APPENDIX A

Air Quality and Greenhouse Gas Assessment

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1605 INDUSTRIAL AVENUE REDEVELOPMENT AIR QUALITY AND GHG EMISSIONS ASSESSMENT

San José, California

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INTRODUCTION

The purpose of this report is to address air quality, community risk, and greenhouse gas (GHG) emission impacts associated with the proposed 1605 Industrial Avenue warehouse building project in San José, California. The air quality impacts and GHG emissions would be associated with demolition of the existing uses at the site, construction of the new buildings and infrastructure, and operation of the project. Construction of this project could also lead to community risk impacts, or in other words, increase health risks at sensitive receptors since construction is the primary source of toxic air contaminant (TAC) and fine particulate matter ($PM_{2.5}$) emissions. GHG emissions resulting from construction and project operation are also addressed. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The proposed project would include demolition of the existing six, one-story buildings totaling 37,615 square feet (SF) on the site and construction of a new, 180,150-gross-square-foot (GSF) warehouse building and associated site improvements. The proposed building would include 5,000 SF of office space on the ground floor and 5,000 SF of office space on the mezzanine. The new warehouse building would be one story and include 28 loading dock doors and loading spaces on the eastern side. Up to 77 container parking stalls would be located east of the building and a total of 74 vehicle parking stalls would be provided to the south of the building. It is assumed that approximately 75 employees would work on site. The project site is bordered by Interstate 880 (I-880) to the west and is surrounded by industrial land uses.

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 ($PM_{2.5}$).

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

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

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.[2] 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.[3] The detailed community risk modeling methodology used in this assessment is contained in *Attachment 1*.

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

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:

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize air pollutant emissions from new and existing 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.

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

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.

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.

Applicable Goals – Construction Air Emissions

Goal MS-13 Minimize air pollutant emissions during demolition and construction activities

Applicable Policies – Construction Air Emissions

MS-13.1 Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At

minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Applicable Actions – Construction Air Emissions

MS-13.4 Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.

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 the California Conservation Corps (CCC) daycare and the Challenger School and Preschool approximately 800 feet southeast of the project site. The closest residences are located over 1,800 feet to the east and over 2,000 feet to the northeast.

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 that were used in this analysis are summarized in Table 1.

Table 1. Air Quality Significance 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	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
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 $\mu g/m^3$	>0.8 $\mu g/m^3$	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) and adjusted to 660 metric tons annually or 2.6 metric tons per capita (for 2030)*		

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 1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable State or federal ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

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.

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 is included as *Attachment 2*.

Construction period emissions

CalEEMod provided annual emissions for 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. A construction build-out scenario, including equipment list and schedule, was based on information provided by the applicant. The proposed project land uses were input into CalEEMod, which included 175,150 SF entered as "Unrefrigerated Warehouse-No Rail", 10,000 SF entered as "General Office Building", and 297,430 SF entered as "Parking Lot" on an approximate 11-acre site. In addition, 37,615 SF of existing building demolition, 78 one-way truck trips demolition pavement hauling, 11,175 cubic yard (CY) of soil export during grading, 480 one-way cement truck trips during building construction, and 388 one-way asphalt truck trips during paving was calculated and entered into the model.

Specific construction activity required to build the project was provided by the applicant. Construction was assumed to begin May 2019 and last 10 months. Based on the CalEEMod default construction schedule and equipment usage, there was an estimated 208 construction workdays. 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 the construction period emissions would not exceed the BAAQMD significance thresholds.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices*.

Table 2. Construction Period Emissions

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total construction emissions (tons)	1.4 tons	3.4 tons	0.1 tons	0.1 tons
Average daily emissions (pounds)[1]	13.3 lbs./day	32.6 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**

Notes: [1]Assumes 208 workdays.

Mitigation Measure AQ-1: **Include measures to control dust and exhaust during construction.**

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. 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.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. 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.

6. 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 [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. 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.

Effectiveness of Mitigation Measure AQ-1

The measures included above would be consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from automobiles driven by employees and truck deliveries. 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.

Land Uses

The project land uses were input to CalEEMod as described above for the construction period modeling.

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. The earliest the project could possibly be constructed and begin operating would be 2020. Emissions associated with build-out later than 2020 would be lower.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table.[4] 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. The traffic consultant provided project trip generation values for the proposed warehouse. The weekday trip rate was 1.74, which changed the Saturday trip rate to 0.33 and the Sunday trip rate to 0.17.

