer is blocked by the ridgeline to the west. San Francisco lies at the northern end of the peninsula. Because most of San Francisco's topography is below 200 feet, marine air can flow easily across most of the city, making its climate cool and windy.

The blocking effect of the Santa Cruz Mountains results in variations in summertime maximum temperatures in different parts of the peninsula. For example, in coastal areas and San Francisco the mean maximum summer temperatures are in the mid-60's, while in Redwood City the mean maximum summer temperatures are in the low-80's. Mean minimum temperatures during the winter months are in the high-30's to low-40's on the eastern side of the Peninsula and in the low 40's on the coast.

Two important gaps in the Santa Cruz Mountains occur on the peninsula. The larger of the two is the San Bruno Gap, extending from Fort Funston on the ocean to the San Francisco Airport. Because the gap is oriented in the same northwest to southeast direction as the prevailing winds, and because the elevations along the gap are under 200 feet, marine air is easily able to penetrate

the bay. The other gap is the Crystal Springs Gap, between Half Moon Bay and San Carlos. As the sea breeze strengthens on summer afternoons, the gap permits maritime air to pass across the mountains, and its cooling effect is commonly seen from San Mateo to Redwood City.

Annual average wind speeds range from five to ten mph throughout the peninsula, with higher wind speeds usually found along the coast. However, winds on the eastern side of the peninsula are often high in certain areas, such as near the San Bruno Gap and the Crystal Springs Gap. The prevailing winds along the peninsula's coast are from the west, although individual sites can show significant differences. For example, Fort Funston in western San Francisco shows a southwest wind pattern while Pillar Point in San Mateo County shows a northwest wind pattern. On the east side of the mountain winds are generally from the west, although wind patterns in this area are often influenced greatly by local topographic features.

Air pollution potential is highest along the southeastern portion of the peninsula. This is the area most protected from the high winds and fog of the marine layer. Pollutant transport from upwind sites is common. In the southeastern portion of the peninsula, air pollutant emissions are relatively high due to motor vehicle traffic as well as stationary sources. At the northern end of the peninsula in San Francisco, pollutant emissions are high, especially from motor vehicle congestion. Localized pollutants, such as carbon monoxide, can build up in "urban canyons." However, winds are generally fast enough to carry the pollutants away before they can accumulate.[14]

Local Air Quality

The BAAQMD maintains a network of monitoring stations within the Air Basin that monitor air quality and compliance with applicable ambient standards. The monitoring station closest to the project site is in Redwood City at 897 Barron Avenue, approximately 12.5 miles to the southeast of the project site; where levels of CO, ozone, nitrogen dioxide (NO_2), and $PM_{2.5}$ are measured. The closest monitoring station to the project site that monitors PM_{10} is in San Francisco at 10 Arkansas Street, approximately 12 miles to the north.

Table 1 summarizes the most recent three years of data (2017 through 2019) from the BAAQMD's Redwood City air monitoring station and San Francisco air monitoring station (for PM_{10}). The state and national 8-hour ozone standards were exceeded twice in 2017 and twice in 2019. The national 24-hour PM_{10} standard was exceeded twice in 2017 and fourteen times in 2018 (due primarily to wildfires). The national 24-hour $PM_{2.5}$ standard was exceeded six times in 2017 and thirteen times in 2018 (due primarily to wildfires). No other standards were exceeded at the Redwood City air monitoring station during the three-year period. Reflective of the previous

[14] Bay Area Air Quality Management District, *Appendix D – Climate, Topography and Air Pollution Potential,* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqaguid.pdf

information, the Bay Area is currently designated "nonattainment" for state and national (1-hour and 8-hour) ozone standards, for the state PM_{10} standards, and for the state and national (annual average and 24-hour) $PM_{2.5}$ standards. The Bay Area is designated "attainment" or "unclassifiable" with respect to the other ambient air quality standards.

Table 1: Air Quality Data Summary (2017 - 2019)

Pollutant	Monitoring Data by Year			
	Standard[a]	**2017**	**2018**	**2019**
Ozone				
Highest 1 Hour Average (ppm)[b]	0.090	**0.115**	0.067	0.083
Days over State Standard		**2**	0	0
Highest 8 Hour Average (ppm)[b]	0.070	**0.086**	0.049	**0.077**
Days over National Standard		**2**	0	**2**
Highest 8 Hour Average (ppm)[b]	0.070	**0.086**	0.049	**0.077**
Days over State Standard		**2**	0	**2**
Nitrogen Dioxide				
Highest 1 Hour Average (ppm)[b]	0.180/0.100	0.067	0.077	0.055
Days over State Standard		0	0	0
Annual Average ($\mu g/m^3$)[b]	0.030/0.053	0.011	0.011	0.009
Carbon Monoxide				
Highest 1 Hour Average (ppm)[b]	20	2.8	2.5	2.0
Days over State Standard		0	0	0
Highest 8 Hour Average (ppm)[b]	9	1.4	1.7	1.1
Days over State Standard		0	0	0
Particulate Matter (PM_{10})				
Highest 24-Hour Average ($\mu g/m^3$)[b]	50	**77.0**	**177**	42.0
Days over State Standard		**2**	**14**	0
State Annual Average ($\mu g/m^3$)[b]	20	**22.0**	11.7	14.7
Particulate Matter ($PM_{2.5}$)				
Highest 24-Hour Average ($\mu g/m^3$)[b]	35	**60.8**	**121**	29.5
Days over National Standard		**6**	**13**	0
State Annual Average ($\mu g/m^3$)[b]	12	9.1	10.3	7.0

NOTES: Values in **bold** are in excess of at least one applicable standard.

a. Generally, state standards and national standards are not to be exceeded more than once per year.
b. ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.
c. PM_{10} is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.

Source: Bay Area Air Quality Management District, Annual Air Quality Summaries, http://www.baaqmd.gov/about-air-quality/air-quality-summaries

Community Air Risk Evaluation

The BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor air toxics in the Bay Area.

Based on findings of the latest report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant contributors: 1,3-butadiene contributed four percent of the cancer risk-weighted emissions, and benzene contributed three percent. Collectively, five compounds—diesel PM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). A 75 percent reduction in DPM was predicted between 2005 and 2015 when the inventory accounted for CARB's diesel regulations. Overall, cancer risk from TAC dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for state diesel regulations and other reductions.[15]

Modeled cancer risks from TAC in 2005 were highest near sources of DPM: near core urban areas, along major roadways and freeways, and near maritime shipping terminals. Peak modeled risks were found to be located east of San Francisco, near West Oakland, and the maritime Port of Oakland. BAAQMD has identified seven impacted communities in the Bay Area:

- Western Contra Costa County and the cities of Richmond and San Pablo.
- Western Alameda County along the Interstate 880 corridor and the cities of Berkeley, Alameda, Oakland, and Hayward.
- San Jose.
- Eastern side of San Francisco.
- Concord.
- Vallejo.
- Pittsburgh and Antioch.

The proposed project is within the city of Burlingame, which is not part of the seven CARE program impacted communities in the Bay Area.[16] The health impacts in the Bay Area, as determined both by pollution levels and by existing health vulnerabilities in a community, are

[15] Bay Area Air Quality Management District, *Improving Air Quality & Health in Bay Area Communities, Community Air Risk Program Retrospective & Path Forward (2004 – 2013)*, April 2014, http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE_Retrospective_April2014.ashx?la=en

[16] Community Air Risk Evaluation Program, Identifying Areas with Cumulative Impacts from Air Pollution in the San Francisco Bay Area, March 2014, http://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program

approximately 160 cancer risk per million persons. In Burlingame, including the project site, the health impact is approximately 111 cancer risk per million persons.[17]

Addressing Sources of Air Pollutants in Community Planning

In May of 2016, the BAAQMD published *Planning Health Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning*.[18] The BAAQMD's primary goal in providing the *Guidebook* is to support and promote infill development; which is important to reducing vehicle miles traveled and the associated air emissions, while minimizing air pollution exposure for existing and future residents. The *Guidebook* provides developers and planners with the information and tools needed to create health-protective communities.

The *Guidebook* recommends Best Practices to Reduce Emissions and Reduce Exposure to Local Air Pollution. Implementing as many Best Practices to Reduce Emissions as is feasible will reduce potential health risks to the greatest extent. The *Guidebook* also lists examples of a variety of strategies to reduce exposure to, and emissions of, air pollution, including the adoption of air quality-specific ordinances, standard conditions of approval, and incorporation of policies into general plans and other planning documents. The BAAQMD recommends implementing all best practices to reduce exposure that are feasible and applicable to a project in areas that are likely to experience elevated levels of air pollution. To reduce exposure to pollutants, the *Guidebook* recommends practices like installing indoor air filtration systems, planting dense vegetation, implementing project design which provides a buffer between sensitive receptors and emission source, and developing alternative truck routes.

The *Guidebook* provides an interactive map of the Bay Area showing areas with estimated elevated levels of fine particulates and/or toxic air contaminants. The interactive map shows locations where further study is needed, such as a detailed health risk assessment; specifically, locations next to major roads and freeways and large industrial sites, as well as the downtown districts of cities.

Nearby Sensitive Receptors

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons

---

[17] Bay Area Air Quality Management District, *Identifying Areas with Cumulative Impacts from Air Pollution in the San Francisco Bay Area*, March 2014, http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CARE%20Program/Documents/ImpactCommunities_2_Methodology.ashx?la=en

[18] Bay Area Air Quality Management District, *Planning Health Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning*, January 2016, http://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/draft_planninghealthyplaces_marchworkshop-pdf.pdf?la=en

engaged in strenuous work or exercise also have increased sensitivity to poor air quality. The CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience. According to the BAAQMD, workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees.

BAAQMD considers the relevant zone of influence for an assessment of air quality health risks to be within 1,000 feet of a project site. Senior living and apartment buildings are adjacent to the project site to the east and west. Several apartment buildings are located opposite of Ogden Drive to the west/southwest of the project site. Mills High School, Spring Valley Elementary School, and Learning Links Preschool are nearby the project site.

According to the requirements under the California Public Resources Code, Division 13, Environmental Quality (§21000 – §21189.57), proposed projects located within ¼ mile of a school that involve the construction or alteration of a facility that might reasonably be anticipated to emit hazardous air emissions, and that may impose a health or safety hazard to persons who would attend or would be employed at the school, must meet all requirements per CEQA Guidelines §15186 (b)(1)(2)[19]. The lead agency must consult with the affected school district or districts regarding the potential impact of the project on the school and notify the affected school district(s) of the project in writing, not less than 30 days prior to approval or certification of the negative declaration or environmental impact report.

North Burlingame/Rolllins Road Specific Plan

The proposed project is within the North Burlingame/Rollins Road Specific Plan Area. The Specific Plan area encompasses the Rollins Road corridor north of Broadway, and the El Camino Real corridor in the northern portion of Burlingame.However, the Specific Plan does not contain any goals, policies, or standards related to air quality and climate change, thus it is not discussed further in this document.[20]

[19] 2019 CEQA Statutes and Guidelines, http://resources.ca.gov/ceqa/docs/2019_CEQA_Statutes_and_Guidelines.pdf

[20] City of Burlingame, *North Burlingame/Rollins Road Specific Plan*, Adopted in 2004, Amended in 2007, https://www.burlingame.org/departments/planning/general_and_specific_plans.php

Burlingame General Plan

On January 7, 2019, the Burlingame City Council adopted the new General Plan.[21] The air quality and GHG reduction portion of the General Plan contains goals and policies that will help reduce GHG emissions and other air pollutants. The City's Climate Action Plan compiles all the climate action related goals and policies found in the General Plan (See **Section 6** for Climate Action Plan discussion), therfore, only goals and policies related to air quality are listed.

Goal HP-3: Minimize expsoure of residents and employees of local businesses to harmful air pollutants.

> **HP-3.1: Regional Air Quality Standards**: Support regional policies and efforts to improve air quality, and participate in regional planning efforts with the BAAQMD to meet or exceed air quality standards.
>
> **HP-3.2: Local Air Quality Standards**: Work with local businesses, industries, and developers to reduce the impact of stationary and mobile sources of pollution. Ensure that new development does not create cumulative net increases in air pollution, and require Transportation Demand Management Techniques when air quality impacts are unavoidable.
>
> **HP-3.3: Indoor Air Quality Standards**: Require that developers mitigate impacts on indoor air quality for new residential and commercial developments, particularly along higher density corridors, near industrial uses, and along the freeway and rail line, such as in North Burlingame, along Rollins Road, and in Downtown. Potential mitigation strategies include installing air filters (MERV 13 or higher), building sound walls, and planting vegetation and trees as pollution buffers.
>
> **HP-3.4: Air Pollution Reduction**: Support regional efforts to improve air quality, reduce auto use, expand infrastructure for alternative transportation, and reduce traffic congestion. Focus efforts to reduce truck idling to two minutes or fewer in industrial and warehouse districts along Rollins Road and the Inner Bayshore.
>
> **HP-3.5: Air Pollution Reduction**: Encourage residents to replace wood-burning fireplaces and stoves with cleaner electric heat pumps, natural gas, or propane stoves. Educate the public about financial assistance options through the BAAQMD's fireplace and wood stove replacement incentive program.

[21] City of Burlingame, *2035 General Plan*, Adopted January 2019, https://www.burlingame.org/departments/planning/general_plan_update.php

HP-3.6: Caltrain Electriciation: Encourage the electrification of Caltrain to eliminate emissions from the rail line.

HP-3.7: Proximity to Sensitive Locations: Avoid locating stationary and mobile sources of air pollution near sensitive uses such as residences, schools, childcare facilities, healthcare facilities, and senior living facilities. Where adjacencies exist, include site planning and building features that minimize potential conflicts and impacts.

HP-3.8: Proximity to Emission Sources: Avoid locating residential developments and other sensitive uses near significant pollution sources such as freeways and large stationary source emitters. Require BAAQMD recommended procedures for air modeling and health risk assessment for new sensitive land uses located near sources of toxic air contaminants.

HP-3.9: Building Site Design and Operations: Place sensitive uses within development projects (e.g. residences, daycares, medical clinics) as far away from emission sources (including loading docks, busy roads, stationary sources) as possible. Design open space, commercial buildings, or parking garages between sensitive land uses and air pollution sources as a buffer. Locate operable windows, balconies, and building air intakes far away from emission sources.

HP-3.10: Truck Routes: Ensure projects that generate truck traffic and existing truck routes avoid sensitive land uses such as residences, schools, day care centers, senior facilities, and residences.

HP-3.11: Dust Abatement: Require dust abatement actions for all new construction and redevelopment projects.

HP-3.12: Construction Best Management Practices: Require construction projects to implement the BAAQMD's Best Practices for Construction to reduce pollution from dust and exhaust as feasible; require construction projects to transition to electrically-powered construction equipment as it becomes available; and seek construction contractors who use alternative fuels in their equipment fleet.

5.0 IMPACT ANALYSIS AND MITIGATION

The air quality analysis includes a review of pollutant emissions such as CO, NO_x, SO_2, VOC as ROG, PM_{10}, and $PM_{2.5}$. The HRA addresses the DPM emissions from on-site construction equipment and haul trucks associated with the proposed project and cumulative impacts from nearby emission sources.

Threshold of Significance

The significance of potential impacts was determined based on State CEQA Guidelines, Appendix G, and the BAAQMD *CEQA Air Quality Guidelines*. Using Appendix G evaluation thresholds, the proposed project would be considered to have significant air quality impacts if it were to:

A. Conflict with or obstruct implementation of the applicable air quality plan;

B. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;

C. Expose sensitive receptors to substantial pollutant concentrations; or

D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The thresholds and methodologies from the BAAQMD's *CEQA Air Quality Guidelines* were used to evaluate the potential impacts of construction and operation of the proposed project. The thresholds of significance applied to assess project-level air quality impacts are:

- Average daily construction exhaust emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10};
- Average daily operation emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or $PM_{2.5}$ or 15 tons per year of PM_{10};
- Exposure of persons by siting a new source or a new sensitive receptor to substantial levels of TAC resulting in (a) a cancer risk level greater than 10 in one million, (b) a noncancerous risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$). For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers; or
- Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people.

Assessment of a significant cumulative impact if it would result in:

- Exposure of persons, by siting a new source or a new sensitive receptor, to substantial levels of TAC during either construction or operation resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 $\mu g/m^3$.

The BAAQMD air quality significance thresholds are found in **Table 2**.

Table 2: BAAQMD Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Daily Operational Thresholds	Annual Operational Thresholds
Criteria Air Pollutants			
ROG	54	54	10
NOx	54	54	10
PM10	82 (exhaust only)	82	15
PM2.5	54 (exhaust only)	54	10
CO	NA	9.0 ppm (8-hour) and 20.0 ppm (1-hour)	
Fugitive Dust	Best Management Practices	NA	
Project Health Risk and Hazards			
Excess Cancer Risk	10 per million		
Chronic Hazard Index	1.0		
Acute Hazard Index	1.0		
Incremental Annual Average $PM_{2.5}$	0.3 µg/m^3		
Cumulative Health Risk and Hazards			
Excess Cancer Risk	100 per million		
Chronic Hazard Index	10.0		
Acute Hazard Index	10.0		
Incremental Annual Average $PM_{2.5}$	0.8 µg/m^3		

SOURCE: BAAQMD Adopted Air Quality CEQA Thresholds of Significance – May 2017, https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/tools/ceqa-guidelines-may-2017-thresholds-table-pdf.pdf?la=en

For projects that are considered new sources of TAC or $PM_{2.5}$ (such as construction activity, stationary sources, industrial sources, or roadway projects), it is generally appropriate to use the project-level thresholds because the project-level threshold identifies project's incremental contribution to health impacts. Project impacts which are below the project-level thresholds would be presumed to contribute a less than significant impact to the cumulative condition. However, for projects that consist of new receptors (such as proposed residences or schools), it is generally appropriate to use the project and cumulative-level thresholds because the project itself is a source of TAC or $PM_{2.5}$ and, the cumulative risk threshold accounts for all potential sources of TAC and $PM_{2.5}$ in proximity to the new receptors on the project site. Therefore, the proposed project, which does include existing and proposed receptors, was compared to the project-level and cumulative-level thresholds.

Health Impact Evaluation

The HRA was conducted following methodologies in OEHHA's *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*.[22] This was accomplished by applying the estimated concentrations at the receptors analyzed to the established cancer risk estimates and acceptable reference concentrations for non-cancer health effects.

Recent OEHHA's revisions to its *Guidance Manual* were primarily designed to ensure that the greater sensitivity of children to cancer and other health risks is reflected in HRA. For example, OEHHA now recommends that risks be analyzed separately for multiple age groups, focusing especially on young children and teenagers, rather than the past practice of analyzing risks to the general population, without distinction by age. OEHHA also now recommends that statistical "age sensitivity factors" be incorporated into an HRA, and that children's relatively high breathing rates be accounted for. On the other hand, the *Guidance Manual* revisions also include some changes that would reduce calculated health risks. For example, under the former guidance, OEHHA recommended that residential cancer risks be assessed by assuming 70 years of exposure at a residential receptor; under the *Guidance Manual*, this assumption is lessened to 30 years. **Attachment B: Health Risk Assessment Methodology and Assumptions** provides additional methodologies and assumptions used within the health risk assessment.

5.1 Consistency with Clean Air Plan

The BAAQMD adopted its *Bay Area 2010 Clean Air Plan* (CAP)[23] in accordance with the requirements of the California Clean Air Act (CCAA) to implement all feasible measures to reduce ozone; provide a control strategy to reduce ozone, particulate matter, air toxics, and GHG emissions in a single, integrated plan; and establish emission control measures to be adopted or implemented in the 2010 through 2012 timeframe.[24] The primary goals of the 2010 Bay Area CAP are to:

- Attain air quality standards;
- Reduce population exposure and protecting public health in the Bay Area; and
- Reduce GHG emissions and protect the climate.

---

[22] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

[23] Bay Area Air Quality Management District. *Bay Area 2010 Clean Air Plan*. September 15, 2010, http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans

[24] In 2015, the BAAQMD initiated an update to the 2010 CAP. On February 28, 2014, the District held a public meeting to report progress on implementing the control measures in the 2010 CAP, to solicit ideas and strategies to further reduce ozone precursors, particulate matter, toxic air contaminants, and greenhouse gases, and to seek input on innovative strategies to reduce greenhouse gases, mechanisms for tracking progress in reducing GHG, and how the District may further support actions to reduce GHG. The culmination of this effort will be an updated CAP.

On April 20, 2017, BAAQMD released the *2017 Clean Air Plan*.[25] The 2017 Clean Air Plan/Regional Climate Protection Strategy (CAP/RCPS) provides a roadmap for BAAQMD's efforts over the next few years to reduce air pollution and protect public health and the global climate. The CAP/RCPS includes the Bay Area's first-ever comprehensive RCPS, which identifies potential rules, control measures, and strategies that BAAQMD can pursue to reduce GHG in the Bay Area. Measures of the 2017 CAP addressing the transportation sector are in direct support of *Plan Bay Area 2040*, which was prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) and includes the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan. Highlights of the *2017 Clean Air Plan* control strategy include:

- **Limit Combustion:** Develop a region-wide strategy to improve fossil fuel combustion efficiency at industrial facilities, beginning with the three largest sources of industrial emissions: oil refineries, power plants, and cement plants.
- **Stop Methane Leaks:** Reduce methane emissions from landfills, and oil and natural gas production and distribution.
- **Reduce Exposure to Toxics:** Reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks at existing and new facilities.
- **Put a Price on Driving:** Implement pricing measures to reduce travel demand.
- **Advance Electric Vehicles:** Accelerate the widespread adoption of electric vehicles.
- **Promote Clean Fuels:** Promote the use of clean fuels and low or zero carbon technologies in trucks and heavy-duty vehicles.
- **Accelerate Low-Carbon Buildings:** Expand the production of low-carbon, renewable energy by promoting on-site technologies such as rooftop solar and ground-source heat pumps.
- **Support More Energy Choices:** Support of community choice energy programs throughout the Bay Area.
- **Make Buildings More Efficient:** Promote energy efficiency in both new and existing buildings.
- **Make Space and Water Heating Cleaner:** Promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

When a public agency contemplates approving a project where an air quality plan consistency determination is required, BAAQMD recommends that the agency analyze the project with

[25] Bay Area Air Quality Management District, *2017 Clean Air Plan*, April 20, 2017, http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en

respect to the following questions: (1) Does the project support the primary goals of the air quality plan; (2) Does the project include applicable control measures from the air quality plan; and (3) Does the project disrupt or hinder implementation of any 2017 CAP control measures? If the first two questions are concluded in the affirmative and the third question concluded in the negative, the BAAQMD considers the project consistent with air quality plans prepared for the Bay Area.

Any project that would not support the 2017 CAP goals would not be considered consistent with the 2017 CAP. The recommended measure for determining project support of these goals is consistency with BAAQMD CEQA thresholds of significance. As presented in the preceding and subsequent impact discussions, the proposed project would not exceed the BAAQMD significance thresholds; therefore, the proposed project would support the primary goals of the 2017 CAP and would not hinder implementation of any of the CAP control measures.

5.2 Construction Impacts

Intermittent (short-term construction emissions that occur from activities, such as site-grading, paving, and building construction) and long-term air quality impacts related to the operation of the proposed project were evaluated. The analysis focuses on daily emissions from construction and operational (mobile, area, stationary, and fugitive sources) activities. CalEEMod, Version 2016.3.2[26] was used to quantify construction-related pollutant emissions. CalEEMod output worksheets are included in **Attachment A: CalEEMod Output Files**. The emissions generated from these construction activities include:

- Dust (including PM_{10} and $PM_{2.5}$) primarily from "fugitive" sources (i.e., emissions released through means other than through a stack or tailpipe) such as material handling and travel on unpaved surfaces; and
- Combustion exhaust emissions of criteria air pollutants (ROG, NO_x, CO, PM_{10}, and $PM_{2.5}$) primarily from operation of heavy off-road construction equipment, haul trucks, (primarily diesel-operated), and construction worker automobile trips (primarily gasoline-operated).
- VOC as ROG primarily from "fugitive" sources such as architectural coating and paving.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. High winds (greater than 10 miles per hour) occur infrequently in the area, less than two percent of the time. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM_{10} concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include

[26] California Air Resources Board, *California Emissions Estimator Model User's Guide*, November 9, 2017.

not only PM_{10}, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts.

Demolition/construction activities are estimated to begin in January 2022 and construction of the project is estimated to be completed in May 2023. **Table 3** provides the estimated construction schedule for each phase: demolition, site preparation, grading, building construction, paving, and architectural coating based on CalEEMod and adjusted to the applicants expected start/end dates. Per Burlingame's Municipal Code Section 18.07.110, construction activities would be expected to occur Monday through Friday from 8 am through 7 pm and Saturday from 9 am through 6 pm.

