BLOCK 8 AIR QUALITY AND GREENHOUSE GAS EMISSION ASSESSMENT

San José, California

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Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the proposed office-retail mixed-use development located at the intersection of South Market Street and West San Carlos Street in San José, California. The air quality impacts from this project would be associated with construction of the new buildings and infrastructure, and operation of the project. Air pollutants and GHG emissions associated with construction and operation of the project were predicted using models. In addition, the potential project health risk impacts (includes construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The project proposes to demolish and remove the existing surface parking lot and construct a 19-story (up to 295-foot-tall with mechanical parapet) office mixed-use building. The building would include approximately 16,375 square feet (sf) of commercial uses on the ground floor, 627,210 sf of office uses on the first floor and floors 8-19, and parking on floors 2-7 with two levels of below grade parking. Floor 17 would include an approximately 12,600-square foot "sky garden," which would consist of landscaping, seating and furniture and areas for casual dining and socializing. Similarly, floor 19 would include an approximately 10,550-square foot sky garden programmed the same way. An approximately 430 square foot outdoor amenity space is proposed on floor 8. The design of the upper floors of the proposed building would extend over the existing right-of-way and the project requires an easement from the City.

Vehicle access to Block 8 would be provided via a driveway on South Market Street. The building would include up to 1,333 vehicle parking spaces totaling 465,930 sf.[2] There would also be 162,298 sf for back of house (BOH) operations, mechanical, electrical, plumbing (MEP), and circulation. A total of 154 long- and short-term bicycle parking spaces for the commercial and office uses would be provided on-site. Pedestrian access to the site would continue to be provided via sidewalks on South Market Street, West San Carlos Street, and South First Street.

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

[1] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

[2] Note that at the time of the analysis 1,333 parking spaces were proposed in a 465,930 sf parking garage. Since completion of this report, the number of parking spaces has increased by 235 spaces for a total of 1,568 parking spaces, but the parking garage square footage would stay the same. The slight increase in the parking spaces would result in similar or slightly increased operational criteria pollutant and GHG emissions. However, even with this change, the conclusions of the report and the mitigation measures described would remain the same.

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

Regulatory Agencies

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled

vehicles.[3] The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.[4] The detailed community risk modeling methodology used in this assessment is contained in *Attachment 1*.

San José Envision 2040 General Plan

The San José Envision 2040 General Plan includes goals, policies, and actions to reduce exposure of the City's sensitive population to exposure of air pollution and toxic air contaminants or TACs. The following goals, policies, and actions are applicable to the proposed project and this assessment:

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize emissions from new development.

Applicable Policies – Air Pollutant Emission Reduction

MS-10.1 Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.

MS-10.2 Consider the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.

MS-10.3 Promote the expansion and improvement of public transportation services and facilities, where appropriate, to both encourage energy conservation and reduce air pollution.

Applicable Goals – Toxic Air Contaminants

Goal MS-11 Minimize exposure of people to air pollution and toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

Applicable Policies – Toxic Air Contaminants

[3] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: November 21, 2014.
[4] Bay Area Air Quality Management District. 2017. *BAAQMD CEQA Air Quality Guidelines.* May.

MS-11.2 For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.

MS-11.5 Encourage the use of pollution absorbing trees and vegetation in buffer areas between substantial sources of TACs and sensitive land uses.

Actions – Toxic Air Contaminants

MS-11.7 Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.

MS-11.8 For new projects that generate truck traffic, require signage which reminds drivers that the State truck idling law limits truck idling to five minutes.

Downtown Strategy 2040 Plan

The San José Downtown Strategy (DTS) 2040 Plan is an urban design plan that guides development activities planned within the Downtown area. This strategy would increase the amount of new commercial office by an additional three million -sf (approximately 10,000 jobs with the new total being 14.2 million -sf of commercial by the year 2040. The residential capacity would be increased up to 4,360 units. The amount of new retail development (1.4 million sq. ft.) and hotel room (3,600 rooms) capacities of the Downtown Strategy 2000 would be maintained. The integrated Final Environmental Impact Report was published December 2018.

The DTS identified less-than-significant construction period emissions if development projects are in conformance with 2017 BAAQMD CEQA Guidelines, GP Policy MS-13.1, and current City requirements that include various levels of construction emissions control measures. All projects are required to implement the following control measures:

City requirements, all projects will be required to implement the following control measures:

- 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 mph.

- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 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 visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Future projects developed under the DTS that incorporate these measures and are below the screening levels would not result in a significant impact related to construction emissions of regional criteria pollutants. Projects that exceed the screening levels would be required to complete additional project level analysis of construction-related emissions of criteria pollutants and may require additional measures to ensure that construction emissions would not exceed the threshold for average daily emissions. ***The proposed project exceeds these screening thresholds, and therefore, an analysis of construction emissions was conducted.***

Operational emissions of regional criteria air pollutants with measures included to reduce emissions under the DTS were identified as significant and unavoidable. To reduce operational emissions associated with vehicle travel, future development will be required to implement a transportation demand management (TDM) program, consistent with the Downtown Transportation Plan.

The TDM programs may incorporate, but would not be limited to, the following Transportation Control Measures (TCMs):

- Rideshare Measures:
- Implement carpool/vanpool program (e.g., carpool ride matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.)
- Transit Measures:
- Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.
- Design and locate buildings to facilitate transit access (e.g., locate building entrances near transit stops, eliminate building setbacks, etc.)
- Services Measures:
- Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc.;

- Provide on-site child care or contribute to off-site childcare within walking distance.
- Shuttle Measures:
- Establish mid-day shuttle service from work site to food service establishments/commercial areas;
- Provide shuttle service to transit stations/multimodal centers
- Parking Measures:
- Provide preferential parking (e.g., near building entrance, sheltered area, etc.) for carpool and vanpool vehicles;
- Implement parking fees for single occupancy vehicle commuters;
- Implement parking cash-out program for employees (i.e., non-driving employees receive transportation allowance equivalent to value of subsidized parking);
- Bicycle and Pedestrian Measures:
- Provide secure, weather-protected bicycle parking for employees;
- Provide safe, direct access for bicyclists to adjacent bicycle routes;
- Provide showers and lockers for employees bicycling or walking to work;
- Provide secure short-term bicycle parking for retail customers or non-commute trips;
- Provide direct, safe, attractive pedestrian access from Planning Area to transit stops and adjacent development;
- Other Measures:
- Implement compressed work week schedule (e.g., 4 days/40 hours, 9 days/80 hours);
- Implement home-based telecommuting program.

During project-level supplemental review of future individual development projects, the measures will be evaluated for consistency with the Downtown Strategy 2040 and General Plan policies. All feasible and applicable measures will be required as part of project design or as conditions of approval.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. The closest sensitive receptors to the project site are adult senior apartments at 200 South Market Street (Casa Del Pueblo), which are adjacent to the project's northern boundary. The closest residential building that could include all age groups (i.e. infants, children, and adults) is the St. Claire Apartments at 311 S. First Street above Original Joe's. Additional residences are planned or under construction near the project site including the student housing project at 80 East San Carlos Street. This project would not introduce new sensitive receptors to the area.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds, which were used in this analysis and are summarized in Table 1.

Table 1. BAAQMD Air Quality Exceedance Thresholds

Criteria Air Pollutant	**Construction Thresholds**	**Operational Thresholds**	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	*Evaluated in DSP Strategy DEIR*	
NO_x	54		
PM_{10}	82 (Exhaust)		
$PM_{2.5}$	54 (Exhaust)		
CO	Not Applicable		
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	*Evaluated in DSP Strategy DEIR*		

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.

*BAAQMD does not have a recommended post-2020 GHG threshold.

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: 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?

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the site assuming full build-out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod along with construction inputs are included as *Attachment 2*.

Land Use Inputs

The project is unique in that it includes rentable office space, common interior areas, retail space, and outdoor amenity spaces on several floors. The proposed project land uses were input into CalEEMod as follows:

- 627,210 sf entered as "General Office Building" on 1.48 acres
- 1,333 spaces and 628,228 sf[5] entered as "Enclosed Parking with Elevator"
- 16,375 sf entered as "Strip Mall" to represent the proposed retail

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size and acreage. Inputs to CalEEMod were developed that take into account demolition of the on-site uses, excavation, and the tall building construction. CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were based on information provided by the project applicant.

Construction phases include demolition, site preparation, shoring, grading/mass excavation, trenching/foundation, exterior building construction, paving/hardscape and architectural coatings.

[5] The 628,228 sf includes 465,930 sf for the parking garage and 162,298 sf for the BOH, MEP, and circulation.

For demolition, it was estimated that 725 tons of pavement materials would be demolished and hauled from the site. For grading, 80,000 cubic yards of material would be excavated and hauled from the site. Cement truck trips were estimated using CalEEMod and there would be approximately 10,300 vendor trips.

The construction equipment worksheet provided included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was provided. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. The construction schedule assumed that the earliest possible start date would be February 2021 and the project would be built out over a period of approximately 35 months, or 745 construction workdays. The first earliest operational year was assumed to be 2024.

CalEEMod predicted the amount of worker traffic, vendor trips and haul trips. Haul trips were computed by CalEEMod based on the amount of demolition material and excavated dirt that would be hauled from the site. CalEEMod assumes haul trip lengths of 20 miles

Summary of Computed Construction Period Emissions

Annual emissions were predicted using CalEEMod and the estimated 745 construction workdays are reported in Table 2. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 2 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 2, predicted construction period emissions would not exceed the BAAQMD significance thresholds. Additionally, the DTS control measures requires to implement best management practices to control dust and exhaust during construction. Therefore, air pollutant emissions from the project would be further reduced.

Table 2. Construction Period Emissions

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total construction emissions (tons)	5.4 tons	18.6 tons	0.53 tons	0.50 tons
Average daily emissions (pounds)[1]	**14.5 lbs./day**	**50.0 lbs./day**	**1.4 lbs./day**	**1.3 lbs./day**
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

[1]Assumes 745 workdays.

Operational Period Emissions

The impact of operational emissions was addressed in the DSP DEIR and found to be significant and unavoidable. Emissions from the project were computed for information purposes. Operational air emissions from the project would be generated primarily from autos driven by future employees, customers, and vendors. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. This analysis assumed that the project would be fully built out and operating in the year 2024.

Operational Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model. The daily trip rate accounted for the employment – retail internal reduction and the location-based reduction.[6] For each land use type, the forecasted daily trip rate with trip reductions applied was divided by the quantity of that land use to identify the weekday daily trip rate. The Saturday and Sunday trip rates were assumed to be the weekday rate adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate. The default trip lengths and trip types specified by CalEEMod were used. Note that the project may implement a transportation demand management (TDM) program; however, the effects of a TDM program were not included in the operational analysis.

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The electricity produced emission rate was modified in CalEEMod. CalEEMod has a default emission factor of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. PG&E published 2015 emissions rates for 2009 through 2015, which showed the emission rate for delivered electricity had been reduced to 405 pounds CO_2 per megawatt of electricity delivered.[7] The projected GHG intensity factor for the year 2020 is 290 pounds of CO_2 per megawatt of electricity produced, which was input to the model.[8] The project would use

[6] Hexagon Transportation Consultants, Inc., 2019, *Block 8 Mixed-Use Development Local Transportation Analysis Memorandum.* November.
[7] PG&E 2017. Climate Change. See http://www.pgecorp.com/corp_responsibility/reports/2017/en02_climate_change.html accessed March 13, 2018.
[8] PG&E. 2015. Greenhouse Gas Emission Factors: Guidance for PG&E Customers See: https://www.ca-ilg.org/sites/main/files/file-attachments/ghg_emission_factor_guidance.pdf

electricity supplied by San José Clean Energy (SJCE) that will be 100-percent carbon free by 2021 before the project becomes operational.[9]

Project Generators

The project would include one emergency generator on the first-level of the project. The generator would be powered by diesel engines and its preliminary size would be 1,000 kilowatts (kW). This generator would be tested periodically and power the buildings in the event of a power failure. For modeling purposes, it was assumed that the generator would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use was changed to 100% aerobic conditions to represent wastewater treatment plant conditions.

Existing Uses

The existing land use is a parking lot, so no existing use model was computed.

Summary of Computed Operational Emissions

As shown in Table 3, operational emissions would not exceed the BAAQMD significance thresholds.

Table 3. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2024 Project Operational Emissions (*tons/year*)	3.7 tons	3.4 tons	3.0 tons	0.8 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2024 Project Operational Emissions (*lbs/day*)[1]	20.1 lbs.	18.4 lbs.	16.4 lbs.	4.7 lbs.
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*

Notes: [1] Assumes 365-day operation.

[9] Kerrie Romanow and Rosalynn Hughey, 2019. *Building reach Code for New Construction Memorandum*. August. Web: https://sanJosé .legistar.com/LegislationDetail.aspx?ID=4090015&GUID=278596A7-1A2B-4248-B794-7A34E2279E85

Impact AIR-2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e. on-site construction and truck hauling emissions) and operation (i.e. emergency diesel generators and project traffic).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. Project operation would increase traffic in the area that would increase the air pollutant and TAC emissions. In addition, the project would include the installation of emergency generators powered by diesel engines that would also have emissions of TACs and air pollutants.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC was also assessed in terms of the cumulative risk that includes the project contribution. Community risk impacts were addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the modeling of TAC and $PM_{2.5}$ emissions, dispersion modeling and cancer risk computations.

Community Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Although it was concluded in the previous sections (see Table 2) that construction exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations, construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[10] This assessment included dispersion modeling to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages of 0.5070 tons (1,014 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.0810 tons (162 pounds) for the overall construction period.

[10] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[11] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions. Combustion equipment exhaust emissions were modeled as a series of point sources with a nine-foot release height (construction equipment exhaust stack height) placed at 20-feet (6-meter) intervals throughout the construction site. This resulted in 158 individual point sources being used to represent mobile equipment DPM exhaust emissions in the construction area, with DPM emissions occurring throughout the project construction site. For dispersion modeling, it was assumed that traffic emissions from on-road vehicles traveling at or near the site would occur at the construction site. Those emissions were included in the point-source modeling along with construction equipment exhaust emissions. Since there are several tall buildings adjacent to, or near the project construction site, the effects of building downwash on the construction equipment exhaust plumes were also included in the modeling analysis.

The locations of the point sources used for the modeling and the buildings that were evaluated for potential downwash effects are identified in Figure 1. Emissions from vehicle travel on- and off-site were distributed among the point sources throughout the site. Construction fugitive $PM_{2.5}$ dust emissions were modeled as an area source encompassing the entire construction site with a near ground level release height of seven feet (two meters). Construction emissions were modeled as occurring daily between 7 a.m. to 5 p.m. per the project applicant's construction schedule.

The modeling used a 5-year meteorological data set (2006-2010) from the San José Airport prepared for use with the AERMOD model by the BAAQMD. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2021-2023 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 15 feet (4.5 meters), 20 feet (6.1 meters), 25 feet (7.6 meters), 30 feet (9.1 meters), and 35 feet (10.7 meters) were used to represent the breathing heights of residents in nearby multi-story mixed-used residential developments. These breathing heights account for residents occupying the second, third, and fourth floors.

The cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations, as described in *Attachment 1*. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant and adult exposures were assumed to occur at all residences (except for the senior housing at Casa Del Pueblo and student housing where only adult exposure was assumed) during the entire construction period.

Figure 1 shows the locations where the maximum-modeled DPM and $PM_{2.5}$ concentrations from construction activities occurred. The maximum increased cancer risk at the location of the maximally exposed individual (MEI) was calculated using the annual modeled DPM concentration and using BAAQMD recommended methods for calculation health risks. The maximum

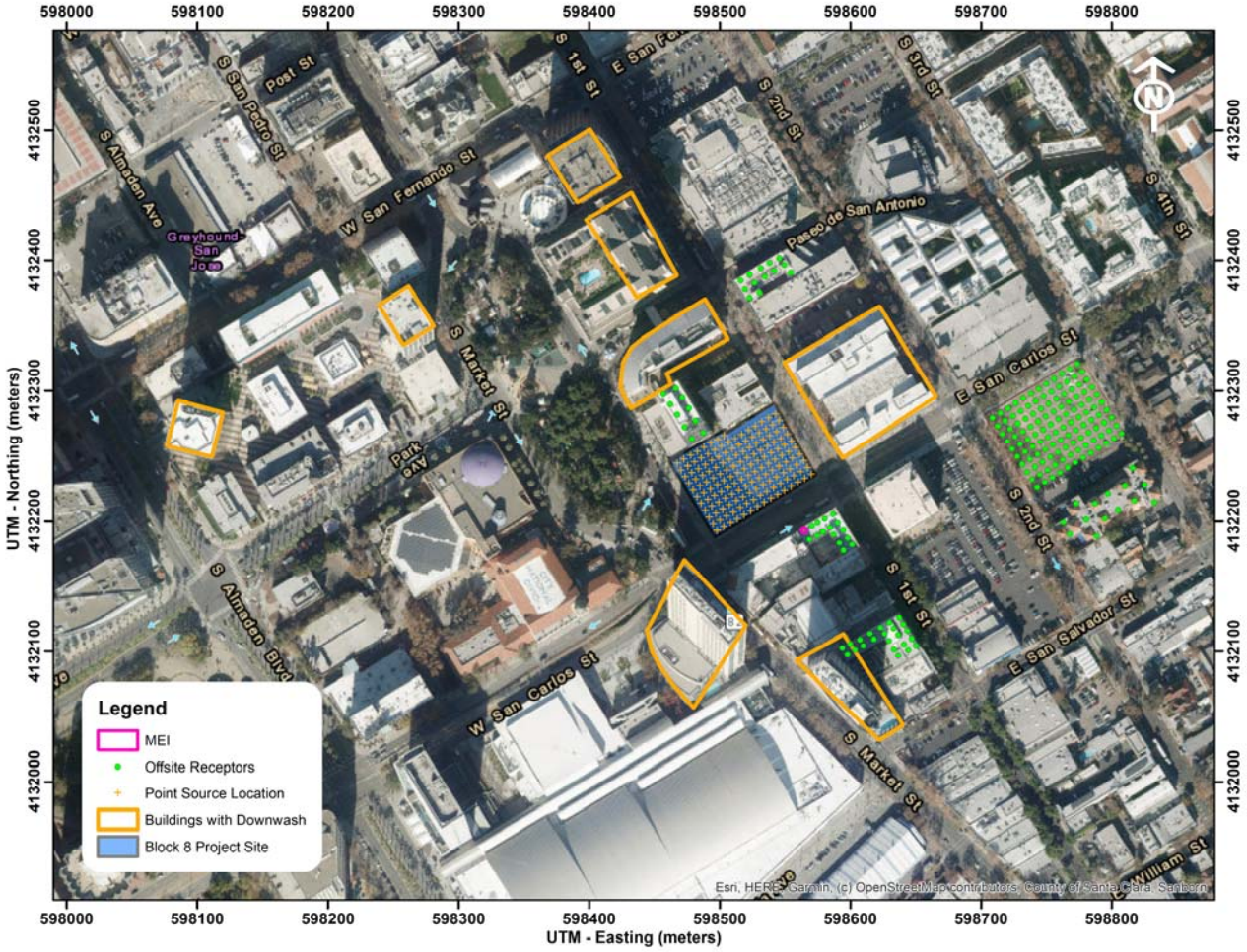
[11] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.

concentrations occurred at the apartments immediately south of the project site across West San Carlos Street at the St. Claire Apartments on the third floor (20 feet breathing height). *Attachment 3* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations. Table 4 lists the community risks from construction at the MEI with *Mitigation Measure AQ-1*.

Table 4. Construction Risk Impacts at the Offsite Residential MEI

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction			
Unmitigated	**132.0 (infant)**	0.51	0.10
Mitigated	7.1 (infant)	0.05	0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?			
Unmitigated	***Yes***	***Yes***	*No*
Mitigated	*No*	*No*	*No*

Figure 1. Project Construction Site and Locations of Off-Site Sensitive Receptors and Maximum TAC Impacts



Community Risks from Project Operation – Traffic and Generators

Operation of the project would have long-term emissions from stationary sources (i.e., traffic) and stationary sources (i.e., traffic). While these emissions would not be as intensive at or near the site as construction activity, they would contribute to long-term effects to sensitive receptors.

Operational Traffic

BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways may have a potentially significant effect on sensitive receptors. Two adjustments were made to the cancer risk predictions made by this calculator: (1) adjustment for latest vehicle emissions rates predicted using EMFAC2014 and (2) adjustment of cancer risk to reflect new Office of Environmental Health Hazard Assessment (OEHHA) guidance (see *Attachment 1*).

The calculator uses EMFAC2011 emission rates for the year 2014. However, an updated version of the emissions factor model, EMFAC2014, is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for 2018. The predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.

The project would generate 4,389 net new vehicle trips per day.[12] The effect of local traffic generated by the project was computed through use of the BAAQMD's *Roadway Screening Analysis Calculator* with input of the project's daily traffic on West San Carlos, South Market Street, and South First Street. New project trips forecasted by the traffic consultants for each of the roadways were input into the calculator by taking the average peak hour volume and multiplying by ten to obtain the average daily traffic volume (ADT). The cancer risk was adjusted for exposure duration since the MEI would only be exposed to the increased traffic impacts once the project would be operational. The calculator computes lifetime cancer risk; however, construction, which has a much greater impact, would occur during the first 2 to 3 years. Therefore, the increased cancer risk exposure duration for operational impacts was adjusted for 27 years of exposure. The distance from each roadway was used and the contribution of each roadway was then summed.

At the MEI (i.e. sensitive receptors at St. Claire Apartments), the project traffic would result in an increase of cancer risk by 1.6 per million and annual $PM_{2.5}$ concentrations of 0.08 $\mu g/m^3$. BAAQMD has found that non-cancer hazards from all local roadways would be below 0.03. These risk levels are below the BAAQMD thresholds of greater than 10 chances per million, 0.3 $\mu g/m^3$, and 1.0. Note this is a screening method and had refined modeling been conducted, lower impacts would likely have been identified.

[12] Hexagon Transportation Consultants, Inc., 2019, *Block 8 Mixed-Use Development Local Transportation Analysis Memorandum.* November.

Operational Emergency Generator Modeling

The project would include a 1,000-kW emergency generator located on the first-floor in the mechanical areas of the building. The exact size of the generator is unknown so it was assumed that the emergency generator would be powered by an approximately 1,340 horsepower diesel engine.

Operation of a diesel generator would be a source of TAC emissions. The generator would be operated for testing and maintenance purposes, with a maximum of 50 hours per year of non-emergency operation under normal conditions. During testing periods, the engine would typically be run for less than one hour under light engine loads. The generator engine would be required to meet U.S. EPA emission standards and consume commercially available California low sulfur diesel fuel. The emissions from the operation of the generator were calculated using the CalEEMod model.

This diesel engine would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM) and require permits from the BAAQMD, since it will be equipped with an engine larger than 50 hp. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics (TBACT) and pass the toxic risk screening level of less than ten in a million. The risk assessment would be prepared by BAAQMD. Depending on results, BAAQMD would set limits for DPM emissions (e.g., more restricted engine operation periods). Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality community risk impact.

To obtain an estimate of potential cancer risks and $PM_{2.5}$ impacts from operation of the emergency generators the U.S. EPA AERMOD dispersion model was used to calculate the maximum annual DPM concentration at off-site sensitive receptor locations (nearby residences). The same receptors and breathing heights used in the construction dispersion modeling were used for the generator discern model. Additionally, the same building downwash and BAAQMD San José Airport meteorological data was used. Stack parameters (stack height, exhaust flow rate, and exhaust gas temperature) for modeling the generators was based on BAAQMD default parameters for emergency generators.[13] Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator testing could occur at any time of the day.

To calculate the increased cancer risk from the generators at the MEI, the cancer risks were also adjusted for exposure duration to account for the MEI being exposed to construction for the first three years of the 30-year period. The exposure duration was adjusted for 27 years of exposure. Based on this duration, the increased cancer risk from the generators would be 3.4 per million. The maximum annual $PM_{2.5}$ concentration would be less than 0.01 $\mu g/m^3$ and the HI value would be less than 0.01. The emissions and health risk calculations for the proposed generators are included in *Attachment 3*.

[13] The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

Summary of Project-Related Community Risks at MEI

The cumulative risk impacts from a project is the combination of construction and operation sources. These sources include on-site construction activity, construction truck hauling, project generators, and increased traffic from the project. The project impact is computed by adding the construction cancer risk for an infant to the lifetime cancer risk for the project operational conditions for the roadway at the MEI over a 30-year period. The project MEI is identified as the sensitive receptor that is most impacted by the project's construction and operation.

For this project, the sensitive receptor identified in Figure 1 as the construction MEI is also the project MEI. At this location, the MEI would be exposed to three years of construction cancer risks and 27 years of operational (includes traffic and emergency backup generators) cancer risks. The cancer risks from construction and operation of the project were summed together. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration, and HI risks are not additive but based on an annual maximum risk for the entirety of the project.