Operational Off-Road Equipment

During operation, the project is assumed to have two electric forklifts that would operate for four hours per day.

[4] Hexagon Transportation Consultants Inc, "1605 Industrial Avenue Transportation Analysis", December 2018.

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. Indirect emissions from electricity were computed in CalEEMod. The model has a default rate of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. The rate was adjusted to account for PG&E's projected 2020 CO_2 intensity rate. This 2020 rate is based, in part, on the requirement of a renewable energy portfolio standard of 33 percent by the year 2020. The derived 2020 rate for PG&E was estimated at 290 pounds of CO_2 per megawatt of electricity delivered.[5]

Other Inputs

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

Existing Uses

A CalEEMod model run was developed to compute emissions from use of the existing buildings as if they were operating in 2020. Inputs for this modeling scenario included 37,615 SF entered as "General Heavy Industry", 299,571 SF entered as "Other Non-Asphalt Surfaces", and 140,394 SF entered as "Parking Lot". These inputs were applied to the modeling in the same manner described for the proposed project. The traffic consultant provided project trip generation values for the existing specialty truck parts retailer. The weekday trip rate was 5.32, which changed the Saturday trip rate to 1.01 and the Sunday trip rate to 0.52.

As shown in Table 3, operational emissions would not exceed the BAAQMD significance thresholds. This would be considered a *less-than-significant* impact.

Table 3. Operational Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2020 Project Operational Emissions (*tons/year*)	0.9 tons	0.5 tons	0.3 tons	0.1 tons
2020 Existing Use Emissions (*tons/year*)	0.2 tons	0.2 tons	0.2 tons	0.1 tons
Net Annual Emissions (*tons/year*)	0.7 tons	0.3 tons	0.1 tons	0.0 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	***No***	***No***	***No***	***No***
2020 Project Operational Emissions (*pounds/day*)[1]	3.8 lbs.	1.5 lbs.	0.6 lbs.	0.2 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.

[5] Pacific Gas & Electric, 2015. *Greenhouse Gas Emission Factors: Guidance for PG&E Customers*. November.

Impact 2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. Temporary project construction activity would generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors. The operation of the project would also add heavy-duty truck traffic to the area, which would be a source of long-term DPM emissions. Community risk impacts are 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*.

Construction Community Health Risk Impacts

Project Construction Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These 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 of sensitive receptors at these nearby residences from construction emissions of DPM and $PM_{2.5}$.[6] The closest sensitive receptors to the project site are the CCC daycare and the Challenger School and Preschool approximately 800 feet southeast of the project site. The closest residences are located over 1,800 feet to the east and over 2,000 feet to the northeast (see *Figure 1*). Emissions and dispersion modeling were conducted to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Period Emissions

The CalEEMod model provided total uncontrolled 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 0.137 tons (274 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. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.04505 tons (90 pounds) for the overall construction period.

[6] 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 $PM_{2.5}$ at sensitive receptors (daycare infants, school children, and 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.[7] For each of the construction sites modeled, the modeling utilized two area sources to represent the on-site construction emissions, 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. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 4 p.m., when the majority of construction activity would occur.

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 at each project site during the 2019-2020 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. A receptor height of 1.0 meter (3.3 feet) was used for modeling impacts to infants and children at the daycare and school. A receptor height of 1.5 meters (5 feet) was used to represent the breathing height of nearby residences on the ground floor. *Attachment 3* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Predicted Cancer Risk and Hazards

Figure 1 shows the location where the maximum-modeled DPM and $PM_{2.5}$ concentrations occurred. The maximum concentrations occurred on the west corner of the ground floor (1 meter) of the CCC daycare to the southeast of the project site. Using the maximum annual modeled DPM concentration, the maximum increased cancer risk at the location of the maximally exposed individual (MEI) was calculated using BAAQMD recommended methods. The cancer risk calculations are based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. BAAQMD-recommended exposure parameters were used for the cancer risk calculations, as described in *Attachment 1*. Infant exposure (0-2 years) was assumed at the daycare, child exposure (2-9 years) was assumed at the school, and infant and adult exposures were assumed to occur at all residences through the entire construction period.

Results of this assessment without any mitigation or construction emissions control indicate that the maximum increased daycare cancer risks would be 1.5 in one million for an infant exposure,

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

the maximum increased school cancer risk would be 0.3 in one million for a child exposure, and the maximum increase residential cancer risk would be 0.4 in one million for an infant exposure and less than 0.1 in one million for an adult exposure. The maximum infant, school, and residential excess cancer risk would not exceed the significance threshold of 10.0 in one million.