Table 3: Estimated Construction Schedule

Phase	Description	Start	End	Working Days
1	Demolition	01/03/2022	01/13/2022	10
2	Site Preparation	01/15/2022	01/17/2022	2
3	Grading	01/18/2022	01/23/2022	5
4	Building Construction	01/24/2022	05/13/2023	408
5	Paving	05/14/2023	05/19/2023	5
6	Architectural Coating	05/20/2023	05/25/2023	5

Demolition would involve removing the existing 4,050 square feet building at 1814 Ogden Drive and the existing 10,114 square feet building at 1820 Ogden Drive requiring approximately 64 haul truck trips. Site preparation would consist of land clearing and grading resulting in approximately 10,500 cubic yards of export requiring approximately 1,312 haul truck trips. The estimated construction equipment associated with the proposed project along with the number of pieces of equipment, daily hours of operation, horsepower (hp), and load factor (i.e., percent of full throttle) are shown in **Table 4** based on CalEEMod defaults. All construction equipment is assumed to be diesel-fueled. Pile drilling may occur at isolated areas, this technique will utilize the site area for any required laydown areas.

Table 4: Estimated Construction Equipment Usage

Phase	Equipment	Amount	Daily Hours	HP	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
Demolition	Rubber Tired Dozers	1	1	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6	97	0.37
Site Preparation	Graders	1	8	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37
Grading	Concrete/Industrial	1	8	81	0.73
Grading	Rubber Tired Dozers	1	1	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6	97	0.37
Building Construction	Cranes	1	4	231	0.29
Building Construction	Forklifts	2	6	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8	97	0.37
Paving	Cement and Mortar Mixers	4	6	9	0.56
Paving	Pavers	1	7	130	0.42
Paving	Rollers	1	7	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7	97	0.37
Architectural Coating	Air Compressors	1	6	78	0.48

SOURCE: CalEEMod Version 2016.3.2.

Table 5 provides the estimated short-term construction emissions that would be associated with the proposed project and compares those emissions to the BAAQMD's significance thresholds for construction exhaust emissions. The average daily construction period emissions (i.e., total construction period emissions divided by the number of construction days of 438) were compared to the BAAQMD significance thresholds. All construction-related emissions would be below the BAAQMD significance thresholds.

Based on the CalEEMod and using standard fuel consumption estimates, construction activities would require 47,750 gallons of diesel fuel.[27]

[27] Fuel usage is estimated using the CalEEMod output for CO_2, and a 10.15 $kgCO_2$/gallon conversion factor for diesel fuel, https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf

Table 5: Estimated Construction Emissions

Condition	ROG	NOx	PM10	PM2.5	CO
	Unmitigated				
Total Construction Emissions (tons)	0.89	2.04	0.08	0.07	2.11
Average Daily Construction Emissions (pounds)	4.11	9.39	0.36	0.33	9.72
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No
	Mitigated				
Total Construction Emissions (tons)	0.81	1.89	0.01	0.01	2.29
Average Daily Construction Emissions (pounds)	3.72	8.68	0.07	0.07	10.5
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No

SOURCE: CalEEMod Version 2016.3.2.

BAAQMD's *CEQA Air Quality Guidelines* require several best management practices to control fugitive dust and exhaust emissions. There would be a potential fugitive dust impact that is mitigated to less than significant with implementation of the erosion control measures that would be part of these best management practices. The following measures shall be implemented by the construction contractor:

Mitigation Measure AQ-1: *BAAQMD Required Fugitive Dust Control Measures:* Per the Burlingame General Plan, the applicant shall require their construction contractors to reduce construction-related fugitive dust by implementing BAAQMD's basic control measures at all construction and staging areas, including:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AQ-2: *BAAQMD Required Basic Exhaust Emissions Reduction Measures.* Per the Burlingame General Plan, the applicant shall require their construction contractors to implement the following measures during construction to reduce exhaust emissions:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

The applicant shall encourage their contractors to reduce construction-related fugitive ROG emissions by ensuring that low-VOC coatings that have a VOC content of 50 grams/liter or less are used during the coating of the building's interiors and exterior surfaces. The project applicant shall submit evidence of the use of low-VOC coatings to BAAQMD prior to the start of construction.

5.3 Operational Impacts

CalEEMod was used to estimate emissions that would be associated with motor vehicle use, space and water heating, and landscape maintenance emissions expected to occur after the proposed project construction is complete and the project is operational. The proposed project land use types and size and other project-specific information were input to the model. CalEEMod provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport. CalEEMod output worksheets are included in **Attachment A: CalEEMod Output Files**.

The daily weekday trip rate of 5.44 weekday trips per dwelling unit (or 490 daily weekday trips) was used to estimate mobile vehicle emissions. The estimated annual vehicle miles traveled for the proposed project would be 1,13,784 miles, requiring approximately 43,210 gallons of gasoline (based on standard fuel consumption estimates). The proposed residential units would be all-electric (no natural gas) with a commitment to the Peninsula Clean Energy's ECO100 program[28].

The existing building's (existing baseline) electricity consumption was estimated to be approximately 144,205 kilowatt-hours (kWh) per year and natural gas consumption was estimated to be approximately 262,208 Kilo British Thermal Units (KBTU) per year. The daily

[28] Peninsula Clean Energy's ECO100 program, https://www.peninsulacleanenergy.com/opt-up/

weekday trip rate of 4.09 weekday trips per patient (based on 50 patients) for the existing day care center use (or 205 daily weekday trips) and 34.8 weekday trips per thousand square feet of medical office use (or 352 weekday trips) was used to estimate mobile vehicle emissions (557 total existing weekday trips). The estimated annual vehicle miles traveled for the existing baseline would be 702,425 miles, requiring approximately 27,273 gallons of gasoline (based on standard fuel consumption estimates).

Estimated daily and annual operational emissions that would be associated with the proposed project are presented in **Tables 6 and 7** and are compared to BAAQMD's thresholds of significance. As indicated in **Tables 6 and 7**, the estimated proposed project operational emissions would be below the BAAQMD's significance thresholds and would be less than significant.[29]

Table 6: Estimated Daily Operational Emissions (pounds)

Condition	ROG	NOx	PM10	PM2.5	CO
Project Summer Daily Emissions	3.33	1.67	2.46	0.70	14.2
Existing Summer Daily Emissions	0.99	1.53	2.00	0.55	5.80
Net Summer Daily Emissions	**2.34**	**0.14**	**0.46**	**0.15**	**8.42**
Project Winter Daily Emissions	3.27	1.80	2.46	0.70	14.4
Existing Winter Daily Emissions	0.93	1.63	2.00	0.55	6.13
Net Winter Daily Emissions	**2.34**	**0.17**	**0.46**	**0.15**	**8.32**
Maximum Daily Net Project Emissions	**2.34**	**0.17**	**0.46**	**0.15**	**8.42**
Significance Threshold	54	54	82	54	---
Significant Impact?	No	No	No	No	No

SOURCE: CalEEMod Version 2016.3.2.

Table 7: Estimated Annual Operational Emissions (tons)

Condition	ROG	NOx	PM10	PM2.5	CO
Project Annual Emissions	0.58	0.31	0.43	0.12	1.89
Existing Annual Emissions	0.14	0.22	0.26	0.07	0.80
Net Annual Project Emissions	**0.43**	**0.09**	**0.16**	**0.05**	**1.09**
Significance Threshold	10	10	15	10	---
Significant (Yes or No)?	No	No	No	No	No

SOURCE: CalEEMod Version 2016.3.2.

[29] Use of CalEEMod Version 2016.3.2 may underestimate the criteria pollutant emissions by 1 to 4 percent and underestimate the GHG emissions by up to ten percent for gasoline-powered vehicles. However, the project-related operational emissions are well below the significance thresholds and any adjustments due to the Safer Affordable Fuel-Efficient (SAFE) Vehicle Rule or CalEEMod version would not change this conclusion. would not change this conclusion.

5.4 Cumulative Impacts

As shown, project-related emissions would be less than the BAAQMD significance thresholds. The BAAQMD *CEQA Air Quality Guidelines* recommend that cumulative air quality effects from criteria air pollutants also be addressed by comparison to the mass daily and annual thresholds. These thresholds were developed to identify a cumulatively considerable contribution to a significant regional air quality impact. Project-related emissions would be below the significance thresholds. Therefore, the proposed project would not be cumulatively considerable and cumulative impacts would be less than significant.

5.5 Health Impacts

The proposed project would constitute a new emission source of DPM and $PM_{2.5}$ due to its construction activities. Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. The proposed project would also locate sensitive receptors near existing permitted stationary sources.

Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to air toxic concentrations over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The maximally exposed individual (MEI) represents the worst–case risk estimate, based on a theoretical person continuously exposed for a lifetime at the point of highest compound concentration in the air. This is a highly conservative assumption, since most people do not remain at home all day and on average residents change residences every 11 to 12 years. In addition, this assumption assumes that residents are experiencing outdoor concentrations for the entire exposure period.

This HRA analyzes the incremental cancer risks to sensitive receptors in the vicinity of the proposed project, using emission rates (in pounds per hour) from the CalEEMod emission model. DPM (reported as exhaust emissions of $PM_{2.5}$) emission rates were input into the USEPA's AERMOD atmospheric dispersion model to calculate ambient air concentrations at receptors in the proposed project vicinity. This HRA is intended to provide a worst–case estimate of the increased exposure by employing a standard emission estimation program, an accepted pollutant dispersion model, approved toxicity factors, and conservative exposure parameters.

In accordance with OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,* this HRA was accomplished by applying the highest estimated concentrations of TAC at the receptors analyzed to the established cancer potency factors and acceptable reference concentrations for non-cancer health effects. Increased cancer risks were calculated using the modeled DPM concentrations and OEHHA-recommended methodologies for both a

child exposure (3rd trimester through two years of age) and adult exposure. The cancer risk calculations were based on applying the OEHHA-recommended age sensitivity factors and breathing rates, as well as fraction of time at home and an exposure duration of 30 years, to the DPM concentration exposures. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing air pollutants. The supporting methodology and assumptions used in this HRA are provided in **Attachment B: Health Risk Assessment Methodology, Assumptions, and Results**.

These conservative methodologies overestimate both non-carcinogenic and carcinogenic health risk, possibly by an order of magnitude or more. Therefore, for carcinogenic risks, the actual probabilities of cancer formation in the populations of concern due to exposure to carcinogenic pollutants are likely to be lower than the risks derived using the HRA methodology. The extrapolation of toxicity data in animals to humans, the estimation of concentration prediction methods within dispersion models; and the variability in lifestyles, fitness and other confounding factors of the human population also contribute to the overestimation of health impacts. Therefore, the results of this HRA are highly overstated.

Health Impacts on Existing Residences

The following describes the HRA results associated with existing receptors due to unmitigated project construction activities and cumulative emisson sources. The maximum cancer risk from unmitigated project construction emissions for a residential-adult receptor would be 1.8 per million and for a residential-child receptor would be 41 per million.[30] The maximum cancer risk from unmitigated project construction emissions for a school child receptor would be 0.01 per million.

Table 8: Estimated Unmitigated Health Impacts for Existing Receptors

Source	Cancer Risk (child/adult)	Hazard Impact	$PM_{2.5}$ Concentration
Unmitigated Proposed Project Construction	40.9/1.84	0.04	0.42
Total Proposed Project	**40.9/1.84**	**0.04**	**0.42**
Significance Threshold	10	1.0	0.3
Potentially Significant (Yes or No)?	**Yes**	No	**Yes**

The maximum concentrations would occur at a residential receptor (also known as the maximum exposed individual or MEI) to the south and within 100 feet of the project site; apartments at 1823

[30] This theoretical individual would be born on construction year 1 and subsequently be exposed to the full construction period. Individuals born after construction year 1 would be exposed to shorter construction duration and thus, result in a lower risk and health impacts.

Ogden Drive. Thus, the cancer risk due to construction activities and project operations are potentially above the BAAQMD threshold of 10 per million and would be potentially significant.

Therefore, the proposed project would be required to implement **Mitigation Measure AQ-3** BAAQMD's *Enhanced Exhaust Emission Reduction Measures*.

> ***Mitigation Measure AQ-3:*** *BAAQMD Enhanced Exhaust Emissions Reduction Measures.* The applicant shall implement the following measures during construction to further reduce construction-related exhaust emissions:
>
> All diesel-powered off-road equipment larger than 50 horsepower and operating at the site for more than two days continuously shall meet USEPA particulate matter emissions standards for Tier 3 engines or equivalent:
>
> 1. Where access to alternative sources of power are available, portable diesel engines shall be prohibited; and
> 2. All off-road equipment shall have engines that meet or exceed either USEPA or CARB Tier 3 (or better) off-road emission standards and Level 3 Diesel Particulate Filters (DPF). Other measures may be the use of added exhaust devices, or a combination of measures, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to less than significant.

As shown in **Table 9**, with the implementation of **Mitigation Measures AQ-1 through AQ-3**, the maximum cancer risk from mitigated project construction for a residential-adult receptor would be 0.4 per million and for a residential-child receptor would be 8.2 per million. The maximum cancer risk from mitigated project construction emissions for a school child receptor would be 0.01 per million.Thus, the cancer risk due to construction activities and project operations would be below the BAAQMD threshold of 10 per million and would be less than significant with mitigation.

Table 9: Estimated Mitigated Health Impacts for Existing Receptors

Source	Cancer Risk (child/adult)	Hazard Impact	$PM_{2.5}$ Concentration
Mitigated Proposed Project Construction	8.16/0.37	0.01	0.22
Total Proposed Project	**8.16/0.37**	**0.01**	**0.22**
Significance Threshold	10	1.0	0.3
Potentially Significant (Yes or No)?	No	No	No

Non-Cancer Health Hazard Associated with Existing Receptors

Both acute (short-term) and chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental DPM exposure concentration from the proposed project to a reference exposure level (REL) that

could cause adverse health effects. The REL are published by OEHHA based on epidemiological research. The ratio (referred to as the Hazard Quotient [HQ]) of each non-carcinogenic substance that affects a certain organ system is added to produce an overall HI for that organ system. The overall HI is calculated for each organ system. The impact is considered to be significant if the overall HI for the highest-impacted organ system is greater than 1.0.

There is no acute REL for DPM. The chronic reference exposure level for DPM was established by the California OEHHA[31] as 5 μg/m^3. Thus, the proposed project-related annual concentration of DPM cannot exceed 5.0 μg/m^3; resulting in a chronic HI of greater than 1.0 (i.e., DPM annual concentration/5.0 μg/m^3).

The unmitigated chronic HI would be 0.04, based on a proposed project-related maximum annual diesel concentration of 0.22 μg/m^3 (per dispersion modeling analysis) or 0.22 μg/m^3/5.0 μg/m^3, which is 0.04. The mitigated chronic HI would be 0.01. The chronic HI would be below the project-level threshold of 1 and the impact of the proposed project would therefore be less than significant.

$PM_{2.5}$ Concentration

Dispersion modeling also estimated the exposure of sensitive receptors to project-related concentrations of $PM_{2.5}$. The BAAQMD *Air Quality Guidelines* requires inclusion of $PM_{2.5}$ exhaust and fugitive dust emissions in this analysis. The proposed project's unmitigated annual $PM_{2.5}$ concentration from construction activities would be 0.42 μg/m^3; a potentially significant impact. With implementation of **Mitigation Measures AQ-1 through AQ-3**, the annual $PM_{2.5}$ concentration would be reduced to 0.22 μg/m^3. Thus, the annual $PM_{2.5}$ concentration due to project construction (combustion exhaust and fugitive dust) would be below the BAAQMD threshold of 0.3 μg/m^3 and would be considered less than significant.

Cumulative Health Impacts on Existing Residences

A cumulative health risk assessment for existing receptors due to project construction and nearby existing emission sources has been included. The following describes the health risk assessment associated with existing residences as a result of existing cumulative sources such as permitted sources (i.e., diesel generators, boilers, gasoline stations), major roadways, and rail activities, as well as project construction.

The method for determining cumulative health risk requires the tallying of health risk from permitted stationary sources, major roadways and any other identified substantial air toxic

[31] California Office of Environmental Health Hazards Assessment - Acute, 8-hour, and Chronic Reference Exposure Levels, June 2014, http://www.oehha.ca.gov/air/allrels.html

sources in the vicinity of the maxiually exposed existing residence[32] (i.e., within a 1,000-foot radius) and then adding the individual sources to determine whether the BAAQMD's cumulative health risk thresholds are exceeded.

Table 10 the cumulative cancer risks, hazard impacts, and $PM_{2.5}$ concentrations (in $\mu g/m^3$) impacting the existing residences from nearby existing emission sources.

BAAQMD has developed a geo-referenced database of roadways throughout the San Francisco Bay Area and has developed the *Highway and Major Roadway GIS Tool* for estimating cumulative health risks from highways and major roadways. US 82 (El Camino Real) and Trousdale Drive.[33] The estimated cumulative cancer risk due to US 82 is 4.10 per million persons. The estimated cumulative $PM_{2.5}$ concentration due to US 82 is 0.10 $\mu g/m^3$. For Trousdale Drive, the estimated cumulative cancer risk is 0.28 per million persons and the estimated cumulative $PM_{2.5}$ concentration is 0.01 $\mu g/m^3$.

Table 10: Estimated Cumulative Health Impacts for Existing Residences

Source	Cancer Risk	Hazard Impact	$PM_{2.5}$ Concentration
Project Construction (mitigated)	8.16	0.01	0.22
US 82	4.10	<0.01	0.10
Trousdale Drive	0.28	<0.01	0.01
Rail Activities	2.40	<0.01	<0.01
Verizon Wireless	0.92	<0.01	<0.01
Sunrise Senior Living	3.00	0.02	0.01
Peninsula Health Care District	1.16	<0.01	0.01
City of Burlingame	0.17	<0.01	<0.01
Cumulative Impact	**20.2**	**0.03**	**0.35**
Significance Threshold	100	10	0.8
Potentially Significant (Yes or No)?	No	No	No

SOURCE: Bay Area Air Quality Management District, *Stationary Source Risk & Hazard Analysis Tool*, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65
Bay Area Air Quality Management District, *Highway, Major Roadway and Rail GIS Tool,* https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools

BAAQMD has developed a geo-referenced database of rail activities throughout the San Francisco Bay Area and has developed the *Rail GIS Tool* for estimating cumulative health risks from rail activities.[34] The estimated cumulative cancer risk due to rail activities is 2.40 per million

[32] The maximum concentrations would occur at a residential receptor to the south and within 100 feet of the project site; apartments at 1823 Ogden Drive.

[33] Bay Area Air Quality Management District, *Highway and Major Roadway GIS Tool*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools

[34] Bay Area Air Quality Management District, *Rail GIS Tool*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools

persons. The estimated cumulative $PM_{2.5}$ concentration due to rail activities is less than 0.01 $\mu g/m^3$. The estimated total cumulative cancer risk at existing residences is 20.2 per million persons, which is below the significance threshold of 100 per million persons. The estimated cumulative $PM_{2.5}$ concentration at existing residences is 0.35 $\mu g/m^3$, which is below the significance threshold of 0.8 $\mu g/m^3$.

Cumulative Health Impacts on Proposed Residences

The following describes the health risk assessment associated with proposed residences as a result of existing cumulative sources such as permitted sources (i.e., diesel generators, boilers, gasoline stations), major roadways, and rail activities.

Table 11 the cumulative cancer risks, hazard impacts, and $PM_{2.5}$ concentrations (in $\mu g/m^3$) impacting the proposed residences from nearby existing emission sources. The estimated total cumulative cancer risk at existing residences is 12.0 per million persons, which is below the significance threshold of 100 per million persons. The estimated cumulative $PM_{2.5}$ concentration at existing residences is 0.13 $\mu g/m^3$, which is below the significance threshold of 0.8 $\mu g/m^3$.

Table 11: Estimated Cumulative Health Impacts for Proposed Project Receptors

Source	Cancer Risk	Hazard Impact	$PM_{2.5}$ Concentration
US 82	4.10	<0.01	0.10
Trousdale Drive	0.28	<0.01	0.01
Rail Activities	2.40	<0.01	<0.01
Verizon Wireless	0.92	<0.01	<0.01
Sunrise Senior Living	3.00	0.02	0.01
Peninsula Health Care District	1.16	<0.01	0.01
City of Burlingame	0.17	<0.01	<0.01
Cumulative Impact	**12.0**	**0.02**	**0.13**
Significance Threshold	100	10	0.8
Potentially Significant (Yes or No)?	No	No	No

SOURCE: Bay Area Air Quality Management District, *Stationary Source Risk & Hazard Analysis Tool*, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65
Bay Area Air Quality Management District, *Highway, Major Roadway and Rail GIS Tool,* https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools

5.6 Odor Impacts

Though offensive odors from stationary and mobile sources rarely cause any physical harm, they remain unpleasant and can lead to public distress, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

The BAAQMD's significance criteria for odors are subjective and are based on the number of odor complaints generated by a project. Generally, the BAAQMD considers any project with the

potential to frequently expose members of the public to objectionable odors to cause a significant impact. With respect to the proposed project, diesel-fueled construction equipment exhaust would generate some odors. However, these emissions typically dissipate quickly and would be unlikely to affect a substantial number of people. The proposed project would not involve operational activities that generate substantial odors.

Generally, odor emissions are highly dispersive, especially in areas with higher average wind speeds. However, odors disperse less quickly during inversions or during calm conditions, which hamper vertical mixing and dispersion. Therefore, odor impacts associated with the location of the proposed project would be less than significant.

6.0 GREENHOUSE GAS ANALYSIS

"Global warming" and "global climate change" are the terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal, with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. GHG naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHG occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Gases that trap heat in the atmosphere are referred to as GHG because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG has been implicated as the driving force for global climate change. The

primary GHG are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), ozone, and water vapor.

While the presence of the primary GHG in the atmosphere are naturally occurring, CO_2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHG include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent GHG than CO_2, with GWP of 25 and 298 times that of CO_2, respectively.[35]

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons (MT) of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWP than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e.

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO_2 emissions (and thus substantial increases in atmospheric concentrations of CO_2). In pre-industrial times (c. 1860), concentrations of atmospheric CO_2 were approximately 280 parts per million (ppm). By May 2020, atmospheric CO_2 concentrations had increased to 417 ppm, 49 percent percent above pre-industrial concentrations.[36]

There is international scientific consensus that human-caused increases in GHG have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.[37]

---

[35] Global warming potential values, https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf

[36] Earth System Research Laboratory, *Recent Monthly Mean CO_2 at Mauna Lora*, www.esrl.noaa.gov/gmd/ccgg/trends/

[37] California Environmental Protection Agency, *2006 Final Climate Action Team Report to the Governor and Legislature*, March 2006, http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF

City of Burlingame 2030 Climate Action Plan Update

The City of Burlingame adopted a 2030 Climate Action Plan (CAP) in 2019.[38] The CAP presents the City's blueprint for responding to the challenges of climate change. The CAP includes an emissions inventory of existing GHG emission sources in the City, reduction targets to lower annual GHG emissions by 40 percent in 2030, 60 percent in 2040, and 80 percent by 2050, and 20 measures including strategies to reach zero waste, procure 100 percent renewable electricity, support green building and electric vehicles, and significant cut exhaust emissions.

The CAP includes the following 20 GHG reduction measures:

1. Mixed Use Development, Transit Oriented Development, and Transit Supporting Land Use
2. Transportation Demand Management
3. Complete Streets
4. Caltrain Electrification
5. Bicycle Sharing
6. Electric Vehicle Infrastructure and Initiatives
7. Parking Pricing, Parking Requirements, and Creative Parking Approaches
8. Burlingame Shuttle Service
9. Electrification of Yard and Garden Equipment
10. Construction Best Management Practices
11. Green Building Practices and Standards
12. Energy Efficiency
13. Peninsula Clean Energy ECO100
14. Residential Solar Power
15. Alternatively-Powered Residential Water Heaters
16. Retrofits
17. Water Conservation
18. Zero Waste

[38] City of Burlingame, 2030 *Climate Action Plan Update*, August 28, 2019, https://www.burlingame.org/document_center/Sustainability/CAP/Climate%20Action%20Plan_FINAL.pdf

19. Municipal Green Building Measures
20. Increase the Public Tree Population

The CAP specifies policies, including feasible GHG emissions reduction measures, which are implemented on a project-by-project basis, to achieve the City's reduction targets through 2030. Compliance with appropriate measures in the CAP would ensure an individual project's consistency with an adopted GHG reduction plan. Projects that are consistent with the qualified CAP would have a less-than-significant impact related to GHG emissions generated through the 2030 planning horizon. The City's CAP was prepared consistent with CEQA Guidelines Section 15183.5 and is therefore a qualified strategy, and the proposed project is eligible to tier from it.

California Green Building Standards Code

California Code of Regulations Title 24, Part 6 and Part 11 (California Green Building Standards Code)[39], which relate to energy and green building and commonly referred to as CALGreen, is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CALGreen contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. CALGreen provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. CALGreen also requires building commissioning, which is a process for verifying that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency. The following provides examples of CALGreen requirements:

- **Designated parking.** Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles.
- **Recycling by Occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.
- **Construction waste.** A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and-75 percent for new homes and 80-percent for commercial projects. All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled.
- **Wastewater reduction.** Each building shall reduce the generation of wastewater by installation of water-conserving fixtures or using nonpotable water systems.