The unmitigated maximum cancer risks, unmitigated would exceed the BAAQMD single-source threshold of greater than 10.0 per million. However, with *Mitigation Measure AQ-1 and AQ-2* the mitigated increased project cancer risk would not exceed the single-source threshold. The mitigated annual $PM_{2.5}$ concentrations, and non-cancer hazards from construction and operation activities would be below the single-source significance thresholds as seen in Table 5

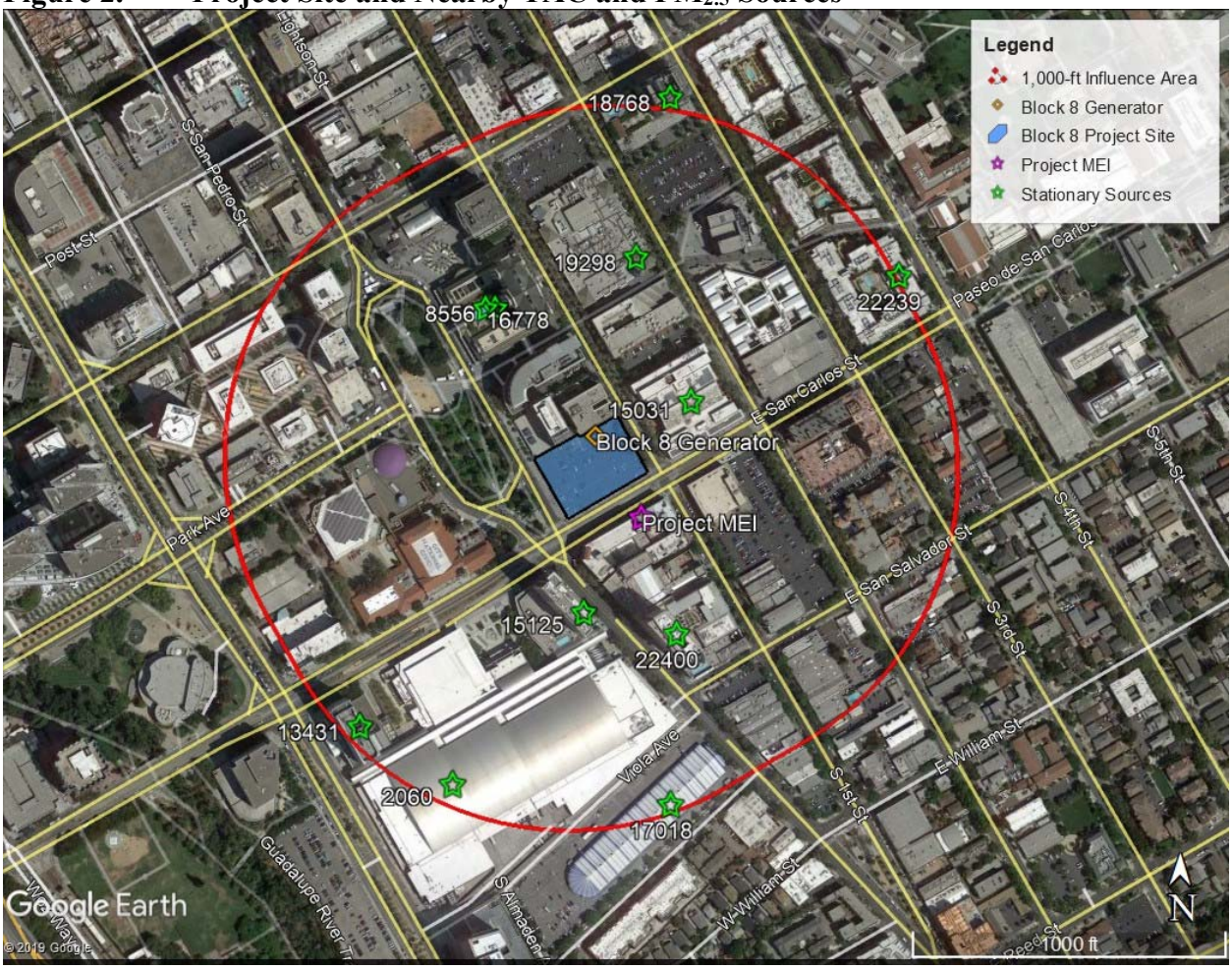
Table 5. Construction and Operation Risk Impacts at the Offsite Project MEI

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction (Years 0-3)			
Unmitigated	**134.4 (infant)**	0.51	0.10
Mitigated	7.1 (infant)	0.05	0.01
Project Traffic (Years 4-30)	1.6	0.08	<0.03
Project Generators (Years 4-30)			
Unmitigated	3.4	<0.01	<0.01
Mitigated	0.5	-	-
Unmitigated Total/Maximum Project (Years 0-30)	**139.4**	**0.60**	0.14
Mitigated Total/Maximum Project (Years 0-30)	9.2	0.14	0.05
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?			
Unmitigated/Mitigated	***Yes**/No*	***Yes**/No*	*No/No*

Cumulative Community Risks of all TAC Sources at Project MEI

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site (i.e. influence area). These sources include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic San Carlos Street and South Market Street would exceed 10,000 vehicles per day. Other nearby streets are assumed to have less than 10,000 vehicles per day. A review of BAAQMD's stationary source Google Earth map tool identified 11 stationary sources with the potential to affect the MEI. In addition, there are development projects whose construction would contribute to the cumulative risk. The risk impacts from these developments are included within the analysis. Figure 2 shows the location of the sources affecting the MEI. Community risk impacts from these sources upon the MEI reported in Table 6. Details of the modeling and community risk calculations are included in *Attachment 4.*

Figure 2. Project Site and Nearby TAC and $PM_{2.5}$ Sources



Local Roadways –West San Carlos Street & South Market Street

The same *Roadway Screening Analysis Calculator* used in the project traffic screening calculations was used for the cumulative risk analysis. The only two roadways with and ADT over 10,000 vehicles per day were West San Carlos Street and South Market Street. This was based on the peak-hour traffic volumes included in the project's traffic analysis for background plus project conditions.[14] The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT. Estimated lifetime cancer risks and annual $PM_{2.5}$ concentration values for the roadways are listed in Table 6. Note that BAAQMD has found that non-cancer hazards from all local roadways would be well below the BAAQMD thresholds. Chronic or acute HI for the roadway would be less than 0.03.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identifies the location of nearby stationary sources and their estimated risk and hazard impacts. In addition, *BAAQMD's Permitted Stationary Sources 2017* GIS website[15] was used to locate updated nearby permitted stationary sources. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. BAAQMD provided updated emissions data.[16] Those data were input into BAAQMD's *Risk and Hazards Emissions Screening Calculator* which computes the cancer risk, annual $PM_{2.5}$ concentrations, and HI using adjustments to account for new OEHHA guidance and distance from the sources. Note that the BAAQMD's *Risk and Hazards Emissions Screening Calculator* uses meters instead of feet to measure distance.

Out of the eleven sources identified, ten were diesel generators. The Owl Energy Resources stationary source (Plant #16778) is a cogeneration system with natural gas engines. The emissions data for all these stationary sources were provided by BAAQMD, entered BAAQMD's *Risk and Hazard Emissions Screening Calculator*, and adjusted for distance based on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines* or *Distance Adjustment Multiplier Tool for Generic Engines* when appropriate. Concentration levels and community risk impacts from these sources upon the project are reported in Table 6.

Construction Risk Impacts from Nearby Developments

Within the 1,000-ft influence area, there are three developments that are planning approved or under construction.[17] The developments under construction include the office development at 200 Park Avenue (File Number H18-045) and the Parkside Hall/Museum Place office development at 180 Park Avenue (File Number H16-024). The development that has been approved includes Tribute Hotel at 211 South 1st Street (File Number HP17-003 & H16-042).

[14] Hexagon Transportation Consultants, Inc., 2019, *Block 8 Mixed-Use Development Local Transportation Analysis Memorandum.* November.
[15] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65
[16] Correspondence with Areana Flores, BAAQMD, 9 October 2019.
[17] Developments under planning review are not included within the cumulative analysis since it is speculative to include construction emissions from projects that may or may not be approved.

Illingworth & Rodkin, Inc. had analyzed the construction risk impacts for the Tribute Hotel in a previous report.[18] Emissions from that report were used and re-calculated at the location of the Block 8 project MEI. For the 200 Park office project, CalEEMod emissions included in the City of San José project documents for this project were used.[19] For the Museum Place project, CalEEMod was used to model the office and retail development. Default CalEEMod inputs for construction were used.[20] For both 200 Park and Museum Place, unmitigated CalEEMod emissions were used because neither project was subject to construction-related exhaust or fugitive dust mitigation measures.

Both the 200 Park office project and Museum Place project were molded as two area sources, one for exhaust emissions and one for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area sources. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area sources. The modeling used a 5-year meteorological data set (2006-2010) from the San José International Airport prepared for use with the AERMOD model by BAAQMD. A receptor height of 9.1 meters (30 feet) was used to represent the breathing height of the Block 8 MEI. Construction emissions were modeled as occurring daily between 7 a.m. and 4 p.m., when the majority of construction activity would occur. Risk results are listed in Table 6.

[18] Illingworth & Rodkin, Inc., 2019. *San* José *Tribute Hotel Air Quality Assessment*. April.
[19] City of San José, 2019. 200 Park Avenue Office project CalEEMod Output. October Web: https://www.sanJosé ca.gov/Home/ShowDocument?id=43171
[20] Note that Illingworth & Rodkin, Inc. had previously analyzed this project in 2016 but since that report the project had changed and the CalEEMod model used in that previous report do not align with the current project description for Museum Place. Therefore, a new CalEEMod model based on defaults was used.

Summary of Cumulative Risks at MEI

Table 6 reports both the project and cumulative community risk impacts. Without mitigation, the project would have a *significant* impact with respect to community risk caused by project construction and operation activities. The maximum cancer risk and $PM_{2.5}$ concentrations are above the single-source thresholds of 10.0 per million for cancer risk and 0.3 $\mu g/m^3$ for $PM_{2.5}$ concentrations. *Mitigation Measures AQ-1 and AQ-2 would reduce these levels to a less-than-significant impact.* The mitigated cumulative community risks would not exceed their respective BAAQMD cumulative-source thresholds. Therefore, the project would not contribute to a cumulative risk impact

Table 6. Cumulative Community Risk Impacts from Combined TAC Sources at MEI

Source	Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Project Impacts			
Unmitigated Total/Maximum Project (Years 0-30)	**139.4**	**0.60**	0.14
Mitigated Total/Maximum Project (Years 0-30)	9.2	0.14	0.05
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold? Unmitigated	***Yes***	***Yes***	*No*
Mitigated	*No*	*No*	*No*
Cumulative Sources			
West San Carlos Street, ADT 13,020 (MEI at 40 feet south)	4.8	0.18	<0.03
South Market Street, ADT 17,580 (MET at 270 feet east)	2.6	0.09	<0.03
US General Services Administration (Plant #15031, Generator)	0.3	0.06	<0.01
San José Marriott Hotel (Plant #15125, Generator)	0.3	0.03	<0.01
360 Residences c/o Gateway Nathaniel Inc (Plant #22400, Generator)	<0.1	-	-
DataPipe Inc (Plant #19298, Generator)	5.0	0.01	<0.01
G&K Management (Plant #22239, Generator)	0.1	<0.01	<0.01
Owl Energy Resources Inc (Plant #16778, Cogeneration System)	2.8	<0.01	<0.01
Fairmont Hotel, San José (Plant #8556, Generator)	0.8	0.04	<0.01
San José Hilton & Towers (Plant #13431, Generator)	0.3	<0.01	<0.01
Dept of Convention & Cultural Affairs-San José (Plant #2060, Generator)	1.4	0.08	<0.01
San José Redevelopment Agency (Plant #17018, Generator)	<0.1	<0.01	-
88 Master Association (Plant #18768, Generator)	0.1	<0.01	<0.01
Tribute Hotel Mitigated Construction Emissions	0.9	<0.01	<0.01
Museum Place Unmitigated Construction Emissions	2.2	0.01	0.01
200 Park Construction Unmitigated Emissions	0.6	<0.01	<0.01
Combined Sources *Unmitigated*	**<161.8 (infant)**	**<1.17**	<0.32
Mitigated	<31.6 (infant)	<0.71	<0.23
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Exceed Threshold? Unmitigated	***Yes***	***Yes***	*No*
Mitigated	*No*	*No*	*No*

Mitigation Measure AQ-1: **Selection of equipment during construction to minimize emissions. Such equipment selection would include the following:**

The project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 93-percent reduction in DPM exhaust emissions or greater. One feasible plan to achieve this reduction would include the following:

- All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 4 engines. Exceptions could be made for equipment that includes CARB-certified Level 3 Diesel Particulate Filters or equivalent. Equipment that is electrically powered or uses non-diesel fuels would also meet this requirement.

- Install electric power during early construction phases to avoid use of diesel generators and compressors.

- Stationary construction cranes (building cranes) shall be powered by electricity.

- A majority or forklifts and aerial lifts used for interior construction shall be electric or propane/natural gas powered.

Effectiveness of Mitigation Measure AQ-1

CalEEMod was used to compute emissions associated with his mitigation measure assuming that all equipment met U.S. EPA Tier 4 finals standards, generators were powered by temporary power line, and cranes were electrified. The computed maximum increased lifetime residential cancer risk from construction, assuming infant exposure, would be 7.1 in one million or less and the maximum annual $PM_{2.5}$ concentration would be reduced to 0.05 $\mu g/m^3$. With the implementation of Mitigation Measure AQ-1, risk levels would not exceed the BAAQMD significance thresholds.

Mitigation Measure AQ-2: Complete a health risk analysis of the proposed Project Generators once location and generator type have been finalized.

Prior to installation of any emergency generator, the project applicant(s) shall submit documentation that demonstrates the equipment includes diesel particulate matter filters that achieve a minimum 85-percent reduction in particulate matter emissions or submit documentation that has been reviewed and approved by the City demonstrating that the project generators will not increase lifetime cancer risk by 10 chances per million, when combined with effects from the project construction and traffic. Significant cancer risk impacts can be avoided by the following measures:

- Placement of the equipment;
- Placement and orientation of the exhaust stacks;
- Application of exhaust controls such as diesel particulate matter filters that reduce DPM by 85 percent; and/or
- Limitation to the operation hours to less than 50 hours per year.

Effectiveness of Mitigation Measure AQ-2

Assuming that the generator is equipped with diesel particulate matter filters that achieve 85-percent reduction in particulate matter emissions (CARB Level 3), incremental project increased cancer risks from generators would be reduced to 0.5 chances per million. In combination with Mitigation Measures AQ-1 and AQ-2, increased cancer risks from project construction and operation, including project traffic, would be reduced to 9.2 chances per million.

Greenhouse Gases

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions

Assembly Bill 32 (AB 32), California Global Warming Solutions Act (2006)

AB 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards

Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

Senate Bill 375, California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

SB 350 Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Executive Order EO-B-30-15 (2015) and SB 32 GHG Reduction Targets

In April 2015, Governor Brown signed Executive Order which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*. While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term

goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit oriented housing;
- Develop walkable and bikable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

GHG Emissions

The U.S. EPA reported that in 2017, total gross nationwide GHG emissions were 6,457 MMT. These emissions were lower than peak levels of 7,370 MMT that were emitted in 2008. Relative to 1990 levels, these emissions were CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions[21]. In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was completed for the year 2011, where emissions were 87 MMT [22]. As a point of comparison, statewide emissions were about 444 MMT in 2011.

Climate Smart San José

Climate Smart San José is a plan to reduce air pollution, save water, and create a stronger and healthier community. The City approved goals and milestones in February 2018 to ensure the City can substantially reduce GHG emissions through reaching the following goals and milestones:

[21] CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017*. Available at https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf accessed on Nov. 26, 2019.

[22] BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Available at http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf accessed Nov. 26, 2019.

- All new residential buildings will be Zero Net Carbon Emissions (ZNE) by 2020 and all new commercial buildings will be ZNE by 2030 (Note that ZNE buildings would be all electric with a carbon-free electricity source).
- San José Clean Energy (SJCE) will provide 100-percent carbon-free base power by 2021.
- One gigawatt of solar power will be installed in San José by 2040.
- 61 percent of passenger vehicles will be powered by electricity by 2030.

The California Energy Commission (CEC) updates the California Building Energy Efficiency Standards every three years, in alignment with the California Code of regulations. Title 24 Parts 6 and 11 of the California Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen) address the need for regulations to improve energy efficiency and combat climate change. The 2019 CAL Green standards include some substantial changes intended to increase the energy efficiency of buildings. For example, the code encourages the installation of solar and heat pump water heaters in low-rise residential buildings. The 2019 California Code went before City Council in October 2019 for approval, with an effective date of January 1, 2020. As part of this action, the City adopted a "reach code" that requires development projects to exceed the minimum Building Energy Efficiency requirements.[23] The City's reach code applies only to new residential and non-residential construction in San José. It incentivizes all-electric construction, requires increased energy efficiency and electrification-readiness for those choosing to maintain the presence of natural gas. The code requires that non-residential construction include solar readiness. It also requires additional EV charging readiness and/or electric vehicle service equipment (EVSE) installation for all development types.

Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate. Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.6 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_2e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.6 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.[24] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_2e/year threshold.

[23] City of San José Transportation and Environmental Committee, *Building Reach Code for New Construction Memorandum,* August 2019.

[24] Association of Environmental Professionals, 2016. *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California*. April.

Impact-GHG 1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, the generator, energy and water usage, and solid waste disposal. The impact of GHG emissions were addressed in the DSP DEIR and found to be significant and unavoidable under 2040 conditions. Emissions from the project were computed for information purposes. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future full-time commercial and retail employees. The number of workers was estimated using a rate of approximately one office worker per 175 sf of office space and one retail worker per 250 sf of small retail space.[25] Based on the project's proposed 627,207 sf for office use and 16,375 sf for retail use, there would be 3,650 future full-time employees.

Construction Emissions

GHG emissions associated with construction were computed to be 4,641 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. The effects from a TDM program or other project-specific sustainability measures were not included in this analysis.

As shown in Table 7, annual emissions resulting from operation of the proposed project are predicted to be 3,747 MT of CO_2e in 2024 and 3,358 MT of CO_2e in 2030. The service population

[25] Strategic Economics. 2016. *San* José *Market Overview and Employment Lands Analysis*. January 20.

emission for the years 2024 and 2030 are predicted to be 1.03 and 0.92 MT/CO_{2e}/year/service population, respectively.

To be considered significant, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold in the opening and future year. Note that if the project exceeds in the opening but not the future year, then it is still considered a significant impact. Emissions from both years must be below at least one of the thresholds.

The project would exceed the 2030 operational annual emissions bright-line threshold of 660 MT CO_2e/year in both the opening and future year. However, the project would not exceed the service population emissions "Substantial Progress" efficiency metric of 2.6 MT CO_2e/year/service population in either 2024 or 2030.

Table 7. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Proposed Project in 2024	Proposed Project in 2030
Area	<1	<1
Energy Consumption	553	553
Mobile	2,709	2,320
Solid Waste Generation	302	302
Water Usage	182	182
Total	**3,747**	**3,358**
Bright-Line Significance Threshold	*660 MT of CO_2e*	
Service Population Emissions	**1.03**	**0.92**
Per Capita Significance Threshold	*2.6 MT of CO_2e/year/service population*	
Exceed Both?	***No***	***No***

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute lifetime cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational output for existing uses and 2030 project uses are also included in this attachment. Also included are any modeling assumptions.

Attachment 3 is the construction health risk assessment. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 4 includes the screening community risk calculations from sources affecting the MEI. Due to the large size of the BAAQMD health risk calculators, these files were not included but are available upon request and would be provided in digital format.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[26] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[27] This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[28] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs are calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

[26] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.
[27] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[28] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity that would have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^6$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR^* \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
8HrBR = 8-hour breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

* An 8-hour breathing rate is used for worker exposures.

The health risk parameters used in this evaluation are summarized as follows:

Parameter	*Exposure Type* →	Infant		Child		Adult
	Age Range →	3rd Trimester	0<2	2 < 9	2 < 16	16 - 30
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	631	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	861	745	335
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14*
Exposure Frequency (days/year)		350	350	350	350	350*
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73*

* For worker exposures (adult) the exposure duration and frequency are 25 years 250 days/year and FAH is not applicable.

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). The HI value represents the maximum concentration at which no adverse health effects to the respiratory system are anticipated to occur. OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu g/m^3$).

Annual $PM_{2.5}$ Concentrations

While not a TAC, fine particulate matter ($PM_{2.5}$) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for $PM_{2.5}$ (project level and cumulative) are in terms of an increase in the annual average concentration. When considering $PM_{2.5}$ impacts, the contribution from all sources of $PM_{2.5}$ emissions should be included. For projects with potential impacts from nearby local roadways, the $PM_{2.5}$ impacts should include those from vehicle exhaust emissions, $PM_{2.5}$ generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Modeling Output

Project Name: Block 8

Project Size
_____ Dwelling Units
_____ total project acres disturbed
_____ s.f. residential
16,372 s.f. retail
627,210 ~~568,286~~ s.f. office/commercial
162,298 s.f. other, specify: MEP, BOH, Circulation
_____ s.f. other, specify:
Complete ALL Portions in Yellow
465,930 s.f. parking garage
1,333 spaces
_____ s.f. parking lot
_____ spaces

Construction Hours 7 am to 5 pm

Qty	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Comments
	Demolition	**Start Date:**	**2/1/2021**	**Total phase:**	**4**		**Overall Import/Export Volumes**
		End Date:	**2/5/2021**				
1	Concrete/Industrial Saws	81	0.73	8	1	2	**Demolition Volume**
2	Excavators	162	0.38	8	4	8	Square footage of buildings to be demolished
0	Rubber-Tired Dozers	255	0.4	8	0	0	(or total tons to be hauled)
1	Tractors/Loaders/Backhoes	97	0.37	8	4	8	0 square feet or
							0 Hauling volume (tons)
	Site Preperation	**Start Date:**	**2/9/2021**	**Total phase:**	**5**		Any pavement demolished and hauled? 725 tons
		End Date:	**2/16/2021**				**Soil Hauling Volume**
1	Graders	174	0.41	8	3	4.8	
0	Rubber Tired Dozers	255	0.4	8	0	0	Export volume = 2 cubic yards?
1	Tractors/Loaders/Backhoes	97	0.37	8	3	4.8	Import volume = 2 cubic yards?
	Shoring	**Start Date:**	**2/17/2021**	**Total phase:**	**15**		
		End Date:	**3/10/2021**				
1	Crane	260	0.29	10	15	10	
1	Drill Rig	589	0.5	10	15	10	
2	Track Loader	92	0.37	10	15	10	
1	Reach Lift	116	0.2	10	15	10	
1	Tractors/Loaders/Backhoes	97	0.37	10	15	10	
	Other Equipment?					0	
	Grading / Excavation	**Start Date:**	**3/12/2021**	**Total phase:**	**117**		
		End Date:	**8/23/2021**				**Soil Hauling Volume**
2	Scrapers	361	0.48	8	68	4.64	
2	Excavators	162	0.38	8	68	4.64	Export volume = 80,000 cubic yards?
1	Graders	174	0.41	8	68	4.64	Import volume = 0 cubic yards?
1	Tractors/Loaders/Backhoes	97	0.37	8	68	4.64	
2	Drill Rig	589	0.5	10	20	1.71	
	Other Equipment?						
	Trenching	**Start Date:**	**2/23/2021**	**Total phase:**	**15**		
		End Date:	**3/16/2021**				
1	Tractor/Loader/Backhoe	97	0.37	8	15	8	
1	Excavators	162	0.38	8	15	8	
	Other Equipment?						
	Concrete	**Start Date:**	**8/23/2021**	**Total phase:**	**305**		
		End Date:	**10/25/2022**				
2	Concrete Pumps	78	0.48	24	4	0.31	
1150	Concrete Trucks	62	0.31	24	4	0.31	
2	Concrete Pumps	78	0.48	14	40	1.83	
1064	Concrete Trucks	62	0.31	14	40	1.83	
2	Concrete Pumps	78	0.48	8	151	3.95	
1900	Concrete Trucks	62	0.31	8	151	3.95	
	Other Equipment?						
	Steel / Exterior	**Start Date:**	**9/22/2021**	**Total phase:**	**540**		
		End Date:	**10/18/2023**				
2	Cranes	226	0.29	10	540	10	Electric? (Y/N) ___ Otherwise assumed diesel
	Forklifts	89	0.2			0	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
2	Generator Sets	84	0.74	8	170	3	Or temporary line power? (Y/N) ___
	Tractors/Loaders/Backhoes	97	0.37			0	otherwise, assume diesel generator.
16	Welders	46	0.45	8	170	3	
	Other Equipment?					0	
	Interiors	**Start Date:**	**10/17/2022**	**Total phase:**	**300**		
		End Date:	**12/11/2023**				
16	Forklifts	89	0.2	8	300	8	
4	Aerial Lifts	62	0.31	8	300	8	
						0	
						0	
	Other Equipment?						