Predicted Annual $PM_{2.5}$ Concentration

The maximum-modeled annual $PM_{2.5}$ concentration, which is based on combined exhaust and fugitive dust emissions, would be 0.01 $\mu g/m^3$ at the daycare and school MEIs and less than 0.01 $\mu g/m^3$ at the residential MEI. The maximum annual $PM_{2.5}$ concentrations would not exceed the BAAQMD significance threshold of greater than 0.3 $\mu g/m^3$.

Non-Cancer Hazards

The maximum modeled annual DPM concentration (i.e., from construction exhaust) would be 0.0095 $\mu g/m^3$ at the daycare MEI, 0.0098 $\mu g/m^3$ at the school MEI, and 0.0026 $\mu g/m^3$ at the residential MEI. The maximum computed Hazard Index (HI) based on these DPM concentrations would be less than 0.01, which would not exceed the BAAQMD significance criterion of a HI greater than 1.0.

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

Operational Health Risk Impacts

Operation of the project would result in 112 daily truck trips, which are assumed to be heavy-duty diesel-powered trucks and a source of long-term DPM emissions. These trucks would travel to and from the site and are anticipated to idle at loading docks for 5 minutes for each trip.

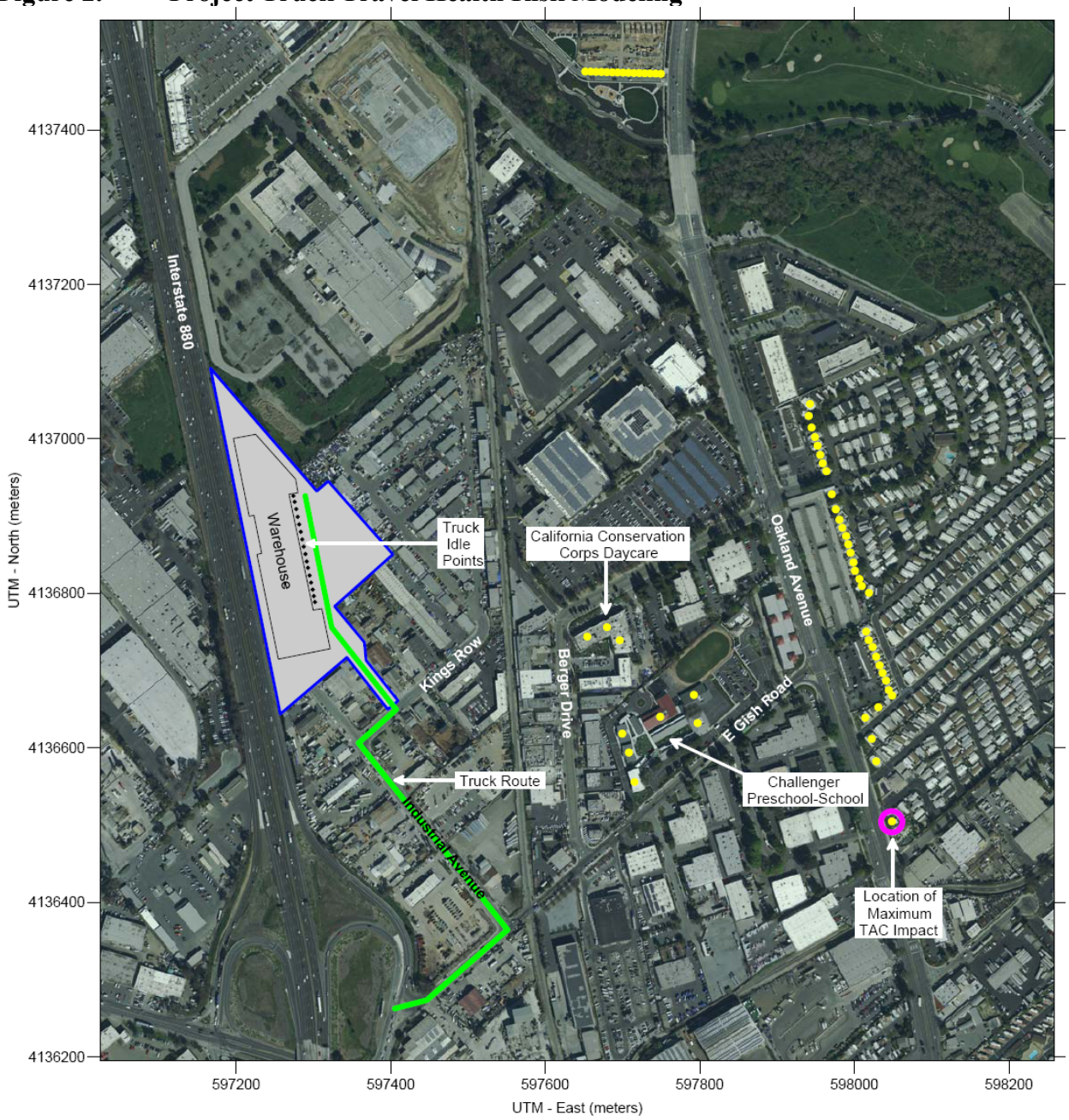
Emissions of DPM (assumed to be PM_{10} exhaust) from this activity were computed using the CARB EMFAC2017 model assuming trucks travel, both on-site and off-site, at a speed of 15 miles per hour and idling of each truck at the warehouse site for 5 minutes per trip. There would be 112 new truck trips. Each truck trip would emit 0.0782 grams per mile travelled of DPM on or near the project site per trip. Idling trips were computed based on EMFAC2017 emission rates for 5-mph travel and converted to hourly emissions. Each truck idling would produce 0.063 grams per trip.