[39] California Code of Regulations Title 24, Part 11, http://www.bsc.ca.gov/Home/CALGreen.aspx

- **Water use savings.** 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40-percent reductions.
- **Water meters.** Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day.
- **Irrigation efficiency.** Moisture-sensing irrigation systems for larger landscaped areas.
- **Materials pollution control.** Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.
- **Building commissioning.** Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.

Executive Order S-3-05

Governor Schwarzenegger established Executive Order S-3-05 in 2005, in recognition of California's vulnerability to the effects of climate change. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHG would be progressively reduced, as follows:

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

The executive order directed the Secretary of the CalEPA to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of CalEPA created the California Climate Action Team, made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through state incentive and regulatory programs.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG

emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations to achieve reductions in GHG to meet the 1990 emissions cap by 2020.

Climate Change Scoping Plan

AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHG to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every five years. The initial AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause climate change. The initial Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. In August 2011, the initial Scoping Plan was approved by CARB.

The 2013 Scoping Plan Update builds upon the initial Scoping Plan with new strategies and recommendations. The 2013 Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2013 Update defines CARB climate change priorities for the next five years and sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012. The 2013 Update highlights California progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. In the 2013 Update, nine key focus areas were identified (energy, transportation, agriculture, water, waste management, and natural and working lands), along with short-lived climate pollutants, green

buildings, and the cap-and-trade program. On May 22, 2014, the First Update to the Climate Change Scoping Plan was approved by the Board, along with the finalized environmental documents.

Executive Order No. B-30-15

On April 29, 2015, Executive Order No. B-30-15 was issued to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Executive Order No. B-30-15 sets a new, interim, 2030 reduction goal intended to provide a smooth transition to the existing ultimate 2050 reduction goal set by Executive Order No. S-3-05 (signed by Governor Schwarzenegger in June 2005). It is designed so State agencies do not fall behind the pace of reductions necessary to reach the existing 2050 reduction goal. Executive Order No. B-30-15 orders "All State agencies with jurisdiction over sources of GHG emissions shall implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 targets." The Executive Order also states that "CARB shall update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent." The CARB is currently moving forward with a second update to the Climate Change Scoping Plan to reflect the 2030 reduction target. The updated Scoping Plan will provide a framework for achieving the 2030 target. In September of 2016, the AB 32 was extended to achieve reductions in GHG of 40 percent below 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

Senate Bill 100—The 100 Percent Clean Energy Act of 2018 (2018)

SB 100, the Clean Energy and Pollution Reduction Act of 2015, increases the 2030 RPS target set in SB 350 to 60 percent and requires an RPS of 100 percent by 2045.

Executive Order No. B-55-18

In 2018, EO B-55-18 established a new state goal to achieve carbon neutrality as soon as possible (no later than 2045) and achieve and maintain net negative emissions thereafter. EOs are binding on state government agencies but are not legally binding on cities and counties or on private development.

Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule

Under the SAFE Vehicles Rule, current 2020 emission standards would be maintained through 2026. The SAFE Rule would decrease the stringency of the CAFE standards 1.5 percent each year through model year 2026; the standards issued in 2012 would have required annual fuel efficiency increases of about five percent.

Greenhouse Gas Regional Emission Estimates

Worldwide emissions of GHG in 2017 were estimated at 48.40 billion metric tons of CO_2e.[40] This value includes ongoing emissions from industrial and agricultural sources but excludes emissions from land use changes.

In 2019, the United States emitted about 6,558 million metric tons of CO_2e. Emissions increased from 2018 to 2019 by 1.7 percent. This decrease was driven largely by a decrease in emissions from fossil fuel combustion resulting from a decrease in total energy use in 2019 compared to 2018 and a continued shift from coal to natural gas and renewables in the electric power sector.[41] GHG emissions in 2018 (after accounting for sequestration from the land sector) were 10.2 percent below 2005 levels. GHG emissions in 2019 (after accounting for sequestration from the land sector) were 13 percent below 2005 levels.

In 2018, California emitted approximately 425 million metric tons of CO_2e, 0.8 million metric tons of CO_2e higher than 2017 levels and six million metric tons of CO_2e below the 2020 GHG Limit of 431 million metric tons of CO_2e).[42] Consistent with recent years, these reductions have occurred while California's economy has continued to grow and generate jobs. The transportation sector remains the largest source of GHG emissions in the state with 40 percent of the emissions in 2018 but saw a decrease in emissions compared to 2017.[43]

Emissions from the electricity sector account for 15 percent of the inventory and showed a slight increase in 2018 due to less hydropower. California in 2018 used more electricity from zero-GHG sources (for the purpose of the GHG inventory, these include hydro, solar, wind, and nuclear energy) than from GHG-emitting sources for both in-state generation and total (in-state plus imports) generation. The industrial sector has seen steady emissions in the past few years and remains at 21 percent of the inventory.[44]

In the San Francisco Bay Area, the GHG emissions inventory prepared by the BAAQMD indicates that the transportation and industrial/commercial sectors represent the largest sources of GHG emissions, accounting for 39.7 percent and 35.7 percent, respectively, of the Bay Area's 86.6 million tons of CO_2e emissions in 2011. Electricity/co-generation sources account for

---

[40] World Resources Institute, *Climate Analysis Indicator Tool – Global Historical GHG Emissions*, https://www.climatewatchdata.org/ghg-emissions?end_year=2017&start_year=1990

[41] United States Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks*, April 2021, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019

[42] California Air Resources Board, *Emissions Trends Report 2000-2018 (2020 Edition)*, https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf

[43] California Air Resources Board, *Emissions Trends Report 2000-2018 (2020 Edition)*, https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf

[44] California Air Resources Board, *Emissions Trends Report 2000-2018 (2020 Edition)*, https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf

approximately 14 percent of the Bay Area's GHG emissions, followed by residential fuel usage at approximately 7.7 percent. Off-road equipment sources currently account for approximately 1.5 percent of total Bay Area GHG emissions.[45]

The City of Burlingame prepared two community-wide annual GHG emission inventories as part of the 2030 CAP. Key findings of the 2005 and 2015 community-wide GHG emission inventories include:

- GHG emission levels fell by approximately 12,672 MT CO_2e, approximately five percent, from 2005 to 2015.
- Most of the GHG emission reductions are due to increased electricity supplied from renewable sources (e.g., solar and wind power), as required under the State's RPS Program.
- Transportation is the largest contributor to GHG emissions at 53 percent, followed by energy use in buildings (primarily from heating and cooling) at 44 percent.
- GHG emission increases in the transportation sector are from additional off -road equipment operation (e.g., construction and yard and garden equipment); on-road emissions have decreased.
- The transportation and wastewater sectors are the only areas where emissions grew over the last decade.

Thresholds of Significance

CEQA Guidelines Appendix G includes a list of potentially significant project impacts. The Project would have a GHG emissions impact if it would:

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

CEQA Guidelines Section 15064.4 provides guidance to lead agencies for determining the significance of environmental impacts pertaining to GHG emissions. Section 15064.4(a) states that a lead agency should make a good-faith effort that is based, to the extent possible, on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions that would result from implementation of a project. CEQA Guidelines Section 15064.4(b) also states that, when assessing the significance of impacts from GHG emissions, a lead agency should consider

[45] Bay Area Air Quality Management District, *Bay Area Emissions Inventory*, Adopted June 2011, Updated January 2015, http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/ by2011_ghgsummary.pdf

(1) the extent to which the project may increase or reduce GHG emissions compared with existing conditions, (2) whether the project's GHG emissions would exceed a threshold of significance that the lead agency has determined to be applicable to the project, and (3) the extent to which the project would comply with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The approach to evaluating the significance of the project's emissions is further assessed in terms of construction emissions and operational emissions. **Attachment C: Climate Action Plan Consistency Checklist** contains a completed Climate Action Plan Consistency Checklist.

6.1 Greenhouse Gas Emissions

CalEEMod was used to quantify GHG emissions associated with construction activities, as well as long-term operational emissions produced by motor vehicles, natural gas combustion for space and water heating, electricity use, and landscape maintenance equipment. CalEEMod incorporates GHG emission factors for the central electric utility serving the Bay Area and mitigation measures based on the California Air Pollution Control Officer's Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures*[46] and the *California Climate Action Registry General Reporting Protocol*[47].

CalEEMod incorporates GHG emission factors for the central electric utility serving the Bay Area. Default rates for energy consumption were assumed in the model. Emissions rates associated with electricity consumption were adjusted to account for Peninsula Clean Energy's most recent CO_2 intensity rate (2019). CalEEMod uses a default rate of 641 pounds of CO_2 per megawatt of electricity produced. Peninsula Clean Energy's 2019 CO_2 intensity rate of 130 pounds of CO_2 per megawatt of electricity produced for 2024 (the first year of project operations) was used for the existing condition.

The BAAQMD CEQA Guidelines do not identify a GHG emissions threshold for construction-related emissions; however, they do recommend that GHG emissions from construction be quantified and disclosed and a determination regarding the significance of the GHG emissions be made with respect to whether the project in question is consistent with state goals regarding reductions in GHG emissions. The proposed project would be consistent with the City's Climate Action Plan, an adopted and qualified GHG reduction strategy. The Climate Action Plan's consistency checklist would require the proposed project to comply with BAAQMD's Best Management Practices for reducing GHG emissions from construction. The proposed project would ensure that GHG emissions during construction would be minimized through

[46] California Air Pollution Control Officer's Association *Quantifying Greenhouse Gas Mitigation Measures*, August 2010, http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

[47] California Climate Action Registry General Reporting Protocol, April 2008, http://www.climateactionreserve.org/wp-content/uploads/videos/GRP_V3_April%202008_FINAL.pdf

implementation of BAAQMD's Best Management Practices. Best management practices may include but are not limited to: using alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet; using local building materials of at least 10 percent; and recycling or reusing at least 50 percent of construction waste or demolition materials. Therefore, this impact would be less than significant.

BAAQMD's CEQA Guidelines state that "if a project, including stationary sources, is located in a community with an adopted qualified GHG reduction strategy, the project may be considered less than significant if it is consistent with the GHG reduction strategy." The analysis of emissions from proposed project sources (e.g., sources related to energy consumption, water consumption, waste generation, mobile sources, land use changes) is based on the Climate Action Plan's consistency checklist. The proposed project would be consistent with the City's Climate Action Plan, an adopted and qualified GHG reduction strategy. Therefore, quantification of operational emissions is not required as part of the GHG analysis. The proposed project's GHG emissions are not used to determine the significance of the project's impacts since the impact determination is made through consistency with the Climate Action Plan.

GHG emissions sources associated with operation of the proposed project include on-road vehicles, landscaping equipment, landfill waste, electricity for building energy and water, and changes to land uses. Potential impacts from these sources are determined by using the City's Climate Action Plan consistency checklist. To be consistent with the City's Climate Action Plan, the proposed project would be subject to the measures in the Climate Action Plan consistency checklist. The proposed residential units would be all-electric (no natural gas) with a commitment to the Peninsula Clean Energy's ECO100 program.

The proposed project's estimated construction and operational GHG emissions are presented in **Table 12**. The estimated construction GHG emissions are approximately 485 metric tons of CO_2e. As indicated, 30-year amortized annual construction related GHG emissions would be approximately 16.2 metric tons of CO_2e. The GHG operational emissions would be 427 metric tons per year. Furthermore, the existing baseline GHG emissions were estimated to be approximately 326 metric tons per year. The net project annual emissions would be approximately 101 metric tons per year. Additionally, the applicant would provide a net increase of nine trees which would result in a carbon sequestration of 6 metric tons of CO_2e. Therefore, the net project annual emissions would be approximately 95 metric tons per year.

Table 12: Estimated Greenhouse Gas Emissions (metric tons of CO_2e)

Source	Annual CO_2e Metric Tons
Area Sources	1.1
Energy	0.0
Mobile	396
Solid Waste	20.8
Water	8.0
Total Proposed Project Emissions	**427**
Existing Condition GHG Emissions	**326**
Net Project Annual Emissions	**101**
Sequestration due to Tree Planting	**-6**
Grand Net Project Annual Emissions	**95**

SOURCE: CalEEMod Version 2016.3.2.

6.2 Consistency with State and Local GHG Reduction Plans

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. In September of 2016, SB 32 extended the goals of AB 32 and set a goal to achieve reductions in GHG of 40 percent below 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use,

putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

The City of Burlingame adopted their 2030 CAP update in 2019. The CAP will be a roadmap for how the City will reduce energy consumption and GHG emissions to meet State GHG emissions targets (AB 32 and SB 32). Since the proposed project will be operational post 2020, the principal State plan and policy adopted for the purpose of reducing GHG emissions is SB 32. The quantitative goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. Statewide plans and regulations such as GHG emissions standards for vehicles and the low carbon fuel standard are being implemented at the statewide level, and compliance at the specific plan or project level is not addressed. The assumption is that SB 32 will be successful in reducing GHG emissions and reducing the cumulative GHG emissions statewide by 2030. The State has taken these measures, because no project individually could have a major impact (either positively or negatively) on the global concentration of GHG. As the proposed project has completed the CAP Consistency Checklist, the proposed project would be consistent with the City's Climate Action Plan, an adopted and qualified GHG reduction strategy.

The proposed project has been reviewed relative to the climate change policies and measures in CARB's *2017 Climate Change Scoping Plan* and it has been determined that the proposed project would not conflict with State GHG reduction goals. The proposed project has also been reviewed relative to the GHG emission reduction measures in the 2030 CAP update and it has been determined that the proposed project would not conflict with the 2030 CAP. Therefore, impacts would be less than significant.

Attachment A

Construction and Operational Emissions

CalEEMod Output Files

Proposed Project

- Annual
- Summer
- Winter

Existing Conditions

- Annual
- Summer
- Winter

1814-20 Ogden Drive Existing Baseline Condition

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	10.11	1000sqft	0.23	10,114.00	0
Day-Care Center	4.05	1000sqft	0.09	4,050.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	130	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - https://www.peninsulacleanenergy.com/wp-content/uploads/2019/09/PCE_Student-Activity-Packet_Final2.pdf

Land Use -

Construction Phase - No construction - existing condition

Off-road Equipment - no construction -existing condition

Trips and VMT - no construction -existing condition

Energy Use -

Vehicle Trips - Per Traffic Report

1814-20 Ogden Drive Existing Baseline Condition - San Mateo County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	641.35	130
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	WD_TR	74.06	50.62
tblVehicleTrips	WD_TR	36.13	34.80

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0739	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0739**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0739	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0739**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	4-3-2022	7-2-2022	0.0528	0.0528
		Highest	0.0528	0.0528

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0627	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.7000e-004
Energy	1.4100e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	22.4957	22.4957	2.7000e-004	2.6000e-004	22.5788
Mobile	0.0788	0.2092	0.7907	2.6500e-003	0.2605	2.1900e-003	0.2627	0.0700	2.0400e-003	0.0720	0.0000	242.7573	242.7573	8.9600e-003	0.0000	242.9814
Waste						0.0000	0.0000		0.0000	0.0000	23.2323	0.0000	23.2323	1.3730	0.0000	57.5571
Water						0.0000	0.0000		0.0000	0.0000	0.4576	0.6023	1.0598	0.0470	1.1100e-003	2.5655
Total	**0.1430**	**0.2221**	**0.8017**	**2.7300e-003**	**0.2605**	**3.1700e-003**	**0.2636**	**0.0700**	**3.0200e-003**	**0.0730**	**23.6899**	**265.8555**	**289.5454**	**1.4292**	**1.3700e-003**	**325.6830**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0627	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.7000e-004
Energy	1.4100e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	22.4957	22.4957	2.7000e-004	2.6000e-004	22.5788
Mobile	0.0788	0.2092	0.7907	2.6500e-003	0.2605	2.1900e-003	0.2627	0.0700	2.0400e-003	0.0720	0.0000	242.7573	242.7573	8.9600e-003	0.0000	242.9814
Waste						0.0000	0.0000		0.0000	0.0000	23.2323	0.0000	23.2323	1.3730	0.0000	57.5571
Water						0.0000	0.0000		0.0000	0.0000	0.4576	0.6023	1.0598	0.0470	1.1100e-003	2.5655
Total	**0.1430**	**0.2221**	**0.8017**	**2.7300e-003**	**0.2605**	**3.1700e-003**	**0.2636**	**0.0700**	**3.0200e-003**	**0.0730**	**23.6899**	**265.8555**	**289.5454**	**1.4292**	**1.3700e-003**	**325.6830**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/16/2022	6/16/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,246; Non-Residential Outdoor: 7,082; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0739					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0739**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0739					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0739**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0788	0.2092	0.7907	2.6500e-003	0.2605	2.1900e-003	0.2627	0.0700	2.0400e-003	0.0720	0.0000	242.7573	242.7573	8.9600e-003	0.0000	242.9814
Unmitigated	0.0788	0.2092	0.7907	2.6500e-003	0.2605	2.1900e-003	0.2627	0.0700	2.0400e-003	0.0720	0.0000	242.7573	242.7573	8.9600e-003	0.0000	242.9814

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	205.00	25.15	23.61	180,641	180,641
Medical Office Building	351.97	90.62	15.68	521,784	521,784
Total	556.97	115.77	39.29	702,425	702,425

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Medical Office Building	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8.5033	8.5033	0.0000	0.0000	8.5033
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8.5033	8.5033	0.0000	0.0000	8.5033
NaturalGas Mitigated	1.4100e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	13.9924	13.9924	2.7000e-004	2.6000e-004	14.0755
NaturalGas Unmitigated	1.4100e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	13.9924	13.9924	2.7000e-004	2.6000e-004	14.0755

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Day-Care Center	66703.5	3.6000e-004	3.2700e-003	2.7500e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.5596	3.5596	7.0000e-005	7.0000e-005	3.5807
Medical Office Building	195504	1.0500e-003	9.5800e-003	8.0500e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4328	10.4328	2.0000e-004	1.9000e-004	10.4948
Total		**1.4100e-003**	**0.0129**	**0.0108**	**8.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**13.9924**	**13.9924**	**2.7000e-004**	**2.6000e-004**	**14.0755**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Day-Care Center	66703.5	3.6000e-004	3.2700e-003	2.7500e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.5596	3.5596	7.0000e-005	7.0000e-005	3.5807
Medical Office Building	195504	1.0500e-003	9.5800e-003	8.0500e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4328	10.4328	2.0000e-004	1.9000e-004	10.4948
Total		**1.4100e-003**	**0.0129**	**0.0108**	**8.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**13.9924**	**13.9924**	**2.7000e-004**	**2.6000e-004**	**14.0755**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	17982	1.0603	0.0000	0.0000	1.0603
Medical Office Building	126223	7.4430	0.0000	0.0000	7.4430
Total		**8.5033**	**0.0000**	**0.0000**	**8.5033**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Day-Care Center	17982	1.0603	0.0000	0.0000	1.0603
Medical Office Building	126223	7.4430	0.0000	0.0000	7.4430
Total		**8.5033**	**0.0000**	**0.0000**	**8.5033**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0627	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.7000e-004
Unmitigated	0.0627	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.7000e-004
Total	**0.0627**	**0.0000**	**1.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.7000e-004
Total	**0.0627**	**0.0000**	**1.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.0598	0.0470	1.1100e-003	2.5655
Unmitigated	1.0598	0.0470	1.1100e-003	2.5655

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.173703 / 0.446664	0.2027	5.6600e-003	1.3000e-004	0.3841
Medical Office Building	1.26861 / 0.24164	0.8571	0.0413	9.8000e-004	2.1814
Total		**1.0598**	**0.0470**	**1.1100e-003**	**2.5655**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Day-Care Center	0.173703 / 0.446664	0.2027	5.6600e-003	1.3000e-004	0.3841
Medical Office Building	1.26861 / 0.24164	0.8571	0.0413	9.8000e-004	2.1814
Total		**1.0598**	**0.0470**	**1.1100e-003**	**2.5655**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.2323	1.3730	0.0000	57.5571
Unmitigated	23.2323	1.3730	0.0000	57.5571

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	5.26	1.0677	0.0631	0.0000	2.6453
Medical Office Building	109.19	22.1646	1.3099	0.0000	54.9118
Total		**23.2323**	**1.3730**	**0.0000**	**57.5571**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Day-Care Center	5.26	1.0677	0.0631	0.0000	2.6453
Medical Office Building	109.19	22.1646	1.3099	0.0000	54.9118
Total		**23.2323**	**1.3730**	**0.0000**	**57.5571**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

1814-20 Ogden Drive Existing Baseline Condition

San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	10.11	1000sqft	0.23	10,114.00	0
Day-Care Center	4.05	1000sqft	0.09	4,050.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	130	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - https://www.peninsulacleanenergy.com/wp-content/uploads/2019/09/PCE_Student-Activity-Packet_Final2.pdf

Land Use -

Construction Phase - No construction - existing condition

Off-road Equipment - no construction -existing condition

Trips and VMT - no construction -existing condition

Energy Use -

Vehicle Trips - Per Traffic Report

1814-20 Ogden Drive Existing Baseline Condition - San Mateo County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	641.35	130
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	WD_TR	74.06	50.62
tblVehicleTrips	WD_TR	36.13	34.80

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	147.7128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**147.7128**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	147.7128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**147.7128**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3437	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Energy	7.7500e-003	0.0704	0.0592	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003		84.5148	84.5148	1.6200e-003	1.5500e-003	85.0170
Mobile	0.6413	1.4593	5.7368	0.0202	1.9764	0.0160	1.9924	0.5293	0.0149	0.5441		2,040.9270	2,040.9270	0.0715		2,042.7136
Total	**0.9928**	**1.5298**	**5.7974**	**0.0206**	**1.9764**	**0.0213**	**1.9977**	**0.5293**	**0.0202**	**0.5495**		**2,125.4448**	**2,125.4448**	**0.0731**	**1.5500e-003**	**2,127.7339**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3437	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Energy	7.7500e-003	0.0704	0.0592	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003		84.5148	84.5148	1.6200e-003	1.5500e-003	85.0170
Mobile	0.6413	1.4593	5.7368	0.0202	1.9764	0.0160	1.9924	0.5293	0.0149	0.5441		2,040.9270	2,040.9270	0.0715		2,042.7136
Total	**0.9928**	**1.5298**	**5.7974**	**0.0206**	**1.9764**	**0.0213**	**1.9977**	**0.5293**	**0.0202**	**0.5495**		**2,125.4448**	**2,125.4448**	**0.0731**	**1.5500e-003**	**2,127.7339**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/16/2022	6/16/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,246; Non-Residential Outdoor: 7,082; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	147.7128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**147.7128**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	147.7128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**147.7128**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6413	1.4593	5.7368	0.0202	1.9764	0.0160	1.9924	0.5293	0.0149	0.5441		2,040.9270	2,040.9270	0.0715		2,042.7136
Unmitigated	0.6413	1.4593	5.7368	0.0202	1.9764	0.0160	1.9924	0.5293	0.0149	0.5441		2,040.9270	2,040.9270	0.0715		2,042.7136

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	205.00	25.15	23.61	180,641	180,641
Medical Office Building	351.97	90.62	15.68	521,784	521,784
Total	556.97	115.77	39.29	702,425	702,425

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Medical Office Building	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.7500e-003	0.0704	0.0592	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003		84.5148	84.5148	1.6200e-003	1.5500e-003	85.0170
NaturalGas Unmitigated	7.7500e-003	0.0704	0.0592	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003		84.5148	84.5148	1.6200e-003	1.5500e-003	85.0170

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Day-Care Center	182.749	1.9700e-003	0.0179	0.0151	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003		21.4999	21.4999	4.1000e-004	3.9000e-004	21.6277
Medical Office Building	535.626	5.7800e-003	0.0525	0.0441	3.2000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003		63.0149	63.0149	1.2100e-003	1.1600e-003	63.3893
Total		**7.7500e-003**	**0.0704**	**0.0592**	**4.3000e-004**		**5.3500e-003**	**5.3500e-003**		**5.3500e-003**	**5.3500e-003**		**84.5148**	**84.5148**	**1.6200e-003**	**1.5500e-003**	**85.0170**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Day-Care Center	0.182749	1.9700e-003	0.0179	0.0151	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003		21.4999	21.4999	4.1000e-004	3.9000e-004	21.6277
Medical Office Building	0.535626	5.7800e-003	0.0525	0.0441	3.2000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003		63.0149	63.0149	1.2100e-003	1.1600e-003	63.3893
Total		**7.7500e-003**	**0.0704**	**0.0592**	**4.3000e-004**		**5.3500e-003**	**5.3500e-003**		**5.3500e-003**	**5.3500e-003**		**84.5148**	**84.5148**	**1.6200e-003**	**1.5500e-003**	**85.0170**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3437	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Unmitigated	0.3437	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0405					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Total	**0.3437**	**1.0000e-005**	**1.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.1000e-003**	**3.1000e-003**	**1.0000e-005**		**3.3000e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0405					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Total	**0.3437**	**1.0000e-005**	**1.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.1000e-003**	**3.1000e-003**	**1.0000e-005**		**3.3000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

1814-20 Ogden Drive Existing Baseline Condition

San Mateo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	10.11	1000sqft	0.23	10,114.00	0
Day-Care Center	4.05	1000sqft	0.09	4,050.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	130	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - https://www.peninsulacleanenergy.com/wp-content/uploads/2019/09/PCE_Student-Activity-Packet_Final2.pdf