Equipment listed in this sheet is to provide an example of inputs
It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate
Modify horepower or load factor, as appropriate

Typical Equipment Type & Load Factors

OFFROAD Equipment Type	HP	Load Factor
Aerial Lifts	62	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	205	0.5
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	226	0.29
Crawler Tractors	208	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	162	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	174	0.41
Off-Highway Tractors	122	0.44
Off-Highway Trucks	400	0.38
Other Construction Equipment	171	0.42
Other General Industrial Equipment	150	0.34
Other Material Handling Equipment	167	0.4
Pavers	125	0.42
Paving Equipment	130	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.2
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	255	0.4
Rubber Tired Loaders	199	0.36
Scrapers	361	0.48
Signal Boards	6	0.82
Skid Steer Loaders	64	0.37
Surfacing Equipment	253	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	80	0.5
Welders	46	0.45

Block 8 Mixed-Use Development VMT Trip Generation Estimates

Land Use	ITE Land Use Code	Location	% of Vehicle Mode Share	% Reduction	Size	Daily Rate	Daily Trip	AM Peak Hour Pk-Hr Rate	AM Split In	AM Split Out	AM Trip In	AM Trip Out	AM Trip Total	PM Peak Hour Pk-Hr Rate	PM Split In	PM Split Out	PM Trip In	PM Trip Out	PM Trip Total
Proposed Land Uses																			
General Office Building[1]	710				627,207 Square Feet	9.740	6,109	1.160	86%	14%	626	102	728	1.150	16%	84%	115	606	721
- Employment - Retail Internal Reduction[2]				*3%*			*-183*				*-6*	*-3*	*-9*				*-3*	*-18*	*-21*
- Location Based Reduction[3]		*Urban High-Transit*	*69%*	*31%*			*-1,837*				*-192*	*-30*	*-222*				*-35*	*-182*	*-217*
Shopping Center[1]	820				16,372 Square Feet	37.750	618	0.940	62%	38%	9	6	15	3.810	48%	52%	30	32	62
- Employment - Retail Internal Reduction[2]							*-183*				*-3*	*-6*	*-9*				*-18*	*-3*	*-21*
- Location Based Reduction[3]		*Urban High-Transit*	*83%*	*17%*			*-135*				*-2*	*0*	*-2*				*-4*	*-9*	*-13*
Total Project Trips							**4,389**				**432**	**69**	**501**				**85**	**426**	**511**

Notes:

[1] Source: ITE *Trip Generation Manual*, 10th Edition 2017, average trip generation rates.

[2] As prescribed by the Transportation Impact Analysis Guidelines from VTA (October 2014), the maximum trip reduction for a mixed-use development project with office and retail is equal to 3% off the office component. However, since the number of outbound trips produced by the retail component is less than 3% of the inbound trips into the office component during the AM peak hour, all outbound retail trips during the AM peak hour are assumed to be internalized with the office component.

[3] The project site is located within an urban high-transit area based on the City of San Jose VMT Evaluation Tool (February 29, 2019). The location-based vehicle mode shares are obtained from Table 6 of the City of San Jose Transportation Analysis Handbook (April 2018). The trip reductions are based on the percent of mode share for all of the other modes of travel besides vehicle.

	Traffic Consultant Trip Gen					CalEEMod Default			
Land Use		**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**	**USED TRIP RATES**
General Office Building		627207	6109	4089	***6.52***	11.03	2.46	1.05	
Reduction			*-183*			*Rev*	***1.45***	***0.62***	
Reduction			*-1837*						
Shopping Center		16375	618	300	***18.32***	44.32	42.04	20.43	
Reduction			*-183*			*Rev*	***17.38***	***8.45***	
Reduction			*-135*						

18-218 Block 8 SJ AQ-GHG

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	627.21	1000sqft	1.49	627,207.00	0
Enclosed Parking with Elevator	1,333.00	Space	0.00	628,228.00	0
Strip Mall	16.38	1000sqft	0.00	16,375.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Office = 627,207 sqft, Retail = 16,375 sqft, Parking= 628,228 sqft (add BOH, MEP, and circulation sqft to Parking = 162,298 sqft + 465,930 sqft) up to 1333 spaces. All on 1.485 acres

Construction Phase - Project Applicant Construction Schedule from 3.13.2020

Off-road Equipment - project applicant equipment list

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - project applicant equipment list

Trips and VMT - TAC trip length 1 mile, putting concrete truck trips within heavy duty hauling

Demolition - 725 tons of pavement demolished and hauled

Grading - 80,000 cubic yards of grading export

Vehicle Trips - Strip Mall w/reduction: 18.32, 17.38, 8.45; Office w/reduction: 6.52, 1.45, 0.62

Energy Use -

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPs, Tier 3 DPF 3, temporary power line for generators

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps - diesel generator on level 1 of the project and its preliminary size is 1000kW/1250kVA, approximately

Architectural Coating -

Area Coating -

Energy Mitigation - SJ Reach Code for carbon-free electricity

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	17.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	4.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	4.00	117.00
tblConstructionPhase	NumDays	10.00	306.00
tblConstructionPhase	NumDays	200.00	540.00
tblConstructionPhase	NumDays	10.00	300.00
tblGrading	MaterialExported	0.00	80,000.00
tblLandUse	LandUseSquareFeet	627,210.00	627,207.00
tblLandUse	LandUseSquareFeet	533,200.00	628,228.00
tblLandUse	LandUseSquareFeet	16,380.00	16,375.00
tblLandUse	LotAcreage	14.40	1.49
tblLandUse	LotAcreage	12.00	0.00
tblLandUse	LotAcreage	0.38	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	16.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	6.00	4.60
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.60
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	3.00

tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,340.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	10,300.00
tblVehicleTrips	ST_TR	2.46	1.45
tblVehicleTrips	ST_TR	42.04	17.38
tblVehicleTrips	SU_TR	1.05	0.62
tblVehicleTrips	SU_TR	20.43	8.45
tblVehicleTrips	WD_TR	11.03	6.52
tblVehicleTrips	WD_TR	44.32	18.32
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	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					

2021	0.416	5.2358	3.1017	0.0128	0.506	0.1235	0.6295	0.1308	0.1168	0.2475	0	1,182.19	1,182.19	0.1255	0	1,185.33
2022	1.4236	7.484	5.8855	0.0211	0.7761	0.1923	0.9684	0.2107	0.1847	0.3953	0	1,916.82	1,916.82	0.1529	0	1,920.64
2023	3.5496	5.9108	6.2423	0.017	0.6188	0.2109	0.8297	0.1679	0.1976	0.3655	0	1,530.20	1,530.20	0.1926	0	1,535.02
Maximum	**3.5496**	**7.484**	**6.2423**	**0.0211**	**0.7761**	**0.2109**	**0.9684**	**0.2107**	**0.1976**	**0.3953**	**0**	**1,916.82**	**1,916.82**	**0.1926**	**0**	**1,920.64**

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					
2021	0.2083	4.0985	3.3720	0.0128	0.4258	0.0265	0.4524	0.1047	0.0259	0.1306	0.0000	1,166.7205	1,166.7205	0.1247	0.0000	1,169.8381
2022	1.0423	6.2472	5.8384	0.0211	0.7761	0.0576	0.8336	0.2107	0.0570	0.2676	0.0000	1,861.7075	1,861.7075	0.1503	0.0000	1,865.4645
2023	3.1986	4.8935	6.2875	0.0170	0.6188	0.0600	0.6788	0.1679	0.0597	0.2276	0.0000	1,486.3282	1,486.3282	0.1907	0.0000	1,491.0947
Maximum	**3.1986**	**6.2472**	**6.2875**	**0.0211**	**0.7761**	**0.0600**	**0.8336**	**0.2107**	**0.0597**	**0.2676**	**0.0000**	**1,861.7075**	**1,861.7075**	**0.1907**	**0.0000**	**1,865.4645**

	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	**17.44**	**18.20**	**-1.76**	**0.00**	**4.22**	**72.64**	**19.06**	**5.13**	**71.43**	**37.94**	**0.00**	**2.47**	**2.47**	**1.13**	**0.00**	**2.47**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-1-2021**	**4-30-2021**	1.1606	0.8044
2	**5-1-2021**	**7-31-2021**	1.4969	1.1392
3	**8-1-2021**	**10-31-2021**	1.4956	1.1800
4	**11-1-2021**	**1-31-2022**	2.1480	1.7080
5	**2-1-2022**	**4-30-2022**	1.9641	1.5987
6	**5-1-2022**	**7-31-2022**	2.0159	1.6382
7	**8-1-2022**	**10-31-2022**	2.2272	1.8221

8	**11-1-2022**	**1-31-2023**	2.9406	2.4573
9	**2-1-2023**	**4-30-2023**	2.6583	2.2615
10	**5-1-2023**	**7-31-2023**	2.7389	2.3288
11	**8-1-2023**	**9-30-2023**	1.8160	1.5441
		Highest	2.9406	2.4573

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	2.9045	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Energy	0.0556	0.5052	0.4244	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	2,528.3088	2,528.3088	0.2084	0.0510	2,548.72
Mobile	0.6763	2.6108	7.9354	0.0295	2.9177	0.0230	2.9407	0.7809	0.0214	0.8024	0.0000	2,707.2177	2,707.2177	0.0840	0.0000	2,709.32
Stationary	0.0550	0.2459	0.1402	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5134	25.5134	3.5800e-003	0.0000	25.6028
Waste						0.0000	0.0000		0.0000	0.0000	121.8981	0.0000	121.8981	7.2040	0.0000	301.9974
Water						0.0000	0.0000		0.0000	0.0000	39.8698	112.0080	151.8778	0.1484	0.0890	182.1168
Total	**3.6913**	**3.3621**	**8.5181**	**0.0328**	**2.9177**	**0.0696**	**2.9872**	**0.7809**	**0.068**	**0.8489**	**161.7679**	**5,373.0832**	**5,534.8511**	**7.6484**	**0.1400**	**5,767.7922**

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	2.9045	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Energy	0.0556	0.5052	0.4244	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	549.9774	549.9774	0.0105	0.0101	553.2457
Mobile	0.6763	2.6108	7.9354	0.0295	2.9177	0.0230	2.9407	0.7809	0.0214	0.8024	0.0000	2,707.2177	2,707.2177	0.0840	0.0000	2,709.32
Stationary	0.0550	0.2459	0.1402	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5134	25.5134	3.5800e-003	0.0000	25.6028
Waste						0.0000	0.0000		0.0000	0.0000	121.8981	0.0000	121.8981	7.2040	0.0000	301.9974
Water						0.0000	0.0000		0.0000	0.0000	39.8698	112.0080	151.8778	0.1484	0.0890	182.1168
Total	**3.6913**	**3.3621**	**8.5181**	**0.0328**	**2.9177**	**0.0696**	**2.9872**	**0.7809**	**0.068**	**0.8489**	**161.7679**	**3,394.7519**	**3,556.5198**	**7.4506**	**0.0991**	**3,772.3176**

	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**	**36.82**	**35.74**	**2.59**	**29.23**	**34.60**

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	2/1/2021	2/4/2021	5	4	
2	Site Preparation	Site Preparation	2/9/2021	2/15/2021	5	5	
3	Shoring	Site Preparation	2/17/2021	3/9/2021	5	15	
4	Trenching	Trenching	2/23/2021	3/15/2021	5	15	
5	Grading	Grading	3/12/2021	8/23/2021	5	117	
6	Concrete	Paving	8/23/2021	10/24/2022	5	306	
7	Steel/Exterior	Building Construction	9/22/2021	10/17/2023	5	540	
8	Building Interior	Architectural Coating	10/17/2022	12/8/2023	5	300	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 168.19

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 965,373; Non-Residential Outdoor: 321,791; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	2.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	4.80	187	0.41
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	4.80	97	0.37
Shoring	Bore/Drill Rigs	1	10.00	221	0.50
Shoring	Cranes	1	10.00	231	0.29
Shoring	Forklifts	1	10.00	89	0.20
Shoring	Tractors/Loaders/Backhoes	3	10.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	2	1.70	221	0.50
Grading	Excavators	2	4.60	158	0.38
Grading	Graders	1	4.60	187	0.41
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Scrapers	2	4.60	367	0.48
Grading	Tractors/Loaders/Backhoes	1	4.60	97	0.37
Concrete	Cement and Mortar Mixers	0	6.00	9	0.56
Concrete	Pavers	0	6.00	130	0.42
Concrete	Paving Equipment	0	8.00	132	0.36
Concrete	Pumps	2	1.00	84	0.74
Concrete	Pumps	2	2.00	84	0.74
Concrete	Pumps	2	4.00	84	0.74
Concrete	Rollers	0	7.00	80	0.38
Concrete	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Steel/Exterior	Cranes	2	10.00	231	0.29
Steel/Exterior	Forklifts	0	0.00	89	0.20
Steel/Exterior	Generator Sets	2	3.00	84	0.74
Steel/Exterior	Pumps	0	5.00	84	0.74
Steel/Exterior	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Steel/Exterior	Welders	16	3.00	46	0.45
Building Interior	Aerial Lifts	4	8.00	63	0.31
Building Interior	Air Compressors	0	6.00	78	0.48
Building Interior	Forklifts	16	8.00	89	0.20
Shoring	Graders	1	8.00	187	0.41
Shoring	Rubber Tired Dozers	1	7.00	247	0.40

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	72.00	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
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	10,000.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete	6	15.00	0.00	10,300.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Steel/Exterior	20	470.00	208.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Interior	20	94.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Shoring	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					7.7600e-003	0.0000	7.7600e-003	1.1700e-003	0.0000	1.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4800e-003	0.0139	0.0194	3.0000e-005		7.3000e-004	7.3000e-004		6.8000e-004	6.8000e-004	0.0000	2.6298	2.6298	7.8000e-004	0.0000	2.6493
Total	**1.4800e-003**	**0.0139**	**0.0194**	**3.0000e-005**	**7.7600e-003**	**7.3000e-004**	**8.4900e-003**	**1.1700e-003**	**6.8000e-004**	**1.8500e-003**	**0.0000**	**2.6298**	**2.6298**	**7.8000e-004**	**0.0000**	**2.6493**

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	2.8000e-004	9.6300e-003	2.1000e-003	3.0000e-005	6.1000e-004	3.0000e-005	6.4000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.7109	2.7109	1.2000e-004	0.0000	2.7140
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	4.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1313	0.1313	0.0000	0.0000	0.1314
Total	**3.4000e-004**	**9.6700e-003**	**2.5600e-003**	**3.0000e-005**	**7.7000e-004**	**3.0000e-005**	**8.0000e-004**	**2.1000e-004**	**3.0000e-005**	**2.4000e-004**	**0.0000**	**2.8422**	**2.8422**	**1.2000e-004**	**0.0000**	**2.8454**

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					3.4900e-003	0.0000	3.4900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	0.0129	0.0223	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.6298	2.6298	7.8000e-004	0.0000	2.6493
Total	**4.5000e-004**	**0.0129**	**0.0223**	**3.0000e-005**	**3.4900e-003**	**5.0000e-005**	**3.5400e-003**	**2.6000e-004**	**5.0000e-005**	**3.1000e-004**	**0.0000**	**2.6298**	**2.6298**	**7.8000e-004**	**0.0000**	**2.6493**

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	2.8000e-004	9.6300e-003	2.1000e-003	3.0000e-005	6.1000e-004	3.0000e-005	6.4000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.7109	2.7109	1.2000e-004	0.0000	2.7140
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	4.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1313	0.1313	0.0000	0.0000	0.1314
Total	**3.4000e-004**	**9.6700e-003**	**2.5600e-003**	**3.0000e-005**	**7.7000e-004**	**3.0000e-005**	**8.0000e-004**	**2.1000e-004**	**3.0000e-005**	**2.4000e-004**	**0.0000**	**2.8422**	**2.8422**	**1.2000e-004**	**0.0000**	**2.8454**

3.3 Site Preparation - 2021

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					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	0.0117	6.0400e-003	1.0000e-005		4.5000e-004	4.5000e-004		4.1000e-004	4.1000e-004	0.0000	1.2827	1.2827	4.1000e-004	0.0000	1.2930
Total	**9.6000e-004**	**0.0117**	**6.0400e-003**	**1.0000e-005**	**8.0000e-004**	**4.5000e-004**	**1.2500e-003**	**9.0000e-005**	**4.1000e-004**	**5.0000e-004**	**0.0000**	**1.2827**	**1.2827**	**4.1000e-004**	**0.0000**	**1.2930**

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	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0821	0.0821	0.0000	0.0000	0.0821
Total	**4.0000e-005**	**3.0000e-005**	**2.9000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0821**	**0.0821**	**0.0000**	**0.0000**	**0.0821**

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					3.6000e-004	0.0000	3.6000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4000e-004	6.7800e-003	7.8900e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.2827	1.2827	4.1000e-004	0.0000	1.2930
Total	**4.4000e-004**	**6.7800e-003**	**7.8900e-003**	**1.0000e-005**	**3.6000e-004**	**1.1000e-004**	**4.7000e-004**	**2.0000e-005**	**1.1000e-004**	**1.3000e-004**	**0.0000**	**1.2827**	**1.2827**	**4.1000e-004**	**0.0000**	**1.2930**

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	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0821	0.0821	0.0000	0.0000	0.0821
Total	**4.0000e-005**	**3.0000e-005**	**2.9000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0821**	**0.0821**	**0.0000**	**0.0000**	**0.0821**

3.4 Shoring - 2021

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					0.0435	0.0000	0.0435	0.0222	0.0000	0.0222	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2546	0.1523	3.5000e-004		0.0115	0.0115		0.0106	0.0106	0.0000	30.7368	30.7368	9.9400e-003	0.0000	30.9853
Total	**0.0230**	**0.2546**	**0.1523**	**3.5000e-004**	**0.0435**	**0.0115**	**0.0550**	**0.0222**	**0.0106**	**0.0328**	**0.0000**	**30.7368**	**30.7368**	**9.9400e-003**	**0.0000**	**30.9853**

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	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854
Total	**4.6000e-004**	**3.2000e-004**	**3.4300e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9848**	**0.9848**	**2.0000e-005**	**0.0000**	**0.9854**

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					0.0196	0.0000	0.0196	4.9800e-003	0.0000	4.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2400e-003	0.1208	0.2047	3.5000e-004		1.0200e-003	1.0200e-003		9.9000e-004	9.9000e-004	0.0000	30.7367	30.7367	9.9400e-003	0.0000	30.9853
Total	**7.2400e-003**	**0.1208**	**0.2047**	**3.5000e-004**	**0.0196**	**1.0200e-003**	**0.0206**	**4.9800e-003**	**9.9000e-004**	**5.9700e-003**	**0.0000**	**30.7367**	**30.7367**	**9.9400e-003**	**0.0000**	**30.9853**

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	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854

Total	**4.6000e-004**	**3.2000e-004**	**3.4300e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9848**	**0.9848**	**2.0000e-005**	**0.0000**	**0.9854**

3.5 Trenching - 2021

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	3.1200e-003	0.0304	0.0415	6.0000e-005		1.6200e-003	1.6200e-003		1.4900e-003	1.4900e-003	0.0000	5.4505	5.4505	1.7600e-003	0.0000	5.4946
Total	**3.1200e-003**	**0.0304**	**0.0415**	**6.0000e-005**		**1.6200e-003**	**1.6200e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**5.4505**	**5.4505**	**1.7600e-003**	**0.0000**	**5.4946**

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	1.2000e-004	8.0000e-005	8.6000e-004	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2462	0.2462	1.0000e-005	0.0000	0.2463
Total	**1.2000e-004**	**8.0000e-005**	**8.6000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2462**	**0.2462**	**1.0000e-005**	**0.0000**	**0.2463**

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	1.0000e-003	0.0272	0.0470	6.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	5.4505	5.4505	1.7600e-003	0.0000	5.4946
Total	**1.0000e-003**	**0.0272**	**0.0470**	**6.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**5.4505**	**5.4505**	**1.7600e-003**	**0.0000**	**5.4946**

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	1.2000e-004	8.0000e-005	8.6000e-004	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2462	0.2462	1.0000e-005	0.0000	0.2463
Total	**1.2000e-004**	**8.0000e-005**	**8.6000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2462**	**0.2462**	**1.0000e-005**	**0.0000**	**0.2463**

3.6 Grading - 2021

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					0.0937	0.0000	0.0937	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1059	1.2031	0.8784	1.9300e-003		0.0474	0.0474		0.0436	0.0436	0.0000	169.4499	169.4499	0.0548	0.0000	170.8199
Total	**0.1059**	**1.2031**	**0.8784**	**1.9300e-003**	**0.0937**	**0.0474**	**0.1411**	**0.0103**	**0.0436**	**0.0539**	**0.0000**	**169.4499**	**169.4499**	**0.0548**	**0.0000**	**170.8199**

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	0.0392	1.3372	0.2914	3.8900e-003	0.0848	4.1700e-003	0.0889	0.0233	3.9900e-003	0.0273	0.0000	376.5165	376.5165	0.0171	0.0000	376.9436
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	3.6000e-003	2.5000e-003	0.0268	8.0000e-005	9.2800e-003	6.0000e-005	9.3400e-003	2.4700e-003	5.0000e-005	2.5200e-003	0.0000	7.6815	7.6815	1.7000e-004	0.0000	7.6859
Total	**0.0428**	**1.3397**	**0.3181**	**3.9700e-003**	**0.0941**	**4.2300e-003**	**0.0983**	**0.0258**	**4.0400e-003**	**0.0298**	**0.0000**	**384.1981**	**384.1981**	**0.0173**	**0.0000**	**384.6295**

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					0.0422	0.0000	0.0422	2.3200e-003	0.0000	2.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0348	0.6374	1.1101	1.9300e-003		5.1900e-003	5.1900e-003		5.0200e-003	5.0200e-003	0.0000	169.4497	169.4497	0.0548	0.0000	170.8197
Total	**0.0348**	**0.6374**	**1.1101**	**1.9300e-003**	**0.0422**	**5.1900e-003**	**0.0474**	**2.3200e-003**	**5.0200e-003**	**7.3400e-003**	**0.0000**	**169.4497**	**169.4497**	**0.0548**	**0.0000**	**170.8197**

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	0.0392	1.3372	0.2914	3.8900e-003	0.0848	4.1700e-003	0.0889	0.0233	3.9900e-003	0.0273	0.0000	376.5165	376.5165	0.0171	0.0000	376.9436
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	3.6000e-003	2.5000e-003	0.0268	8.0000e-005	9.2800e-003	6.0000e-005	9.3400e-003	2.4700e-003	5.0000e-005	2.5200e-003	0.0000	7.6815	7.6815	1.7000e-004	0.0000	7.6859
Total	**0.0428**	**1.3397**	**0.3181**	**3.9700e-003**	**0.0941**	**4.2300e-003**	**0.0983**	**0.0258**	**4.0400e-003**	**0.0298**	**0.0000**	**384.1981**	**384.1981**	**0.0173**	**0.0000**	**384.6295**

3.7 Concrete - 2021

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	0.0316	0.2668	0.3109	5.5000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	46.9830	46.9830	2.5600e-003	0.0000	47.0470
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0316**	**0.2668**	**0.3109**	**5.5000e-004**		**0.0148**	**0.0148**		**0.0148**	**0.0148**	**0.0000**	**46.9830**	**46.9830**	**2.5600e-003**	**0.0000**	**47.0470**

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	0.0125	0.4276	0.0932	1.2400e-003	0.0722	1.3300e-003	0.0735	0.0185	1.2800e-003	0.0198	0.0000	120.3992	120.3992	5.4600e-003	0.0000	120.5357
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	2.1900e-003	1.5200e-003	0.0163	5.0000e-005	5.6500e-003	4.0000e-005	5.6900e-003	1.5000e-003	3.0000e-005	1.5400e-003	0.0000	4.6779	4.6779	1.1000e-004	0.0000	4.6805
Total	**0.0147**	**0.4291**	**0.1095**	**1.2900e-003**	**0.0778**	**1.3700e-003**	**0.0792**	**0.0200**	**1.3100e-003**	**0.0213**	**0.0000**	**125.0770**	**125.0770**	**5.5700e-003**	**0.0000**	**125.2163**

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	0.0100	0.1950	0.3372	5.5000e-004		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	46.9829	46.9829	2.5600e-003	0.0000	47.0470
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0100**	**0.1950**	**0.3372**	**5.5000e-004**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**46.9829**	**46.9829**	**2.5600e-003**	**0.0000**	**47.0470**

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	0.0125	0.4276	0.0932	1.2400e-003	0.0722	1.3300e-003	0.0735	0.0185	1.2800e-003	0.0198	0.0000	120.3992	120.3992	5.4600e-003	0.0000	120.5357
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	2.1900e-003	1.5200e-003	0.0163	5.0000e-005	5.6500e-003	4.0000e-005	5.6900e-003	1.5000e-003	3.0000e-005	1.5400e-003	0.0000	4.6779	4.6779	1.1000e-004	0.0000	4.6805

Total	**0.0147**	**0.4291**	**0.1095**	**1.2900e-003**	**0.0778**	**1.3700e-003**	**0.0792**	**0.0200**	**1.3100e-003**	**0.0213**	**0.0000**	**125.0770**	**125.0770**	**5.5700e-003**	**0.0000**	**125.2163**

3.7 Concrete - 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	0.0650	0.5481	0.6890	1.2100e-003		0.0287	0.0287		0.0287	0.0287	0.0000	104.3514	104.3514	5.3200e-003	0.0000	104.4846
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0650**	**0.5481**	**0.6890**	**1.2100e-003**		**0.0287**	**0.0287**		**0.0287**	**0.0287**	**0.0000**	**104.3514**	**104.3514**	**5.3200e-003**	**0.0000**	**104.4846**