Project operation was conservatively assumed to occur for 365 days per year and that the trucks could be operating at any hour of the day (i.e., 24 hours/day). The U.S. EPA AERMOD model was used with San Jose Airport meteorology data to model truck travel and idling emissions. Truck travel was modeled as a line-volume source from the nearby Interstate 880 interchange to the project warehouse site with a travel length of 2,836 feet. Idle emissions were modeled as coming from 16 point sources located at the warehouse the loading dock area. The effects of building downwash from the project building were included in the modeling.

TAC concentrations from the project trucks were calculated at surrounding residential receptor locations, as well as the CCC daycare on Berger Drive and at the Challenger School and Preschool on E Gish Road. Receptor heights of 1.5 meters were used to represent the breathing heights at residences and receptor heights of 1.0 meters were used for the breathing heights of children at the CCC daycare site and for Challenger School and Preschool.

The maximum modeled cancer risk from truck travel activity was 0.31 in one million (DPM concentration of 0.00041 ug/m^3) at a residential receptor on Oakland Avenue. The $PM_{2.5}$ concentrations from project truck activity would be less than 0.01 ug/m^3 at all sensitive receptors. Figure 2 shows the project site, truck travel route, truck idle locations, and the location of maximum impact from project truck operation. The truck traffic emissions and cancer risk calculations are provided in *Attachment 3.*