Land Use -

Construction Phase - No construction - existing condition

Off-road Equipment - no construction -existing condition

Trips and VMT - no construction -existing condition

Energy Use -

Vehicle Trips - Per Traffic Report

1814-20 Ogden Drive Existing Baseline Condition - San Mateo County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	641.35	130
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	WD_TR	74.06	50.62
tblVehicleTrips	WD_TR	36.13	34.80

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	147.7128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**147.7128**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	147.7128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**147.7128**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3437	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Energy	7.7500e-003	0.0704	0.0592	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003		84.5148	84.5148	1.6200e-003	1.5500e-003	85.0170
Mobile	0.5779	1.5638	6.0685	0.0192	1.9764	0.0160	1.9924	0.5293	0.0149	0.5442		1,941.9462	1,941.9462	0.0735		1,943.7846
Total	**0.9294**	**1.6342**	**6.1291**	**0.0197**	**1.9764**	**0.0214**	**1.9978**	**0.5293**	**0.0203**	**0.5495**		**2,026.4641**	**2,026.4641**	**0.0752**	**1.5500e-003**	**2,028.8050**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3437	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Energy	7.7500e-003	0.0704	0.0592	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003		84.5148	84.5148	1.6200e-003	1.5500e-003	85.0170
Mobile	0.5779	1.5638	6.0685	0.0192	1.9764	0.0160	1.9924	0.5293	0.0149	0.5442		1,941.9462	1,941.9462	0.0735		1,943.7846
Total	**0.9294**	**1.6342**	**6.1291**	**0.0197**	**1.9764**	**0.0214**	**1.9978**	**0.5293**	**0.0203**	**0.5495**		**2,026.4641**	**2,026.4641**	**0.0752**	**1.5500e-003**	**2,028.8050**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/16/2022	6/16/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,246; Non-Residential Outdoor: 7,082; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	147.7128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**147.7128**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	147.7128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**147.7128**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5779	1.5638	6.0685	0.0192	1.9764	0.0160	1.9924	0.5293	0.0149	0.5442		1,941.9462	1,941.9462	0.0735		1,943.7846
Unmitigated	0.5779	1.5638	6.0685	0.0192	1.9764	0.0160	1.9924	0.5293	0.0149	0.5442		1,941.9462	1,941.9462	0.0735		1,943.7846

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	205.00	25.15	23.61	180,641	180,641
Medical Office Building	351.97	90.62	15.68	521,784	521,784
Total	556.97	115.77	39.29	702,425	702,425

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Day-Care Center	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808
Medical Office Building	0.465886	0.050507	0.268464	0.141721	0.017188	0.007113	0.024629	0.006618	0.004259	0.003067	0.009235	0.000505	0.000808

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.7500e-003	0.0704	0.0592	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003		84.5148	84.5148	1.6200e-003	1.5500e-003	85.0170
NaturalGas Unmitigated	7.7500e-003	0.0704	0.0592	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003		84.5148	84.5148	1.6200e-003	1.5500e-003	85.0170

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Day-Care Center	182.749	1.9700e-003	0.0179	0.0151	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003		21.4999	21.4999	4.1000e-004	3.9000e-004	21.6277
Medical Office Building	535.626	5.7800e-003	0.0525	0.0441	3.2000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003		63.0149	63.0149	1.2100e-003	1.1600e-003	63.3893
Total		**7.7500e-003**	**0.0704**	**0.0592**	**4.3000e-004**		**5.3500e-003**	**5.3500e-003**		**5.3500e-003**	**5.3500e-003**		**84.5148**	**84.5148**	**1.6200e-003**	**1.5500e-003**	**85.0170**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Day-Care Center	0.182749	1.9700e-003	0.0179	0.0151	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003		21.4999	21.4999	4.1000e-004	3.9000e-004	21.6277
Medical Office Building	0.535626	5.7800e-003	0.0525	0.0441	3.2000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003		63.0149	63.0149	1.2100e-003	1.1600e-003	63.3893
Total		**7.7500e-003**	**0.0704**	**0.0592**	**4.3000e-004**		**5.3500e-003**	**5.3500e-003**		**5.3500e-003**	**5.3500e-003**		**84.5148**	**84.5148**	**1.6200e-003**	**1.5500e-003**	**85.0170**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3437	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Unmitigated	0.3437	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0405					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Total	**0.3437**	**1.0000e-005**	**1.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.1000e-003**	**3.1000e-003**	**1.0000e-005**		**3.3000e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0405					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.1000e-003	3.1000e-003	1.0000e-005		3.3000e-003
Total	**0.3437**	**1.0000e-005**	**1.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.1000e-003**	**3.1000e-003**	**1.0000e-005**		**3.3000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

1814-20 Ogden Drive Burlingame

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	111.00	Space	0.00	45,940.00	0
Parking Lot	34.00	Space	0.30	13,600.00	0
Condo/Townhouse High Rise	90.00	Dwelling Unit	0.47	95,889.00	257

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

1814-20 Ogden Drive Burlingame - San Mateo County, Annual

Project Characteristics - All-electric supplied by Peninsula Clean Energy

Land Use - 90 units (5 stories) of residential over two levels of parking garage.

Construction Phase - January 2022 through May 2023

Demolition - Existing structure demo

Grading - 10,500 cy of offhaul

Vehicle Trips - Per Traffic Report

Woodstoves - assumes no woodstoves or fireplaces

Energy Use - All-electric supplied by Peninsula Clean Energy

Sequestration -

Construction Off-road Equipment Mitigation - BAAQMD Basic and Enhanced Control Measures

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	100.00	408.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	LightingElect	1,001.10	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	NT24E	3,054.10	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	426.45	0.00
tblEnergyUse	T24E	3.92	0.00
tblEnergyUse	T24NG	6,115.43	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	13.50	0.00
tblFireplaces	NumberNoFireplace	3.60	0.00
tblFireplaces	NumberWood	15.30	0.00
tblGrading	AcresOfGrading	0.00	0.77
tblGrading	AcresOfGrading	1.00	0.77
tblGrading	MaterialExported	0.00	10,500.00
tblLandUse	LandUseSquareFeet	44,400.00	45,940.00
tblLandUse	LandUseSquareFeet	90,000.00	95,889.00
tblLandUse	LotAcreage	1.00	0.00
tblLandUse	LotAcreage	0.31	0.30
tblLandUse	LotAcreage	1.41	0.47
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	641.35	0
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblSequestration	NumberOfNewTrees	0.00	9.00

tblTripsAndVMT	HaulingTripNumber	1,313.00	1,312.00
tblVehicleTrips	ST_TR	4.31	5.44
tblVehicleTrips	SU_TR	3.43	5.44
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	1.80	0.00
tblWoodstoves	NumberNoncatalytic	1.80	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1528	1.5696	1.5576	3.9300e-003	0.1448	0.0592	0.2040	0.0386	0.0546	0.0932	0.0000	364.6412	364.6412	0.0643	0.0000	366.2484
2023	0.7404	0.4732	0.5555	1.2900e-003	0.0482	0.0195	0.0676	0.0130	0.0179	0.0309	0.0000	117.8816	117.8816	0.0221	0.0000	118.4335
Maximum	**0.7404**	**1.5696**	**1.5576**	**3.9300e-003**	**0.1448**	**0.0592**	**0.2040**	**0.0386**	**0.0546**	**0.0932**	**0.0000**	**364.6412**	**364.6412**	**0.0643**	**0.0000**	**366.2484**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0893	1.4324	1.6821	3.9300e-003	0.1391	0.0107	0.1499	0.0373	0.0107	0.0480	0.0000	364.6410	364.6410	0.0643	0.0000	366.2482
2023	0.7190	0.4550	0.6046	1.2900e-003	0.0482	3.8000e-003	0.0520	0.0130	3.7700e-003	0.0168	0.0000	117.8815	117.8815	0.0221	0.0000	118.4335
Maximum	**0.7190**	**1.4324**	**1.6821**	**3.9300e-003**	**0.1391**	**0.0107**	**0.1499**	**0.0373**	**0.0107**	**0.0480**	**0.0000**	**364.6410**	**364.6410**	**0.0643**	**0.0000**	**366.2482**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.51**	**7.61**	**-8.21**	**0.00**	**2.93**	**81.52**	**25.69**	**2.42**	**80.12**	**47.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.5580	0.5098
2	4-3-2022	7-2-2022	0.3877	0.3368
3	7-3-2022	10-2-2022	0.3920	0.3406
4	10-3-2022	1-2-2023	0.3942	0.3434
5	1-3-2023	4-2-2023	0.3440	0.3193
6	4-3-2023	7-2-2023	0.8829	0.8685
		Highest	0.8829	0.8685

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4674	7.7200e-003	0.6697	4.0000e-005		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	1.0942	1.0942	1.0600e-003	0.0000	1.1206
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1079	0.3031	1.2176	4.3200e-003	0.4193	3.4600e-003	0.4227	0.1127	3.2200e-003	0.1159	0.0000	396.1404	396.1404	0.0142	0.0000	396.4949
Waste						0.0000	0.0000		0.0000	0.0000	8.4038	0.0000	8.4038	0.4967	0.0000	20.8201
Water						0.0000	0.0000		0.0000	0.0000	1.8603	0.0000	1.8603	0.1911	4.5100e-003	7.9817
Total	**0.5752**	**0.3108**	**1.8873**	**4.3600e-003**	**0.4193**	**7.1600e-003**	**0.4264**	**0.1127**	**6.9200e-003**	**0.1196**	**10.2642**	**397.2346**	**407.4988**	**0.7030**	**4.5100e-003**	**426.4172**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4674	7.7200e-003	0.6697	4.0000e-005		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	1.0942	1.0942	1.0600e-003	0.0000	1.1206
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1079	0.3031	1.2176	4.3200e-003	0.4193	3.4600e-003	0.4227	0.1127	3.2200e-003	0.1159	0.0000	396.1404	396.1404	0.0142	0.0000	396.4949
Waste						0.0000	0.0000		0.0000	0.0000	8.4038	0.0000	8.4038	0.4967	0.0000	20.8201
Water						0.0000	0.0000		0.0000	0.0000	1.8603	0.0000	1.8603	0.1911	4.5100e-003	7.9817
Total	**0.5752**	**0.3108**	**1.8873**	**4.3600e-003**	**0.4193**	**7.1600e-003**	**0.4264**	**0.1127**	**6.9200e-003**	**0.1196**	**10.2642**	**397.2346**	**407.4988**	**0.7030**	**4.5100e-003**	**426.4172**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	6.3720
Total	**6.3720**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/13/2022	6	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	6	2	
3	Grading	Grading	1/18/2022	1/23/2022	6	5	
4	Building Construction	Building Construction	1/24/2022	5/13/2023	6	408	
5	Paving	Paving	5/14/2023	5/19/2023	6	5	
6	Architectural Coating	Architectural Coating	5/20/2023	5/25/2023	6	5	

Acres of Grading (Site Preparation Phase): 0.77

Acres of Grading (Grading Phase): 0.77

Acres of Paving: 0.3

Residential Indoor: 194,175; Residential Outdoor: 64,725; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	64.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	1,312.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	90.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.9700e-003	0.0000	6.9700e-003	1.0600e-003	0.0000	1.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**	**6.9700e-003**	**1.6900e-003**	**8.6600e-003**	**1.0600e-003**	**1.6100e-003**	**2.6700e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	8.7600e-003	4.6000e-003	2.0000e-005	5.4000e-004	3.0000e-005	5.6000e-004	1.5000e-004	2.0000e-005	1.7000e-004	0.0000	2.5831	2.5831	3.4000e-004	0.0000	2.5916
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	7.0000e-005	8.4000e-004	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3045	0.3045	1.0000e-005	0.0000	0.3047
Total	**3.8000e-004**	**8.8300e-003**	**5.4400e-003**	**2.0000e-005**	**9.3000e-004**	**3.0000e-005**	**9.6000e-004**	**2.5000e-004**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**2.8876**	**2.8876**	**3.5000e-004**	**0.0000**	**2.8962**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1400e-003	0.0000	3.1400e-003	4.7000e-004	0.0000	4.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0298	0.0397	6.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**1.3300e-003**	**0.0298**	**0.0397**	**6.0000e-005**	**3.1400e-003**	**3.0000e-004**	**3.4400e-003**	**4.7000e-004**	**3.0000e-004**	**7.7000e-004**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	8.7600e-003	4.6000e-003	2.0000e-005	5.4000e-004	3.0000e-005	5.6000e-004	1.5000e-004	2.0000e-005	1.7000e-004	0.0000	2.5831	2.5831	3.4000e-004	0.0000	2.5916
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	7.0000e-005	8.4000e-004	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3045	0.3045	1.0000e-005	0.0000	0.3047
Total	**3.8000e-004**	**8.8300e-003**	**5.4400e-003**	**2.0000e-005**	**9.3000e-004**	**3.0000e-005**	**9.6000e-004**	**2.5000e-004**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**2.8876**	**2.8876**	**3.5000e-004**	**0.0000**	**2.8962**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.1000e-004	0.0000	4.1000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8000e-004	6.9300e-003	3.9600e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.8550	0.8550	2.8000e-004	0.0000	0.8620
Total	**5.8000e-004**	**6.9300e-003**	**3.9600e-003**	**1.0000e-005**	**4.1000e-004**	**2.6000e-004**	**6.7000e-004**	**4.0000e-005**	**2.4000e-004**	**2.8000e-004**	**0.0000**	**0.8550**	**0.8550**	**2.8000e-004**	**0.0000**	**0.8620**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0305	0.0305	0.0000	0.0000	0.0305
Total	**1.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**0.0000**	**0.0305**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8000e-004	0.0000	1.8000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-004	4.8700e-003	5.8600e-003	1.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.8550	0.8550	2.8000e-004	0.0000	0.8620
Total	**2.4000e-004**	**4.8700e-003**	**5.8600e-003**	**1.0000e-005**	**1.8000e-004**	**4.0000e-005**	**2.2000e-004**	**2.0000e-005**	**4.0000e-005**	**6.0000e-005**	**0.0000**	**0.8550**	**0.8550**	**2.8000e-004**	**0.0000**	**0.8620**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0305	0.0305	0.0000	0.0000	0.0305
Total	**1.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**0.0000**	**0.0305**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.8800e-003	0.0000	2.8800e-003	1.1700e-003	0.0000	1.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7700e-003	0.0160	0.0187	3.0000e-005		8.4000e-004	8.4000e-004		8.1000e-004	8.1000e-004	0.0000	2.6034	2.6034	4.8000e-004	0.0000	2.6154
Total	**1.7700e-003**	**0.0160**	**0.0187**	**3.0000e-005**	**2.8800e-003**	**8.4000e-004**	**3.7200e-003**	**1.1700e-003**	**8.1000e-004**	**1.9800e-003**	**0.0000**	**2.6034**	**2.6034**	**4.8000e-004**	**0.0000**	**2.6154**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.2800e-003	0.1795	0.0944	5.1000e-004	0.0110	5.2000e-004	0.0115	3.0200e-003	5.0000e-004	3.5100e-003	0.0000	52.9528	52.9528	6.9600e-003	0.0000	53.1268
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1523	0.1523	0.0000	0.0000	0.1523
Total	**5.3400e-003**	**0.1795**	**0.0948**	**5.1000e-004**	**0.0112**	**5.2000e-004**	**0.0117**	**3.0700e-003**	**5.0000e-004**	**3.5600e-003**	**0.0000**	**53.1050**	**53.1050**	**6.9600e-003**	**0.0000**	**53.2792**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3000e-003	0.0000	1.3000e-003	5.3000e-004	0.0000	5.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6000e-004	0.0149	0.0199	3.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.6034	2.6034	4.8000e-004	0.0000	2.6154
Total	**6.6000e-004**	**0.0149**	**0.0199**	**3.0000e-005**	**1.3000e-003**	**1.5000e-004**	**1.4500e-003**	**5.3000e-004**	**1.5000e-004**	**6.8000e-004**	**0.0000**	**2.6034**	**2.6034**	**4.8000e-004**	**0.0000**	**2.6154**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.2800e-003	0.1795	0.0944	5.1000e-004	0.0110	5.2000e-004	0.0115	3.0200e-003	5.0000e-004	3.5100e-003	0.0000	52.9528	52.9528	6.9600e-003	0.0000	53.1268
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1523	0.1523	0.0000	0.0000	0.1523
Total	**5.3400e-003**	**0.1795**	**0.0948**	**5.1000e-004**	**0.0112**	**5.2000e-004**	**0.0117**	**3.0700e-003**	**5.0000e-004**	**3.5600e-003**	**0.0000**	**53.1050**	**53.1050**	**6.9600e-003**	**0.0000**	**53.2792**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1009	1.0328	1.0514	1.6800e-003		0.0547	0.0547		0.0503	0.0503	0.0000	147.2171	147.2171	0.0476	0.0000	148.4074
Total	**0.1009**	**1.0328**	**1.0514**	**1.6800e-003**		**0.0547**	**0.0547**		**0.0503**	**0.0503**	**0.0000**	**147.2171**	**147.2171**	**0.0476**	**0.0000**	**148.4074**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.3800e-003	0.2736	0.1247	7.2000e-004	0.0182	5.9000e-004	0.0188	5.2700e-003	5.6000e-004	5.8300e-003	0.0000	72.1538	72.1538	6.2700e-003	0.0000	72.3106
Worker	0.0319	0.0198	0.2212	8.9000e-004	0.1042	6.2000e-004	0.1048	0.0277	5.7000e-004	0.0283	0.0000	80.5820	80.5820	1.3700e-003	0.0000	80.6163
Total	**0.0402**	**0.2934**	**0.3459**	**1.6100e-003**	**0.1224**	**1.2100e-003**	**0.1236**	**0.0330**	**1.1300e-003**	**0.0341**	**0.0000**	**152.7358**	**152.7358**	**7.6400e-003**	**0.0000**	**152.9269**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0411	0.9011	1.1705	1.6800e-003		8.5000e-003	8.5000e-003		8.5000e-003	8.5000e-003	0.0000	147.2169	147.2169	0.0476	0.0000	148.4073
Total	**0.0411**	**0.9011**	**1.1705**	**1.6800e-003**		**8.5000e-003**	**8.5000e-003**		**8.5000e-003**	**8.5000e-003**	**0.0000**	**147.2169**	**147.2169**	**0.0476**	**0.0000**	**148.4073**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.3800e-003	0.2736	0.1247	7.2000e-004	0.0182	5.9000e-004	0.0188	5.2700e-003	5.6000e-004	5.8300e-003	0.0000	72.1538	72.1538	6.2700e-003	0.0000	72.3106
Worker	0.0319	0.0198	0.2212	8.9000e-004	0.1042	6.2000e-004	0.1048	0.0277	5.7000e-004	0.0283	0.0000	80.5820	80.5820	1.3700e-003	0.0000	80.6163
Total	**0.0402**	**0.2934**	**0.3459**	**1.6100e-003**	**0.1224**	**1.2100e-003**	**0.1236**	**0.0330**	**1.1300e-003**	**0.0341**	**0.0000**	**152.7358**	**152.7358**	**7.6400e-003**	**0.0000**	**152.9269**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0360	0.3659	0.4045	6.5000e-004		0.0183	0.0183		0.0168	0.0168	0.0000	57.1188	57.1188	0.0185	0.0000	57.5806
Total	**0.0360**	**0.3659**	**0.4045**	**6.5000e-004**		**0.0183**	**0.0183**		**0.0168**	**0.0168**	**0.0000**	**57.1188**	**57.1188**	**0.0185**	**0.0000**	**57.5806**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5800e-003	0.0832	0.0476	2.7000e-004	7.0600e-003	1.2000e-004	7.1800e-003	2.0400e-003	1.1000e-004	2.1500e-003	0.0000	27.1805	27.1805	2.3900e-003	0.0000	27.2403
Worker	0.0117	6.9700e-003	0.0799	3.3000e-004	0.0404	2.4000e-004	0.0406	0.0108	2.2000e-004	0.0110	0.0000	30.0667	30.0667	4.8000e-004	0.0000	30.0787
Total	**0.0143**	**0.0902**	**0.1275**	**6.0000e-004**	**0.0475**	**3.6000e-004**	**0.0478**	**0.0128**	**3.3000e-004**	**0.0131**	**0.0000**	**57.2472**	**57.2472**	**2.8700e-003**	**0.0000**	**57.3190**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0159	0.3494	0.4539	6.5000e-004		3.3000e-003	3.3000e-003		3.3000e-003	3.3000e-003	0.0000	57.1187	57.1187	0.0185	0.0000	57.5806
Total	**0.0159**	**0.3494**	**0.4539**	**6.5000e-004**		**3.3000e-003**	**3.3000e-003**		**3.3000e-003**	**3.3000e-003**	**0.0000**	**57.1187**	**57.1187**	**0.0185**	**0.0000**	**57.5806**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5800e-003	0.0832	0.0476	2.7000e-004	7.0600e-003	1.2000e-004	7.1800e-003	2.0400e-003	1.1000e-004	2.1500e-003	0.0000	27.1805	27.1805	2.3900e-003	0.0000	27.2403
Worker	0.0117	6.9700e-003	0.0799	3.3000e-004	0.0404	2.4000e-004	0.0406	0.0108	2.2000e-004	0.0110	0.0000	30.0667	30.0667	4.8000e-004	0.0000	30.0787
Total	**0.0143**	**0.0902**	**0.1275**	**6.0000e-004**	**0.0475**	**3.6000e-004**	**0.0478**	**0.0128**	**3.3000e-004**	**0.0131**	**0.0000**	**57.2472**	**57.2472**	**2.8700e-003**	**0.0000**	**57.3190**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5300e-003	0.0138	0.0176	3.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669
Paving	3.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9200e-003**	**0.0138**	**0.0176**	**3.0000e-005**		**6.6000e-004**	**6.6000e-004**		**6.2000e-004**	**6.2000e-004**	**0.0000**	**2.3498**	**2.3498**	**6.8000e-004**	**0.0000**	**2.3669**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	6.0000e-005	7.0000e-004	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2637	0.2637	0.0000	0.0000	0.2639
Total	**1.0000e-004**	**6.0000e-005**	**7.0000e-004**	**0.0000**	**3.5000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2637**	**0.2637**	**0.0000**	**0.0000**	**0.2639**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	0.0119	0.0173	3.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669
Paving	3.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.5000e-004**	**0.0119**	**0.0173**	**3.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**2.3498**	**2.3498**	**6.8000e-004**	**0.0000**	**2.3669**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	6.0000e-005	7.0000e-004	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2637	0.2637	0.0000	0.0000	0.2639
Total	**1.0000e-004**	**6.0000e-005**	**7.0000e-004**	**0.0000**	**3.5000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2637**	**0.2637**	**0.0000**	**0.0000**	**0.2639**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**0.6879**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	6.0000e-005	7.0000e-004	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2637	0.2637	0.0000	0.0000	0.2639
Total	**1.0000e-004**	**6.0000e-005**	**7.0000e-004**	**0.0000**	**3.5000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2637**	**0.2637**	**0.0000**	**0.0000**	**0.2639**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	3.3900e-003	4.5800e-003	1.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**0.6876**	**3.3900e-003**	**4.5800e-003**	**1.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	6.0000e-005	7.0000e-004	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2637	0.2637	0.0000	0.0000	0.2639
Total	**1.0000e-004**	**6.0000e-005**	**7.0000e-004**	**0.0000**	**3.5000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2637**	**0.2637**	**0.0000**	**0.0000**	**0.2639**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1079	0.3031	1.2176	4.3200e-003	0.4193	3.4600e-003	0.4227	0.1127	3.2200e-003	0.1159	0.0000	396.1404	396.1404	0.0142	0.0000	396.4949
Unmitigated	0.1079	0.3031	1.2176	4.3200e-003	0.4193	3.4600e-003	0.4227	0.1127	3.2200e-003	0.1159	0.0000	396.1404	396.1404	0.0142	0.0000	396.4949

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	489.60	489.60	489.60	1,130,784	1,130,784
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	489.60	489.60	489.60	1,130,784	1,130,784

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Enclosed Parking with Elevator	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Parking Lot	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	4760	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4674	7.7200e-003	0.6697	4.0000e-005		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	1.0942	1.0942	1.0600e-003	0.0000	1.1206
Unmitigated	0.4674	7.7200e-003	0.6697	4.0000e-005		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	1.0942	1.0942	1.0600e-003	0.0000	1.1206

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0687					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0203	7.7200e-003	0.6697	4.0000e-005		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	1.0942	1.0942	1.0600e-003	0.0000	1.1206
Total	**0.4673**	**7.7200e-003**	**0.6697**	**4.0000e-005**		**3.7000e-003**	**3.7000e-003**		**3.7000e-003**	**3.7000e-003**	**0.0000**	**1.0942**	**1.0942**	**1.0600e-003**	**0.0000**	**1.1206**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0687					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0203	7.7200e-003	0.6697	4.0000e-005		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	1.0942	1.0942	1.0600e-003	0.0000	1.1206
Total	**0.4673**	**7.7200e-003**	**0.6697**	**4.0000e-005**		**3.7000e-003**	**3.7000e-003**		**3.7000e-003**	**3.7000e-003**	**0.0000**	**1.0942**	**1.0942**	**1.0600e-003**	**0.0000**	**1.1206**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.8603	0.1911	4.5100e-003	7.9817
Unmitigated	1.8603	0.1911	4.5100e-003	7.9817

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	5.86386 / 3.69678	1.8603	0.1911	4.5100e-003	7.9817
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8603**	**0.1911**	**4.5100e-003**	**7.9817**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	5.86386 / 3.69678	1.8603	0.1911	4.5100e-003	7.9817
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8603**	**0.1911**	**4.5100e-003**	**7.9817**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.4038	0.4967	0.0000	20.8201
Unmitigated	8.4038	0.4967	0.0000	20.8201

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	41.4	8.4038	0.4967	0.0000	20.8201
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.4038**	**0.4967**	**0.0000**	**20.8201**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	41.4	8.4038	0.4967	0.0000	20.8201
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.4038**	**0.4967**	**0.0000**	**20.8201**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	6.3720	0.0000	0.0000	6.3720

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	9	6.3720	0.0000	0.0000	6.3720
Total		**6.3720**	**0.0000**	**0.0000**	**6.3720**

1814-20 Ogden Drive Burlingame

San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	111.00	Space	0.00	45,940.00	0
Parking Lot	34.00	Space	0.30	13,600.00	0
Condo/Townhouse High Rise	90.00	Dwelling Unit	0.47	95,889.00	257

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

1814-20 Ogden Drive Burlingame - San Mateo County, Summer

Project Characteristics - All-electric supplied by Peninsula Clean Energy

Land Use - 90 units (5 stories) of residential over two levels of parking garage.