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	0.0262	0.8722	0.2034	2.7200e-003	0.0805	2.5400e-003	0.0831	0.0215	2.4300e-003	0.0240	0.0000	263.8077	263.8077	0.0119	0.0000	264.1042
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	4.5500e-003	3.0300e-003	0.0333	1.1000e-004	0.0126	8.0000e-005	0.0126	3.3400e-003	7.0000e-005	3.4100e-003	0.0000	10.0124	10.0124	2.1000e-004	0.0000	10.0177
Total	**0.0308**	**0.8752**	**0.2367**	**2.8300e-003**	**0.0931**	**2.6200e-003**	**0.0957**	**0.0249**	**2.5000e-003**	**0.0274**	**0.0000**	**273.8201**	**273.8201**	**0.0121**	**0.0000**	**274.1219**

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	0.0223	0.4332	0.7489	1.2100e-003		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	104.3513	104.3513	5.3200e-003	0.0000	104.4844
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0223**	**0.4332**	**0.7489**	**1.2100e-003**		**1.6200e-003**	**1.6200e-003**		**1.6200e-003**	**1.6200e-003**	**0.0000**	**104.3513**	**104.3513**	**5.3200e-003**	**0.0000**	**104.4844**

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	0.0262	0.8722	0.2034	2.7200e-003	0.0805	2.5400e-003	0.0831	0.0215	2.4300e-003	0.0240	0.0000	263.8077	263.8077	0.0119	0.0000	264.1042
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	4.5500e-003	3.0300e-003	0.0333	1.1000e-004	0.0126	8.0000e-005	0.0126	3.3400e-003	7.0000e-005	3.4100e-003	0.0000	10.0124	10.0124	2.1000e-004	0.0000	10.0177
Total	**0.0308**	**0.8752**	**0.2367**	**2.8300e-003**	**0.0931**	**2.6200e-003**	**0.0957**	**0.0249**	**2.5000e-003**	**0.0274**	**0.0000**	**273.8201**	**273.8201**	**0.0121**	**0.0000**	**274.1219**

3.8 Steel/Exterior - 2021

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	0.1137	0.8596	0.6582	1.2700e-003		0.0388	0.0388		0.0374	0.0374	0.0000	102.9456	102.9456	0.0211	0.0000	103.4735
Total	**0.1137**	**0.8596**	**0.6582**	**1.2700e-003**		**0.0388**	**0.0388**		**0.0374**	**0.0374**	**0.0000**	**102.9456**	**102.9456**	**0.0211**	**0.0000**	**103.4735**

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	0.0248	0.7802	0.2077	2.0500e-003	0.0500	1.7300e-003	0.0517	0.0144	1.6500e-003	0.0161	0.0000	196.6551	196.6551	8.5700e-003	0.0000	196.8694
Worker	0.0529	0.0366	0.3924	1.2500e-003	0.1361	8.6000e-004	0.1369	0.0362	7.9000e-004	0.0370	0.0000	112.6298	112.6298	2.5600e-003	0.0000	112.6938
Total	**0.0776**	**0.8167**	**0.6001**	**3.3000e-003**	**0.1860**	**2.5900e-003**	**0.1886**	**0.0506**	**2.4400e-003**	**0.0531**	**0.0000**	**309.2849**	**309.2849**	**0.0111**	**0.0000**	**309.5632**

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	0.0182	0.5029	0.6081	1.2700e-003		0.0111	0.0111		0.0111	0.0111	0.0000	87.4730	87.4730	0.0203	0.0000	87.9811
Total	**0.0182**	**0.5029**	**0.6081**	**1.2700e-003**		**0.0111**	**0.0111**		**0.0111**	**0.0111**	**0.0000**	**87.4730**	**87.4730**	**0.0203**	**0.0000**	**87.9811**

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	0.0248	0.7802	0.2077	2.0500e-003	0.0500	1.7300e-003	0.0517	0.0144	1.6500e-003	0.0161	0.0000	196.6551	196.6551	8.5700e-003	0.0000	196.8694
Worker	0.0529	0.0366	0.3924	1.2500e-003	0.1361	8.6000e-004	0.1369	0.0362	7.9000e-004	0.0370	0.0000	112.6298	112.6298	2.5600e-003	0.0000	112.6938
Total	**0.0776**	**0.8167**	**0.6001**	**3.3000e-003**	**0.1860**	**2.5900e-003**	**0.1886**	**0.0506**	**2.4400e-003**	**0.0531**	**0.0000**	**309.2849**	**309.2849**	**0.0111**	**0.0000**	**309.5632**

3.8 Steel/Exterior - 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	0.3693	2.7865	2.2962	4.5100e-003		0.1206	0.1206		0.1161	0.1161	0.0000	366.6826	366.6826	0.0735	0.0000	368.5194
Total	**0.3693**	**2.7865**	**2.2962**	**4.5100e-003**		**0.1206**	**0.1206**		**0.1161**	**0.1161**	**0.0000**	**366.6826**	**366.6826**	**0.0735**	**0.0000**	**368.5194**

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	0.0823	2.6266	0.6966	7.2300e-003	0.1779	5.3600e-003	0.1833	0.0514	5.1200e-003	0.0566	0.0000	693.7146	693.7146	0.0291	0.0000	694.4433
Worker	0.1757	0.1169	1.2847	4.2700e-003	0.4846	2.9800e-003	0.4876	0.1289	2.7500e-003	0.1316	0.0000	386.5759	386.5759	8.1800e-003	0.0000	386.7804
Total	**0.2580**	**2.7435**	**1.9813**	**0.0115**	**0.6625**	**8.3400e-003**	**0.6708**	**0.1803**	**7.8700e-003**	**0.1882**	**0.0000**	**1,080.2905**	**1,080.2905**	**0.0373**	**0.0000**	**1,081.2237**

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	0.0649	1.7910	2.1659	4.5100e-003		0.0395	0.0395		0.0395	0.0395	0.0000	311.5745	311.5745	0.0709	0.0000	313.3459
Total	**0.0649**	**1.7910**	**2.1659**	**4.5100e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**	**0.0000**	**311.5745**	**311.5745**	**0.0709**	**0.0000**	**313.3459**

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	0.0823	2.6266	0.6966	7.2300e-003	0.1779	5.3600e-003	0.1833	0.0514	5.1200e-003	0.0566	0.0000	693.7146	693.7146	0.0291	0.0000	694.4433
Worker	0.1757	0.1169	1.2847	4.2700e-003	0.4846	2.9800e-003	0.4876	0.1289	2.7500e-003	0.1316	0.0000	386.5759	386.5759	8.1800e-003	0.0000	386.7804

Total	**0.2580**	**2.7435**	**1.9813**	**0.0115**	**0.6625**	**8.3400e-003**	**0.6708**	**0.1803**	**7.8700e-003**	**0.1882**	**0.0000**	**1,080.2905**	**1,080.2905**	**0.0373**	**0.0000**	**1,081.2237**

3.8 Steel/Exterior - 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	0.2727	2.0802	1.8015	3.5900e-003		0.0854	0.0854		0.0821	0.0821	0.0000	291.9331	291.9331	0.0571	0.0000	293.3608
Total	**0.2727**	**2.0802**	**1.8015**	**3.5900e-003**		**0.0854**	**0.0854**		**0.0821**	**0.0821**	**0.0000**	**291.9331**	**291.9331**	**0.0571**	**0.0000**	**293.3608**

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	0.0494	1.5848	0.4982	5.5900e-003	0.1417	1.8500e-003	0.1435	0.0410	1.7700e-003	0.0427	0.0000	536.6009	536.6009	0.0198	0.0000	537.0948
Worker	0.1310	0.0837	0.9410	3.2700e-003	0.3858	2.3300e-003	0.3881	0.1026	2.1400e-003	0.1048	0.0000	296.0830	296.0830	5.8400e-003	0.0000	296.2290
Total	**0.1803**	**1.6685**	**1.4392**	**8.8600e-003**	**0.5275**	**4.1800e-003**	**0.5316**	**0.1436**	**3.9100e-003**	**0.1475**	**0.0000**	**832.6839**	**832.6839**	**0.0256**	**0.0000**	**833.3237**

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	0.0517	1.4259	1.7244	3.5900e-003		0.0315	0.0315		0.0315	0.0315	0.0000	248.0586	248.0586	0.0552	0.0000	249.4380
Total	**0.0517**	**1.4259**	**1.7244**	**3.5900e-003**		**0.0315**	**0.0315**		**0.0315**	**0.0315**	**0.0000**	**248.0586**	**248.0586**	**0.0552**	**0.0000**	**249.4380**

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	0.0494	1.5848	0.4982	5.5900e-003	0.1417	1.8500e-003	0.1435	0.0410	1.7700e-003	0.0427	0.0000	536.6009	536.6009	0.0198	0.0000	537.0948
Worker	0.1310	0.0837	0.9410	3.2700e-003	0.3858	2.3300e-003	0.3881	0.1026	2.1400e-003	0.1048	0.0000	296.0830	296.0830	5.8400e-003	0.0000	296.2290
Total	**0.1803**	**1.6685**	**1.4392**	**8.8600e-003**	**0.5275**	**4.1800e-003**	**0.5316**	**0.1436**	**3.9100e-003**	**0.1475**	**0.0000**	**832.6839**	**832.6839**	**0.0256**	**0.0000**	**833.3237**

3.9 Building Interior - 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	0.6393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0540	0.5258	0.6280	8.6000e-004		0.0319	0.0319		0.0293	0.0293	0.0000	75.3161	75.3161	0.0244	0.0000	75.9250
Total	**0.6932**	**0.5258**	**0.6280**	**8.6000e-004**		**0.0319**	**0.0319**		**0.0293**	**0.0293**	**0.0000**	**75.3161**	**75.3161**	**0.0244**	**0.0000**	**75.9250**

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	7.4300e-003	4.9500e-003	0.0544	1.8000e-004	0.0205	1.3000e-004	0.0206	5.4500e-003	1.2000e-004	5.5700e-003	0.0000	16.3551	16.3551	3.5000e-004	0.0000	16.3638
Total	**7.4300e-003**	**4.9500e-003**	**0.0544**	**1.8000e-004**	**0.0205**	**1.3000e-004**	**0.0206**	**5.4500e-003**	**1.2000e-004**	**5.5700e-003**	**0.0000**	**16.3551**	**16.3551**	**3.5000e-004**	**0.0000**	**16.3638**

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	0.6393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.3994	0.6513	8.6000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	75.3160	75.3160	0.0244	0.0000	75.9249
Total	**0.6590**	**0.3994**	**0.6513**	**8.6000e-004**		**5.3500e-003**	**5.3500e-003**		**5.3500e-003**	**5.3500e-003**	**0.0000**	**75.3160**	**75.3160**	**0.0244**	**0.0000**	**75.9249**

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	7.4300e-003	4.9500e-003	0.0544	1.8000e-004	0.0205	1.3000e-004	0.0206	5.4500e-003	1.2000e-004	5.5700e-003	0.0000	16.3551	16.3551	3.5000e-004	0.0000	16.3638
Total	**7.4300e-003**	**4.9500e-003**	**0.0544**	**1.8000e-004**	**0.0205**	**1.3000e-004**	**0.0206**	**5.4500e-003**	**1.2000e-004**	**5.5700e-003**	**0.0000**	**16.3551**	**16.3551**	**3.5000e-004**	**0.0000**	**16.3638**

3.9 Building Interior - 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	2.8476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2179	2.1423	2.7789	3.8200e-003		0.1208	0.1208		0.1111	0.1111	0.0000	335.4988	335.4988	0.1085	0.0000	338.2115
Total	**3.0656**	**2.1423**	**2.7789**	**3.8200e-003**		**0.1208**	**0.1208**		**0.1111**	**0.1111**	**0.0000**	**335.4988**	**335.4988**	**0.1085**	**0.0000**	**338.2115**

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	0.0310	0.0198	0.2228	7.7000e-004	0.0913	5.5000e-004	0.0919	0.0243	5.1000e-004	0.0248	0.0000	70.0873	70.0873	1.3800e-003	0.0000	70.1218
Total	**0.0310**	**0.0198**	**0.2228**	**7.7000e-004**	**0.0913**	**5.5000e-004**	**0.0919**	**0.0243**	**5.1000e-004**	**0.0248**	**0.0000**	**70.0873**	**70.0873**	**1.3800e-003**	**0.0000**	**70.1218**

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	2.8476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0879	1.7792	2.9012	3.8200e-003		0.0238	0.0238		0.0238	0.0238	0.0000	335.4984	335.4984	0.1085	0.0000	338.2111
Total	**2.9356**	**1.7792**	**2.9012**	**3.8200e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**	**0.0000**	**335.4984**	**335.4984**	**0.1085**	**0.0000**	**338.2111**

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	0.0310	0.0198	0.2228	7.7000e-004	0.0913	5.5000e-004	0.0919	0.0243	5.1000e-004	0.0248	0.0000	70.0873	70.0873	1.3800e-003	0.0000	70.1218

Total	**0.0310**	**0.0198**	**0.2228**	**7.7000e-004**	**0.0913**	**5.5000e-004**	**0.0919**	**0.0243**	**5.1000e-004**	**0.0248**	**0.0000**	**70.0873**	**70.0873**	**1.3800e-003**	**0.0000**	**70.1218**

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	0.6763	2.6108	7.9354	0.0295	2.9177	0.0230	2.9407	0.7809	0.0214	0.8024	0.0000	2,707.2177	2,707.2177	0.0840	0.0000	2,709.3173
Unmitigated	0.6763	2.6108	7.9354	0.0295	2.9177	0.0230	2.9407	0.7809	0.0214	0.8024	0.0000	2,707.2177	2,707.2177	0.0840	0.0000	2,709.3173

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	4,089.41	909.45	388.87	7,423,723	7,423,723
Strip Mall	300.08	284.68	138.41	423,180	423,180
Total	4,389.49	1,194.14	527.28	7,846,903	7,846,903

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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
General Office Building	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
Strip Mall	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704

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	1,978.3313	1,978.3313	0.1978	0.0409	1,995.4746
NaturalGas Mitigated	0.0556	0.5052	0.4244	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	549.9774	549.9774	0.0105	0.0101	553.2457
NaturalGas Unmitigated	0.0556	0.5052	0.4244	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	549.9774	549.9774	0.0105	0.0101	553.2457

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					
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
General Office Building	1.02674e+007	0.0554	0.5033	0.4228	3.0200e-003		0.0383	0.0383		0.0383	0.0383	0.0000	547.9064	547.9064	0.0105	0.0100	551.1624
Strip Mall	38808.8	2.1000e-004	1.9000e-003	1.6000e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0710	2.0710	4.0000e-005	4.0000e-005	2.0833
Total		**0.0556**	**0.5052**	**0.4244**	**3.0300e-003**		**0.0384**	**0.0384**		**0.0384**	**0.0384**	**0.0000**	**549.9774**	**549.9774**	**0.0105**	**0.0101**	**553.2457**

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					
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
General Office Building	1.02674e+007	0.0554	0.5033	0.4228	3.0200e-003		0.0383	0.0383		0.0383	0.0383	0.0000	547.9064	547.9064	0.0105	0.0100	551.1624
Strip Mall	38808.8	2.1000e-004	1.9000e-003	1.6000e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0710	2.0710	4.0000e-005	4.0000e-005	2.0833
Total		**0.0556**	**0.5052**	**0.4244**	**3.0300e-003**		**0.0384**	**0.0384**		**0.0384**	**0.0384**	**0.0000**	**549.9774**	**549.9774**	**0.0105**	**0.0101**	**553.2457**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	3.68142e+006	484.2601	0.0484	0.0100	488.4564
General Office Building	1.11831e+007	1,471.0451	0.1471	0.0304	1,483.7924

Strip Mall	175049	23.0262	2.3000e-003	4.8000e-004	23.2258
Total		**1,978.3314**	**0.1978**	**0.0409**	**1,995.4746**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	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

	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	2.9045	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Unmitigated	2.9045	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376

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	0.3487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.6700e-003	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Total	**2.9045**	**1.6000e-004**	**0.0181**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0353**	**0.0353**	**9.0000e-005**	**0.0000**	**0.0376**

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	0.3487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.6700e-003	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Total	**2.9045**	**1.6000e-004**	**0.0181**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0353**	**0.0353**	**9.0000e-005**	**0.0000**	**0.0376**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	151.8778	0.1484	0.0890	182.1168
Unmitigated	151.8778	0.1484	0.0890	182.1168

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	111.476 / 68.3242	150.2426	0.1468	0.0881	180.1560
Strip Mall	1.21331 / 0.74364	1.6352	1.6000e-003	9.6000e-004	1.9608
Total		**151.8778**	**0.1484**	**0.0890**	**182.1168**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	111.476 / 68.3242	150.2426	0.1468	0.0881	180.1560
Strip Mall	1.21331 / 0.74364	1.6352	1.6000e-003	9.6000e-004	1.9608
Total		**151.8778**	**0.1484**	**0.0890**	**182.1168**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	121.8981	7.2040	0.0000	301.9974
Unmitigated	121.8981	7.2040	0.0000	301.9974

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	583.31	118.4067	6.9976	0.0000	293.3475
Strip Mall	17.2	3.4914	0.2063	0.0000	8.6499
Total		**121.8981**	**7.2040**	**0.0000**	**301.9974**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	583.31	118.4067	6.9976	0.0000	293.3475
Strip Mall	17.2	3.4914	0.2063	0.0000	8.6499
Total		**121.8981**	**7.2040**	**0.0000**	**301.9974**

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
Emergency Generator	1	0	50	1340	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0550	0.2459	0.1402	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5134	25.5134	3.5800e-003	0.0000	25.6028
Total	**0.0550**	**0.2459**	**0.1402**	**2.6000e-004**		**8.0900e-003**	**8.0900e-003**		**8.0900e-003**	**8.0900e-003**	**0.0000**	**25.5134**	**25.5134**	**3.5800e-003**	**0.0000**	**25.6028**

11.0 Vegetation

18-218 Block 8 SJ AQ/GHG 2030 - Santa Clara County, Annual

18-218 Block 8 SJ AQ/GHG 2030

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	627.21	1000sqft	1.49	627,207.00	0
Enclosed Parking with Elevator	1,333.00	Space	0.00	628,228.00	0
Strip Mall	16.38	1000sqft	0.00	16,375.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Office = 627,207 sqft, Retail = 16,375 sqft, Parking= 628,228 sqft (add BOH, MEP, and circulation sqft to Parking = 162,298 sqft + 465,930 sqft) up to 1333 spaces. All on 1.485 acres

Construction Phase - Project Applicant Construction Schedule from 3.13.2020

Off-road Equipment - project applicant equipment list

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - project applicant equipment list

Trips and VMT -

Demolition - 725 tons of pavement demolished and hauled

Grading - 80,000 cubic yards of grading export

Vehicle Trips - Strip Mall w/reduction: 18.32, 17.38, 8.45; Office w/reduction: 6.52, 1.45, 0.62

Energy Use -

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPs, Tier 3 DPF 3, temporary power line for generators

Energy Mitigation - SJ Reach Code for 100% carbon free electricity

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps - diesel generator on level 1 of the project and its preliminary size is 1000kW/1250kVA, approximately

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	37,694.00	27,911.00
tblAreaCoating	Area_Parking	37694	27911
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	FuelType	Diesel	Electrical

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	17.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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	10.00	300.00
tblConstructionPhase	NumDays	200.00	540.00
tblConstructionPhase	NumDays	20.00	4.00
tblConstructionPhase	NumDays	4.00	117.00
tblConstructionPhase	NumDays	10.00	306.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	2.00	15.00

tblGrading	AcresOfGrading	168.19	12.50
tblGrading	MaterialExported	0.00	80,000.00
tblLandUse	LandUseSquareFeet	627,210.00	627,207.00
tblLandUse	LandUseSquareFeet	533,200.00	628,228.00
tblLandUse	LandUseSquareFeet	16,380.00	16,375.00
tblLandUse	LotAcreage	14.40	1.49
tblLandUse	LotAcreage	12.00	0.00
tblLandUse	LotAcreage	0.38	0.00
tblOffRoadEquipment	LoadFactor	0.20	0.31
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	16.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	6.00	4.60

tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.60
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,340.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	10,000.00	1,500.00
tblTripsAndVMT	VendorTripNumber	208.00	182.00
tblTripsAndVMT	WorkerTripNumber	20.00	15.00
tblTripsAndVMT	WorkerTripNumber	20.00	15.00
tblTripsAndVMT	WorkerTripNumber	470.00	401.00
tblTripsAndVMT	WorkerTripNumber	94.00	80.00
tblVehicleTrips	ST_TR	2.46	1.45
tblVehicleTrips	ST_TR	42.04	17.38
tblVehicleTrips	SU_TR	1.05	0.62
tblVehicleTrips	SU_TR	20.43	8.45
tblVehicleTrips	WD_TR	11.03	6.52
tblVehicleTrips	WD_TR	44.32	18.32
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	2.9011	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Energy	0.0556	0.5052	0.4244	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	2,528.3088	2,528.3088	0.2084	0.0510	2,548.7203
Mobile	0.5068	2.1888	5.8447	0.0252	2.9172	0.0169	2.9341	0.7807	0.0157	0.7964	0.0000	2,319.2139	2,319.2139	0.0667	0.0000	2,320.8802
Stationary	0.0550	0.2459	0.1402	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5134	25.5134	3.5800e-003	0.0000	25.6028
Waste						0.0000	0.0000		0.0000	0.0000	121.8981	0.0000	121.8981	7.2040	0.0000	301.9974
Water						0.0000	0.0000		0.0000	0.0000	39.8698	112.0080	151.8778	0.1484	0.0890	182.1168
Total	**3.5184**	**2.9400**	**6.4273**	**0.0285**	**2.9172**	**0.0634**	**2.9807**	**0.7807**	**0.0623**	**0.8429**	**161.7679**	**4,985.0794**	**5,146.8473**	**7.6311**	**0.1400**	**5,379.3552**

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	2.9011	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Energy	0.0556	0.5052	0.4244	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	549.9774	549.9774	0.0105	0.0101	553.2457
Mobile	0.5068	2.1888	5.8447	0.0252	2.9172	0.0169	2.9341	0.7807	0.0157	0.7964	0.0000	2,319.2139	2,319.2139	0.0667	0.0000	2,320.88
Stationary	0.0550	0.2459	0.1402	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5134	25.5134	3.5800e-003	0.0000	25.6028
Waste						0.0000	0.0000		0.0000	0.0000	121.8981	0.0000	121.8981	7.2040	0.0000	301.9974
Water						0.0000	0.0000		0.0000	0.0000	39.8698	112.0080	151.8778	0.1484	0.0890	182.1168
Total	**3.5184**	**2.9400**	**6.4273**	**0.0285**	**2.9172**	**0.0634**	**2.9807**	**0.7807**	**0.0623**	**0.8429**	**161.7679**	**3,006.7481**	**3,168.5159**	**7.4333**	**0.0991**	**3,383.88**

	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**	**39.69**	**38.44**	**2.59**	**29.23**	**37.10**

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	0.5068	2.1888	5.8447	0.0252	2.9172	0.0169	2.9341	0.7807	0.0157	0.7964	0.0000	2,319.2139	2,319.2139	0.0667	0.0000	2,320.8802
Unmitigated	0.5068	2.1888	5.8447	0.0252	2.9172	0.0169	2.9341	0.7807	0.0157	0.7964	0.0000	2,319.2139	2,319.2139	0.0667	0.0000	2,320.8802

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	4,089.41	909.45	388.87	7,423,723	7,423,723
Strip Mall	300.08	284.68	138.41	423,180	423,180
Total	4,389.49	1,194.14	527.28	7,846,903	7,846,903

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651
General Office Building	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651
Strip Mall	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651

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	1,978.3313	1,978.3313	0.1978	0.0409	1,995.4746
NaturalGas Mitigated	0.0556	0.5052	0.4244	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	549.9774	549.9774	0.0105	0.0101	553.2457
NaturalGas Unmitigated	0.0556	0.5052	0.4244	3.0300e-003		0.0384	0.0384		0.0384	0.0384	0.0000	549.9774	549.9774	0.0105	0.0101	553.2457

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					
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
General Office Building	1.02674e+007	0.0554	0.5033	0.4228	3.0200e-003		0.0383	0.0383		0.0383	0.0383	0.0000	547.9064	547.9064	0.0105	0.0100	551.1624
Strip Mall	38808.8	2.1000e-004	1.9000e-003	1.6000e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0710	2.0710	4.0000e-005	4.0000e-005	2.0833
Total		**0.0556**	**0.5052**	**0.4244**	**3.0300e-003**		**0.0384**	**0.0384**		**0.0384**	**0.0384**	**0.0000**	**549.9774**	**549.9774**	**0.0105**	**0.0101**	**553.2457**

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					
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
General Office Building	1.02674e+007	0.0554	0.5033	0.4228	3.0200e-003		0.0383	0.0383		0.0383	0.0383	0.0000	547.9064	547.9064	0.0105	0.0100	551.1624