Figure 2. Project Truck Travel Health Risk Modeling

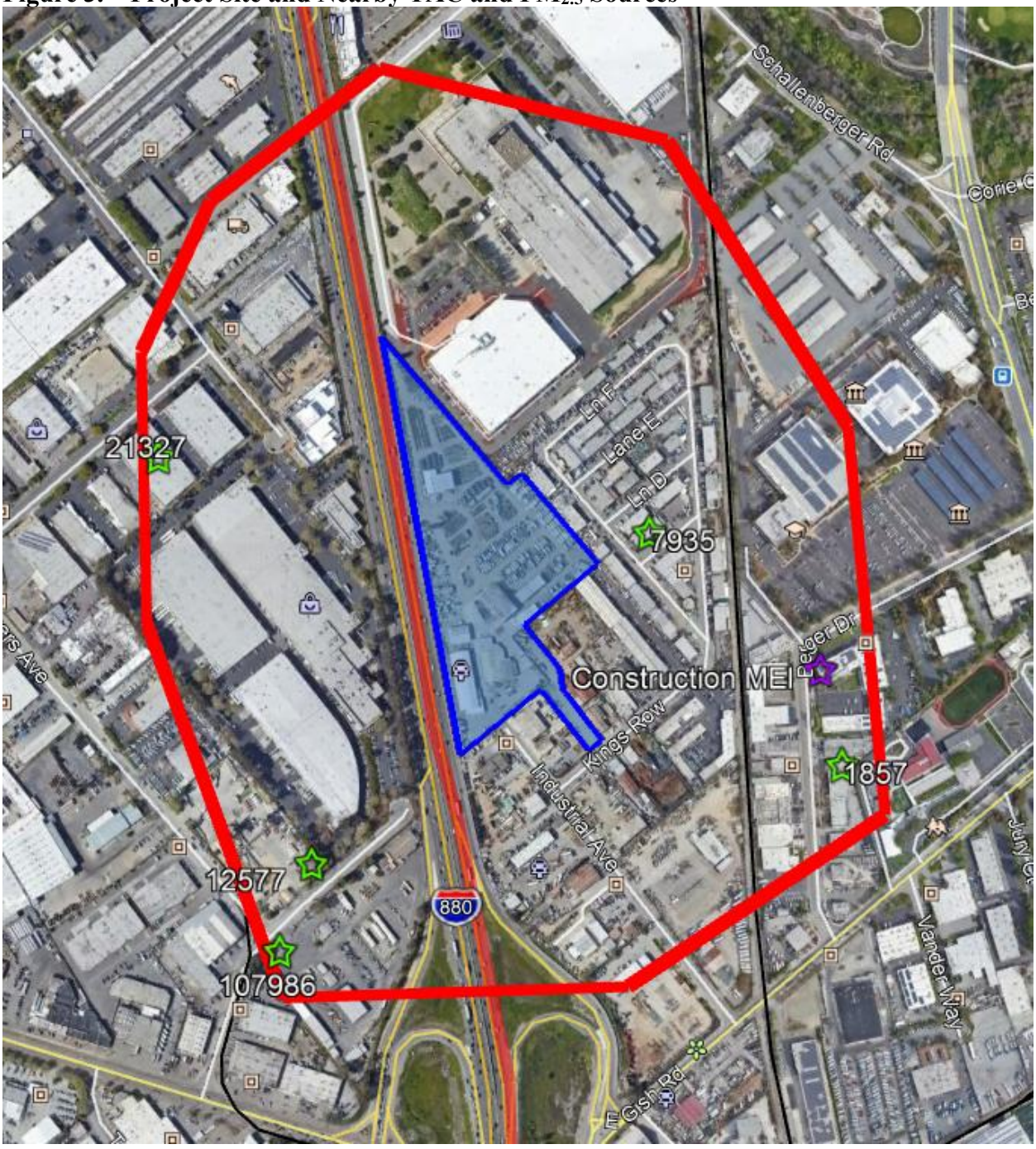


Cumulative Impact on Construction MEI

Cumulative community risk impacts were addressed through an evaluation of TAC sources located within 1,000 feet of the project site. These sources include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of this project area indicates that traffic on I-880 is considered a source of TACs. A review of BAAQMD's stationary source Google Earth map tool identified five stationary sources with the potential to affect the project site and construction MEI. The Union Pacific Railroad (UPRR) Line is also located within the 1,000-ft of the project. Figure 3 shows the nearby cumulative sources affecting

the project site and construction MEI. Community risk impacts from these sources upon the construction MEI are reported in Table 4. Details of the modeling and community risk calculations are included in *Attachment 4.*

Figure 3. Project Site and Nearby TAC and $PM_{2.5}$ Sources



Highway: Interstate 880

BAAQMD provides a Google Earth *Highway Screening Analysis Tool* that can be used to identify screening level impacts from State highways. The portion of the highway closest to the project was selected (i.e., Link 360, 6ft elevation). The lifetime cancer risk, annual $PM_{2.5}$ exposure, and non-cancer hazard index corresponding to the distance between the source and the construction MEI was used. 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 data were based on a distance of 1,000 feet east from the highway.

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 identified the location of five stationary sources and their estimated risk and hazard impacts. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. Updated risk levels, emissions and adjustments to account for new OEHHA guidance were provided.[8] The adjusted risk values were then adjusted with the appropriate distance multiplier values provided by BAAQMD or the emissions information was used in refined modeling.

Five stationary sources were identified (Plant #12577, #1857, #107986, #7935, and #21327) with one source being a concrete plant, one source being an electronic company with a generator, cleaners, and strippers, one source being a gas dispensing facility, one source being a boiler, and one source being a. coating operation. The screening risk emissions levels for these stationary sources were provided by BAAQMD and adjusted for distance based on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines* or *Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities* when appropriate. Concentration levels and community risk impacts from these sources upon the construction MEI are reported in Table 4.

Note that the nearby electronic company, Plant #1857, has a generator, cleaners, and strippers. While the generator's risk values were adjusted for distance, the cleaners' and strippers' risk values were not adjusted for distance. The BAAQMD *Risk and Hazard Emissions Screening Calculator (Beta Version)* was used with the 2018 daily emissions information to calculate the risk impact from this plant.