Construction Phase - January 2022 through May 2023

Demolition - Existing structure demo

Grading - 10,500 cy of offhaul

Vehicle Trips - Per Traffic Report

Woodstoves - assumes no woodstoves or fireplaces

Energy Use - All-electric supplied by Peninsula Clean Energy

Sequestration -

Construction Off-road Equipment Mitigation - BAAQMD Basic and Enhanced Control Measures

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	100.00	408.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	LightingElect	1,001.10	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	NT24E	3,054.10	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	426.45	0.00
tblEnergyUse	T24E	3.92	0.00
tblEnergyUse	T24NG	6,115.43	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	13.50	0.00
tblFireplaces	NumberNoFireplace	3.60	0.00
tblFireplaces	NumberWood	15.30	0.00
tblGrading	AcresOfGrading	0.00	0.77
tblGrading	AcresOfGrading	1.00	0.77
tblGrading	MaterialExported	0.00	10,500.00
tblLandUse	LandUseSquareFeet	44,400.00	45,940.00
tblLandUse	LandUseSquareFeet	90,000.00	95,889.00
tblLandUse	LotAcreage	1.00	0.00
tblLandUse	LotAcreage	0.31	0.30
tblLandUse	LotAcreage	1.41	0.47
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	641.35	0
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblSequestration	NumberOfNewTrees	0.00	9.00

tblTripsAndVMT	HaulingTripNumber	1,313.00	1,312.00
tblVehicleTrips	ST_TR	4.31	5.44
tblVehicleTrips	SU_TR	3.43	5.44
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	1.80	0.00
tblWoodstoves	NumberNoncatalytic	1.80	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.8275	76.5216	45.2169	0.2178	5.7935	0.5434	6.3368	1.7368	0.5194	2.2562	0.0000	24,672.1862	24,672.1862	3.2756	0.0000	24,754.0753
2023	275.2000	7.9698	9.4039	0.0224	0.8676	0.3264	1.1940	0.2330	0.3004	0.5334	0.0000	2,251.1701	2,251.1701	0.4130	0.0000	2,261.4948
Maximum	**275.2000**	**76.5216**	**45.2169**	**0.2178**	**5.7935**	**0.5434**	**6.3368**	**1.7368**	**0.5194**	**2.2562**	**0.0000**	**24,672.1862**	**24,672.1862**	**3.2756**	**0.0000**	**24,754.0753**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.3833	76.0722	45.6856	0.2178	5.1590	0.2661	5.4251	1.4797	0.2572	1.7369	0.0000	24,672.1862	24,672.1862	3.2756	0.0000	24,754.0753
2023	275.0678	7.6808	10.2693	0.0224	0.8676	0.0640	0.9316	0.2330	0.0636	0.2966	0.0000	2,251.1701	2,251.1701	0.4130	0.0000	2,261.4948
Maximum	**275.0678**	**76.0722**	**45.6856**	**0.2178**	**5.1590**	**0.2661**	**5.4251**	**1.4797**	**0.2572**	**1.7369**	**0.0000**	**24,672.1862**	**24,672.1862**	**3.2756**	**0.0000**	**24,754.0753**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.21**	**0.87**	**-2.44**	**0.00**	**9.53**	**62.05**	**15.59**	**13.05**	**60.88**	**27.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6749	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412	0.0000	13.4014	13.4014	0.0129	0.0000	13.7249
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.6541	1.5849	6.7776	0.0249	2.4022	0.0190	2.4212	0.6433	0.0177	0.6610		2,516.8281	2,516.8281	0.0859		2,518.9751
Total	**3.3290**	**1.6707**	**14.2192**	**0.0253**	**2.4022**	**0.0602**	**2.4624**	**0.6433**	**0.0589**	**0.7022**	**0.0000**	**2,530.2296**	**2,530.2296**	**0.0988**	**0.0000**	**2,532.7000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6749	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412	0.0000	13.4014	13.4014	0.0129	0.0000	13.7249
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.6541	1.5849	6.7776	0.0249	2.4022	0.0190	2.4212	0.6433	0.0177	0.6610		2,516.8281	2,516.8281	0.0859		2,518.9751
Total	**3.3290**	**1.6707**	**14.2192**	**0.0253**	**2.4022**	**0.0602**	**2.4624**	**0.6433**	**0.0589**	**0.7022**	**0.0000**	**2,530.2296**	**2,530.2296**	**0.0988**	**0.0000**	**2,532.7000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/13/2022	6	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	6	2	
3	Grading	Grading	1/18/2022	1/23/2022	6	5	
4	Building Construction	Building Construction	1/24/2022	5/13/2023	6	408	
5	Paving	Paving	5/14/2023	5/19/2023	6	5	
6	Architectural Coating	Architectural Coating	5/20/2023	5/25/2023	6	5	

Acres of Grading (Site Preparation Phase): 0.77

Acres of Grading (Grading Phase): 0.77

Acres of Paving: 0.3

Residential Indoor: 194,175; Residential Outdoor: 64,725; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	64.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	1,312.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	90.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3942	0.0000	1.3942	0.2111	0.0000	0.2111			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**1.3942**	**0.3375**	**1.7318**	**0.2111**	**0.3225**	**0.5336**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0511	1.7096	0.9163	5.0000e-003	0.1112	5.0100e-003	0.1162	0.0304	4.7900e-003	0.0352		572.0249	572.0249	0.0747		573.8922
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0242	0.0132	0.1788	7.1000e-004	0.0822	4.7000e-004	0.0826	0.0218	4.3000e-004	0.0222		71.2650	71.2650	1.2100e-003		71.2952
Total	**0.0752**	**1.7228**	**1.0951**	**5.7100e-003**	**0.1933**	**5.4800e-003**	**0.1988**	**0.0522**	**5.2200e-003**	**0.0574**		**643.2899**	**643.2899**	**0.0759**		**645.1874**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6274	0.0000	0.6274	0.0950	0.0000	0.0950			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.6274**	**0.0603**	**0.6877**	**0.0950**	**0.0603**	**0.1553**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0511	1.7096	0.9163	5.0000e-003	0.1112	5.0100e-003	0.1162	0.0304	4.7900e-003	0.0352		572.0249	572.0249	0.0747		573.8922
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0242	0.0132	0.1788	7.1000e-004	0.0822	4.7000e-004	0.0826	0.0218	4.3000e-004	0.0222		71.2650	71.2650	1.2100e-003		71.2952
Total	**0.0752**	**1.7228**	**1.0951**	**5.7100e-003**	**0.1933**	**5.4800e-003**	**0.1988**	**0.0522**	**5.2200e-003**	**0.0574**		**643.2899**	**643.2899**	**0.0759**		**645.1874**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4083	0.0000	0.4083	0.0441	0.0000	0.0441			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.4083**	**0.2573**	**0.6656**	**0.0441**	**0.2367**	**0.2808**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0121	6.6000e-003	0.0894	3.6000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.2000e-004	0.0111		35.6325	35.6325	6.0000e-004		35.6476
Total	**0.0121**	**6.6000e-003**	**0.0894**	**3.6000e-004**	**0.0411**	**2.3000e-004**	**0.0413**	**0.0109**	**2.2000e-004**	**0.0111**		**35.6325**	**35.6325**	**6.0000e-004**		**35.6476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1837	0.0000	0.1837	0.0198	0.0000	0.0198			0.0000			0.0000
Off-Road	0.2382	4.8716	5.8579	9.7300e-003		0.0361	0.0361		0.0361	0.0361	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.2382**	**4.8716**	**5.8579**	**9.7300e-003**	**0.1837**	**0.0361**	**0.2198**	**0.0198**	**0.0361**	**0.0559**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0121	6.6000e-003	0.0894	3.6000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.2000e-004	0.0111		35.6325	35.6325	6.0000e-004		35.6476
Total	**0.0121**	**6.6000e-003**	**0.0894**	**3.6000e-004**	**0.0411**	**2.3000e-004**	**0.0413**	**0.0109**	**2.2000e-004**	**0.0111**		**35.6325**	**35.6325**	**6.0000e-004**		**35.6476**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1536	0.0000	1.1536	0.4674	0.0000	0.4674			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**1.1536**	**0.3375**	**1.4911**	**0.4674**	**0.3225**	**0.7899**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0939	70.0945	37.5688	0.2051	4.5578	0.2054	4.7631	1.2476	0.1965	1.4441		23,453.0187	23,453.0187	3.0625		23,529.5800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0242	0.0132	0.1788	7.1000e-004	0.0822	4.7000e-004	0.0826	0.0218	4.3000e-004	0.0222		71.2650	71.2650	1.2100e-003		71.2952
Total	**2.1181**	**70.1077**	**37.7476**	**0.2059**	**4.6399**	**0.2059**	**4.8457**	**1.2694**	**0.1969**	**1.4663**		**23,524.2838**	**23,524.2838**	**3.0637**		**23,600.8752**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5191	0.0000	0.5191	0.2103	0.0000	0.2103			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.5191**	**0.0603**	**0.5794**	**0.2103**	**0.0603**	**0.2706**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0939	70.0945	37.5688	0.2051	4.5578	0.2054	4.7631	1.2476	0.1965	1.4441		23,453.0187	23,453.0187	3.0625		23,529.5800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0242	0.0132	0.1788	7.1000e-004	0.0822	4.7000e-004	0.0826	0.0218	4.3000e-004	0.0222		71.2650	71.2650	1.2100e-003		71.2952
Total	**2.1181**	**70.1077**	**37.7476**	**0.2059**	**4.6399**	**0.2059**	**4.8457**	**1.2694**	**0.1969**	**1.4663**		**23,524.2838**	**23,524.2838**	**3.0637**		**23,600.8752**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8360	0.8154	4.9300e-003	0.1283	3.9100e-003	0.1322	0.0369	3.7400e-003	0.0407		545.0304	545.0304	0.0466		546.1964
Worker	0.2173	0.1188	1.6089	6.4300e-003	0.7393	4.2300e-003	0.7436	0.1961	3.8900e-003	0.2000		641.3852	641.3852	0.0109		641.6564
Total	**0.2731**	**1.9548**	**2.4243**	**0.0114**	**0.8676**	**8.1400e-003**	**0.8757**	**0.2330**	**7.6300e-003**	**0.2407**		**1,186.4156**	**1,186.4156**	**0.0575**		**1,187.8528**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2793	6.1296	7.9624	0.0114		0.0578	0.0578		0.0578	0.0578	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.2793**	**6.1296**	**7.9624**	**0.0114**		**0.0578**	**0.0578**		**0.0578**	**0.0578**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0557	1.8360	0.8154	4.9300e-003	0.1283	3.9100e-003	0.1322	0.0369	3.7400e-003	0.0407		545.0304	545.0304	0.0466		546.1964
Worker	0.2173	0.1188	1.6089	6.4300e-003	0.7393	4.2300e-003	0.7436	0.1961	3.8900e-003	0.2000		641.3852	641.3852	0.0109		641.6564
Total	**0.2731**	**1.9548**	**2.4243**	**0.0114**	**0.8676**	**8.1400e-003**	**0.8757**	**0.2330**	**7.6300e-003**	**0.2407**		**1,186.4156**	**1,186.4156**	**0.0575**		**1,187.8528**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**		**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0441	1.4433	0.8053	4.7700e-003	0.1283	1.9800e-003	0.1303	0.0369	1.9000e-003	0.0388		529.4333	529.4333	0.0459		530.5810
Worker	0.2059	0.1078	1.5015	6.1800e-003	0.7393	4.1600e-003	0.7435	0.1961	3.8300e-003	0.1999		617.1279	617.1279	9.8300e-003		617.3736
Total	**0.2499**	**1.5512**	**2.3068**	**0.0110**	**0.8676**	**6.1400e-003**	**0.8738**	**0.2330**	**5.7300e-003**	**0.2387**		**1,146.5612**	**1,146.5612**	**0.0557**		**1,147.9546**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2793	6.1296	7.9624	0.0114		0.0578	0.0578		0.0578	0.0578	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.2793**	**6.1296**	**7.9624**	**0.0114**		**0.0578**	**0.0578**		**0.0578**	**0.0578**	**0.0000**	**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0441	1.4433	0.8053	4.7700e-003	0.1283	1.9800e-003	0.1303	0.0369	1.9000e-003	0.0388		529.4333	529.4333	0.0459		530.5810
Worker	0.2059	0.1078	1.5015	6.1800e-003	0.7393	4.1600e-003	0.7435	0.1961	3.8300e-003	0.1999		617.1279	617.1279	9.8300e-003		617.3736
Total	**0.2499**	**1.5512**	**2.3068**	**0.0110**	**0.8676**	**6.1400e-003**	**0.8738**	**0.2330**	**5.7300e-003**	**0.2387**		**1,146.5612**	**1,146.5612**	**0.0557**		**1,147.9546**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.1572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7684**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**		**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0412	0.0216	0.3003	1.2400e-003	0.1479	8.3000e-004	0.1487	0.0392	7.7000e-004	0.0400		123.4256	123.4256	1.9700e-003		123.4747
Total	**0.0412**	**0.0216**	**0.3003**	**1.2400e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**123.4256**	**123.4256**	**1.9700e-003**		**123.4747**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.0436	0.0436		0.0436	0.0436	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.1572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3811**	**4.7579**	**6.9028**	**0.0113**		**0.0436**	**0.0436**		**0.0436**	**0.0436**	**0.0000**	**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0412	0.0216	0.3003	1.2400e-003	0.1479	8.3000e-004	0.1487	0.0392	7.7000e-004	0.0400		123.4256	123.4256	1.9700e-003		123.4747
Total	**0.0412**	**0.0216**	**0.3003**	**1.2400e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**123.4256**	**123.4256**	**1.9700e-003**		**123.4747**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	274.9672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**275.1589**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0412	0.0216	0.3003	1.2400e-003	0.1479	8.3000e-004	0.1487	0.0392	7.7000e-004	0.0400		123.4256	123.4256	1.9700e-003		123.4747
Total	**0.0412**	**0.0216**	**0.3003**	**1.2400e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**123.4256**	**123.4256**	**1.9700e-003**		**123.4747**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	274.9672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**275.0266**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0412	0.0216	0.3003	1.2400e-003	0.1479	8.3000e-004	0.1487	0.0392	7.7000e-004	0.0400		123.4256	123.4256	1.9700e-003		123.4747
Total	**0.0412**	**0.0216**	**0.3003**	**1.2400e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**123.4256**	**123.4256**	**1.9700e-003**		**123.4747**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6541	1.5849	6.7776	0.0249	2.4022	0.0190	2.4212	0.6433	0.0177	0.6610		2,516.8281	2,516.8281	0.0859		2,518.9751
Unmitigated	0.6541	1.5849	6.7776	0.0249	2.4022	0.0190	2.4212	0.6433	0.0177	0.6610		2,516.8281	2,516.8281	0.0859		2,518.9751

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	489.60	489.60	489.60	1,130,784	1,130,784
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	489.60	489.60	489.60	1,130,784	1,130,784

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Enclosed Parking with Elevator	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Parking Lot	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6749	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412	0.0000	13.4014	13.4014	0.0129	0.0000	13.7249
Unmitigated	2.6749	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412	0.0000	13.4014	13.4014	0.0129	0.0000	13.7249

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3767					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0731					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2251	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412		13.4014	13.4014	0.0129		13.7249
Total	**2.6749**	**0.0857**	**7.4416**	**3.9000e-004**		**0.0412**	**0.0412**		**0.0412**	**0.0412**	**0.0000**	**13.4014**	**13.4014**	**0.0129**	**0.0000**	**13.7249**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3767					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0731					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2251	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412		13.4014	13.4014	0.0129		13.7249
Total	**2.6749**	**0.0857**	**7.4416**	**3.9000e-004**		**0.0412**	**0.0412**		**0.0412**	**0.0412**	**0.0000**	**13.4014**	**13.4014**	**0.0129**	**0.0000**	**13.7249**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

1814-20 Ogden Drive Burlingame

San Mateo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	111.00	Space	0.00	45,940.00	0
Parking Lot	34.00	Space	0.30	13,600.00	0
Condo/Townhouse High Rise	90.00	Dwelling Unit	0.47	95,889.00	257

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

1814-20 Ogden Drive Burlingame - San Mateo County, Winter

Project Characteristics - All-electric supplied by Peninsula Clean Energy

Land Use - 90 units (5 stories) of residential over two levels of parking garage.

Construction Phase - January 2022 through May 2023

Demolition - Existing structure demo

Grading - 10,500 cy of offhaul

Vehicle Trips - Per Traffic Report

Woodstoves - assumes no woodstoves or fireplaces

Energy Use - All-electric supplied by Peninsula Clean Energy

Sequestration -

Construction Off-road Equipment Mitigation - BAAQMD Basic and Enhanced Control Measures

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	100.00	408.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	LightingElect	1,001.10	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	NT24E	3,054.10	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	426.45	0.00
tblEnergyUse	T24E	3.92	0.00
tblEnergyUse	T24NG	6,115.43	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	13.50	0.00
tblFireplaces	NumberNoFireplace	3.60	0.00
tblFireplaces	NumberWood	15.30	0.00
tblGrading	AcresOfGrading	0.00	0.77
tblGrading	AcresOfGrading	1.00	0.77
tblGrading	MaterialExported	0.00	10,500.00
tblLandUse	LandUseSquareFeet	44,400.00	45,940.00
tblLandUse	LandUseSquareFeet	90,000.00	95,889.00
tblLandUse	LotAcreage	1.00	0.00
tblLandUse	LotAcreage	0.31	0.30
tblLandUse	LotAcreage	1.41	0.47
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	641.35	0
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblSequestration	NumberOfNewTrees	0.00	9.00

tblTripsAndVMT	HaulingTripNumber	1,313.00	1,312.00
tblVehicleTrips	ST_TR	4.31	5.44
tblVehicleTrips	SU_TR	3.43	5.44
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	1.80	0.00
tblWoodstoves	NumberNoncatalytic	1.80	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.8716	78.6616	45.8399	0.2156	5.7935	0.5487	6.3422	1.7368	0.5246	2.2613	0.0000	24,418.1616	24,418.1616	3.2936	0.0000	24,500.5013
2023	275.2053	8.0099	9.4001	0.0219	0.8676	0.3266	1.1942	0.2330	0.3005	0.5335	0.0000	2,204.2738	2,204.2738	0.4132	0.0000	2,214.6043
Maximum	**275.2053**	**78.6616**	**45.8399**	**0.2156**	**5.7935**	**0.5487**	**6.3422**	**1.7368**	**0.5246**	**2.2613**	**0.0000**	**24,418.1616**	**24,418.1616**	**3.2936**	**0.0000**	**24,500.5013**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.4274	78.2122	46.3086	0.2156	5.1590	0.2715	5.4305	1.4797	0.2623	1.7420	0.0000	24,418.1616	24,418.1616	3.2936	0.0000	24,500.5013
2023	275.0731	7.7209	10.2655	0.0219	0.8676	0.0641	0.9317	0.2330	0.0637	0.2967	0.0000	2,204.2738	2,204.2738	0.4132	0.0000	2,214.6043
Maximum	**275.0731**	**78.2122**	**46.3086**	**0.2156**	**5.1590**	**0.2715**	**5.4305**	**1.4797**	**0.2623**	**1.7420**	**0.0000**	**24,418.1616**	**24,418.1616**	**3.2936**	**0.0000**	**24,500.5013**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.21**	**0.85**	**-2.42**	**0.00**	**9.53**	**61.66**	**15.58**	**13.05**	**60.49**	**27.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6749	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412	0.0000	13.4014	13.4014	0.0129	0.0000	13.7249
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.5974	1.7162	7.0042	0.0237	2.4022	0.0191	2.4213	0.6433	0.0178	0.6611		2,393.1476	2,393.1476	0.0875		2,395.3354
Total	**3.2723**	**1.8020**	**14.4457**	**0.0241**	**2.4022**	**0.0602**	**2.4624**	**0.6433**	**0.0589**	**0.7022**	**0.0000**	**2,406.5491**	**2,406.5491**	**0.1005**	**0.0000**	**2,409.0603**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6749	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412	0.0000	13.4014	13.4014	0.0129	0.0000	13.7249
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.5974	1.7162	7.0042	0.0237	2.4022	0.0191	2.4213	0.6433	0.0178	0.6611		2,393.1476	2,393.1476	0.0875		2,395.3354
Total	**3.2723**	**1.8020**	**14.4457**	**0.0241**	**2.4022**	**0.0602**	**2.4624**	**0.6433**	**0.0589**	**0.7022**	**0.0000**	**2,406.5491**	**2,406.5491**	**0.1005**	**0.0000**	**2,409.0603**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/13/2022	6	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	6	2	
3	Grading	Grading	1/18/2022	1/23/2022	6	5	
4	Building Construction	Building Construction	1/24/2022	5/13/2023	6	408	
5	Paving	Paving	5/14/2023	5/19/2023	6	5	
6	Architectural Coating	Architectural Coating	5/20/2023	5/25/2023	6	5	