Strip Mall	38808.8	2.1000e-004	1.9000e-003	1.6000e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0710	2.0710	4.0000e-005	4.0000e-005	2.0833
Total		**0.0556**	**0.5052**	**0.4244**	**3.0300e-003**		**0.0384**	**0.0384**		**0.0384**	**0.0384**	**0.0000**	**549.9774**	**549.9774**	**0.0105**	**0.0101**	**553.2457**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	3.68142e+006	484.2601	0.0484	0.0100	488.4564
General Office Building	1.11831e+007	1,471.0451	0.1471	0.0304	1,483.7924
Strip Mall	175049	23.0262	2.3000e-003	4.8000e-004	23.2258
Total		**1,978.3314**	**0.1978**	**0.0409**	**1,995.4746**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	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

	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	2.9011	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Unmitigated	2.9011	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376

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	0.3453					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.6500e-003	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Total	**2.9011**	**1.6000e-004**	**0.0181**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0353**	**0.0353**	**9.0000e-005**	**0.0000**	**0.0376**

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	0.3453					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.6500e-003	1.6000e-004	0.0181	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0353	0.0353	9.0000e-005	0.0000	0.0376
Total	**2.9011**	**1.6000e-004**	**0.0181**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0353**	**0.0353**	**9.0000e-005**	**0.0000**	**0.0376**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	151.8778	0.1484	0.0890	182.1168
Unmitigated	151.8778	0.1484	0.0890	182.1168

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	111.476 / 68.3242	150.2426	0.1468	0.0881	180.1560
Strip Mall	1.21331 / 0.74364	1.6352	1.6000e-003	9.6000e-004	1.9608
Total		**151.8778**	**0.1484**	**0.0890**	**182.1168**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	111.476 / 68.3242	150.2426	0.1468	0.0881	180.1560
Strip Mall	1.21331 / 0.74364	1.6352	1.6000e-003	9.6000e-004	1.9608
Total		**151.8778**	**0.1484**	**0.0890**	**182.1168**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	121.8981	7.2040	0.0000	301.9974
Unmitigated	121.8981	7.2040	0.0000	301.9974

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	583.31	118.4067	6.9976	0.0000	293.3475
Strip Mall	17.2	3.4914	0.2063	0.0000	8.6499
Total		**121.8981**	**7.2040**	**0.0000**	**301.9974**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	583.31	118.4067	6.9976	0.0000	293.3475

Strip Mall	17.2	3.4914	0.2063	0.0000	8.6499
Total		**121.8981**	**7.2040**	**0.0000**	**301.9974**

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
Emergency Generator	1	0	50	1340	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel	0.0550	0.2459	0.1402	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5134	25.5134	3.5800e-003	0.0000	25.6028
Total	**0.0550**	**0.2459**	**0.1402**	**2.6000e-004**		**8.0900e-003**	**8.0900e-003**		**8.0900e-003**	**8.0900e-003**	**0.0000**	**25.5134**	**25.5134**	**3.5800e-003**	**0.0000**	**25.6028**

11.0 Vegetation

18-218 Block 8 SJ TAC

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	627.21	1000sqft	1.49	627,207.00	0
Enclosed Parking with Elevator	1,333.00	Space	0.00	628,228.00	0
Strip Mall	16.38	1000sqft	0.00	16,375.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate

Land Use - Office = 627,207 sqft, Retail = 16,375 sqft, Parking= 628,228 sqft (add BOH, MEP, and circulation sqft to Parking = 162,298 sqft + 465,930 sqft) up to 1333 spaces. All on 1.485 acres

Construction Phase - Project Applicant Construction Schedule from 3.13.2020

Off-road Equipment - project applicant equipment list

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - Project Applicant Equipment List 3.13.2020

Off-road Equipment - project applicant equipment list

Trips and VMT - TAC trip length 1 mile, putting concrete truck trips within heavy duty hauling

Demolition - 725 tons of pavement demolished and hauled

Grading - 80,000 cubic yards of grading export

Architectural Coating -

Vehicle Trips - Strip Mall w/reduction: 18.32, 17.38, 8.45; Office w/reduction: 6.52, 1.45, 0.62

Area Coating -

Energy Use -

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final, temporary power line for generators

Energy Mitigation - SJ Reach Code for carbon-free electricity

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps - diesel generator on level 1 of the project and its preliminary size is 1000kW/1250kVA, approximately

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	17.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	300.00
tblConstructionPhase	NumDays	200.00	540.00
tblConstructionPhase	NumDays	20.00	4.00
tblConstructionPhase	NumDays	4.00	117.00
tblConstructionPhase	NumDays	10.00	306.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	2.00	15.00
tblGrading	MaterialExported	0.00	80,000.00
tblLandUse	LandUseSquareFeet	627,210.00	627,207.00
tblLandUse	LandUseSquareFeet	533,200.00	628,228.00
tblLandUse	LandUseSquareFeet	16,380.00	16,375.00
tblLandUse	LotAcreage	14.40	1.49
tblLandUse	LotAcreage	12.00	0.00
tblLandUse	LotAcreage	0.38	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	16.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	6.00	4.60
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.60
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	3.00

tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,340.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	10,300.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	2.46	1.45

tblVehicleTrips	ST_TR	42.04	17.38
tblVehicleTrips	SU_TR	1.05	0.62
tblVehicleTrips	SU_TR	20.43	8.45
tblVehicleTrips	WD_TR	11.03	6.52
tblVehicleTrips	WD_TR	44.32	18.32
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	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					
2021	0.3257	3.7898	2.4183	5.8800e-003	0.1751	0.1164	0.2915	0.0418	0.1100	0.1518	0.0000	520.2391	520.2391	0.1063	0.0000	522.8962
2022	1.2371	5.8880	4.4502	9.8100e-003	0.0776	0.1834	0.2610	0.0214	0.1762	0.1976	0.0000	854.0151	854.0151	0.1281	0.0000	857.2169
2023	3.4159	5.3663	5.1813	9.6000e-003	0.0646	0.2072	0.2718	0.0178	0.1942	0.2120	0.0000	835.2369	835.2369	0.1789	0.0000	839.7102
Maximum	**3.4159**	**5.8880**	**5.1813**	**9.8100e-003**	**0.1751**	**0.2072**	**0.2915**	**0.0418**	**0.1942**	**0.2120**	**0.0000**	**854.0151**	**854.0151**	**0.1789**	**0.0000**	**857.2169**

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					
2021	0.0950	1.5982	2.2495	5.8800e-003	0.0949	8.92E-03	0.1039	0.0156	8.6400e-003	0.0243	0.0000	453.7615	453.7615	0.0890	0.0000	455.9864
2022	0.8081	3.0031	3.4048	9.8100e-003	0.0776	7.45E-03	0.0850	0.0214	7.3300e-003	0.0287	0.0000	634.1442	634.1442	0.0722	0.0000	635.9484
2023	3.0097	2.3897	4.4317	9.6000e-003	0.0646	9.13E-03	0.0737	0.0178	9.0600e-003	0.0268	0.0000	660.1882	660.1882	0.1346	0.0000	663.5527
Maximum	**3.0097**	**3.0031**	**4.4317**	**9.8100e-003**	**0.0949**	**9.1300e-003**	**0.1039**	**0.0214**	**9.0600e-003**	**0.0287**	**0.0000**	**660.1882**	**660.1882**	**0.1346**	**0.0000**	**663.5527**

	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	**21.41**	**53.53**	**16.30**	**0.00**	**25.27**	**94.97**	**68.14**	**32.32**	**94.79**	**85.79**	**0.00**	**20.88**	**20.88**	**28.44**	**0.00**	**20.92**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-1-2021**	**4-30-2021**	0.8922	0.2612
2	**5-1-2021**	**7-31-2021**	1.0234	0.3975
3	**8-1-2021**	**10-31-2021**	1.0822	0.4928
4	**11-1-2021**	**1-31-2022**	1.6185	0.7942
5	**2-1-2022**	**4-30-2022**	1.4956	0.7587
6	**5-1-2022**	**7-31-2022**	1.5542	0.7924
7	**8-1-2022**	**10-31-2022**	1.7656	0.9336
8	**11-1-2022**	**1-31-2023**	2.6454	1.5812
9	**2-1-2023**	**4-30-2023**	2.4479	1.4891
10	**5-1-2023**	**7-31-2023**	2.5354	1.5442
11	**8-1-2023**	**9-30-2023**	1.6811	1.0239
		Highest	2.6454	1.5812

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	2/1/2021	2/4/2021	5	4	
2	Site Preparation	Site Preparation	2/9/2021	2/15/2021	5	5	
3	Shoring	Site Preparation	2/17/2021	3/9/2021	5	15	
4	Trenching	Trenching	2/23/2021	3/15/2021	5	15	
5	Grading	Grading	3/12/2021	8/23/2021	5	117	
6	Concrete	Paving	8/23/2021	10/24/2022	5	306	
7	Steel/Exterior	Building Construction	9/22/2021	10/17/2023	5	540	
8	Building Interior	Architectural Coating	10/17/2022	12/8/2023	5	300	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 168.19

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 965,373; Non-Residential Outdoor: 321,791; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	2.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	4.80	187	0.41
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	4.80	97	0.37
Shoring	Bore/Drill Rigs	1	10.00	221	0.50
Shoring	Cranes	1	10.00	231	0.29
Shoring	Forklifts	1	10.00	89	0.20

Shoring	Graders	1	8.00	187	0.41
Shoring	Rubber Tired Dozers	1	7.00	247	0.40
Shoring	Tractors/Loaders/Backhoes	3	10.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	2	1.70	221	0.50
Grading	Excavators	2	4.60	158	0.38
Grading	Graders	1	4.60	187	0.41
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Scrapers	2	4.60	367	0.48
Grading	Tractors/Loaders/Backhoes	1	4.60	97	0.37
Concrete	Cement and Mortar Mixers	0	6.00	9	0.56
Concrete	Pavers	0	6.00	130	0.42
Concrete	Paving Equipment	0	8.00	132	0.36
Concrete	Pumps	2	1.00	84	0.74
Concrete	Pumps	2	2.00	84	0.74
Concrete	Pumps	2	4.00	84	0.74
Concrete	Rollers	0	7.00	80	0.38
Concrete	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Steel/Exterior	Cranes	2	10.00	231	0.29
Steel/Exterior	Forklifts	0	0.00	89	0.20
Steel/Exterior	Generator Sets	2	3.00	84	0.74
Steel/Exterior	Pumps	0	5.00	84	0.74
Steel/Exterior	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Steel/Exterior	Welders	16	3.00	46	0.45
Building Interior	Aerial Lifts	4	8.00	63	0.31
Building Interior	Air Compressors	0	6.00	78	0.48
Building Interior	Forklifts	16	8.00	89	0.20

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	72.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Shoring	8	20.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	10,000.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Concrete	6	15.00	0.00	10,300.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Steel/Exterior	20	470.00	208.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Interior	20	94.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					7.7600e-003	0.0000	7.7600e-003	1.1700e-003	0.0000	1.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4800e-003	0.0139	0.0194	3.0000e-005		7.3000e-004	7.3000e-004		6.8000e-004	6.8000e-004	0.0000	2.6298	2.6298	7.8000e-004	0.0000	2.6493
Total	**1.4800e-003**	**0.0139**	**0.0194**	**3.0000e-005**	**7.7600e-003**	**7.3000e-004**	**8.4900e-003**	**1.1700e-003**	**6.8000e-004**	**1.8500e-003**	**0.0000**	**2.6298**	**2.6298**	**7.8000e-004**	**0.0000**	**2.6493**

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	7.0000e-005	3.5700e-003	5.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.4627	0.4627	5.0000e-005	0.0000	0.4638
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	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0157	0.0157	0.0000	0.0000	0.0157
Total	**9.0000e-005**	**3.5800e-003**	**7.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.4784**	**0.4784**	**5.0000e-005**	**0.0000**	**0.4796**

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					3.4900e-003	0.0000	3.4900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	1.5700e-003	0.0223	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.6298	2.6298	7.8000e-004	0.0000	2.6493
Total	**3.6000e-004**	**1.5700e-003**	**0.0223**	**3.0000e-005**	**3.4900e-003**	**5.0000e-005**	**3.5400e-003**	**2.6000e-004**	**5.0000e-005**	**3.1000e-004**	**0.0000**	**2.6298**	**2.6298**	**7.8000e-004**	**0.0000**	**2.6493**

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	7.0000e-005	3.5700e-003	5.8000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.4627	0.4627	5.0000e-005	0.0000	0.4638
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	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0157	0.0157	0.0000	0.0000	0.0157
Total	**9.0000e-005**	**3.5800e-003**	**7.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.4784**	**0.4784**	**5.0000e-005**	**0.0000**	**0.4796**

3.3 Site Preparation - 2021

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					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	0.0117	6.0400e-003	1.0000e-005		4.5000e-004	4.5000e-004		4.1000e-004	4.1000e-004	0.0000	1.2827	1.2827	4.1000e-004	0.0000	1.2930
Total	**9.6000e-004**	**0.0117**	**6.0400e-003**	**1.0000e-005**	**8.0000e-004**	**4.5000e-004**	**1.2500e-003**	**9.0000e-005**	**4.1000e-004**	**5.0000e-004**	**0.0000**	**1.2827**	**1.2827**	**4.1000e-004**	**0.0000**	**1.2930**

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	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	9.8200e-003	9.8200e-003	0.0000	0.0000	9.8300e-003

Total	**1.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**9.8200e-003**	**9.8200e-003**	**0.0000**	**0.0000**	**9.8300e-003**

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					3.6000e-004	0.0000	3.6000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	3.6200e-003	7.3600e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.2827	1.2827	4.1000e-004	0.0000	1.2930
Total	**3.7000e-004**	**3.6200e-003**	**7.3600e-003**	**1.0000e-005**	**3.6000e-004**	**1.1000e-004**	**4.7000e-004**	**2.0000e-005**	**1.1000e-004**	**1.3000e-004**	**0.0000**	**1.2827**	**1.2827**	**4.1000e-004**	**0.0000**	**1.2930**

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	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	9.8200e-003	9.8200e-003	0.0000	0.0000	9.8300e-003
Total	**1.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**9.8200e-003**	**9.8200e-003**	**0.0000**	**0.0000**	**9.8300e-003**

3.4 Shoring - 2021

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					0.0435	0.0000	0.0435	0.0222	0.0000	0.0222	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2546	0.1523	3.5000e-004		0.0115	0.0115		0.0106	0.0106	0.0000	30.7368	30.7368	9.9400e-003	0.0000	30.9853
Total	**0.0230**	**0.2546**	**0.1523**	**3.5000e-004**	**0.0435**	**0.0115**	**0.0550**	**0.0222**	**0.0106**	**0.0328**	**0.0000**	**30.7368**	**30.7368**	**9.9400e-003**	**0.0000**	**30.9853**

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	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180
Total	**1.5000e-004**	**7.0000e-005**	**8.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1178**	**0.1178**	**0.0000**	**0.0000**	**0.1180**

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					0.0196	0.0000	0.0196	4.9800e-003	0.0000	4.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5800e-003	0.0300	0.1614	3.5000e-004		9.4000e-004	9.4000e-004		9.0000e-004	9.0000e-004	0.0000	25.9848	25.9848	8.4000e-003	0.0000	26.1949
Total	**4.5800e-003**	**0.0300**	**0.1614**	**3.5000e-004**	**0.0196**	**9.4000e-004**	**0.0205**	**4.9800e-003**	**9.0000e-004**	**5.8800e-003**	**0.0000**	**25.9848**	**25.9848**	**8.4000e-003**	**0.0000**	**26.1949**

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	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180
Total	**1.5000e-004**	**7.0000e-005**	**8.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1178**	**0.1178**	**0.0000**	**0.0000**	**0.1180**

3.5 Trenching - 2021

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	3.1200e-003	0.0304	0.0415	6.0000e-005		1.6200e-003	1.6200e-003		1.4900e-003	1.4900e-003	0.0000	5.4505	5.4505	1.7600e-003	0.0000	5.4946
Total	**3.1200e-003**	**0.0304**	**0.0415**	**6.0000e-005**		**1.6200e-003**	**1.6200e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**5.4505**	**5.4505**	**1.7600e-003**	**0.0000**	**5.4946**

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	4.0000e-005	2.0000e-005	2.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**4.0000e-005**	**2.0000e-005**	**2.2000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

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	7.6000e-004	3.3000e-003	0.0470	6.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	5.4505	5.4505	1.7600e-003	0.0000	5.4946
Total	**7.6000e-004**	**3.3000e-003**	**0.0470**	**6.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**5.4505**	**5.4505**	**1.7600e-003**	**0.0000**	**5.4946**

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	4.0000e-005	2.0000e-005	2.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**4.0000e-005**	**2.0000e-005**	**2.2000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

3.6 Grading - 2021

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					0.0937	0.0000	0.0937	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1059	1.2031	0.8784	1.9300e-003		0.0474	0.0474		0.0436	0.0436	0.0000	169.4499	169.4499	0.0548	0.0000	170.8199
Total	**0.1059**	**1.2031**	**0.8784**	**1.9300e-003**	**0.0937**	**0.0474**	**0.1411**	**0.0103**	**0.0436**	**0.0539**	**0.0000**	**169.4499**	**169.4499**	**0.0548**	**0.0000**	**170.8199**

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	0.0102	0.4961	0.0811	6.6000e-004	4.3400e-003	4.3000e-004	4.7700e-003	1.2000e-003	4.1000e-004	1.6100e-003	0.0000	64.2566	64.2566	6.5600e-003	0.0000	64.4206
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	1.1800e-003	5.2000e-004	6.9100e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.9192	0.9192	4.0000e-005	0.0000	0.9201

Total	**0.0114**	**0.4966**	**0.0881**	**6.7000e-004**	**5.2100e-003**	**4.4000e-004**	**5.6500e-003**	**1.4300e-003**	**4.2000e-004**	**1.8500e-003**	**0.0000**	**65.1757**	**65.1757**	**6.6000e-003**	**0.0000**	**65.3406**

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					0.0422	0.0000	0.0422	2.3200e-003	0.0000	2.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.1666	0.9951	1.9300e-003		5.1900e-003	5.1900e-003		5.0200e-003	5.0200e-003	0.0000	169.4497	169.4497	0.0548	0.0000	170.8197
Total	**0.0280**	**0.1666**	**0.9951**	**1.9300e-003**	**0.0422**	**5.1900e-003**	**0.0474**	**2.3200e-003**	**5.0200e-003**	**7.3400e-003**	**0.0000**	**169.4497**	**169.4497**	**0.0548**	**0.0000**	**170.8197**

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	0.0102	0.4961	0.0811	6.6000e-004	4.3400e-003	4.3000e-004	4.7700e-003	1.2000e-003	4.1000e-004	1.6100e-003	0.0000	64.2566	64.2566	6.5600e-003	0.0000	64.4206
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	1.1800e-003	5.2000e-004	6.9100e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.9192	0.9192	4.0000e-005	0.0000	0.9201
Total	**0.0114**	**0.4966**	**0.0881**	**6.7000e-004**	**5.2100e-003**	**4.4000e-004**	**5.6500e-003**	**1.4300e-003**	**4.2000e-004**	**1.8500e-003**	**0.0000**	**65.1757**	**65.1757**	**6.6000e-003**	**0.0000**	**65.3406**

3.7 Concrete - 2021

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	0.0316	0.2668	0.3109	5.5000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	46.9830	46.9830	2.5600e-003	0.0000	47.0470
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0316**	**0.2668**	**0.3109**	**5.5000e-004**		**0.0148**	**0.0148**		**0.0148**	**0.0148**	**0.0000**	**46.9830**	**46.9830**	**2.5600e-003**	**0.0000**	**47.0470**

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	3.2600e-003	0.1586	0.0260	2.1000e-004	3.6400e-003	1.4000e-004	3.7800e-003	9.4000e-004	1.3000e-004	1.0700e-003	0.0000	20.5474	20.5474	2.1000e-003	0.0000	20.5998
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	7.2000e-004	3.2000e-004	4.2100e-003	1.0000e-005	5.3000e-004	1.0000e-005	5.4000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.5597	0.5597	2.0000e-005	0.0000	0.5603
Total	**3.9800e-003**	**0.1590**	**0.0302**	**2.2000e-004**	**4.1700e-003**	**1.5000e-004**	**4.3200e-003**	**1.0800e-003**	**1.4000e-004**	**1.2200e-003**	**0.0000**	**21.1071**	**21.1071**	**2.1200e-003**	**0.0000**	**21.1601**

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	5.4700e-003	0.0237	0.3372	5.5000e-004		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	46.9829	46.9829	2.5600e-003	0.0000	47.0470
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.4700e-003**	**0.0237**	**0.3372**	**5.5000e-004**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**46.9829**	**46.9829**	**2.5600e-003**	**0.0000**	**47.0470**

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	3.2600e-003	0.1586	0.0260	2.1000e-004	3.6400e-003	1.4000e-004	3.7800e-003	9.4000e-004	1.3000e-004	1.0700e-003	0.0000	20.5474	20.5474	2.1000e-003	0.0000	20.5998
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	7.2000e-004	3.2000e-004	4.2100e-003	1.0000e-005	5.3000e-004	1.0000e-005	5.4000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.5597	0.5597	2.0000e-005	0.0000	0.5603
Total	**3.9800e-003**	**0.1590**	**0.0302**	**2.2000e-004**	**4.1700e-003**	**1.5000e-004**	**4.3200e-003**	**1.0800e-003**	**1.4000e-004**	**1.2200e-003**	**0.0000**	**21.1071**	**21.1071**	**2.1200e-003**	**0.0000**	**21.1601**

3.7 Concrete - 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	0.0650	0.5481	0.6890	1.2100e-003		0.0287	0.0287		0.0287	0.0287	0.0000	104.3514	104.3514	5.3200e-003	0.0000	104.4846
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0650**	**0.5481**	**0.6890**	**1.2100e-003**		**0.0287**	**0.0287**		**0.0287**	**0.0287**	**0.0000**	**104.3514**	**104.3514**	**5.3200e-003**	**0.0000**	**104.4846**

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	6.8100e-003	0.3386	0.0560	4.7000e-004	4.1000e-003	2.6000e-004	4.3600e-003	1.1000e-003	2.5000e-004	1.3500e-003	0.0000	45.1653	45.1653	4.3900e-003	0.0000	45.2751
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	1.4700e-003	6.3000e-004	8.4700e-003	1.0000e-005	1.1800e-003	2.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.1988	1.1988	4.0000e-005	0.0000	1.1999
Total	**8.2800e-003**	**0.3393**	**0.0644**	**4.8000e-004**	**5.2800e-003**	**2.8000e-004**	**5.5500e-003**	**1.4100e-003**	**2.6000e-004**	**1.6800e-003**	**0.0000**	**46.3641**	**46.3641**	**4.4300e-003**	**0.0000**	**46.4750**

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	0.0121	0.0526	0.7489	1.2100e-003		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	104.3513	104.3513	5.3200e-003	0.0000	104.4844
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.0526**	**0.7489**	**1.2100e-003**		**1.6200e-003**	**1.6200e-003**		**1.6200e-003**	**1.6200e-003**	**0.0000**	**104.3513**	**104.3513**	**5.3200e-003**	**0.0000**	**104.4844**

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	6.8100e-003	0.3386	0.0560	4.7000e-004	4.1000e-003	2.6000e-004	4.3600e-003	1.1000e-003	2.5000e-004	1.3500e-003	0.0000	45.1653	45.1653	4.3900e-003	0.0000	45.2751
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	1.4700e-003	6.3000e-004	8.4700e-003	1.0000e-005	1.1800e-003	2.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.1988	1.1988	4.0000e-005	0.0000	1.1999
Total	**8.2800e-003**	**0.3393**	**0.0644**	**4.8000e-004**	**5.2800e-003**	**2.8000e-004**	**5.5500e-003**	**1.4100e-003**	**2.6000e-004**	**1.6800e-003**	**0.0000**	**46.3641**	**46.3641**	**4.4300e-003**	**0.0000**	**46.4750**

3.8 Steel/Exterior - 2021

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	0.1137	0.8596	0.6582	1.2700e-003		0.0388	0.0388		0.0374	0.0374	0.0000	102.9456	102.9456	0.0211	0.0000	103.4735
Total	**0.1137**	**0.8596**	**0.6582**	**1.2700e-003**		**0.0388**	**0.0388**		**0.0374**	**0.0374**	**0.0000**	**102.9456**	**102.9456**	**0.0211**	**0.0000**	**103.4735**

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	0.0128	0.4827	0.1300	6.3000e-004	7.0100e-003	4.1000e-004	7.4200e-003	2.0500e-003	3.9000e-004	2.4300e-003	0.0000	60.3657	60.3657	5.6000e-003	0.0000	60.5057
Worker	0.0174	7.6700e-003	0.1014	1.5000e-004	0.0128	1.7000e-004	0.0129	3.4100e-003	1.6000e-004	3.5700e-003	0.0000	13.4769	13.4769	5.3000e-004	0.0000	13.4901

Total	**0.0302**	**0.4903**	**0.2314**	**7.8000e-004**	**0.0198**	**5.8000e-004**	**0.0203**	**5.4600e-003**	**5.5000e-004**	**6.0000e-003**	**0.0000**	**73.8426**	**73.8426**	**6.1300e-003**	**0.0000**	**73.9959**

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	9.5900e-003	0.2199	0.3278	1.2700e-003		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	41.2203	41.2203	5.3700e-003	0.0000	41.3545
Total	**9.5900e-003**	**0.2199**	**0.3278**	**1.2700e-003**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**41.2203**	**41.2203**	**5.3700e-003**	**0.0000**	**41.3545**