Acres of Grading (Site Preparation Phase): 0.77

Acres of Grading (Grading Phase): 0.77

Acres of Paving: 0.3

Residential Indoor: 194,175; Residential Outdoor: 64,725; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,572 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	64.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	1,312.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	90.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3942	0.0000	1.3942	0.2111	0.0000	0.2111			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**1.3942**	**0.3375**	**1.7318**	**0.2111**	**0.3225**	**0.5336**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0521	1.7617	0.9317	4.9500e-003	0.1112	5.1400e-003	0.1163	0.0304	4.9200e-003	0.0354		565.9359	565.9359	0.0751		567.8143
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0271	0.0163	0.1717	6.7000e-004	0.0822	4.7000e-004	0.0826	0.0218	4.3000e-004	0.0222		66.8868	66.8868	1.1400e-003		66.9153
Total	**0.0792**	**1.7780**	**1.1034**	**5.6200e-003**	**0.1933**	**5.6100e-003**	**0.1989**	**0.0522**	**5.3500e-003**	**0.0576**		**632.8227**	**632.8227**	**0.0763**		**634.7296**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6274	0.0000	0.6274	0.0950	0.0000	0.0950			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.6274**	**0.0603**	**0.6877**	**0.0950**	**0.0603**	**0.1553**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0521	1.7617	0.9317	4.9500e-003	0.1112	5.1400e-003	0.1163	0.0304	4.9200e-003	0.0354		565.9359	565.9359	0.0751		567.8143
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0271	0.0163	0.1717	6.7000e-004	0.0822	4.7000e-004	0.0826	0.0218	4.3000e-004	0.0222		66.8868	66.8868	1.1400e-003		66.9153
Total	**0.0792**	**1.7780**	**1.1034**	**5.6200e-003**	**0.1933**	**5.6100e-003**	**0.1989**	**0.0522**	**5.3500e-003**	**0.0576**		**632.8227**	**632.8227**	**0.0763**		**634.7296**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4083	0.0000	0.4083	0.0441	0.0000	0.0441			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.4083**	**0.2573**	**0.6656**	**0.0441**	**0.2367**	**0.2808**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0136	8.1400e-003	0.0859	3.4000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.2000e-004	0.0111		33.4434	33.4434	5.7000e-004		33.4577
Total	**0.0136**	**8.1400e-003**	**0.0859**	**3.4000e-004**	**0.0411**	**2.3000e-004**	**0.0413**	**0.0109**	**2.2000e-004**	**0.0111**		**33.4434**	**33.4434**	**5.7000e-004**		**33.4577**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1837	0.0000	0.1837	0.0198	0.0000	0.0198			0.0000			0.0000
Off-Road	0.2382	4.8716	5.8579	9.7300e-003		0.0361	0.0361		0.0361	0.0361	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.2382**	**4.8716**	**5.8579**	**9.7300e-003**	**0.1837**	**0.0361**	**0.2198**	**0.0198**	**0.0361**	**0.0559**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0136	8.1400e-003	0.0859	3.4000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.2000e-004	0.0111		33.4434	33.4434	5.7000e-004		33.4577
Total	**0.0136**	**8.1400e-003**	**0.0859**	**3.4000e-004**	**0.0411**	**2.3000e-004**	**0.0413**	**0.0109**	**2.2000e-004**	**0.0111**		**33.4434**	**33.4434**	**5.7000e-004**		**33.4577**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1536	0.0000	1.1536	0.4674	0.0000	0.4674			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**1.1536**	**0.3375**	**1.4911**	**0.4674**	**0.3225**	**0.7899**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.1351	72.2315	38.1988	0.2030	4.5578	0.2107	4.7685	1.2476	0.2016	1.4492		23,203.3724	23,203.3724	3.0805		23,280.3858
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0271	0.0163	0.1717	6.7000e-004	0.0822	4.7000e-004	0.0826	0.0218	4.3000e-004	0.0222		66.8868	66.8868	1.1400e-003		66.9153
Total	**2.1622**	**72.2478**	**38.3705**	**0.2036**	**4.6399**	**0.2112**	**4.8511**	**1.2694**	**0.2020**	**1.4714**		**23,270.2592**	**23,270.2592**	**3.0817**		**23,347.3012**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5191	0.0000	0.5191	0.2103	0.0000	0.2103			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.5191**	**0.0603**	**0.5794**	**0.2103**	**0.0603**	**0.2706**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.1351	72.2315	38.1988	0.2030	4.5578	0.2107	4.7685	1.2476	0.2016	1.4492		23,203.3724	23,203.3724	3.0805		23,280.3858
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0271	0.0163	0.1717	6.7000e-004	0.0822	4.7000e-004	0.0826	0.0218	4.3000e-004	0.0222		66.8868	66.8868	1.1400e-003		66.9153
Total	**2.1622**	**72.2478**	**38.3705**	**0.2036**	**4.6399**	**0.2112**	**4.8511**	**1.2694**	**0.2020**	**1.4714**		**23,270.2592**	**23,270.2592**	**3.0817**		**23,347.3012**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0587	1.8607	0.8830	4.8500e-003	0.1283	4.1100e-003	0.1324	0.0369	3.9300e-003	0.0408		535.5863	535.5863	0.0475		536.7749
Worker	0.2439	0.1466	1.5456	6.0300e-003	0.7393	4.2300e-003	0.7436	0.1961	3.8900e-003	0.2000		601.9807	601.9807	0.0103		602.2379
Total	**0.3026**	**2.0072**	**2.4286**	**0.0109**	**0.8676**	**8.3400e-003**	**0.8759**	**0.2330**	**7.8200e-003**	**0.2408**		**1,137.5670**	**1,137.5670**	**0.0578**		**1,139.0129**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2793	6.1296	7.9624	0.0114		0.0578	0.0578		0.0578	0.0578	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.2793**	**6.1296**	**7.9624**	**0.0114**		**0.0578**	**0.0578**		**0.0578**	**0.0578**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0587	1.8607	0.8830	4.8500e-003	0.1283	4.1100e-003	0.1324	0.0369	3.9300e-003	0.0408		535.5863	535.5863	0.0475		536.7749
Worker	0.2439	0.1466	1.5456	6.0300e-003	0.7393	4.2300e-003	0.7436	0.1961	3.8900e-003	0.2000		601.9807	601.9807	0.0103		602.2379
Total	**0.3026**	**2.0072**	**2.4286**	**0.0109**	**0.8676**	**8.3400e-003**	**0.8759**	**0.2330**	**7.8200e-003**	**0.2408**		**1,137.5670**	**1,137.5670**	**0.0578**		**1,139.0129**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**		**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0467	1.4583	0.8659	4.7000e-003	0.1283	2.1400e-003	0.1304	0.0369	2.0400e-003	0.0390		520.4024	520.4024	0.0467		521.5693
Worker	0.2323	0.1330	1.4372	5.8000e-003	0.7393	4.1600e-003	0.7435	0.1961	3.8300e-003	0.1999		579.2625	579.2625	9.2900e-003		579.4948
Total	**0.2789**	**1.5913**	**2.3031**	**0.0105**	**0.8676**	**6.3000e-003**	**0.8739**	**0.2330**	**5.8700e-003**	**0.2389**		**1,099.6649**	**1,099.6649**	**0.0560**		**1,101.0641**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2793	6.1296	7.9624	0.0114		0.0578	0.0578		0.0578	0.0578	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.2793**	**6.1296**	**7.9624**	**0.0114**		**0.0578**	**0.0578**		**0.0578**	**0.0578**	**0.0000**	**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0467	1.4583	0.8659	4.7000e-003	0.1283	2.1400e-003	0.1304	0.0369	2.0400e-003	0.0390		520.4024	520.4024	0.0467		521.5693
Worker	0.2323	0.1330	1.4372	5.8000e-003	0.7393	4.1600e-003	0.7435	0.1961	3.8300e-003	0.1999		579.2625	579.2625	9.2900e-003		579.4948
Total	**0.2789**	**1.5913**	**2.3031**	**0.0105**	**0.8676**	**6.3000e-003**	**0.8739**	**0.2330**	**5.8700e-003**	**0.2389**		**1,099.6649**	**1,099.6649**	**0.0560**		**1,101.0641**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.1572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7684**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**		**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0266	0.2874	1.1600e-003	0.1479	8.3000e-004	0.1487	0.0392	7.7000e-004	0.0400		115.8525	115.8525	1.8600e-003		115.8990
Total	**0.0465**	**0.0266**	**0.2874**	**1.1600e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**115.8525**	**115.8525**	**1.8600e-003**		**115.8990**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.0436	0.0436		0.0436	0.0436	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.1572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3811**	**4.7579**	**6.9028**	**0.0113**		**0.0436**	**0.0436**		**0.0436**	**0.0436**	**0.0000**	**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0266	0.2874	1.1600e-003	0.1479	8.3000e-004	0.1487	0.0392	7.7000e-004	0.0400		115.8525	115.8525	1.8600e-003		115.8990
Total	**0.0465**	**0.0266**	**0.2874**	**1.1600e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**115.8525**	**115.8525**	**1.8600e-003**		**115.8990**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	274.9672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**275.1589**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0266	0.2874	1.1600e-003	0.1479	8.3000e-004	0.1487	0.0392	7.7000e-004	0.0400		115.8525	115.8525	1.8600e-003		115.8990
Total	**0.0465**	**0.0266**	**0.2874**	**1.1600e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**115.8525**	**115.8525**	**1.8600e-003**		**115.8990**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	274.9672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**275.0266**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0266	0.2874	1.1600e-003	0.1479	8.3000e-004	0.1487	0.0392	7.7000e-004	0.0400		115.8525	115.8525	1.8600e-003		115.8990
Total	**0.0465**	**0.0266**	**0.2874**	**1.1600e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**115.8525**	**115.8525**	**1.8600e-003**		**115.8990**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5974	1.7162	7.0042	0.0237	2.4022	0.0191	2.4213	0.6433	0.0178	0.6611		2,393.1476	2,393.1476	0.0875		2,395.3354
Unmitigated	0.5974	1.7162	7.0042	0.0237	2.4022	0.0191	2.4213	0.6433	0.0178	0.6611		2,393.1476	2,393.1476	0.0875		2,395.3354

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	489.60	489.60	489.60	1,130,784	1,130,784
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	489.60	489.60	489.60	1,130,784	1,130,784

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Enclosed Parking with Elevator	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Parking Lot	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6749	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412	0.0000	13.4014	13.4014	0.0129	0.0000	13.7249
Unmitigated	2.6749	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412	0.0000	13.4014	13.4014	0.0129	0.0000	13.7249

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3767					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0731					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2251	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412		13.4014	13.4014	0.0129		13.7249
Total	**2.6749**	**0.0857**	**7.4416**	**3.9000e-004**		**0.0412**	**0.0412**		**0.0412**	**0.0412**	**0.0000**	**13.4014**	**13.4014**	**0.0129**	**0.0000**	**13.7249**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3767					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0731					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2251	0.0857	7.4416	3.9000e-004		0.0412	0.0412		0.0412	0.0412		13.4014	13.4014	0.0129		13.7249
Total	**2.6749**	**0.0857**	**7.4416**	**3.9000e-004**		**0.0412**	**0.0412**		**0.0412**	**0.0412**	**0.0000**	**13.4014**	**13.4014**	**0.0129**	**0.0000**	**13.7249**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment B

Health Risk Assessment Methodology and Assumptions

A health risk assessment (HRA) is accomplished in four steps: 1) hazards identification, 2) exposure assessment, 3) toxicity assessment, and 4) risk characterization. These steps cover the estimation of air emissions, the estimation of the air concentrations resulting from a dispersion analysis, the incorporation of the toxicity of the pollutants emitted, and the characterization of the risk based on exposure parameters such as breathing rate, age adjustment factors, and exposure duration; each depending on receptor type (i.e., residence, school, daycare centers, hospitals, senior care facilities, recreational areas, adult, infant, child).

This HRA was conducted in accordance with technical guidelines developed by federal, state, and regional agencies, including U.S. Environmental Protection Agency (USEPA), California Environmental Protection Agency (CalEPA), California Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*[1] and the Bay Area Air Quality Management District (BAAQMD) *Health Risk Screening Analysis Guidelines*.[2] This HRA addresses the emissions from construction activities including onsite equipment and haul trucks. Specific focus is on diesel particulate matter (DPM) and particulate matter equal to or less than 2.5 micrometers (fine particulate or $PM_{2.5}$) emissions. Gasoline-fueled vehicles emit air toxics in much smaller quantities and toxicity levels compared to DPM. Thus, gasoline-fueled emission sources were not included in the HRA. Secondly, air toxics emissions from project operations is not expected to be substantial and thus, the HRA focused on construction equipment emissions of DPM.

According to CalEPA, a HRA should not be interpreted as the expected rates of cancer or other potential human health effects, but rather as estimates of potential risk or likelihood of adverse effects based on current knowledge, under a number of highly conservative assumptions and the best assessment tools currently available.

TERMS AND DEFINITIONS

As the practice of conducting an HRA is particularly complex and involves concepts that are not altogether familiar to most people, several terms and definitions are provided that are considered essential to the understanding of the approach, methodology and results:

> *Acute effect* – a health effect (non-cancer) produced within a short period of time (few minutes to several days) following an exposure to toxic air contaminants (TAC).

---

[1] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

[2] Bay Area Air Quality Management District, *Health Risk Screening Analysis Guidelines*, January 2010, http://www.baaqmd.gov/~/media/Files/Engineering/Air%20Toxics%20Programs/hrsa_guidelines.ashx

Cancer risk – the probability of an individual contracting cancer from a lifetime (i.e., 70 year) exposure to TAC such as DPM in the ambient air.

Chronic effect – a health effect (non-cancer) produced from a continuous exposure occurring over an extended period (weeks, months, years).

Hazard Index (HI) – the unitless ratio of an exposure level over the acceptable reference dose. The HI can be applied to multiple compounds in an additive manner.

Hazard Quotient (HQ) – the unitless ratio of an exposure level over the acceptable reference dose. The HQ is applied to individual compounds.

Toxic Air Contaminants – any air pollutant that can cause short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). The current California list of TAC lists approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Human Health Effects - comprise disorders such as eye watering, respiratory or heart ailments, and other (i.e., non-cancer) related diseases.

Health Risk Assessment – an analysis designed to predict the generation and dispersion of TAC in the outdoor environment, evaluate the potential for exposure of human populations, and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure.

Incremental – under CEQA, the net difference (or change) in conditions or impacts when comparing the baseline to future year project conditions.

Maximum exposed individual (MEI) – an individual assumed to be located at the point where the highest concentrations of TAC, and therefore, health risks are predicted to occur.

Non-cancer risks – health risks such as eye watering, respiratory or heart ailments, and other non-cancer related diseases.

Receptors – the locations where potential health impacts or risks are predicted (i.e., schools, residences, and recreational sites).

LIMITATIONS AND UNCERTAINTIES

There are several important limitations and uncertainties commonly associated with an HRA due to the wide variability of human exposures to TAC, the extended timeframes over which the exposures are evaluated, and the inability to verify the results. Limitations and uncertainties associated with the HRA and identified by the CalEPA include: (a.) lack of reliable monitoring data; (b.) extrapolation of toxicity data in animals to humans; (c.) estimation errors in calculating TAC emissions; (d.) concentration prediction errors with dispersion models; and (e.)

the variability in lifestyles, fitness and other confounding factors of the human population. This HRA was performed using the best available data and methodologies, notwithstanding the following uncertainties:

- There are uncertainties associated with the estimation of emissions from project activities. Where project-specific data, such as emission factors, are not available, default assumptions in emission models were used.
- The limitations of the air dispersion model provide a source of uncertainty in the estimation of exposure concentrations. According to USEPA, errors due to the limitation of the algorithms implemented in the air dispersion model in the highest estimated concentrations of +/- 10 percent to 40 percent are typical.[3]
- The source parameters used to model emission sources add uncertainty. For all emission sources, the source parameters used source-specific, recommended as defaults, or expected to produce more conservative results. Discrepancies might exist in actual emissions characteristics of an emission source and its representation in the dispersion model.
- The exposure duration estimates do not consider that people do not usually reside at the same location for 30 years and that other exposures (i.e., school children) are also of much shorter durations than was assumed in this HRA. This exposure duration is a highly conservative assumption, since most people do not remain at home all day and on average residents change residences every 11 to 12 years. In addition, this assumption adopts that residents are experiencing outdoor concentrations for the entire exposure period.
- For the risk and hazards calculations as well as the cumulative health impact, numerous assumptions must be made in order to estimate human exposure to pollutants. These assumptions include parameters such as breathing rates, exposure time and frequency, exposure duration, and human activity patterns. While a mean value derived from scientifically defensible studies is the best estimate of central tendency, most of the exposure variables used in this HRA are high-end estimates. The combination of several high-end estimates used as exposure parameters may substantially overestimate pollutant intake. The excess lifetime cancer risks calculated in this HRA are therefore likely to be higher than may be required to be protective of public health.
- The Cal/EPA cancer potency factor for DPM was used to estimate cancer risks associated with exposure to DPM emissions from construction activities. However, the cancer

[3] US Environmental Protection Agency, *Guideline on Air Quality Models (Revised), 40 Code of Federal Regulations, Part 51, Appendix W,* November 2005, https://www3.epa.gov/scram001/guidance/guide/appw_05.pdf

potency factor derived by Cal/EPA for DPM is highly uncertain in both the estimation of response and dose. In the past, due to inadequate animal test data and epidemiology data on diesel exhaust, the International Agency for Research on Cancer (IARC), a branch of the World Health Organization, had classified DPM as Probably Carcinogenic to Humans (Group 2); the USEPA had also concluded that the existing data did not provide an adequate basis for quantitative risk assessment.[4] However, based on two recent scientific studies,[5] IARC recently re-classified DPM as Carcinogenic to Humans to Group 1,[6] which means that the agency has determined that there is "sufficient evidence of carcinogenicity" of a substance in humans and represents the strongest weight-of-evidence rating in IARC's carcinogen classification scheme. This determination by the IARC may provide additional impetus for the USEPA to identify a quantitative dose-response relationship between exposure to DPM and cancer.

In summary, the estimated health impacts are based primarily on a series of conservative assumptions related to predicted environmental concentrations, exposure, and chemical toxicity. The use of conservative assumptions tends to produce upper-bound estimates of risk. BAAQMD acknowledges this uncertainty by stating: "the methods used [to estimate risk] are conservative, meaning that the real risks from the source may be lower than the calculations, but it is unlikely that they will be higher." The USEPA notes that the conservative assumptions used in a HRA are intended to assure that the estimated risks do not underestimate the actual risks posed by a site and that the estimated risks do not necessarily represent actual risks experienced by populations at or near a site.[7]

HAZARDS IDENTIFICATION

California Air Resources Board (CARB) has developed a list of TAC, where a TAC is "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health (California Health and Safety Code Section 39655). All USEPA hazardous air pollutants are TAC. CARB administers the Air Toxics "Hot Spots" program under Assembly Bill 2588 "Hot Spots" Information and Assessment Act, which requires periodic local review of facilities which emit TAC. Local air

---

[4] US Environmental Protection Agency, *Health Assessment Document for Diesel Engine Exhaust*, May 2002, https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=29060

[5] Attfield MD, Schleiff PL, Lubin JH, Blair A, Stewart PA, Vermeulen R, Coble JB, Silverman DT, *The Diesel Exhaust in Miners Study: A Nested Case-Control Study of Lung Cancer and Diesel Exhaust*, June 2012, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3369553/

[6] International Agency for Research on Cancer, *Diesel Engine Exhaust Carcinogenic*, June 2012, https://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf

[7] US Environmental Protection Agency, *Risk Assessment Guidance for Superfund Human Health Risk Assessment*, December 1989, https://www.epa.gov/sites/production/files/2015-09/documents/rags_a.pdf

agencies periodically must prioritize stationary sources of TAC and prepare health risk assessments for high-priority sources.

Diesel exhaust is a complex mixture of numerous individual gaseous and particulate compounds emitted from diesel-fueled combustion engines. Diesel particulate matter is formed primarily through the incomplete combustion of diesel fuel. DPM is removed from the atmosphere through physical processes including atmospheric fall-out and washout by rain. Humans can be exposed to airborne DPM by deposition on water, soil, and vegetation; although the main pathway of exposure is inhalation. Cal/EPA has concluded that potential cancer risk from inhalation exposure to whole diesel exhaust outweigh the multi-pathway cancer risk from the speciated components.

In August 1998, the CARB identified DPM as an air toxic. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel- Fueled Engines and Vehicles* and *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines* and approved these documents on September 28, 2000.[8] [9] The documents represent proposals to reduce DPM emissions, with the goal of reducing emissions and the associated health risk by 75 percent in 2010 and by 85 percent in 2020. The program aimed to require the use of state-of-the-art catalyzed DPM filters and ultra-low-sulfur diesel fuel.

In 2001, CARB assessed the state-wide health risks from exposure to diesel exhaust and to other toxic air contaminants. It is difficult to distinguish the health risks of diesel emissions from those of other air toxics, since diesel exhaust contains approximately 40 different TAC. The CARB study detected diesel exhaust by using ambient air carbon soot measurements as a surrogate for diesel emissions. The study reported that the state-wide cancer risk from exposure to diesel exhaust was about 540 per million population as compared to a total risk for exposure to all ambient air toxics of 760 per million. This estimate, which accounts for about 70 percent of the total risk from TAC, included both urban and rural areas in the state. The estimate can also be considered an average worst-case for the state, since it assumes constant exposure to outdoor concentrations of diesel exhaust and does not account for expected lower concentrations indoors, where most of time is spent. DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over a lifetime.[10]

Exposure to DPM results in a greater incidence of chronic non-cancer health effects, such as cough, labored breathing, chest tightness, wheezing, and bronchitis. Individuals particularly

---

[8] California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000, http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf

[9] California Air Resources Board, *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*, October 2000, https://www.arb.ca.gov/diesel/documents/rmgFinal.pdf

[10] California Air Resources Board, *Summary: Diesel Particulate Matter Health Impacts*, April 12, 2016, https://www.arb.ca.gov/research/diesel/diesel-health_summ.htm

vulnerable to DPM are children, whose lung tissue is still developing, the elderly and people with illnesses who may have other serious health problems that can be aggravated by exposure to DPM. In general, children are more vulnerable than adults to air pollutants because they have higher inhalation rates, narrower airways, and less mature immune systems. In addition, children with allergies may have an enhanced allergic response when exposed to diesel exhaust).

EXPOSURE ASSESSMENT

Dispersion is the process by which atmospheric pollutants disseminate due to wind and vertical stability. The results of a dispersion analysis are used to assess pollutant concentrations at or near an emission source. The results of an analysis allow predicted concentrations of pollutants to be compared directly to air quality standards and other criteria such as health risks based on modeled concentrations.

A rising pollutant plume reacts with the environment in several ways before it levels off. First, the plume's own turbulence interacts with atmospheric turbulence to entrain ambient air. This mixing process reduces and eventually eliminates the density and momentum differences that cause the plume to rise. Second, the wind transports the plume during its rise and entrainment process. Higher winds mix the plume more rapidly, resulting in a lower final rise. Third, the plume interacts with the vertical temperature stratification of the atmosphere, rising as a result of buoyancy in the unstable-to-neutrally stratified mixed layer. However, after the plume encounters the mixing lid and the stably stratified air above, its vertical motion is dampened.

Molecules of gas or small particles injected into the atmosphere will separate from each other as they are acted on by turbulent eddies. The Gaussian mathematical model such as AERMOD simulates the dispersion of the gas or particles within the atmosphere. The formulation of the Gaussian model is based on the following assumptions:

- The predictions are not time-dependent (all conditions remain unchanged with time)
- The wind speed and direction are uniform, both horizontally and vertically, throughout the region of concern
- The rate of diffusion is not a function of position
- Diffusion in the direction of the transporting wind is negligible when compared to the transport flow

Dispersion Modeling Approach

Air dispersion modeling was performed to estimate the downwind dispersion of DPM exhaust emissions resulting from construction activities. The following sections present the fundamental components of an air dispersion modeling analysis including air dispersion model selection and options, receptor locations, meteorological data, and source exhaust parameters.

Model Selection and Options

AERMOD (Version 19191)[11] was used for the dispersion analysis. AERMOD is the USEPA preferred atmospheric dispersion modeling system for general industrial sources. The model can simulate point, area, volume, and line sources. AERMOD is the appropriate model for this analysis based on the coverage of simple, intermediate, and complex terrain. It also predicts both short-term and long-term (annual) average concentrations. The model was executed using the regulatory default options (stack-tip downwash, buoyancy-induced dispersion, and final plume rise), default wind speed profile categories, default potential temperature gradients, and assuming no pollutant decay.

The selection of the appropriate dispersion coefficients depends on the land use within three kilometers (km) of the project site. The types of land use were based on the classification method defined by Auer (1978); using pertinent United States Geological Survey (USGS) 1:24,000 scale (7.5 minute) topographic maps of the area. If the Auer land use types of heavy industrial, light-to-moderate industrial, commercial, and compact residential account for 50 percent or more of the total area, the USEPA *Guideline on Air Quality Models*[12] recommends using urban dispersion coefficients; otherwise, the appropriate rural coefficients can be used. Based on observation of the area surrounding the project site, rural (urban is only designated within dense city centers such as downtown San Francisco) dispersion coefficients were applied within AERMOD.

Receptor Locations

Some receptors are considered more sensitive to air pollutants than others, because of preexisting health problems, proximity to the emissions source, or duration of exposure to air pollutants. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential areas are also considered sensitive to poor air quality because people in residential areas are often at home for extended periods. Recreational land uses are moderately sensitive to air pollution because vigorous exercise associated with recreation places having a high demand on respiratory system function.

Sensitive receptors were placed at receptors to estimate health impacts due to proposed project construction on existing residences. Senior living and apartment buildings are adjacent to the project site to the east and west. Several apartment buildings are located opposite of Ogden

---

[11] US Environmental Protection Agency, AERMOD Modeling System, https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

[12] US Environmental Protection Agency, *Guideline on Air Quality Models (Revised), 40 Code of Federal Regulations, Part 51, Appendix W*, November 2005, https://www3.epa.gov/scram001/guidance/guide/appw_05.pdf

Drive to the west/southwest of the project site. Vacant land is adjacent to the project site to the north. Mills High School (located 785 feet to the northwest at 400 Murchison Drive), Spring Valley Elementary School (located 1,250 feet to the southwest at 870 Murchison Drive), and Learning Links Preschool (600 feet to the southeast at 1764 Marco Polo Way). **Figure B-1** displays the location of the sensitive receptors used in this HRA. Receptors were placed at a height of 1.8 meters (typical breathing height). Terrain elevations for receptor locations were used based on available USGS information for the area. The maximum concentrations would occur at a residential receptor (also known as the maximum exposed individual or MEI) to the northwest and within 100 feet of the project site; apartments at 1860 Ogden Drive.

Meteorological Data

Hourly meteorological data from San Francisco International Airport (surface data), located approximately two miles to the northeast of the proposed project, and Oakland International Airport (upper air) were used in the dispersion modeling analysis. Meteorological data from 2009 through 2013 were used.[13] **Figure B-2** displays the annual wind rose. Wind directions are predominately from the west with a moderate frequency of calm wind speed conditions (approximately 13 percent), as shown in **Figure B-3**. The average annual wind speed is 10.6 miles per hour (4.8 meters per second).

Source Release Characteristics

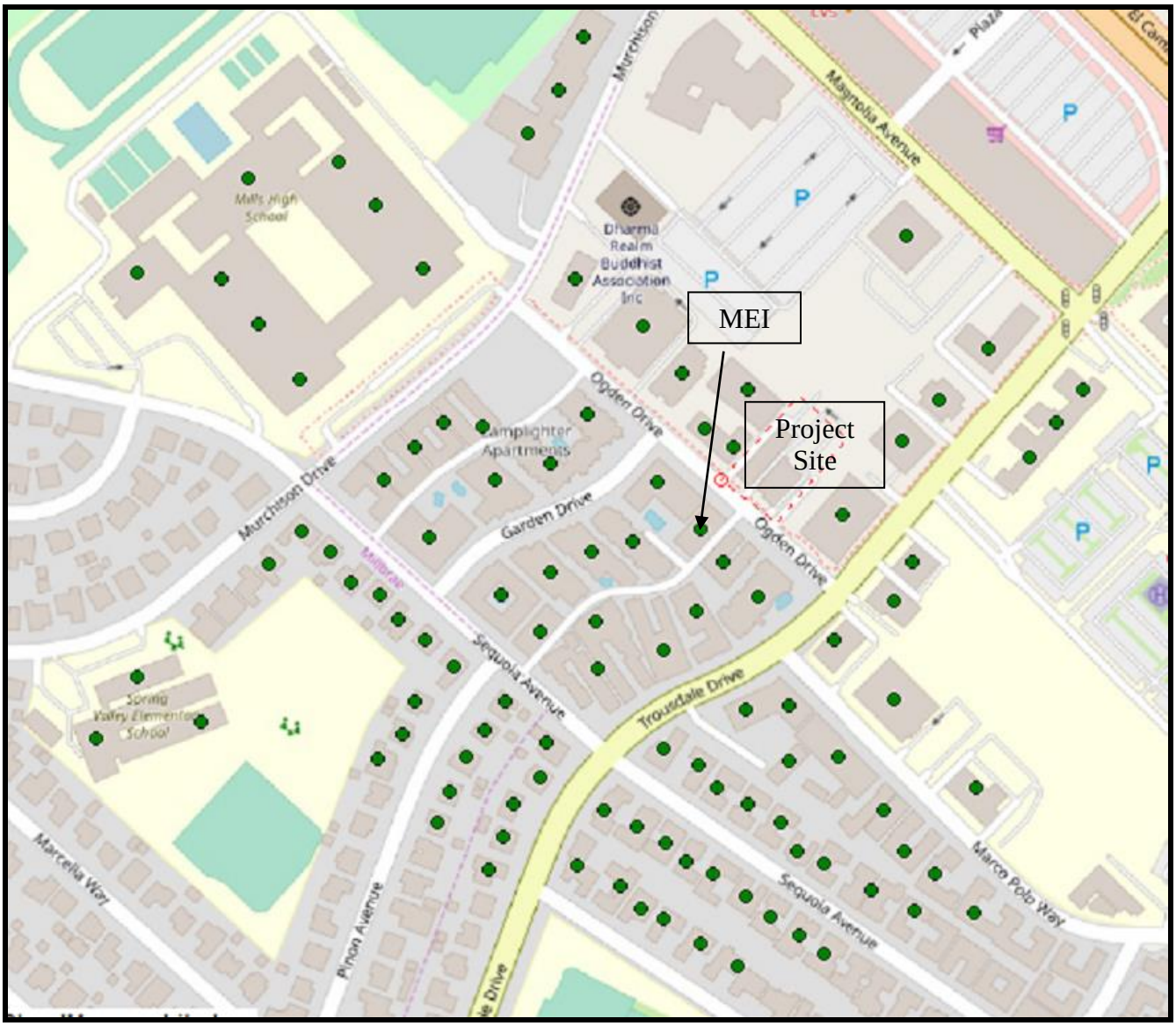
Construction equipment activities were treated as an area source. The release height of the off-road equipment exhaust was 5.0 meters (16.4 feet) and an initial vertical dimension of 1.4 meters 4.6 feet), which reflects the height of the equipment plus an additional height of the exhaust plume above the exhaust point to account for plume rise due to buoyancy and momentum. Fugitive dust-generating activities were treated as an area source. The release height of the fugitive dust was 0.0 meters (0.0 feet) and an initial vertical dimension of 1.0 meter (3.3 feet). Haul trucks were treated as a line source (i.e., volume sources placed at regular intervals) located along an access road. The haul trucks were assigned a release height of 5.0 meters (16.4 feet) and an initial vertical dimension of 1.4 meters (4.6 feet), which accounts for dispersion from the movement of vehicles.[14] [15]

---

[13] California Air Resources Board, Hotspots Analysis and Reporting Program Meteorological Files, October 5, 2015, https://www.arb.ca.gov/toxics/harp/metfiles2.htm

[14] While haul truck emissions contribute substantially to overall project emissions, they are spread over many miles. Hence, the portion of trucking emissions that would impact one receptor is much smaller than the emissions that the clustered off-road activity at the project site would impact a receptor near the site. For example, the DPM emissions from truck travel within 1,000 feet of the project are less than 1 percent of the total off-road DPM emissions.

FIGURE B-1
HEALTH RISK ASSESSMENT RECEPTORS



[15] South Coast Air Quality Management District, Final Localized Significance Threshold Methodology. July 2008, http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2

FIGURE B-2
WINDROSE FOR SAN FRANCISCO INTERNATIONAL AIRPORT

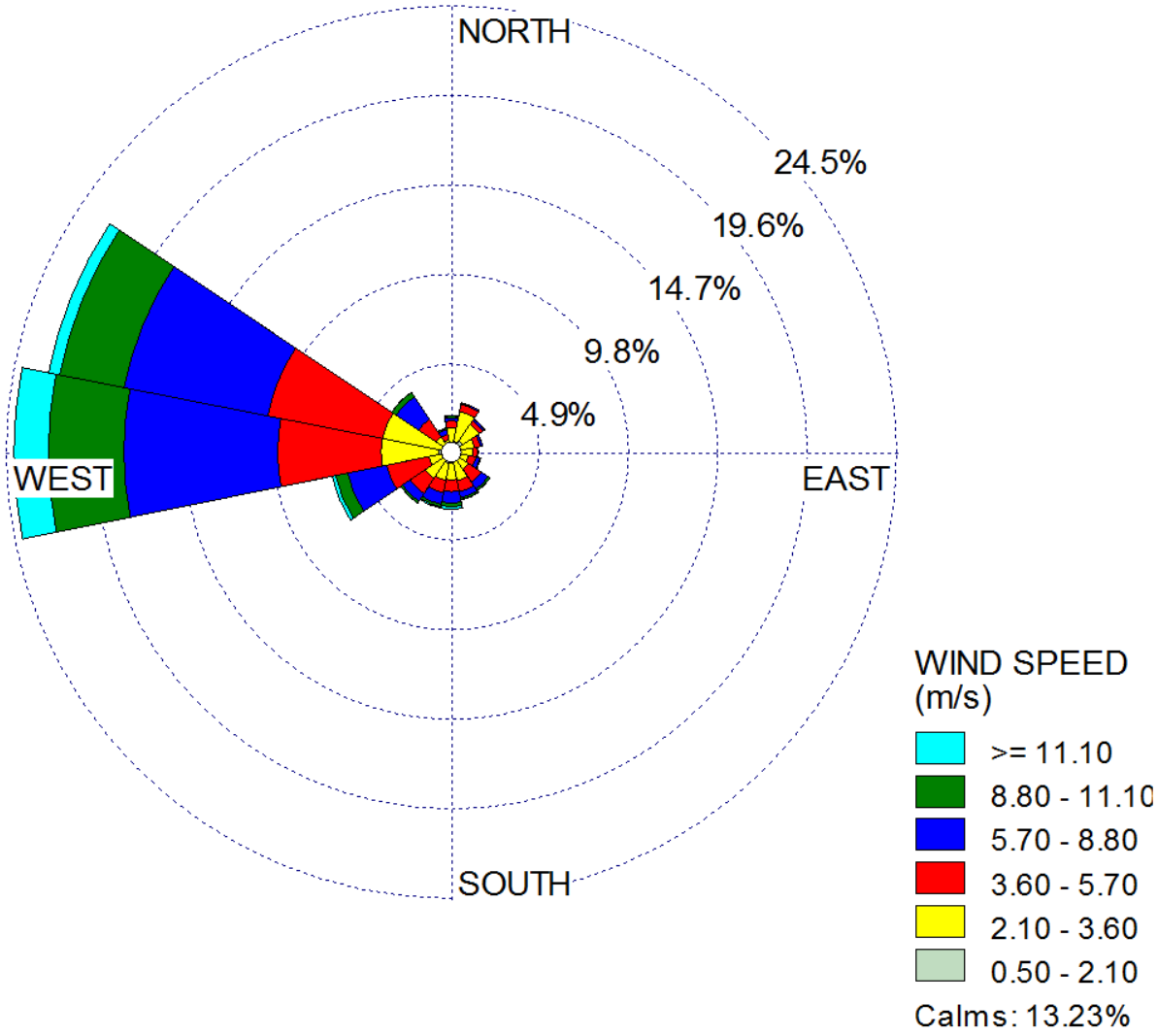
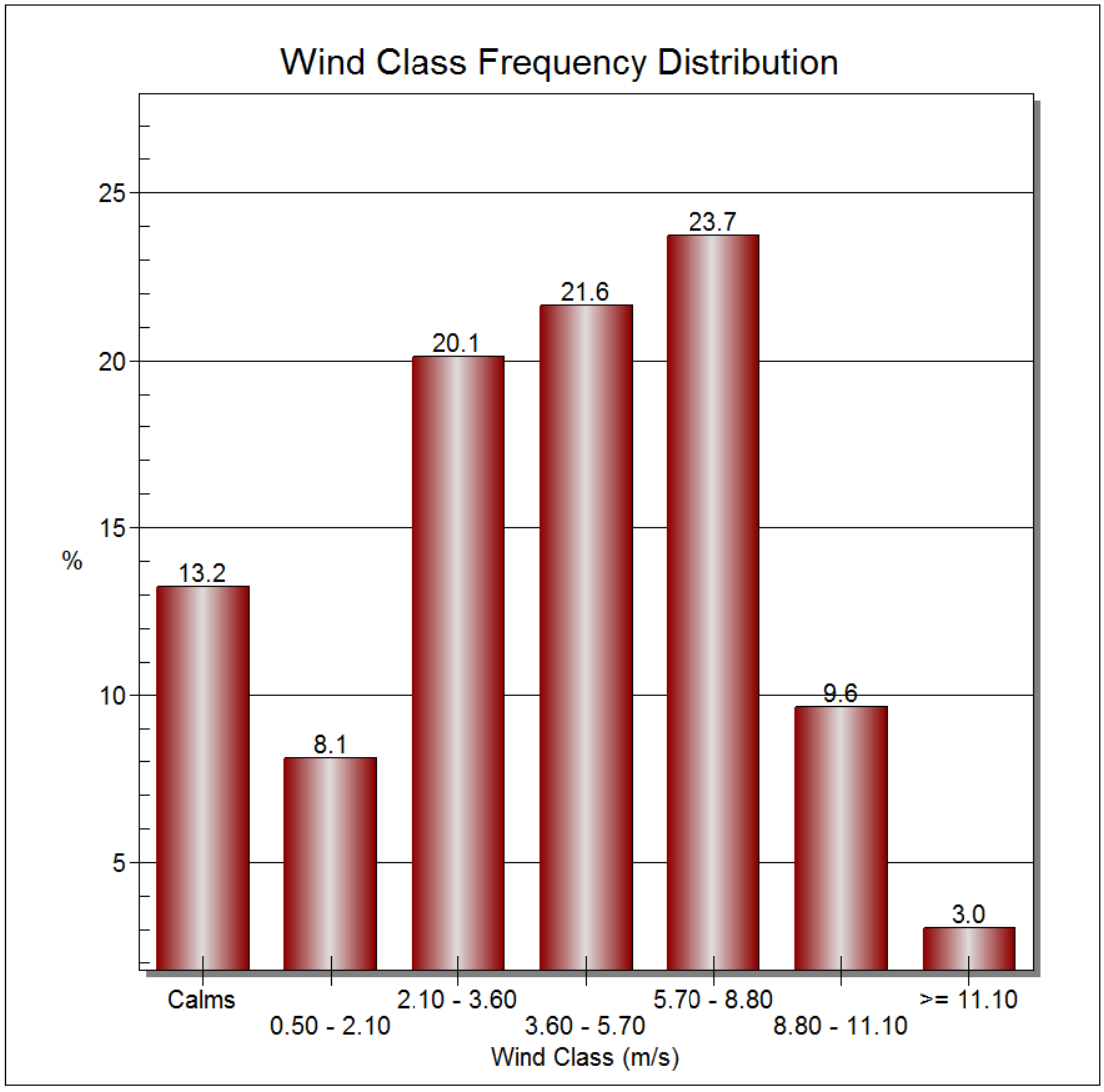


FIGURE B-3
WIND SPEED DISTRIBUTION FOR SAN FRANCISCO INTERNATIONAL AIRPORT



Per Burlingame's Municipal Code Section 18.07.110, construction activities would be expected to occur Monday through Friday from 8 am through 7 pm and Saturday from 9 am through 6 pm. Terrain elevations for emission source locations were used based on available USGS information for the area. AERMAP (Version 11103)[16] was used to develop the terrain elevations.

EXPOSURE PARAMETERS

This HRA was conducted following methodologies in OEHHA's *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*.[17] This was accomplished by applying the estimated concentrations at the receptors analyzed to the established cancer risk estimates and acceptable reference concentrations for non-cancer health effects.

OEHHA's revisions to its *Guidance Manual* were primarily designed to ensure that the greater sensitivity of children to cancer and other health risks is reflected in HRAs. For example, OEHHA now recommends that risks be analyzed separately for multiple age groups, focusing especially on young children and teenagers, rather than the past practice of analyzing risks to the general population, without distinction by age. OEHHA also now recommends that statistical "age sensitivity factors" be incorporated into an HRA, and that children's relatively high breathing rates be accounted for. On the other hand, the *Guidance Manual* revisions also include some changes that would reduce calculated health risks. For example, under the former guidance, OEHHA recommended that residential cancer risks be assessed by assuming 70 years of exposure at a residential receptor; under the *Guidance Manual*, this assumption is lessened to 30 years.

OEHHA has developed exposure factors (e.g., daily breathing rates) for six age groups including the last trimester to birth, birth to 2 years, 2 to 9 years, 2 to 16 years, 16 to 30 years, and 16 to 70 years. These age bins allow for more refined exposure information to be used when estimating exposure and the potential for developing cancer over a lifetime. This means that exposure variates are needed for the third trimester, ages zero to less than two, ages two to less than nine, ages two to less than 16, ages 16 to less than 30, and ages 16 to 70. Residential receptors utilize the 95th percentile breathing rate values. The breathing rates are age-specific and are 1,090 liters per kilogram-day for ages less than 2 years, 745 liters per kilogram-day for ages 2 to 16 years, 335 liters per kilogram-day for ages 16 to 30 years, and 290 liters per kilogram-day for ages 30 to 70 years. A school child breathing rate is 520 liters per kilogram-day and an off-site worker breathing rate is 230 liters per kilogram-day.

---

[16] US Environmental Protection Agency, AERMAP, https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

[17] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

OEHHA developed age sensitivity factors (ASF) to consider the increased sensitivity to carcinogens during early-in-life exposures. OEHHA recommends that cancer risks be weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to 2 years of age, and by a factor of 3 for exposures from 2 years through 15 years of age.

Based on OEHHA recommendations, the cancer risk to residential receptors assumes exposure occurs 24 hours per day for 350 days per year while accounting for a percentage of time at home. OEHHA evaluated information from activity pattern databases to estimate the fraction of time at home (FAH) during the day. This information was used to adjust exposure duration and cancer risk based on the assumption that a person is not present at home continuously for 24 hours and therefore exposure to emissions is not occurring when a person is away from their home. In general, the FAH factors are age-specific and are 0.85 for ages less than 2 years, 0.72 for ages 2 to 16 years, and 0.73 for ages 30 to 70 years.

OEHHA has decreased the exposure duration currently being used for estimating cancer risk at the maximum exposed individual resident from 70 years to 30 years. This is based on studies showing that 30 years is a reasonable estimate of the 90th to 95th percentile of residency duration in the population. Additionally, OEHHA recommends using the 9 and 70-year exposure duration to represent the potential impacts over the range of residency periods.

Given the exposure durations of less than 24 hours, sensitive recreational receptors were evaluated for acute impacts only. Based on OEHHA recommendations, for children at school sites, exposure is assumed to occur 10 hours per day for 180 days (or 36 weeks) per year. Cancer risk estimates for children at school sites are calculated based on 9-year exposure duration. School sites also include teachers and other adult staff which are treated as off-site workers.

RISK CHARACTERIZATION

Cancer risk is defined as the lifetime probability of developing cancer from exposure to carcinogenic substances. Cancer risks are expressed as the chance in one million of getting cancer (i.e., number of cancer cases among one million people exposed). The cancer risks are assumed to occur exclusively through the inhalation pathway. The cancer risk can be estimated by using the cancer potency factor (milligrams per kilogram of body weight per day [mg/kg-day]), the 30-year annual average concentration (microgram per cubic meter [$\mu g/m^3$]), and the lifetime exposure adjustment.

Following guidelines established by OEHHA, the incremental cancer risks attributable to the proposed project were calculated by applying exposure parameters to modeled DPM concentrations in order to determine the inhalation dose (mg/kg-day) or the amount of pollutants inhaled per body weight mass per day. The cancer risks occur exclusively through the inhalation pathway; therefore, the cancer risks can be estimated from the following equation:

$$\text{Dose-inh} = \frac{C_{air} * \{DBR\} * A * ASF * FAH * EF * ED * 10^{-6}}{AT}$$

where:

Dose-inh	= Dose of the toxic substance through inhalation in mg/kg-day
10^{-6}	= Micrograms to milligrams conversion, Liters to cubic meters conversion
C_{air}	= Concentration in air in microgram (μg)/cubic meter (m^3)
{DBR}	= Daily breathing rate in liter (L)/kg body weight – day
A	= Inhalation absorption factor, 1.0
ASF	= Age Sensitivity Factor
EF	= Exposure frequency (days/year)
ED	= Exposure duration (years)
FAH	= Fraction of Time at Home
AT	= Averaging time period over which exposure is averaged in days (25,550 days for a 70-year cancer risk)

To determine incremental cancer risk, the estimated inhalation dose attributed to the proposed project was multiplied by the cancer potency slope factor (cancer risk per mg/kg-day). The cancer potency slope factor is the upper bound on the increased cancer risk from a lifetime exposure to a pollutant. These slope factors are based on epidemiological studies and are different values for different pollutants. This allows the estimated inhalation dose to be equated to a cancer risk.

Non-cancer adverse health impacts, acute (short-term) and chronic (long-term), are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental exposure concentration from the proposed project to a published reference exposure level (REL) that could cause adverse health effects as established by OEHHA. The ratio (referred to as the Hazard Quotient [HQ]) of each non-carcinogenic substance that affects a certain organ system is added to produce an overall HI for that organ system. The overall HI is calculated as the total for each organ system. If the overall HI for the highest-impacted organ system is greater than one, then the impact is significant.

The HI is an expression used for the potential for non-cancer health effects. The relationship for the non-cancer health effects is given by the annual concentration (in $\mu g/m^3$) and the REL (in $\mu g/m^3$). The acute hazard index was determined using the "simple" concurrent maximum approach, which tends to be conservative (i.e., overpredicts).

The relationship for the non-cancer health effects is given by the following equation:

$$HI = C/REL$$

Where:

HI = Hazard index; an expression of the potential for non-cancer health effects.

C = Annual average concentration ($\mu g/m^3$) during the 70-year exposure period.

REL = Concentration at which no adverse health effects are anticipated.

The chronic REL for DPM was established by the California OEHHA as 5 $\mu g/m^3$.[18] There is no acute REL for DPM.

CUMULATIVE SOURCES

The BAAQMD's *CEQA Air Quality Guidelines* include standards and methods for determining the significance of cumulative health impacts.[19] The method for determining cumulative health impacts requires the tallying of health impacts from permitted stationary sources, rail activities, and roadways in the vicinity of a project (i.e., within a 1,000-foot radius or "zone of influence") to determine whether the cumulative health impacts thresholds are exceeded.

BAAQMD provided the cumulative screening health impacts due to four stationary emission sources (backup diesel generators) which are located within 1,000 feet of the project site.[20] **Table B-1** provide the estimated cancer risk, hazard impacts, and the $PM_{2.5}$ concentrations for the nearby stationary emission sources.

TABLE B-1
SCREENING HEALTH IMPACTS – STATIONARY EMISSION SOURCES

Distance (feet)	Facility ID	Facility Name	Address	Cancer Risk	Hazard Impact	$PM_{2.5}$ Concentration
214	18931	Verizon Wireless	1801 Murchison Drive	2.25	0.00	0.00
247	22738	Sunrise Senior Living	1818 Trousdale Drive	9.67	0.02	0.01
492	200828	Peninsula Health Care District	1600 Trousdale Drive	9.63	0.00	0.01
679	14472	City of Burlingame	1111 Trousdale Drive	2.07	0.00	0.00

SOURCE: Bay Area Air Quality Management District, *Stationary Source Risk & Hazard Analysis Tool*, Accessed March 19, 2021, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65.

Per BAAQMD guidance, a distance adjustment multiplier was applied to the diesel generators based on the *Diesel Internal Combustion Engine Distance Multiplier Tool*. **Table B-2** provide the

[18] Office of Environmental Health Hazards Assessment - Acute, 8-hour, and Chronic Reference Exposure Levels, June 2014, http://www.oehha.ca.gov/air/allrels.html

[19] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017, http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

[20] Bay Area Air Quality Management District, *Stationary Source Risk & Hazard Analysis Tool*, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

estimated cancer risk, hazard impacts, and the $PM_{2.5}$ concentrations for the nearby stationary emission sources adjusted for distance from the proposed project and the emission source.

TABLE B-2
ADJUSTED HEALTH IMPACTS – STATIONARY EMISSION SOURCES

Distance (feet)	Facility ID	Facility Name	Address	Cancer Risk	Hazard Impact	$PM_{2.5}$ Concentration
214	18931	Verizon Wireless	1801 Murchison Drive	0.92	0.00	0.00
247	22738	Sunrise Senior Living	1818 Trousdale Drive	3.00	0.02	0.01
492	200828	Peninsula Health Care District	1600 Trousdale Drive	1.16	0.00	0.01
679	14472	City of Burlingame	1111 Trousdale Drive	0.17	0.00	0.00

SOURCE: Bay Area Air Quality Management District, *Stationary Source Risk & Hazard Analysis Tool*, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65 Cancer risk adjusted to account for the BAAQMD's *Diesel Internal Combustion (IC) Engine Distance Multiplier Tool*

BAAQMD has developed a geo-referenced database of roadways throughout the San Francisco Bay Area and has developed the *Highway and Major Roadway GIS Tool* for estimating cumulative health risks from highways and major roadways. US 82 (El Camino Real) and Trousdale Drive.[21] Typically, health impacts from a roadway at grade are lower at second floor than the first floor. For the proposed project, all residential units will be on the second, third, fourth, fifth, or sixth floors only. The estimated cumulative cancer risk due to US 82 is 4.10 per million persons. The estimated cumulative $PM_{2.5}$ concentration due to US 82 is 0.10 $\mu g/m^3$. For Trousdale Drive, the estimated cumulative cancer risk is 0.28 per million persons and the estimated cumulative $PM_{2.5}$ concentration is 0.01 $\mu g/m^3$.

BAAQMD has developed a geo-referenced database of rail activities throughout the San Francisco Bay Area and has developed the *Rail GIS Tool* for estimating cumulative health risks from rail activities.[22] The estimated cumulative cancer risk due to rail activities is 2.40 per million persons. The estimated cumulative $PM_{2.5}$ concentration due to rail activities is less than 0.01 $\mu g/m^3$.