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	0.0128	0.4827	0.1300	6.3000e-004	7.0100e-003	4.1000e-004	7.4200e-003	2.0500e-003	3.9000e-004	2.4300e-003	0.0000	60.3657	60.3657	5.6000e-003	0.0000	60.5057
Worker	0.0174	7.6700e-003	0.1014	1.5000e-004	0.0128	1.7000e-004	0.0129	3.4100e-003	1.6000e-004	3.5700e-003	0.0000	13.4769	13.4769	5.3000e-004	0.0000	13.4901
Total	**0.0302**	**0.4903**	**0.2314**	**7.8000e-004**	**0.0198**	**5.8000e-004**	**0.0203**	**5.4600e-003**	**5.5000e-004**	**6.0000e-003**	**0.0000**	**73.8426**	**73.8426**	**6.1300e-003**	**0.0000**	**73.9959**

3.8 Steel/Exterior - 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	0.3693	2.7865	2.2962	4.5100e-003		0.1206	0.1206		0.1161	0.1161	0.0000	366.6826	366.6826	0.0735	0.0000	368.5194
Total	**0.3693**	**2.7865**	**2.2962**	**4.5100e-003**		**0.1206**	**0.1206**		**0.1161**	**0.1161**	**0.0000**	**366.6826**	**366.6826**	**0.0735**	**0.0000**	**368.5194**

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	0.0422	1.6632	0.4317	2.2200e-003	0.0250	1.2500e-003	0.0262	7.2900e-003	1.1900e-003	8.4800e-003	0.0000	213.0555	213.0555	0.0187	0.0000	213.5240
Worker	0.0568	0.0242	0.3271	5.1000e-004	0.0454	6.0000e-004	0.0460	0.0122	5.5000e-004	0.0127	0.0000	46.2871	46.2871	1.6700e-003	0.0000	46.3289
Total	**0.0990**	**1.6874**	**0.7588**	**2.7300e-003**	**0.0704**	**1.8500e-003**	**0.0722**	**0.0194**	**1.7400e-003**	**0.0212**	**0.0000**	**259.3426**	**259.3426**	**0.0204**	**0.0000**	**259.8529**

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	0.0342	0.7831	1.1675	4.5100e-003		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	146.8119	146.8119	0.0176	0.0000	147.2511
Total	**0.0342**	**0.7831**	**1.1675**	**4.5100e-003**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**146.8119**	**146.8119**	**0.0176**	**0.0000**	**147.2511**

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	0.0422	1.6632	0.4317	2.2200e-003	0.0250	1.2500e-003	0.0262	7.2900e-003	1.1900e-003	8.4800e-003	0.0000	213.0555	213.0555	0.0187	0.0000	213.5240
Worker	0.0568	0.0242	0.3271	5.1000e-004	0.0454	6.0000e-004	0.0460	0.0122	5.5000e-004	0.0127	0.0000	46.2871	46.2871	1.6700e-003	0.0000	46.3289
Total	**0.0990**	**1.6874**	**0.7588**	**2.7300e-003**	**0.0704**	**1.8500e-003**	**0.0722**	**0.0194**	**1.7400e-003**	**0.0212**	**0.0000**	**259.3426**	**259.3426**	**0.0204**	**0.0000**	**259.8529**

3.8 Steel/Exterior - 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	0.2727	2.0802	1.8015	3.5900e-003		0.0854	0.0854		0.0821	0.0821	0.0000	291.9331	291.9331	0.0571	0.0000	293.3608
Total	**0.2727**	**2.0802**	**1.8015**	**3.5900e-003**		**0.0854**	**0.0854**		**0.0821**	**0.0821**	**0.0000**	**291.9331**	**291.9331**	**0.0571**	**0.0000**	**293.3608**

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	0.0262	1.1227	0.3084	1.7000e-003	0.0199	4.6000e-004	0.0204	5.8000e-003	4.4000e-004	6.2400e-003	0.0000	163.9344	163.9344	0.0119	0.0000	164.2309
Worker	0.0416	0.0171	0.2366	3.9000e-004	0.0362	4.7000e-004	0.0366	9.6700e-003	4.3000e-004	0.0101	0.0000	35.4735	35.4735	1.1800e-003	0.0000	35.5029
Total	**0.0678**	**1.1398**	**0.5450**	**2.0900e-003**	**0.0561**	**9.3000e-004**	**0.0570**	**0.0155**	**8.7000e-004**	**0.0163**	**0.0000**	**199.4078**	**199.4078**	**0.0130**	**0.0000**	**199.7338**

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	0.0272	0.6235	0.9295	3.5900e-003		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	116.8849	116.8849	0.0128	0.0000	117.2037
Total	**0.0272**	**0.6235**	**0.9295**	**3.5900e-003**		**1.8100e-003**	**1.8100e-003**		**1.8100e-003**	**1.8100e-003**	**0.0000**	**116.8849**	**116.8849**	**0.0128**	**0.0000**	**117.2037**

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	0.0262	1.1227	0.3084	1.7000e-003	0.0199	4.6000e-004	0.0204	5.8000e-003	4.4000e-004	6.2400e-003	0.0000	163.9344	163.9344	0.0119	0.0000	164.2309
Worker	0.0416	0.0171	0.2366	3.9000e-004	0.0362	4.7000e-004	0.0366	9.6700e-003	4.3000e-004	0.0101	0.0000	35.4735	35.4735	1.1800e-003	0.0000	35.5029
Total	**0.0678**	**1.1398**	**0.5450**	**2.0900e-003**	**0.0561**	**9.3000e-004**	**0.0570**	**0.0155**	**8.7000e-004**	**0.0163**	**0.0000**	**199.4078**	**199.4078**	**0.0130**	**0.0000**	**199.7338**

3.9 Building Interior - 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	0.6393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0540	0.5258	0.6280	8.6000e-004		0.0319	0.0319		0.0293	0.0293	0.0000	75.3161	75.3161	0.0244	0.0000	75.9250
Total	**0.6932**	**0.5258**	**0.6280**	**8.6000e-004**		**0.0319**	**0.0319**		**0.0293**	**0.0293**	**0.0000**	**75.3161**	**75.3161**	**0.0244**	**0.0000**	**75.9250**

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	2.4000e-003	1.0200e-003	0.0138	2.0000e-005	1.9200e-003	3.0000e-005	1.9500e-003	5.1000e-004	2.0000e-005	5.4000e-004	0.0000	1.9583	1.9583	7.0000e-005	0.0000	1.9601

Total	**2.4000e-003**	**1.0200e-003**	**0.0138**	**2.0000e-005**	**1.9200e-003**	**3.0000e-005**	**1.9500e-003**	**5.1000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.9583**	**1.9583**	**7.0000e-005**	**0.0000**	**1.9601**

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	0.6393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.1397	0.6513	8.6000e-004		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	75.3160	75.3160	0.0244	0.0000	75.9249
Total	**0.6521**	**0.1397**	**0.6513**	**8.6000e-004**		**1.4100e-003**	**1.4100e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**75.3160**	**75.3160**	**0.0244**	**0.0000**	**75.9249**

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	2.4000e-003	1.0200e-003	0.0138	2.0000e-005	1.9200e-003	3.0000e-005	1.9500e-003	5.1000e-004	2.0000e-005	5.4000e-004	0.0000	1.9583	1.9583	7.0000e-005	0.0000	1.9601
Total	**2.4000e-003**	**1.0200e-003**	**0.0138**	**2.0000e-005**	**1.9200e-003**	**3.0000e-005**	**1.9500e-003**	**5.1000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.9583**	**1.9583**	**7.0000e-005**	**0.0000**	**1.9601**

3.9 Building Interior - 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	2.8476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2179	2.1423	2.7789	3.8200e-003		0.1208	0.1208		0.1111	0.1111	0.0000	335.4988	335.4988	0.1085	0.0000	338.2115
Total	**3.0656**	**2.1423**	**2.7789**	**3.8200e-003**		**0.1208**	**0.1208**		**0.1111**	**0.1111**	**0.0000**	**335.4988**	**335.4988**	**0.1085**	**0.0000**	**338.2115**

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	9.8400e-003	4.0500e-003	0.0560	9.0000e-005	8.5600e-003	1.1000e-004	8.6700e-003	2.2900e-003	1.0000e-004	2.3900e-003	0.0000	8.3971	8.3971	2.8000e-004	0.0000	8.4041
Total	**9.8400e-003**	**4.0500e-003**	**0.0560**	**9.0000e-005**	**8.5600e-003**	**1.1000e-004**	**8.6700e-003**	**2.2900e-003**	**1.0000e-004**	**2.3900e-003**	**0.0000**	**8.3971**	**8.3971**	**2.8000e-004**	**0.0000**	**8.4041**

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	2.8476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0572	0.6224	2.9012	3.8200e-003		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	335.4984	335.4984	0.1085	0.0000	338.2111
Total	**2.9048**	**0.6224**	**2.9012**	**3.8200e-003**		**6.2700e-003**	**6.2700e-003**		**6.2700e-003**	**6.2700e-003**	**0.0000**	**335.4984**	**335.4984**	**0.1085**	**0.0000**	**338.2111**

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	9.8400e-003	4.0500e-003	0.0560	9.0000e-005	8.5600e-003	1.1000e-004	8.6700e-003	2.2900e-003	1.0000e-004	2.3900e-003	0.0000	8.3971	8.3971	2.8000e-004	0.0000	8.4041
Total	**9.8400e-003**	**4.0500e-003**	**0.0560**	**9.0000e-005**	**8.5600e-003**	**1.1000e-004**	**8.6700e-003**	**2.2900e-003**	**1.0000e-004**	**2.3900e-003**	**0.0000**	**8.3971**	**8.3971**	**2.8000e-004**	**0.0000**	**8.4041**

Attachment 3: Health Risk Calculations for Construction and Operation

CONSTRUCTION CALCULATIONS

Block 8, San Jose, CA

DPM Construction Emissions and Modeling Emission Rates

Construction Year	Activity	DPM (ton/year)	Source Type	No. Sources	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Emissions per Point Source (g/s)
2021	Construction	0.1164	Point	158	232.8	0.06378	8.04E-03	5.09E-05
2022	Construction	0.1834	Point	158	366.8	0.10049	1.27E-02	8.01E-05
2023	Construction	0.2072	Point	158	414.4	0.11353	1.43E-02	9.05E-05
Total		***0.5070***		***474***	***1014***	***0.2778***		

Construction Hours

hr/day =	10	(7am-5pm)
days/yr =	365	
hours/year =	3650	

PM2.5 Fugitive Construction Emissions and Modeling Emission Rates

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	Emission Rate $g/s/m^2$
2021	Construction	FUG	0.0418	83.6	0.02290	2.89E-03	14,849	1.94E-07
2022	Construction	FUG	0.0214	42.8	0.01173	1.48E-03	14,849	9.95E-08
2023	Construction	FUG	0.0178	35.6	0.00975	1.23E-03	14,849	8.28E-08
Total			***0.0810***	***162***	***0.0444***	***0.0056***		

Construction Hours

hr/day =	10	(7am-5pm)
days/yr =	365	
hours/year =	3650	

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	DPM (ton/year)	Source Type	No. Sources	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Emissions per Point Source (g/s)
2021	Construction	0.0089	Point	158	17.8	0.00489	6.16E-04	3.90E-06
2022	Construction	0.0075	Point	158	14.9	0.00408	5.14E-04	3.26E-06
2023	Construction	0.0091	Point	158	18.3	0.00500	6.30E-04	3.99E-06
Total		***0.0255***		***474***	***51***	***0.0140***		

Construction Hours

hr/day =	10	(7am-5pm)
days/yr =	365	
hours/year =	3650	

PM2.5 Fugitive Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	Emission Rate $g/s/m^2$
2021	Construction	FUG	0.0156	31.2	0.00855	1.08E-03	14,849	7.25E-08
2022	Construction	FUG	0.0214	42.8	0.01173	1.48E-03	14,849	9.95E-08
2023	Construction	FUG	0.0178	35.6	0.00975	1.23E-03	14,849	8.28E-08
Total			***0.0548***	***109.6***	***0.0300***	***0.0038***		

Construction Hours

hr/day =	10	(7am-5pm)
days/yr =	365	
hours/year =	3650	

Block 8, San Jose, CA
Construction Health Impacts Summary

Maximum Impacts at Construction MEI Location - Unmitigated

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2021	0.2732	0.0595	48.74	0.78	0.055	0.33
2022	0.4304	0.0305	70.69	1.24	0.086	0.46
2023	0.4860	0.0254	12.57	1.40	0.097	0.51
Total	-	-	**132.0**	**3.4**	-	-
Maximum	0.4860	0.0595	**-**	**-**	**0.097**	**0.51**

Maximum Impacts at Construction MEI Location - With Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2021	0.0209	0.0223	3.72	0.06	0.004	0.04
2022	0.0175	0.0305	2.87	0.05	0.003	0.05
2023	0.0214	0.0254	0.55	0.06	0.004	0.05
Total	-	-	**7.1**	**0.2**	-	-
Maximum	0.0214	0.0305	**-**	**-**	**0.004**	**0.05**

Block 8, San Jose, CA
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
Impacts at Off-Site Receptors-6.1 meters

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				
							Modeled				
Exposure Year	**Exposure Duration (years)**	**Age**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Infant/Child Cancer Risk (per million)**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Adult Cancer Risk (per million)**
0	0.25	-0.25 - 0*	2021	0.2732	10	3.87	2021	0.2732	-	-
1	1	0 - 1	2021	0.2732	10	44.87	2021	0.2732	1	0.78
2	1	1 - 2	2022	0.4304	10	70.69	2022	0.4304	1	1.24
3	1	2 - 3	2023	0.4860	3	12.57	2023	0.4860	1	1.40
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
Total Increased Cancer Risk						**132.0**				**3.42**

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.055	0.0595	0.333
0.086	0.0305	0.461
0.097	0.0254	0.511
0.097	**0.060**	**0.511**

* Third trimester of pregnancy

Block 8, San Jose, CA
Maximum DPM Cancer Risk Calculations From Construction - Mitigated Emissions
Impacts at Off-Site Receptors - 6.1 meters

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
						Infant/Child		Modeled		Adult			
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2021	0.0209	10	0.28	2021	0.0209	-	-			
1	1	0 - 1	2021	0.0209	10	3.44	2021	0.0209	1	0.06	0.004	0.0223	0.043
2	1	1 - 2	2022	0.0175	10	2.87	2022	0.0175	1	0.05	0.003	0.0305	0.048
3	1	2 - 3	2023	0.0214	3	0.55	2023	0.0214	1	0.06	0.004	0.0254	0.047
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00	**0.004**	**0.031**	**0.048**
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**7.1**				**0.17**			

* Third trimester of pregnancy

Block 8, San Jose, CA
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
Impacts at Off-Site Receptors-9.1 meter

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				
							Modeled				
Exposure Year	**Exposure Duration (years)**	**Age**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Infant/Child Cancer Risk (per million)**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Adult Cancer Risk (per million)**
0	0.25	-0.25 - 0*	2021	0.2719	10	3.86	2021	0.2719	-	-
1	1	0 - 1	2021	0.2719	10	44.66	2021	0.2719	1	0.78
2	1	1 - 2	2022	0.4284	10	70.36	2022	0.4284	1	1.23
3	1	2 - 3	2023	0.4838	3	12.51	2023	0.4838	1	1.39
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
Total Increased Cancer Risk						**131.4**				**3.40**

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.054	0.0362	0.308
0.086	0.0186	0.447
0.097	0.0155	0.499
0.097	**0.036**	**0.499**

* Third trimester of pregnancy

OPERATION CALCULATIONS

Block 8, San Jose, CA

Standby Emergency Generator Impacts

Off-site Sensitive Receptors (9.1 meter receptor heights)

DPM Emission Rates		
	DPM Emissions per Generator	
	Max Daily	Annual
Source Type	(lb/day)	(lb/year)
1,000 kW (1,340 hp) Generators	0.044	16.18
CalEEMod DPM Emissions	0.00809	

Modeling Information		
Model	AERMOD	
Source	Diesel Generator Engine	
Source Type	Point	
Meteorological Data	2006-2010 BAAQMD San Jose Meteorological Data	
Point Source Stack Parameters		
Generator Engine Size (hp)	1340	
Stack Height (ft)	12.00	near ground level release
Stack Diameter (ft)**	0.60	
Exhaust Gas Flowrate (CFM)*	2527.73	
Stack Exit Velocity (ft/sec)**	149.00	
Exhaust Temperature (˚F)**	872.00	
Emissions Rate (lb/hr)	0.001847	

* AERMOD default

**BAAQMD default generator parameters

Block 8, San Jose, CA - Cancer Risks from Project Operation
Project Emergency Generator
Impacts at Off-Site Receptors - 9.1 meter receptor height
Impact at Project MEI (27-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child				Adult
Age -->	3rd Trimester	0 - 2	2 - 9	2 - 16	16 - 30
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)
0	0.25	-0.25 - 0*	2021	0.0000	10	0.00
1	1	0 - 1	2021	0.0000	10	0.00
2	1	1 - 2	2022	0.0000	10	0.00
3	1	2 - 3	2023	0.0000	3	0.00
4	1	3 - 4	2024	0.0089	3	0.23
5	1	4 - 5	2025	0.0089	3	0.23
6	1	5 - 6	2026	0.0089	3	0.23
7	1	6 - 7	2027	0.0089	3	0.23
8	1	7 - 8	2028	0.0089	3	0.23
9	1	8 - 9	2029	0.0089	3	0.23
10	1	9 - 10	2030	0.0089	3	0.23
11	1	10 - 11	2031	0.0089	3	0.23
12	1	11 - 12	2032	0.0089	3	0.23
13	1	12 - 13	2033	0.0089	3	0.23
14	1	13 - 14	2034	0.0089	3	0.23
15	1	14 - 15	2035	0.0089	3	0.23
16	1	15 - 16	2036	0.0089	3	0.23
17	1	16-17	2037	0.0089	1	0.03
18	1	17-18	2038	0.0089	1	0.03
19	1	18-19	2039	0.0089	1	0.03
20	1	19-20	2040	0.0089	1	0.03
21	1	20-21	2041	0.0089	1	0.03
22	1	21-22	2042	0.0089	1	0.03
23	1	22-23	2043	0.0089	1	0.03
24	1	23-24	2044	0.0089	1	0.03
25	1	24-25	2045	0.0089	1	0.03
26	1	25-26	2046	0.0089	1	0.03
27	1	26-27	2047	0.0089	1	0.03
28	1	27-28	2048	0.0089	1	0.03
29	1	28-29	2049	0.0089	1	0.03
30	1	29-30	2050	0.0089	1	0.03
Total Increased Cancer Risk						**3.35**

* Third trimester of pregnancy

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	North-South
Side of the Roadway	West
Distance from Roadway	115 feet
Annual Average Daily Traffic (ADT)	2,930

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.017 ($\mu g/m^3$)

Cancer Risk

0.83 (per million)

South First Street

Project Trips from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018	Adjusted for Expsoure Duration (Years)
0.57 (per million)	0.29 (per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust. 0.504
2. Roadways were modeled using CALINE4 Ca3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

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- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
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- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	North-South
Side of the Roadway	East
Distance from Roadway	270 feet
Annual Average Daily Traffic (ADT)	3,075

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.015 ($\mu g/m^3$)

Cancer Risk

0.66 (per million)

South Market Street

Project Trips from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018	Adjusted for Expsoure Duration (Years)
0.45 (per million)	0.23 (per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust. 0.50
2. Roadways were modeled using CALINE4 Ca3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	East-West
Side of the Roadway	South
Distance from Roadway	40 feet
Annual Average Daily Traffic (ADT)	5,710

Results

Santa Clara County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.078 ($\mu g/m^3$)

Cancer Risk

3.08 (per million)

West San Carlos Street

Project Trips from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018	Adjusted for Expsoure Duration (Years)
2.12 (per million)	1.07 (per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust. 0.50
2. Roadways were modeled using CALINE4 CaEqhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Block 8, San Jose, CA
Cancer Risk Adjustment for Roadways

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult
							Modeled			
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)
0	0.25	-0.25 - 0*	2021	1.0000	10	14.18	2021	1.0000	-	-
1	1	0 - 1	2021	1.0000	10	164.25	2021	1.0000	1	2.87
2	1	1 - 2	2022	1.0000	10	164.25	2022	1.0000	1	2.87
3	1	2 - 3	2023	1.0000	3	25.86	2023	1.0000	1	2.87
4	1	3 - 4	2024	1.0000	3	25.86	2024	1.0000	1	2.87
5	1	4 - 5	2024	1.0000	3	25.86	2024	1.0000	1	2.87
6	1	5 - 6	2025	1.0000	3	25.86	2025	1.0000	1	2.87
7	1	6 - 7	2026	1.0000	3	25.86	2026	1.0000	1	2.87
8	1	7 - 8	2026	1.0000	3	25.86	2026	1.0000	1	2.87
9	1	8 - 9	2027	1.0000	3	25.86	2027	1.0000	1	2.87
10	1	9 - 10	2028	1.0000	3	25.86	2028	1.0000	1	2.87
11	1	10 - 11	2028	1.0000	3	25.86	2028	1.0000	1	2.87
12	1	11 - 12	2029	1.0000	3	25.86	2029	1.0000	1	2.87
13	1	12 - 13	2030	1.0000	3	25.86	2030	1.0000	1	2.87
14	1	13 - 14	2031	1.0000	3	25.86	2031	1.0000	1	2.87
15	1	14 - 15	2031	1.0000	3	25.86	2031	1.0000	1	2.87
16	1	15 - 16	2032	1.0000	3	25.86	2032	1.0000	1	2.87
17	1	16-17	2033	1.0000	1	2.87	2033	1.0000	1	2.87
18	1	17-18	2033	1.0000	1	2.87	2033	1.0000	1	2.87
19	1	18-19	2034	1.0000	1	2.87	2034	1.0000	1	2.87
20	1	19-20	2035	1.0000	1	2.87	2035	1.0000	1	2.87
21	1	20-21	2035	1.0000	1	2.87	2035	1.0000	1	2.87
22	1	21-22	2036	1.0000	1	2.87	2036	1.0000	1	2.87
23	1	22-23	2037	1.0000	1	2.87	2037	1.0000	1	2.87
24	1	23-24	2038	1.0000	1	2.87	2038	1.0000	1	2.87
25	1	24-25	2038	1.0000	1	2.87	2038	1.0000	1	2.87
26	1	25-26	2039	1.0000	1	2.87	2039	1.0000	1	2.87
27	1	26-27	2040	1.0000	1	2.87	2040	1.0000	1	2.87
28	1	27-28	2040	1.0000	1	2.87	2040	1.0000	1	2.87
29	1	28-29	2041	1.0000	1	2.87	2041	1.0000	1	2.87
30	1	29-30	2042	1.0000	1	2.87	2042	1.0000	1	2.87
Total Increased Cancer Risk						**744.9**				**8543292.12**

* Third trimester of pregnancy

Block 8, San Jose, CA
Cancer Risk Adjustment for Roadways

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult
				DPM Conc (ug/m3)	Age	Cancer	Modeled		Age	Cancer
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Risk (per million)	DPM Conc (ug/m3) Year	Annual	Sensitivity Factor	Risk (per million)
0	0.25	-0.25 - 0*	2021	0.0000	10	0.00	2021	0.0000	-	-
1	1	0 - 1	2021	0.0000	10	0.00	2021	0.0000	1	0.00
2	1	1 - 2	2022	0.0000	10	0.00	2022	0.0000	1	0.00
3	1	2 - 3	2023	0.0000	3	0.00	2023	0.0000	1	0.00
4	1	3 - 4	2024	1.0000	3	25.86	2024	1.0000	1	2.87
5	1	4 - 5	2024	1.0000	3	25.86	2024	1.0000	1	2.87
6	1	5 - 6	2025	1.0000	3	25.86	2025	1.0000	1	2.87
7	1	6 - 7	2026	1.0000	3	25.86	2026	1.0000	1	2.87
8	1	7 - 8	2026	1.0000	3	25.86	2026	1.0000	1	2.87
9	1	8 - 9	2027	1.0000	3	25.86	2027	1.0000	1	2.87
10	1	9 - 10	2028	1.0000	3	25.86	2028	1.0000	1	2.87
11	1	10 - 11	2028	1.0000	3	25.86	2028	1.0000	1	2.87
12	1	11 - 12	2029	1.0000	3	25.86	2029	1.0000	1	2.87
13	1	12 - 13	2030	1.0000	3	25.86	2030	1.0000	1	2.87
14	1	13 - 14	2031	1.0000	3	25.86	2031	1.0000	1	2.87
15	1	14 - 15	2031	1.0000	3	25.86	2031	1.0000	1	2.87
16	1	15 - 16	2032	1.0000	3	25.86	2032	1.0000	1	2.87
17	1	16-17	2033	1.0000	1	2.87	2033	1.0000	1	2.87
18	1	17-18	2033	1.0000	1	2.87	2033	1.0000	1	2.87
19	1	18-19	2034	1.0000	1	2.87	2034	1.0000	1	2.87
20	1	19-20	2035	1.0000	1	2.87	2035	1.0000	1	2.87
21	1	20-21	2035	1.0000	1	2.87	2035	1.0000	1	2.87
22	1	21-22	2036	1.0000	1	2.87	2036	1.0000	1	2.87
23	1	22-23	2037	1.0000	1	2.87	2037	1.0000	1	2.87
24	1	23-24	2038	1.0000	1	2.87	2038	1.0000	1	2.87
25	1	24-25	2038	1.0000	1	2.87	2038	1.0000	1	2.87
26	1	25-26	2039	1.0000	1	2.87	2039	1.0000	1	2.87
27	1	26-27	2040	1.0000	1	2.87	2040	1.0000	1	2.87
28	1	27-28	2040	1.0000	1	2.87	2040	1.0000	1	2.87
29	1	28-29	2041	1.0000	1	2.87	2041	1.0000	1	2.87
30	1	29-30	2042	1.0000	1	2.87	2042	1.0000	1	2.87
Total Increased Cancer Risk						**376.3**				**8543283.51**

* Third trimester of pregnancy

	376.3419452
	744.874773
Factor	**0.5052419**

Attachment 4: Community Risk Calculations

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara	
Roadway Direction	North-South	
Side of the Roadway	East	
Distance from Roadway	270	feet
Annual Average Daily Traffic (ADT)	17,580	

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.088 ($\mu g/m^3$)

Cancer Risk

3.78 (per million)

South Market Street

Background plus project volumes from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

2.60

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 Ca03qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

- County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.
- Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.
- Side of the Roadway: Identify on which side of the roadway the project is located.
- Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.
- Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara	
Roadway Direction	East-West	
Side of the Roadway	South	
Distance from Roadway	40	feet
Annual Average Daily Traffic (ADT)	13,020	

Results

Santa Clara County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.178 ($\mu g/m^3$)

Cancer Risk

7.03 (per million)

West San Carlos Street

Background plus project volumes from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

4.83

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 Ca03qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

BAAQMD RESPONSE TO REQUEST

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**8/14/2019**
Contact Name	Mimi McNamara
Affiliation	Illingworth & Rodkin, Inc
Phone	707-794-0400 x111
Email	mmcnamara@illingworthrodkin.com
Project Name	Block 8
Address	60 W San Carlos Street
City	San Jose
County	Santa Clara
commercial, mixed use, industrial, etc.)	Offiec use
Project Size (# of units or building square feet)	568,286-sf

Comments: Please provide the daily emission files for the generators. Thank you.

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in **Table A**. Incomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/**, and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx**. The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in **Table B** blue section only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	FACID (Plant No.)	FNAME	FSTREET	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments
TBD	15031	US General Services Administration	280 So 1st Street	8.22107248	0.004494	0.090559		Generator		Emissions file attached.
TBD	**15125**	**San Jose Marriott Hotel**	**301 So Market Street**	**6.58538579**	**0.010342**	**0.008351**		**Generator**		**Emissions file attached.**
TBD	22400	360 Residences c/o Gateway Nathaniel Inc	360 So Market Street	1.93642182	0.00378	0.002431		Generator		Emissions file attached.
TBD	**19298**	**DataPipe Inc**	**150 So 1st Street**	**62.8639667**	**0.056006**	**0.081136**		**Generator**		**Emissions file attached.**
TBD	22239	G&K Management	201 So 4th Street	2.60178879	0.00401	0.003302		Generator		Emissions file attached.
TBD	**16778**	**Owl Energy Resources Inc**	**170 So Market Street**	**17.5363456**	**0.119605**	**3.093653**				**Emissions file attached.**
TBD	8556	Fairmont Hotel, San Jose	170 So Market Street	6.49583627	0.010025	0.008243		Generator		Emissions file attached.
TBD	**13431**	**San Jose Hilton & Towers**	**300 Almaden Boulevard**	**92.4556337**	**0.048017**	**0.120472**		**Generator**		**Emissions file attached.**
TBD	2060	Dept of Convention & Cultural Affairs-San Jose	408 Almaden Avenue	15.8494925	0.008231	0.020652		Generator		Emissions file attached.
TBD	**17018**	**San Jose Redevelopment Agency**	**435 So Market Street**	**5.34269984**	**0.009588**	**0.006734**		**Generator**		**Emissions file attached.**
TBD	18768	88 Master Association	88 E San Fernando St	2.8741504	0.007291	0.003552		Generator		Emissions file attached.

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

ADJUSTED RISK AT PROJECT MEI

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on conducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**8/14/2019**
Contact Name	Mimi McNamara
Affiliation	Illingworth & Rodkin, Inc
Phone	707-794-0400 x111
Email	mmcnamara@illingworthrodkin.com
Project Name	Block 8
Address	60 W San Carlos Street
City	San Jose
County	Santa Clara
Project Type (residential, commercial, mixed use, industrial, etc.)	Offiec use
Project Size (# of units or building square feet)	568,286 sf
Comments: Please provide the daily emission files for the generators. Thank you.	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in **Table A**. Incomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/**, and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx**. The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in **Table B** blue section only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (meter) or MEI[1]	FACID (Plant No.)	FNAME	FSTREET	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	**Project MEI** Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
65	15031	US General Services Administration	280 So 1st Street	8.22107248	0.004494	0.090559		Generator		Emissions file attached.	**0.30**	**0.06**	**<0.01**
105	**15125**	**San Jose Marriott Hotel**	**301 So Market Street**	**6.58538579**	**0.010342**	**0.008351**		**Generator**		**Emissions file attached.**	**0.30**	**0.03**	**<0.01**
100	22400	360 Residences c/o Gateway Nathaniel Inc	360 So Market Street	1.93642182	0.00378	0.002431		Generator		Emissions file attached.	**<0.1**	-	-
210	**19298**	**DataPipe Inc**	**150 So 1st Street**	**62.8639667**	**0.056006**	**0.081136**		**Generator**		**Emissions file attached.**	**5.00**	**0.01**	**<0.01**
275	22239	G&K Management	201 So 4th Street	2.60178879	0.00401	0.003302		Generator		Emissions file attached.	**0.10**	**<0.01**	**<0.01**
215	**16778**	**Owl Energy Resources Inc**	**170 So Market Street**	**17.5363456**	**0.119605**	**3.093653**				**Emissions file attached.**	**2.80**	**<0.01**	**<0.01**
215	8556	Fairmont Hotel, San Jose	170 So Market Street	6.49583627	0.010025	0.008243		Generator		Emissions file attached.	**0.80**	**0.04**	**<0.01**
300	**13431**	**San Jose Hilton & Towers**	**300 Almaden Boulevard**	**92.4556337**	**0.048017**	**0.120472**		**Generator**		**Emissions file attached.**	**0.30**	**<0.01**	**<0.01**
140	2060	Dept of Convention & Cultural Affairs-San Jose	408 Almaden Avenue	15.8494925	0.008231	0.020652		Generator		Emissions file attached.	**1.40**	**0.08**	**<0.01**
235	**17018**	**San Jose Redevelopment Agency**	**435 So Market Street**	**5.34269984**	**0.009588**	**0.006734**		**Generator**		**Emissions file attached.**	**<0.1**	**<0.01**	-
300	18768	88 Master Association	88 E San Fernando St	2.8741504	0.007291	0.003552		Generator		Emissions file attached.	**0.10**	**<0.01**	**<0.01**

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

Tribute Hotel - San Jose, CA

DPM Emissions and Modeling Emission Rates

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2017	Construction	0.0049	1_DPM	9.8	0.00298	3.75E-04	614	6.11E-07
2018	Construction	0.0808	1_DPM	161.6	0.04919	6.20E-03	614	1.01E-05
Total		***0.0857***		***171.4***	***0.0522***	***0.0066***		

Operation Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

*Emissions from the preivous report were used and not altered to match the more current year

PM2.5 Fugitive Dust Emissions for Modeling

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2017	Construction	1_PM25	0.0026	5.1	0.00155	1.96E-04	614	3.19E-07
2018	Construction	1_PM25	0.0012	2.5	0.00075	9.51E-05	614	1.55E-07
Total			***0.0038***	***7.6***	***0.0023***	***0.0003***		

Operation Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Tribute Hotel - San Jose, CA
Maximum DPM Cancer Risk Calculations From Construction Impacts at Block 8 MEI

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
					Age	Infant/Child		Modeled	Age	Adult			
Exposure	Exposure Duration		DPM Conc (ug/m3)		Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2017-2018	0.0050	10	0.07	2017-2018	0.0050	-	-			
1	1	0 - 1	2017-2018	0.0050	10	0.83	2017-2018	0.0050	1	0.01	0.001	0.0029	0.0079
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**0.90**				**0.01**			

* Third trimester of pregnancy

200 Park, San Jose, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2019	Construction	0.0077	DPM	15.4	0.00470	5.92E-04	6,838	**8.66E-08**
2020	Construction	0.1217	DPM	243.4	0.07409	9.34E-03	6,838	**1.37E-06**
2021	Construction	0.0974	DPM	194.8	0.05930	7.47E-03	6,838	**1.09E-06**
2022	Construction	0.0692	DPM	138.4	0.04213	5.31E-03	6,838	**7.76E-07**
Total		***0.2960***		***258.8***	***0.0788***	***0.0099***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

200 Park, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2019	Construction	FUG	0.0002	0.3	0.00010	1.23E-05	6,838	**1.79E-09**
2020	Construction	FUG	0.1564	312.8	0.09522	1.20E-02	6,838	**1.75E-06**
2021	Construction	FUG	0.1552	310.4	0.09449	1.19E-02	6,838	**1.74E-06**
2022	Construction	FUG	0.1244	248.8	0.07574	9.54E-03	6,838	**1.40E-06**
Total			***0.4362***	***313.1***	***0.0953***	***0.0120***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

200 Park Offices, San Jose, CA
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
Impacts at Block 8 MEI

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
						Infant/Child	Modeled			Adult			
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2020	0.0002	10	0.00	2020	0.0002	-	-			
1	1	0 - 1	2020	0.0002	10	0.04	2020	0.0002	1	0.00	0.000	0.0000	0.000
2	1	1 - 2	2021	0.0031	10	0.51	2021	0.0031	1	0.01	0.001	0.0040	0.007
3	1	2 - 3	2022	0.0025	3	0.07	2022	0.0025	1	0.01	0.000	0.0040	0.006
4	1	3 - 4	2023	0.0000	3	0.00	2023	0.0018	1	0.01	0.000	0.003	0.005
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00	**0.001**	**0.004**	**0.007**
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**0.6**				**0.02**			

* Third trimester of pregnancy

Museum Place, San Jose (DEFAULTS)

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2020	Construction	0.1776	DPM	355.2	0.10813	1.36E-02	5,042	**2.70E-06**
2021	Construction	0.0916	DPM	183.2	0.05577	7.03E-03	5,042	**1.39E-06**
Total		***0.2692***		***538.4***	***0.1639***	***0.0207***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Museum Place, San Jose (DEFAULTS)

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2020	Construction	FUG	0.1226	245.2	0.07464	9.40E-03	5,042	**1.87E-06**
2021	Construction	FUG	0.0088	17.6	0.00537	6.77E-04	5,042	**1.34E-07**
Total			***0.1314***	***262.8***	***0.0800***	***0.0101***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Museum Place, San Jose, CA
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
Impacts at Block 8 MEI

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult
							Modeled			
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)
0	0.25	-0.25 - 0*	2020	0.0083	10	0.12	2020	0.0083	-	-
1	1	0 - 1	2020	0.0083	10	1.37	2020	0.0083	1	0.02
2	1	1 - 2	2021	0.0043	10	0.70	2021	0.0043	1	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
Total Increased Cancer Risk						**2.2**				**0.04**

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.002	0.0057	0.014
0.001	0.0004	0.005
0.00	**0.01**	**0.01**

* Third trimester of pregnancy

200 Park Avenue Office Project - Santa Clara County, Annual

200 Park Avenue Office Project

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	840.00	1000sqft	1.70	840,000.00	2856
Enclosed Parking with Elevator	1,755.00	Space	0.00	300,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor is based on PGE's current intensity factor.

Land Use - Lot acreage = project site acreage

service population based on 2.4 employees per 1,000 sf. (employees occupy 840,000 sf of office space)

Construction Phase - Construction assumed to start December 2019. Duration of construction is estimated to be 35 months.

Vehicle Trips - weekday trip generation rate based on daily trips generated by project = 5,356

5,356 daily trips = 840,000 sf (office building sf)/1,000 x weekday trip rate

Energy Use -

Mobile Land Use Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value

tblConstructionPhase	NumDays	200.00	718.00
tblConstructionPhase	PhaseEndDate	11/23/2020	11/17/2020
tblConstructionPhase	PhaseEndDate	10/26/2020	10/20/2022
tblConstructionPhase	PhaseEndDate	11/9/2020	11/3/2022
tblConstructionPhase	PhaseStartDate	11/10/2020	11/4/2020
tblConstructionPhase	PhaseStartDate	10/27/2020	10/21/2022
tblLandUse	LandUseSquareFeet	702,000.00	300,000.00
tblLandUse	LotAcreage	19.28	1.70
tblLandUse	LotAcreage	15.79	0.00
tblLandUse	Population	0.00	2,856.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	160.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	WD_TR	11.03	6.38

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					
2019	0.0141	0.1363	0.0916	1.5000e-004	6.2000e-004	7.7200e-003	8.3400e-003	1.6000e-004	7.2100e-003	7.3800e-003	0.0000	13.3973	13.3973	3.2900e-003	0.0000	13.4795
2020	4.9646	4.7328	3.6645	0.0129	0.5604	0.1217	0.6820	0.1564	0.1171	0.2735	0.0000	1,181.3808	1,181.3808	0.0814	0.0000	1,183.4157
2021	0.4749	4.3972	3.5301	0.0132	0.5694	0.0974	0.6668	0.1552	0.0939	0.2491	0.0000	1,207.4729	1,207.4729	0.0775	0.0000	1,209.4114
2022	0.3541	3.3178	2.7466	0.0105	0.4565	0.0692	0.5256	0.1244	0.0666	0.1910	0.0000	958.5438	958.5438	0.0615	0.0000	960.0816
Maximum	**4.9646**	**4.7328**	**3.6645**	**0.0132**	**0.5694**	**0.1217**	**0.6820**	**0.1564**	**0.1171**	**0.2735**	**0.0000**	**1,207.4729**	**1,207.4729**	**0.0814**	**0.0000**	**1,209.4114**

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					
2019	0.0141	0.1363	0.0915	1.5000e-004	6.2000e-004	7.7200e-003	8.3400e-003	1.6000e-004	7.2100e-003	7.3800e-003	0.0000	13.3973	13.3973	3.2900e-003	0.0000	13.4794
2020	4.9646	4.7328	3.6645	0.0129	0.5604	0.1217	0.6820	0.1564	0.1171	0.2735	0.0000	1,181.3805	1,181.3805	0.0814	0.0000	1,183.4154
2021	0.4749	4.3972	3.5301	0.0132	0.5694	0.0974	0.6668	0.1552	0.0939	0.2491	0.0000	1,207.4726	1,207.4726	0.0775	0.0000	1,209.4111
2022	0.3541	3.3178	2.7466	0.0105	0.4565	0.0692	0.5256	0.1244	0.0666	0.1910	0.0000	958.5435	958.5435	0.0615	0.0000	960.0813
Maximum	**4.9646**	**4.7328**	**3.6645**	**0.0132**	**0.5694**	**0.1217**	**0.6820**	**0.1564**	**0.1171**	**0.2735**	**0.0000**	**1,207.4726**	**1,207.4726**	**0.0814**	**0.0000**	**1,209.4111**

	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)
1	**12-16-2019**	**3-15-2020**	1.1020	1.1020
2	**3-16-2020**	**6-15-2020**	1.3434	1.3434
3	**6-16-2020**	**9-15-2020**	1.3403	1.3403
4	**9-16-2020**	**12-15-2020**	5.7955	5.7955
5	**12-16-2020**	**3-15-2021**	1.2283	1.2283
6	**3-16-2021**	**6-15-2021**	1.2210	1.2210
7	**6-16-2021**	**9-15-2021**	1.2184	1.2184
8	**9-16-2021**	**12-15-2021**	1.2175	1.2175
9	**12-16-2021**	**3-15-2022**	1.1384	1.1384
10	**3-16-2022**	**6-15-2022**	1.1376	1.1376
11	**6-16-2022**	**9-15-2022**	1.1353	1.1353

12	**9-16-2022**	**9-30-2022**	0.1851	0.1851
		Highest	5.7955	5.7955

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	3.7465	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0464	0.0464	1.2000e-004	0.0000	0.0494
Energy	0.0742	0.6741	0.5662	4.0400e-003		0.0512	0.0512		0.0512	0.0512	0.0000	2,935.1732	2,935.1732	0.2342	0.0590	2,958.6098
Mobile	0.9965	4.2518	11.7363	0.0408	3.7740	0.0346	3.8086	1.0102	0.0323	1.0426	0.0000	3,738.6096	3,738.6096	0.1255	0.0000	3,741.7465
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	158.5765	0.0000	158.5765	9.3716	0.0000	392.8667
Water						0.0000	0.0000		0.0000	0.0000	47.3648	148.3933	195.7581	4.8797	0.1179	352.8956
Total	**4.8172**	**4.9260**	**12.3264**	**0.0449**	**3.7740**	**0.0859**	**3.8599**	**1.0102**	**0.0836**	**1.0939**	**205.9414**	**6,822.2224**	**7,028.1637**	**14.6111**	**0.1769**	**7,446.1680**

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	3.7465	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0464	0.0464	1.2000e-004	0.0000	0.0494
Energy	0.0742	0.6741	0.5662	4.0400e-003		0.0512	0.0512		0.0512	0.0512	0.0000	2,935.1732	2,935.1732	0.2342	0.0590	2,958.6098

Mobile	0.7999	2.9204	6.7542	0.0190	1.6146	0.0173	1.6319	0.4322	0.0162	0.4484	0.0000	1,745.0355	1,745.0355	0.0727	0.0000	1,746.8540
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	158.5765	0.0000	158.5765	9.3716	0.0000	392.8667
Water						0.0000	0.0000		0.0000	0.0000	47.3648	148.3933	195.7581	4.8797	0.1179	352.8956
Total	**4.6205**	**3.5947**	**7.3443**	**0.0231**	**1.6146**	**0.0687**	**1.6832**	**0.4322**	**0.0675**	**0.4997**	**205.9414**	**4,828.6483**	**5,034.5896**	**14.5583**	**0.1769**	**5,451.2754**

	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	**4.08**	**27.03**	**40.42**	**48.56**	**57.22**	**20.11**	**56.39**	**57.22**	**19.32**	**54.32**	**0.00**	**29.22**	**28.37**	**0.36**	**0.00**	**26.79**

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	12/16/2019	1/10/2020	5	20	
2	Site Preparation	Site Preparation	1/11/2020	1/14/2020	5	2	
3	Grading	Grading	1/15/2020	1/20/2020	5	4	
4	Building Construction	Building Construction	1/21/2020	10/20/2022	5	718	
5	Paving	Paving	10/21/2022	11/3/2022	5	10	
6	Architectural Coating	Architectural Coating	11/4/2020	11/17/2020	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,260,000; Non-Residential Outdoor: 420,000; Striped Parking

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	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	395.00	187.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	79.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

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	0.0138	0.1361	0.0894	1.4000e-004		7.7200e-003	7.7200e-003		7.2100e-003	7.2100e-003	0.0000	12.8497	12.8497	3.2700e-003	0.0000	12.9315
Total	**0.0138**	**0.1361**	**0.0894**	**1.4000e-004**		**7.7200e-003**	**7.7200e-003**		**7.2100e-003**	**7.2100e-003**	**0.0000**	**12.8497**	**12.8497**	**3.2700e-003**	**0.0000**	**12.9315**

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	2.8000e-004	2.1000e-004	2.1800e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5476	0.5476	1.0000e-005	0.0000	0.5480
Total	**2.8000e-004**	**2.1000e-004**	**2.1800e-003**	**1.0000e-005**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5476**	**0.5476**	**1.0000e-005**	**0.0000**	**0.5480**

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	0.0138	0.1361	0.0894	1.4000e-004		7.7200e-003	7.7200e-003		7.2100e-003	7.2100e-003	0.0000	12.8496	12.8496	3.2700e-003	0.0000	12.9314
Total	**0.0138**	**0.1361**	**0.0894**	**1.4000e-004**		**7.7200e-003**	**7.7200e-003**		**7.2100e-003**	**7.2100e-003**	**0.0000**	**12.8496**	**12.8496**	**3.2700e-003**	**0.0000**	**12.9314**

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	2.8000e-004	2.1000e-004	2.1800e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5476	0.5476	1.0000e-005	0.0000	0.5480
Total	**2.8000e-004**	**2.1000e-004**	**2.1800e-003**	**1.0000e-005**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5476**	**0.5476**	**1.0000e-005**	**0.0000**	**0.5480**

3.2 Demolition - 2020

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	8.5000e-003	0.0838	0.0586	1.0000e-004		4.6100e-003	4.6100e-003		4.3000e-003	4.3000e-003	0.0000	8.4271	8.4271	2.1700e-003	0.0000	8.4812

Total	**8.5000e-003**	**0.0838**	**0.0586**	**1.0000e-004**		**4.6100e-003**	**4.6100e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**8.4271**	**8.4271**	**2.1700e-003**	**0.0000**	**8.4812**

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	1.7000e-004	1.2000e-004	1.3000e-003	0.0000	4.1000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3537	0.3537	1.0000e-005	0.0000	0.3539
Total	**1.7000e-004**	**1.2000e-004**	**1.3000e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.2000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3537**	**0.3537**	**1.0000e-005**	**0.0000**	**0.3539**

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	8.5000e-003	0.0838	0.0586	1.0000e-004		4.6100e-003	4.6100e-003		4.3000e-003	4.3000e-003	0.0000	8.4271	8.4271	2.1700e-003	0.0000	8.4812
Total	**8.5000e-003**	**0.0838**	**0.0586**	**1.0000e-004**		**4.6100e-003**	**4.6100e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**8.4271**	**8.4271**	**2.1700e-003**	**0.0000**	**8.4812**

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	1.7000e-004	1.2000e-004	1.3000e-003	0.0000	4.1000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3537	0.3537	1.0000e-005	0.0000	0.3539
Total	**1.7000e-004**	**1.2000e-004**	**1.3000e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.2000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3537**	**0.3537**	**1.0000e-005**	**0.0000**	**0.3539**

3.3 Site Preparation - 2020

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	**1.6300e-003**	**0.0184**	**7.7100e-003**	**2.0000e-005**	**5.8000e-003**	**8.2000e-004**	**6.6200e-003**	**2.9500e-003**	**7.6000e-004**	**3.7100e-003**	**0.0000**	**1.5127**	**1.5127**	**4.9000e-004**	**0.0000**	**1.5249**

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	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0544	0.0544	0.0000	0.0000	0.0545
Total	**3.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0544**	**0.0544**	**0.0000**	**0.0000**	**0.0545**

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	**1.6300e-003**	**0.0184**	**7.7100e-003**	**2.0000e-005**	**5.8000e-003**	**8.2000e-004**	**6.6200e-003**	**2.9500e-003**	**7.6000e-004**	**3.7100e-003**	**0.0000**	**1.5127**	**1.5127**	**4.9000e-004**	**0.0000**	**1.5249**

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	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0544	0.0544	0.0000	0.0000	0.0545
Total	**3.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0544**	**0.0544**	**0.0000**	**0.0000**	**0.0545**

3.4 Grading - 2020

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
Total	**2.7000e-003**	**0.0302**	**0.0129**	**3.0000e-005**	**9.8300e-003**	**1.3700e-003**	**0.0112**	**5.0500e-003**	**1.2600e-003**	**6.3100e-003**	**0.0000**	**2.4779**	**2.4779**	**8.0000e-004**	**0.0000**	**2.4980**

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	5.0000e-005	4.0000e-005	4.0000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1088	0.1088	0.0000	0.0000	0.1089
Total	**5.0000e-005**	**4.0000e-005**	**4.0000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1088**	**0.1088**	**0.0000**	**0.0000**	**0.1089**

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
Total	**2.7000e-003**	**0.0302**	**0.0129**	**3.0000e-005**	**9.8300e-003**	**1.3700e-003**	**0.0112**	**5.0500e-003**	**1.2600e-003**	**6.3100e-003**	**0.0000**	**2.4779**	**2.4779**	**8.0000e-004**	**0.0000**	**2.4980**

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	5.0000e-005	4.0000e-005	4.0000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1088	0.1088	0.0000	0.0000	0.1089
Total	**5.0000e-005**	**4.0000e-005**	**4.0000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1088**	**0.1088**	**0.0000**	**0.0000**	**0.1089**

3.5 Building Construction - 2020

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	0.2518	1.8337	1.6353	2.7300e-003		0.0987	0.0987		0.0953	0.0953	0.0000	225.1123	225.1123	0.0418	0.0000	226.1570

Total	**0.2518**	**1.8337**	**1.6353**	**2.7300e-003**		**0.0987**	**0.0987**		**0.0953**	**0.0953**	**0.0000**	**225.1123**	**225.1123**	**0.0418**	**0.0000**	**226.1570**