[21] Bay Area Air Quality Management District, *Highway and Major Roadway GIS Tool*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools

[22] Bay Area Air Quality Management District, *Rail GIS Tool*, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools

Health Risk Assessment Assumptions

5	Chronic Reference Exposure Level (ug/m3) for DPM	
1.1	Cancer Potency Slope Factor (cancer risk per mg/kg-day) for DPM	
350	days per year	
25,550	days per lifetime	
1,090	95th Percentile Daily Breathing Rates (L/kg-day)	0<2 Years
861	95th Percentile Daily Breathing Rates (L/kg-day)	2<9 Years
745	95th Percentile Daily Breathing Rates (L/kg-day)	2<16 Years
335	95th Percentile Daily Breathing Rates (L/kg-day)	16<30 Years
290	95th Percentile Daily Breathing Rates (L/kg-day)	30<70 Years
0.85	fraction of 0<2 Years	
0.72	fraction of 2<16 Years	
0.73	fraction of 16<70 Years	

Project:	1814 & 1820 Ogden Drive, Burlingame, CA
Date:	June 11, 2021
Condition:	Unmitigated
Receptor:	Existing Residence

Exposure Year	Calender Year	Annual DPM Concentration (ug/m3)	Annual PM2.5 Concentration (ug/m3)	Daily Breathing Rates (L/kg-day)	Exposure Factor	fraction of time at home	Cancer Risk
1	2022	0.22	0.42	1,090	10.0	0.85	30.8
2	2023	0.07	0.14	1,090	10.0	0.85	10.1
3	2024			745	4.75	0.72	
4	2025			745	3.00	0.72	
5	2026			745	3.00	0.72	
6	2027			745	3.00	0.72	
7	2028			745	3.00	0.72	
8	2029			745	3.00	0.72	
9	2030			745	3.00	0.72	
10	2031			745	3.00	0.72	
11	2032			745	3.00	0.72	
12	2033			745	3.00	0.72	
13	2034			745	3.00	0.72	
14	2035			745	3.00	0.72	
15	2036			745	3.00	0.72	
16	2037			745	3.00	0.72	
17	2038			335	1.70	0.73	
18	2039			335	1.00	0.73	
19	2040			335	1.00	0.73	
20	2041			335	1.00	0.73	
21	2042			335	1.00	0.73	
22	2043			335	1.00	0.73	
23	2044			335	1.00	0.73	
24	2045			335	1.00	0.73	
25	2046			335	1.00	0.73	
26	2047			335	1.00	0.73	
27	2048			335	1.00	0.73	
28	2049			335	1.00	0.73	
29	2050			335	1.00	0.73	
30	2051			335	1.00	0.73	

0.42	Maximum Annual PM2.5 Concentration (ug/m3)
0.3	Significance Threshold (ug/m3)
Yes	Significant?
0.04	Chronic Hazard Impact
1	Significance Threshold
No	Significant?
40.9	Cancer Risk (Child)
10	Significance Threshold
Yes	Significant?
1.84	Cancer Risk (Adult)
10	Significance Threshold
No	Significant?

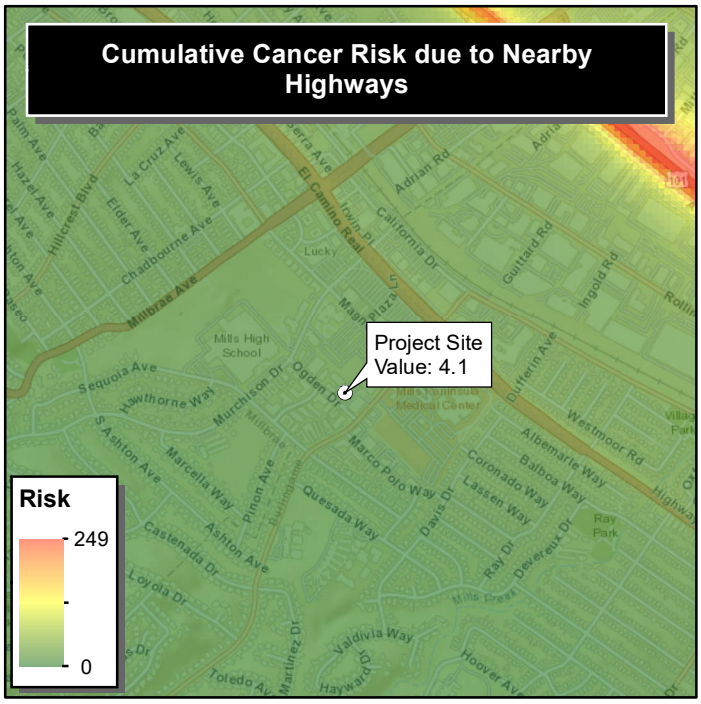
Health Risk Assessment Assumptions

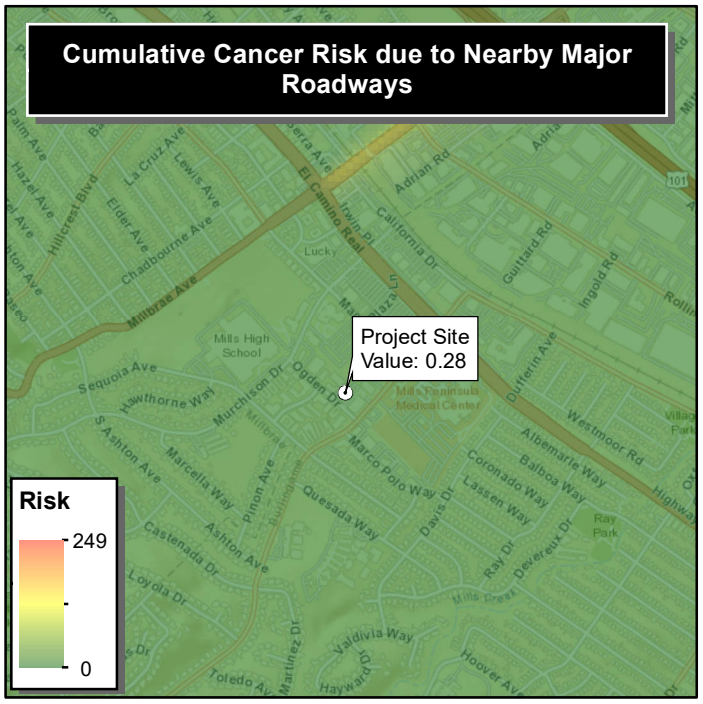
5	Chronic Reference Exposure Level (ug/m3) for DPM	
1.1	Cancer Potency Slope Factor (cancer risk per mg/kg-day) for DPM	
350	days per year	
25,550	days per lifetime	
1,090	95th Percentile Daily Breathing Rates (L/kg-day)	0<2 Years
861	95th Percentile Daily Breathing Rates (L/kg-day)	2<9 Years
745	95th Percentile Daily Breathing Rates (L/kg-day)	2<16 Years
335	95th Percentile Daily Breathing Rates (L/kg-day)	16<30 Years
290	95th Percentile Daily Breathing Rates (L/kg-day)	30<70 Years
0.85	fraction of 0<2 Years	
0.72	fraction of 2<16 Years	
0.73	fraction of 16<70 Years	

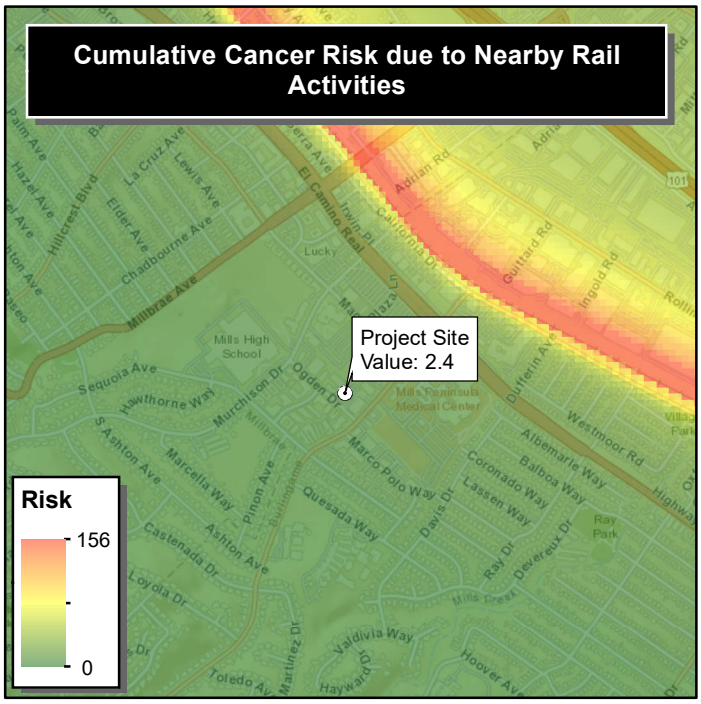
Project: 1814 & 1820 Ogden Drive, Burlingame, CA
Date: June 11, 2021
Condition: Mitigated
Receptor: Existing Residence

Exposure Year	Calender Year	Annual DPM Concentration (ug/m3)	Annual PM2.5 Concentration (ug/m3)	Daily Breathing Rates (L/kg-day)	Exposure Factor	fraction of time at home	Cancer Risk
1	2022	0.04	0.22	1,090	10.0	0.85	6.04
2	2023	0.02	0.08	1,090	10.0	0.85	2.13
3	2024			745	4.75	0.72	
4	2025			745	3.00	0.72	
5	2026			745	3.00	0.72	
6	2027			745	3.00	0.72	
7	2028			745	3.00	0.72	
8	2029			745	3.00	0.72	
9	2030			745	3.00	0.72	
10	2031			745	3.00	0.72	
11	2032			745	3.00	0.72	
12	2033			745	3.00	0.72	
13	2034			745	3.00	0.72	
14	2035			745	3.00	0.72	
15	2036			745	3.00	0.72	
16	2037			745	3.00	0.72	
17	2038			335	1.70	0.73	
18	2039			335	1.00	0.73	
19	2040			335	1.00	0.73	
20	2041			335	1.00	0.73	
21	2042			335	1.00	0.73	
22	2043			335	1.00	0.73	
23	2044			335	1.00	0.73	
24	2045			335	1.00	0.73	
25	2046			335	1.00	0.73	
26	2047			335	1.00	0.73	
27	2048			335	1.00	0.73	
28	2049			335	1.00	0.73	
29	2050			335	1.00	0.73	
30	2051			335	1.00	0.73	

0.22	Maximum Annual PM2.5 Concentration (ug/m3)
0.3	Significance Threshold (ug/m3)
No	Significant?
0.01	Chronic Hazard Impact
1	Significance Threshold
No	Significant?
8.16	Cancer Risk (Child)
10	Significance Threshold
No	Significant?
0.37	Cancer Risk (Adult)
10	Significance Threshold
No	Significant?







Cancer Risk Maps

1820 Ogden Drive
Burlingame, San Mateo County, California

Legend

⊙ Project Site

1:24,000

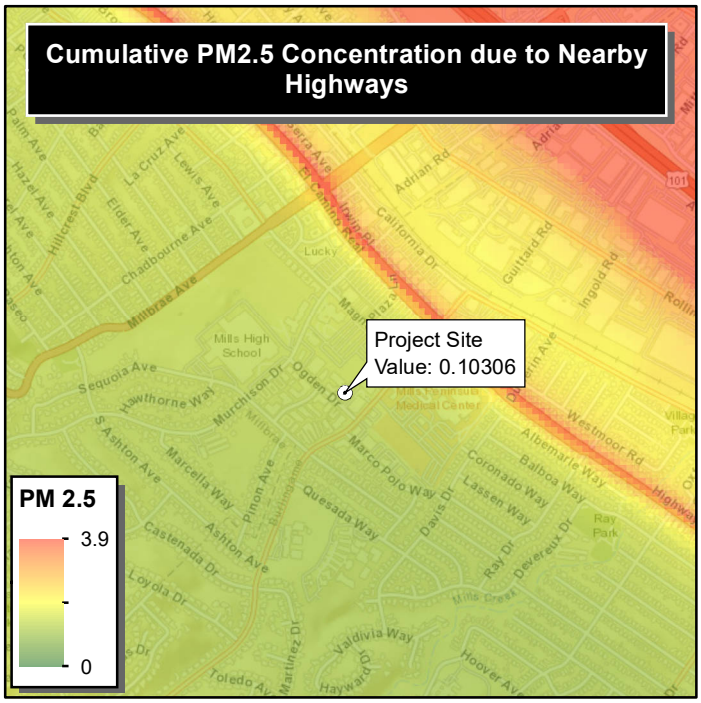
1 inch = 2,000 feet at letter layout

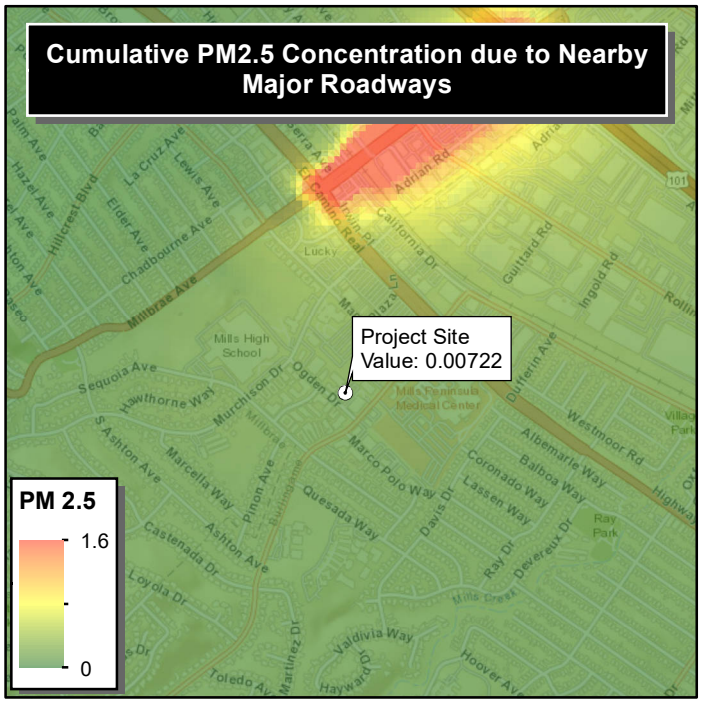
0 0.125 0.25 0.5 Miles

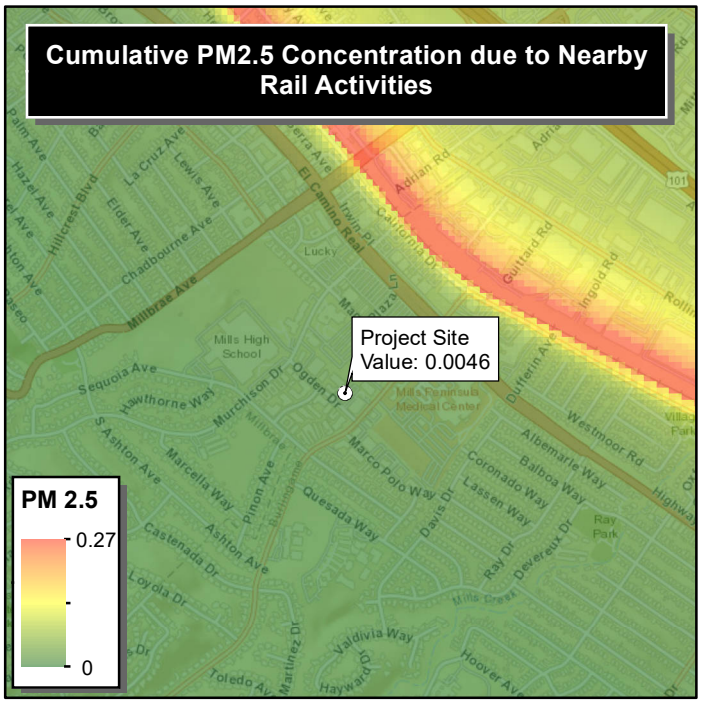
0 0.25 0.5 1 Kilometers

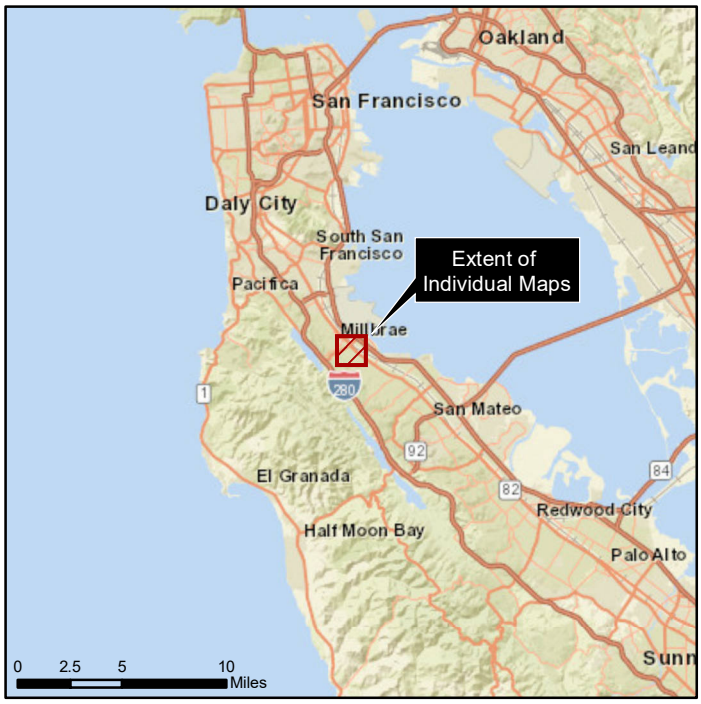
Map Produced by Vollmar Natural Lands Consulting.
Cartography by E. Smith, June 2021.
Data Sources: Bay Area Air Quality Management District, 2021.
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Map File: 513_BAAQMD_Cancer_A-P_2021-0614

Vollmar NATURAL LANDS CONSULTING









PM2.5 Concentration Maps

1820 Ogden Drive
Burlingame, San Mateo County, California

Legend

⊙ Project Site

N
W E
S

1:24,000

1 inch = 2,000 feet at letter layout

0 0.125 0.25 0.5 Miles

0 0.25 0.5 1 Kilometers

Vollmar NATURAL LANDS CONSULTING

Map Produced by Vollmar Natural Lands Consulting.
Cartography by E. Smith, June 2021.
Data Sources: Bay Area Air Quality Management District, 2021.
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Map File: 513_BAAQMD_PM25_A-P_2021-0614

Attachment C

Climate Action Plan Consistency Checklist

City of Burlingame Climate Action Plan
Consistency Checklist for New Development

The purpose of this Checklist is to ensure that development projects comply with Burlingame's 2030 Climate Action Plan Update (CAP) and may be eligible for streamlining the greenhouse gas (GHG) analysis for California Environmental Quality Act (CEQA) review.

The Checklist applies to projects 10,000 sq. ft. and larger and/or six units or more. To be considered consistent with Burlingame's CAP, projects must comply with the land use designations in Burlingame's General Plan and implement at minimum the required CAP measures listed in the Checklist. Projects may then rely on the City's CAP and related environmental review for the impact analysis of GHG emissions, as allowable under CEQA.

The Checklist contains measures from the CAP that pertain to new development. Each measure is noted as either required or voluntary. Required measures are mandated by local or state ordinances. The voluntary measures represent goals of the City and projects are encouraged to address them.

Proposed project that require a General Plan amendment or rezoning and/or do not address the required measures may have to prepare a project-specific GHG analysis and identify appropriate mitigation measures.

Burlingame's Climate Action Plan: https://www.burlingame.org/departments/sustainability/
Burlingame's General Plan: https://www.burlingame.org/departments/planning/
Burlingame's Reach Codes: www.burlingame.org/reachcode

For questions regarding this Checklist or the CAP, please contact Sigalle Michael, Sustainability Coordinator at smichael@burlingame.org

Contact Information

Project Name: 1814-1820 Ogden Drive, Burlingame, CA 94010

Property Address: 1814-1820 Ogden Drive, Burlingame, CA 94010

If a consultant was used to complete this checklist, please provide their contact information:

Consultant Name & Company: LDP Architecture

Consultant Phone & Email: 415-777-0561; info@levydesignpartners.com

Project Information

Proposed land use (residential, commercial, industrial, mixed use, or other):Residential

Brief project description: New construction of a privately funded 6-story condominium building under Tier 3 development standards for the North Burlingame Mixed Use District. Providing 90 residential units with ground floor and basement parking, on-site inclusionary housing and community benefits. The community benefits include affordable housing, a public plaza, and utilizing renewable energy source.

Project size (sq. ft. and/or unit size): Lot Size: 33,336 SF

Is the proposed project seeking a General Plan amendment or rezoning? ❑ Yes ■ No

Climate Action Plan Measure	Project Compliance
REQUIRED MEASURES	
Green Building Practices and Standards (CAP Measure 11): Support, enforce, and expedite green building practices and standards. Burlingame's reach codes: www.burlingame.org/reachcode	**Required Measure** Does the project comply with the City's green building requirements in the reach codes? ■ Yes ❑ No Will the project request any exceptions? If so, briefly explain.
Alternatively-Powered Residential Water Heaters (CAP Measure 15): Support transition from traditional to solar and electrically powered water heaters. Burlingame's reach codes: www.burlingame.org/reachcode	**Required Measure** Does the project include a solar or electrically powered water heater as required in the reach code? ■ Yes ❑ No
Solar Power (CAP Measure 14): Encourage installation of photovoltaic systems. Burlingame's reach codes: www.burlingame.org/reachcode	**Required Measure** Does the project include a photovoltaic system as required by CALGreen and/or the City's reach code? ❑ Yes ■ No The City deemed this project complete prior to the REACH code effective date (10/16/20) therefore this project is not subject to the REACH code requirements.
Electric Vehicle Infrastructure and Initiatives (CAP Measure 6): Support the electric vehicle (EV) network by incentivizing use of EVs and installations of charging stations. Burlingame's reach codes: www.burlingame.org/reachcode	**Required Measure** Does the project comply with the City's EV charging requirements in the reach code? ■ Yes ❑ No List total number and type of EV chargers to be installed: 6
Zero Waste (CAP Measure 18): Reduce organic and recyclable materials going to the landfill and achieve the City's diversion goals.	**Required Measure** Does the project include facilities for collecting recycling and composting? ■ Yes ❑ No Describe any composting and recycling strategies used in the project; Separate bins for recycle, compost, and refuse are being provided. The building will have a sorted chute system.

Transportation Demand Management (TDM) (CAP Measure 2): The City shall require new multi-unit residential developments of 10 units or more and commercial developments of 10,000 sq. ft. or more to incorporate TDM strategies that reduce trip generation rates below the standard rate published in the latest Institute of Transportation Engineers (ITE) Trip Generation Manual (10th edition), or other reputable source. TDM measures may include but are not limited to: shuttles, carpool, transit incentives, and car and/or bike share programs. Residential projects of 100 units or more and commercial projects of 100,000 sq. ft. or more shall have a designated TDM coordinator and provide a report to city staff annually on the effectiveness of the TDM plan. ▪ GreenTRIP: http://www.transformca.org/landing-page/greentrip ▪ City/County Association of Governments of San Mateo County, http://ccag.ca.gov/programs/transportation-programs/transportation-demand-management/ City of San Francisco TDM Tool, https://sfplanning.org/resource/transportation-demand-management-tdm-tool	1. Will the project have a TDM program that meets the 20% reduction in trip generation rates when compared to standard ITE trip generation rates? ■ Yes ❑ No 2. Briefly describe the project's TDM Plan: A separate TDM Plan has been submitted.
Parking Pricing, Parking Requirements, and Creative Parking Approaches (CAP Measure 7): Implement parking reduction strategies including, but not limited to, parking lifts, shared parking, and unbundling of parking costs.	**Required Measure** Does the project meet the parking requirements in the zoning code or TDM plan as applicable? ■ Yes ❑ No ❑ NA Describe any parking reduction strategies used in the project: A separate TDM Plan has been submitted.
VOLUNTARY MEASURES	
Peninsula Clean Energy ECO100 (CAP Measure 13): Increase enrollment in PCE's standard option, ECOplus, for 100% GHG free energy; or PCE's premium option, ECO100 for 100% renewable energy. https://www.peninsulacleanenergy.com/opt-up/	**Voluntary Measure** Will the project enroll in PCE? ■ Yes ❑ No Which PCE option, ECOplus or ECO100? ECO 100

Complete Streets (CAP Measure 3): Develop a network of complete streets that support pedestrian and bicycle accessibility.	**Voluntary Measure** Does the project include on-site pedestrian, transit, or cycling improvements, such as enclosed bike storage or employee showers? ■ Yes ❑ No ❑ NA What is the project's walkscore (www.walkscore.com)? Describe any pedestrian/bicycle friendly measures used in the project: The project will be promoting the public realm by providing a public plaza that will be directly accessible from the right-of-way via sidewalk access. This plaza is creating a widening of public realm with bicycle parking and pedestrian seating zones.
Burlingame Shuttle Service (CAP Measure 8): Increase awareness and use of local shuttles. Burlingame shuttle map: https://www.burlingame.org/departments/sustainability/shuttles.php	**Voluntary Measure** Is the project located near a shuttle station? ■ Yes ❑ No How will shuttle information be distributed to occupants? A separate TDM Plan has been submitted; outlining this.
Water Conservation for New Residential Developments (CAP Measure 17): Implement water conservation elements beyond CALGreen requirements, such as efficient landscaping and Energy Star rated appliances. Water Conservation Resources, https://www.burlingame.org/departments/public_works/water_conservation/index.php	**Voluntary Measure** Does the project use Energy Star® rated dishwashers and clothes washers or go beyond CALGreen? ■ Yes ❑ No ❑ NA Describe any water conservation elements in the project: The project will be providing drought tolerant native plantings, that will use drip irrigation, and the project will use water sense plumbing fixtures.
Construction Best Management Practices (CAP Measure 10): Require projects to implement the Air District's Best Practices for Construction; and use electrically-powered construction equipment as available and feasible.	**Voluntary Measure** Will the project use any electric off-road construction equipment? ■ Yes ❑ No

	If yes, describe what electric construction equipment will be used: TBD
Increase the Public Tree Population (CAP Measure 20): Increase the number of trees in Burlingame.	**<u>Voluntary Measure</u>** Will the project be adding new trees? ■ Yes ❑ No ❑ NA How many trees will be planted in the public right-of-way (like sidewalks)? Please see the Landscape Plans as they are identified How many trees will be planted on private property? Please see the Landscape Plans as they are identified