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	0.0919	2.6403	0.7032	6.3200e-003	0.1525	0.0131	0.1656	0.0441	0.0125	0.0566	0.0000	606.2335	606.2335	0.0278	0.0000	606.9286
Worker	0.1627	0.1169	1.2258	3.6900e-003	0.3885	2.5100e-003	0.3910	0.1033	2.3100e-003	0.1056	0.0000	333.1372	333.1372	8.1700e-003	0.0000	333.3415
Total	**0.2546**	**2.7572**	**1.9290**	**0.0100**	**0.5410**	**0.0156**	**0.5566**	**0.1474**	**0.0148**	**0.1622**	**0.0000**	**939.3707**	**939.3707**	**0.0360**	**0.0000**	**940.2701**

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	0.2518	1.8337	1.6353	2.7300e-003		0.0987	0.0987		0.0953	0.0953	0.0000	225.1120	225.1120	0.0418	0.0000	226.1567
Total	**0.2518**	**1.8337**	**1.6353**	**2.7300e-003**		**0.0987**	**0.0987**		**0.0953**	**0.0953**	**0.0000**	**225.1120**	**225.1120**	**0.0418**	**0.0000**	**226.1567**

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	0.0919	2.6403	0.7032	6.3200e-003	0.1525	0.0131	0.1656	0.0441	0.0125	0.0566	0.0000	606.2335	606.2335	0.0278	0.0000	606.9286
Worker	0.1627	0.1169	1.2258	3.6900e-003	0.3885	2.5100e-003	0.3910	0.1033	2.3100e-003	0.1056	0.0000	333.1372	333.1372	8.1700e-003	0.0000	333.3415
Total	**0.2546**	**2.7572**	**1.9290**	**0.0100**	**0.5410**	**0.0156**	**0.5566**	**0.1474**	**0.0148**	**0.1622**	**0.0000**	**939.3707**	**939.3707**	**0.0360**	**0.0000**	**940.2701**

3.5 Building Construction - 2021

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	0.2365	1.7795	1.6834	2.8800e-003		0.0893	0.0893		0.0862	0.0862	0.0000	236.9197	236.9197	0.0423	0.0000	237.9771
Total	**0.2365**	**1.7795**	**1.6834**	**2.8800e-003**		**0.0893**	**0.0893**		**0.0862**	**0.0862**	**0.0000**	**236.9197**	**236.9197**	**0.0423**	**0.0000**	**237.9771**

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	0.0796	2.5077	0.6675	6.5900e-003	0.1606	5.5600e-003	0.1661	0.0464	5.3200e-003	0.0517	0.0000	632.1224	632.1224	0.0276	0.0000	632.8111
Worker	0.1588	0.1100	1.1792	3.7400e-003	0.4088	2.5700e-003	0.4114	0.1087	2.3700e-003	0.1111	0.0000	338.4309	338.4309	7.7000e-003	0.0000	338.6233
Total	**0.2384**	**2.6176**	**1.8467**	**0.0103**	**0.5694**	**8.1300e-003**	**0.5775**	**0.1552**	**7.6900e-003**	**0.1628**	**0.0000**	**970.5533**	**970.5533**	**0.0353**	**0.0000**	**971.4344**

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	0.2365	1.7795	1.6834	2.8800e-003		0.0893	0.0893		0.0862	0.0862	0.0000	236.9194	236.9194	0.0423	0.0000	237.9768
Total	**0.2365**	**1.7795**	**1.6834**	**2.8800e-003**		**0.0893**	**0.0893**		**0.0862**	**0.0862**	**0.0000**	**236.9194**	**236.9194**	**0.0423**	**0.0000**	**237.9768**

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	0.0796	2.5077	0.6675	6.5900e-003	0.1606	5.5600e-003	0.1661	0.0464	5.3200e-003	0.0517	0.0000	632.1224	632.1224	0.0276	0.0000	632.8111
Worker	0.1588	0.1100	1.1792	3.7400e-003	0.4088	2.5700e-003	0.4114	0.1087	2.3700e-003	0.1111	0.0000	338.4309	338.4309	7.7000e-003	0.0000	338.6233
Total	**0.2384**	**2.6176**	**1.8467**	**0.0103**	**0.5694**	**8.1300e-003**	**0.5775**	**0.1552**	**7.6900e-003**	**0.1628**	**0.0000**	**970.5533**	**970.5533**	**0.0353**	**0.0000**	**971.4344**

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	0.1723	1.3066	1.3299	2.3000e-003		0.0615	0.0615		0.0594	0.0594	0.0000	189.7479	189.7479	0.0331	0.0000	190.5741
Total	**0.1723**	**1.3066**	**1.3299**	**2.3000e-003**		**0.0615**	**0.0615**		**0.0594**	**0.0594**	**0.0000**	**189.7479**	**189.7479**	**0.0331**	**0.0000**	**190.5741**

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	0.0595	1.8982	0.5035	5.2200e-003	0.1286	3.8700e-003	0.1324	0.0372	3.7000e-003	0.0409	0.0000	501.3397	501.3397	0.0211	0.0000	501.8662
Worker	0.1187	0.0790	0.8679	2.8900e-003	0.3274	2.0100e-003	0.3294	0.0871	1.8500e-003	0.0889	0.0000	261.1602	261.1602	5.5300e-003	0.0000	261.2984
Total	**0.1781**	**1.9772**	**1.3713**	**8.1100e-003**	**0.4560**	**5.8800e-003**	**0.4618**	**0.1242**	**5.5500e-003**	**0.1298**	**0.0000**	**762.4998**	**762.4998**	**0.0266**	**0.0000**	**763.1646**

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	0.1723	1.3066	1.3299	2.3000e-003		0.0615	0.0615		0.0594	0.0594	0.0000	189.7477	189.7477	0.0331	0.0000	190.5739
Total	**0.1723**	**1.3066**	**1.3299**	**2.3000e-003**		**0.0615**	**0.0615**		**0.0594**	**0.0594**	**0.0000**	**189.7477**	**189.7477**	**0.0331**	**0.0000**	**190.5739**

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	0.0595	1.8982	0.5035	5.2200e-003	0.1286	3.8700e-003	0.1324	0.0372	3.7000e-003	0.0409	0.0000	501.3397	501.3397	0.0211	0.0000	501.8662
Worker	0.1187	0.0790	0.8679	2.8900e-003	0.3274	2.0100e-003	0.3294	0.0871	1.8500e-003	0.0889	0.0000	261.1602	261.1602	5.5300e-003	0.0000	261.2984
Total	**0.1781**	**1.9772**	**1.3713**	**8.1100e-003**	**0.4560**	**5.8800e-003**	**0.4618**	**0.1242**	**5.5500e-003**	**0.1298**	**0.0000**	**762.4998**	**762.4998**	**0.0266**	**0.0000**	**763.1646**

3.6 Paving - 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	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4400e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9315**

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	1.9000e-004	1.2000e-004	1.3700e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4113	0.4113	1.0000e-005	0.0000	0.4115
Total	**1.9000e-004**	**1.2000e-004**	**1.3700e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4113**	**0.4113**	**1.0000e-005**	**0.0000**	**0.4115**

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	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4400e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9314**

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	1.9000e-004	1.2000e-004	1.3700e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4113	0.4113	1.0000e-005	0.0000	0.4115
Total	**1.9000e-004**	**1.2000e-004**	**1.3700e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4113**	**0.4113**	**1.0000e-005**	**0.0000**	**0.4115**

3.7 Architectural Coating - 2020

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	4.4427					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**4.4439**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

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	1.3100e-003	9.4000e-004	9.8900e-003	3.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.6866	2.6866	7.0000e-005	0.0000	2.6882
Total	**1.3100e-003**	**9.4000e-004**	**9.8900e-003**	**3.0000e-005**	**3.1300e-003**	**2.0000e-005**	**3.1500e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**	**0.0000**	**2.6866**	**2.6866**	**7.0000e-005**	**0.0000**	**2.6882**

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	4.4427					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**4.4439**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

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	1.3100e-003	9.4000e-004	9.8900e-003	3.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.6866	2.6866	7.0000e-005	0.0000	2.6882
Total	**1.3100e-003**	**9.4000e-004**	**9.8900e-003**	**3.0000e-005**	**3.1300e-003**	**2.0000e-005**	**3.1500e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**	**0.0000**	**2.6866**	**2.6866**	**7.0000e-005**	**0.0000**	**2.6882**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Limit Parking Supply

	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	0.7999	2.9204	6.7542	0.0190	1.6146	0.0173	1.6319	0.4322	0.0162	0.4484	0.0000	1,745.0355	1,745.0355	0.0727	0.0000	1,746.8540
Unmitigated	0.9965	4.2518	11.7363	0.0408	3.7740	0.0346	3.8086	1.0102	0.0323	1.0426	0.0000	3,738.6096	3,738.6096	0.1255	0.0000	3,741.7465

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	5,356.01	2,066.40	882.00	10,149,089	4,341,881
Total	5,356.01	2,066.40	882.00	10,149,089	4,341,881

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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
General Office Building	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

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	2,201.3781	2,201.3781	0.2201	0.0456	2,220.4542
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,201.3781	2,201.3781	0.2201	0.0456	2,220.4542
NaturalGas Mitigated	0.0742	0.6741	0.5662	4.0400e-003		0.0512	0.0512		0.0512	0.0512	0.0000	733.7951	733.7951	0.0141	0.0135	738.1556
NaturalGas Unmitigated	0.0742	0.6741	0.5662	4.0400e-003		0.0512	0.0512		0.0512	0.0512	0.0000	733.7951	733.7951	0.0141	0.0135	738.1556

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					
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
General Office Building	1.37508e+007	0.0742	0.6741	0.5662	4.0400e-003		0.0512	0.0512		0.0512	0.0512	0.0000	733.7951	733.7951	0.0141	0.0135	738.1556
Total		**0.0742**	**0.6741**	**0.5662**	**4.0400e-003**		**0.0512**	**0.0512**		**0.0512**	**0.0512**	**0.0000**	**733.7951**	**733.7951**	**0.0141**	**0.0135**	**738.1556**

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					
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
General Office Building	1.37508e+007	0.0742	0.6741	0.5662	4.0400e-003		0.0512	0.0512		0.0512	0.0512	0.0000	733.7951	733.7951	0.0141	0.0135	738.1556
Total		**0.0742**	**0.6741**	**0.5662**	**4.0400e-003**		**0.0512**	**0.0512**		**0.0512**	**0.0512**	**0.0000**	**733.7951**	**733.7951**	**0.0141**	**0.0135**	**738.1556**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.758e+006	231.2505	0.0231	4.7800e-003	233.2544
General Office Building	1.49772e+007	1,970.1277	0.1970	0.0408	1,987.1998
Total		**2,201.3781**	**0.2201**	**0.0455**	**2,220.4542**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.758e+006	231.2505	0.0231	4.7800e-003	233.2544
General Office Building	1.49772e+007	1,970.1277	0.1970	0.0408	1,987.1998
Total		**2,201.3781**	**0.2201**	**0.0455**	**2,220.4542**

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	3.7465	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0464	0.0464	1.2000e-004	0.0000	0.0494
Unmitigated	3.7465	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0464	0.0464	1.2000e-004	0.0000	0.0494

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	0.4443					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.3000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2200e-003	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0464	0.0464	1.2000e-004	0.0000	0.0494
Total	**3.7465**	**2.2000e-004**	**0.0239**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.0464**	**0.0464**	**1.2000e-004**	**0.0000**	**0.0494**

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	0.4443					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.3000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2200e-003	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0464	0.0464	1.2000e-004	0.0000	0.0494
Total	**3.7465**	**2.2000e-004**	**0.0239**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.0464**	**0.0464**	**1.2000e-004**	**0.0000**	**0.0494**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	195.7581	4.8797	0.1179	352.8956
Unmitigated	195.7581	4.8797	0.1179	352.8956

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	149.296 / 91.5042	195.7581	4.8797	0.1179	352.8956
Total		**195.7581**	**4.8797**	**0.1179**	**352.8956**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	149.296 / 91.5042	195.7581	4.8797	0.1179	352.8956
Total		**195.7581**	**4.8797**	**0.1179**	**352.8956**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	158.5765	9.3716	0.0000	392.8667
Unmitigated	158.5765	9.3716	0.0000	392.8667

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	781.2	158.5765	9.3716	0.0000	392.8667

Total		**158.5765**	**9.3716**	**0.0000**	**392.8667**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	781.2	158.5765	9.3716	0.0000	392.8667
Total		**158.5765**	**9.3716**	**0.0000**	**392.8667**

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
Emergency Generator	1	0	0	160	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (100 - 175 HP)	0.0000	0.0000	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**

11.0 Vegetation

Museum Place TAC Model - Defaults

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	910.00	1000sqft	20.89	910,000.00	0
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate, assuming a 2020 start date since it was approved in Dec 2019

Land Use - 850,000 square feet of office built over 20,000 square feet of retail and 60,000 square-foot expansion space for the adjacent museum. The proposed 19 floors of office space is enough for 4,000 workers. Included office and museum sqft together. DEFAULT MODEL, DEFAULT ACREAGE

Construction Phase - DEFAULT CONSTRUCTION SCHEDULE

Off-road Equipment - DEFAULT CONSTRUCTION EQUIPMENT

Trips and VMT - TAC trip length 1 mile

Table Name	Column Name	Default Value	New Value

tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00

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					
2020	0.4016	4.3289	3.0182	5.8400e-003	0.2782	0.1776	0.4558	0.1226	0.1658	0.2884	0.0000	518.7389	518.7389	0.1143	0.0000	521.5957

2021	5.0776	2.5001	1.9804	3.9100e-003	0.0319	0.0916	0.1235	8.8200e-003	0.0861	0.0949	0.0000	348.3252	348.3252	0.0655	0.0000	349.9629
Maximum	**5.0776**	**4.3289**	**3.0182**	**5.8400e-003**	**0.2782**	**0.1776**	**0.4558**	**0.1226**	**0.1658**	**0.2884**	**0.0000**	**518.7389**	**518.7389**	**0.1143**	**0.0000**	**521.5957**

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					
2020	0.4016	4.3289	3.0182	5.8400e-003	0.2782	0.1776	0.4558	0.1226	0.1658	0.2884	0.0000	518.7384	518.7384	0.1143	0.0000	521.5953
2021	5.0776	2.5001	1.9804	3.9100e-003	0.0319	0.0916	0.1235	8.8200e-003	0.0861	0.0949	0.0000	348.3249	348.3249	0.0655	0.0000	349.9627
Maximum	**5.0776**	**4.3289**	**3.0182**	**5.8400e-003**	**0.2782**	**0.1776**	**0.4558**	**0.1226**	**0.1658**	**0.2884**	**0.0000**	**518.7384**	**518.7384**	**0.1143**	**0.0000**	**521.5953**

	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)
1	**1-1-2020**	**3-31-2020**	1.5549	1.5549
2	**4-1-2020**	**6-30-2020**	1.0512	1.0512
3	**7-1-2020**	**9-30-2020**	1.0628	1.0628
4	**10-1-2020**	**12-31-2020**	1.0557	1.0557
5	**1-1-2021**	**3-31-2021**	0.9509	0.9509
6	**4-1-2021**	**6-30-2021**	0.9682	0.9682
7	**7-1-2021**	**9-30-2021**	1.1494	1.1494
		Highest	1.5549	1.5549

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	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	2/11/2020	5	10	
3	Grading	Grading	2/12/2020	3/31/2020	5	35	
4	Building Construction	Building Construction	4/1/2020	8/31/2021	5	370	
5	Paving	Paving	9/1/2021	9/28/2021	5	20	
6	Architectural Coating	Architectural Coating	9/29/2021	10/26/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,395,000; Non-Residential Outdoor: 465,000; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

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	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	298.00	152.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	60.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**		**0.0166**	**0.0166**		**0.0154**	**0.0154**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2386**

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	1.7000e-004	8.0000e-005	9.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1220	0.1220	1.0000e-005	0.0000	0.1221
Total	**1.7000e-004**	**8.0000e-005**	**9.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1220**	**0.1220**	**1.0000e-005**	**0.0000**	**0.1221**

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**		**0.0166**	**0.0166**		**0.0154**	**0.0154**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2385**

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	1.7000e-004	8.0000e-005	9.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1220	0.1220	1.0000e-005	0.0000	0.1221
Total	**1.7000e-004**	**8.0000e-005**	**9.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1220**	**0.1220**	**1.0000e-005**	**0.0000**	**0.1221**

3.3 Site Preparation - 2020

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

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	5.0000e-005	5.9000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0732	0.0732	0.0000	0.0000	0.0733

Total	**1.0000e-004**	**5.0000e-005**	**5.9000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0732**	**0.0732**	**0.0000**	**0.0000**	**0.0733**

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

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	5.0000e-005	5.9000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0732	0.0732	0.0000	0.0000	0.0733
Total	**1.0000e-004**	**5.0000e-005**	**5.9000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0732**	**0.0732**	**0.0000**	**0.0000**	**0.0733**

3.4 Grading - 2020

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0779	0.8785	0.5593	1.0900e-003		0.0380	0.0380		0.0350	0.0350	0.0000	95.3475	95.3475	0.0308	0.0000	96.1185
Total	**0.0779**	**0.8785**	**0.5593**	**1.0900e-003**	**0.1518**	**0.0380**	**0.1898**	**0.0629**	**0.0350**	**0.0979**	**0.0000**	**95.3475**	**95.3475**	**0.0308**	**0.0000**	**96.1185**

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	3.9000e-004	1.8000e-004	2.3000e-003	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2846	0.2846	1.0000e-005	0.0000	0.2849
Total	**3.9000e-004**	**1.8000e-004**	**2.3000e-003**	**0.0000**	**2.6000e-004**	**0.0000**	**2.6000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2846**	**0.2846**	**1.0000e-005**	**0.0000**	**0.2849**

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0779	0.8785	0.5593	1.0900e-003		0.0380	0.0380		0.0350	0.0350	0.0000	95.3474	95.3474	0.0308	0.0000	96.1183
Total	**0.0779**	**0.8785**	**0.5593**	**1.0900e-003**	**0.1518**	**0.0380**	**0.1898**	**0.0629**	**0.0350**	**0.0979**	**0.0000**	**95.3474**	**95.3474**	**0.0308**	**0.0000**	**96.1183**

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	3.9000e-004	1.8000e-004	2.3000e-003	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2846	0.2846	1.0000e-005	0.0000	0.2849
Total	**3.9000e-004**	**1.8000e-004**	**2.3000e-003**	**0.0000**	**2.6000e-004**	**0.0000**	**2.6000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2846**	**0.2846**	**1.0000e-005**	**0.0000**	**0.2849**

3.5 Building Construction - 2020

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	0.2088	1.8898	1.6596	2.6500e-003		0.1100	0.1100		0.1035	0.1035	0.0000	228.1358	228.1358	0.0557	0.0000	229.5273
Total	**0.2088**	**1.8898**	**1.6596**	**2.6500e-003**		**0.1100**	**0.1100**		**0.1035**	**0.1035**	**0.0000**	**228.1358**	**228.1358**	**0.0557**	**0.0000**	**229.5273**

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	0.0283	1.0013	0.2779	1.2500e-003	0.0138	1.6200e-003	0.0155	4.0300e-003	1.5500e-003	5.5800e-003	0.0000	120.1918	120.1918	0.0117	0.0000	120.4850
Worker	0.0325	0.0149	0.1925	2.7000e-004	0.0218	3.0000e-004	0.0221	5.8400e-003	2.8000e-004	6.1100e-003	0.0000	23.8700	23.8700	1.0300e-003	0.0000	23.8957
Total	**0.0608**	**1.0162**	**0.4704**	**1.5200e-003**	**0.0357**	**1.9200e-003**	**0.0376**	**9.8700e-003**	**1.8300e-003**	**0.0117**	**0.0000**	**144.0618**	**144.0618**	**0.0128**	**0.0000**	**144.3807**

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	0.2088	1.8898	1.6596	2.6500e-003		0.1100	0.1100		0.1035	0.1035	0.0000	228.1356	228.1356	0.0557	0.0000	229.5270
Total	**0.2088**	**1.8898**	**1.6596**	**2.6500e-003**		**0.1100**	**0.1100**		**0.1035**	**0.1035**	**0.0000**	**228.1356**	**228.1356**	**0.0557**	**0.0000**	**229.5270**

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	0.0283	1.0013	0.2779	1.2500e-003	0.0138	1.6200e-003	0.0155	4.0300e-003	1.5500e-003	5.5800e-003	0.0000	120.1918	120.1918	0.0117	0.0000	120.4850
Worker	0.0325	0.0149	0.1925	2.7000e-004	0.0218	3.0000e-004	0.0221	5.8400e-003	2.8000e-004	6.1100e-003	0.0000	23.8700	23.8700	1.0300e-003	0.0000	23.8957
Total	**0.0608**	**1.0162**	**0.4704**	**1.5200e-003**	**0.0357**	**1.9200e-003**	**0.0376**	**9.8700e-003**	**1.8300e-003**	**0.0117**	**0.0000**	**144.0618**	**144.0618**	**0.0128**	**0.0000**	**144.3807**

3.5 Building Construction - 2021

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	0.1644	1.5079	1.4338	2.3300e-003		0.0829	0.0829		0.0780	0.0780	0.0000	200.3662	200.3662	0.0483	0.0000	201.5747
Total	**0.1644**	**1.5079**	**1.4338**	**2.3300e-003**		**0.0829**	**0.0829**		**0.0780**	**0.0780**	**0.0000**	**200.3662**	**200.3662**	**0.0483**	**0.0000**	**201.5747**

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	0.0222	0.8359	0.2251	1.0900e-003	0.0122	7.0000e-004	0.0129	3.5400e-003	6.7000e-004	4.2100e-003	0.0000	104.5427	104.5427	9.7000e-003	0.0000	104.7852
Worker	0.0261	0.0115	0.1523	2.3000e-004	0.0192	2.6000e-004	0.0194	5.1300e-003	2.4000e-004	5.3600e-003	0.0000	20.2503	20.2503	8.0000e-004	0.0000	20.2702

Total	**0.0483**	**0.8474**	**0.3775**	**1.3200e-003**	**0.0313**	**9.6000e-004**	**0.0323**	**8.6700e-003**	**9.1000e-004**	**9.5700e-003**	**0.0000**	**124.7930**	**124.7930**	**0.0105**	**0.0000**	**125.0554**

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	0.1644	1.5079	1.4338	2.3300e-003		0.0829	0.0829		0.0780	0.0780	0.0000	200.3660	200.3660	0.0483	0.0000	201.5745
Total	**0.1644**	**1.5079**	**1.4338**	**2.3300e-003**		**0.0829**	**0.0829**		**0.0780**	**0.0780**	**0.0000**	**200.3660**	**200.3660**	**0.0483**	**0.0000**	**201.5745**

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	0.0222	0.8359	0.2251	1.0900e-003	0.0122	7.0000e-004	0.0129	3.5400e-003	6.7000e-004	4.2100e-003	0.0000	104.5427	104.5427	9.7000e-003	0.0000	104.7852
Worker	0.0261	0.0115	0.1523	2.3000e-004	0.0192	2.6000e-004	0.0194	5.1300e-003	2.4000e-004	5.3600e-003	0.0000	20.2503	20.2503	8.0000e-004	0.0000	20.2702
Total	**0.0483**	**0.8474**	**0.3775**	**1.3200e-003**	**0.0313**	**9.6000e-004**	**0.0323**	**8.6700e-003**	**9.1000e-004**	**9.5700e-003**	**0.0000**	**124.7930**	**124.7930**	**0.0105**	**0.0000**	**125.0554**

3.6 Paving - 2021

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

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	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180
Total	**1.5000e-004**	**7.0000e-005**	**8.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1178**	**0.1178**	**0.0000**	**0.0000**	**0.1180**

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

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	1.5000e-004	7.0000e-005	8.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	0.0000	0.0000	0.1180
Total	**1.5000e-004**	**7.0000e-005**	**8.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1178**	**0.1178**	**0.0000**	**0.0000**	**0.1180**

3.7 Architectural Coating - 2021

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	4.8494					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**4.8516**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

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	6.1000e-004	2.7000e-004	3.5500e-003	1.0000e-005	4.5000e-004	1.0000e-005	4.5000e-004	1.2000e-004	1.0000e-005	1.2000e-004	0.0000	0.4714	0.4714	2.0000e-005	0.0000	0.4718
Total	**6.1000e-004**	**2.7000e-004**	**3.5500e-003**	**1.0000e-005**	**4.5000e-004**	**1.0000e-005**	**4.5000e-004**	**1.2000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**0.4714**	**0.4714**	**2.0000e-005**	**0.0000**	**0.4718**

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	4.8494					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**4.8516**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

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	6.1000e-004	2.7000e-004	3.5500e-003	1.0000e-005	4.5000e-004	1.0000e-005	4.5000e-004	1.2000e-004	1.0000e-005	1.2000e-004	0.0000	0.4714	0.4714	2.0000e-005	0.0000	0.4718
Total	**6.1000e-004**	**2.7000e-004**	**3.5500e-003**	**1.0000e-005**	**4.5000e-004**	**1.0000e-005**	**4.5000e-004**	**1.2000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**0.4714**	**0.4714**	**2.0000e-005**	**0.0000**	**0.4718**