Refined Roadway Impacts: Plant #12577 TAC Impacts

The screening levels for the concrete plant, Plant #12577, indicated that the maximum annual $PM_{2.5}$ concentration would exceed the cumulative source threshold, so a refined analysis of this stationary source was conducted. The fugitive $PM_{2.5}$ dust emissions of the source was provided by BAAQMD as 0.983675 tons (5.39 pounds) for the operational year of 2018. The AERMOD modeling utilized one area source to represent the source's fugitive dust emissions. For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 2 meters (6.6 feet) was used for

[8] Correspondence with Areana Flores, BAAQMD, January 3, 2019.

the area source. Emissions from the operational equipment and on-road vehicle travel were distributed throughout the modeled area sources. Operational emissions were modeled as occurring daily between 8 a.m. to 5 p.m., when the majority of operational activity would occur.

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 $PM_{2.5}$ concentrations from operational activities at the construction MEI during the 2019-2020 period was calculated using the model. $PM_{2.5}$ concentrations were calculated at the construction MEI location. A receptor height of 1.0 meter (3.3 feet) was used for modeling impacts to infants and children at the daycare. *Attachment 4* to this report includes the emission calculations used for the operational area source modeling and the $PM_{2.5}$ concentration calculations.

Railway: Union Pacific Railroad

The project site and construction MEI are located near the UPRR line used for freight service, which generates TAC and $PM_{2.5}$ emissions from diesel locomotives. The project site is approximately 450 feet west of the UPRR and the construction MEI is 250 feet east of the UPRR. There are about three freight trains that use this rail line on a daily basis. An environmental study was performed to predict risk levels from these activities.[9] The study predicted maximum risk levels at 25 feet from the rail line. Although these predictions are for positions closer than depicted for the project site and construction MEI, they were used as screening values for this analysis.

Summary of Construction Health Risk Impacts

Table 4 reports both the project and cumulative community risk impacts. The project would have a *less-than-significant* impact with respect to community risk caused by project construction and operational activities, since the maximum cancer risk and $PM_{2.5}$ concentration do not exceed the single-source or cumulative-source thresholds. *Attachment 4* includes the construction and operational emission calculations and source information used in the modeling and the cancer risk calculations.

[9] Illingworth & Rodkin, Inc., "Land Forge Residential Project Draft TAC Assessment", July 2016.

Table 4. Impacts from Combined Sources at Construction MEI

Source	Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Project Construction Unmitigated	1.5 (infant)	0.01	<0.01
Operational Activity	0.3 (lifetime)	<0.01	<0.01
Total	1.8	<0.02	<0.02
BAAQMD Threshold – Single Sources	***>10.0***	***>0.3***	***>1.0***
Significant?	*No*	*No*	*No*
I-880 (Link 360, 6ft elevation at >1,000 feet)	14.7	0.09	0.01
#12577 (Concrete Plant) at 1,000 ft	-	0.01	-
#1857 (Electronic Company) at 260 ft	<0.1	<0.01	<0.01
#107986 (Gas Station) at 1,000 ft	0.1	-	<0.01
#7935 (Boiler) at 730 ft	<0.1	<0.01	<0.01
#21327 (Coating Operation) at 1,000 ft	-	-	<0.01
UPRR at 25 feet*	<12.3	0.02	<0.01
Combined Sources	<29.1	<0.16	<0.08
BAAQMD Threshold – Combined Sources	***>100***	***>0.8***	***>10.0***
Significant?	*No*	*No*	*No*

* These predictions were made at 25 feet from the railroad track. Construction MEI would be approximately 250 feet.

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.

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. 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.[10] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_2e/year threshold.

Impact 3: 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, energy and water usage, and solid waste disposal. 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 in the Operational Period Emissions section. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future employees. The project applicant has indicated that approximately 75 employees would work at the project.

Construction Emissions

GHG emissions associated with construction were computed to be 563 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. Best management practices assumed to be incorporated into construction of the proposed project include but are not

[10] 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.

limited to: using local building materials of at least 10 percent and recycling or reusing at least 50 percent of construction waste or demolition materials.

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. As shown in Table 5, annual emissions resulting from operation of the proposed project are predicted to be 595 MT of CO_2e in 2020 and 531 MT of CO_2e in 2030. The annual emissions from operation of the existing buildings in 2020 are computed as 313 MT of CO_2e. The net emissions resulting from the project would be 282 MT of CO_2e in 2020 and 218 MT of CO_2e in 2030. The service population for 2020 and 2030 were calculated to be 7.9 and 7.1 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. This project only exceeds the service population significance threshold. Therefore, the project would have a *less-than-significant* impact regarding GHG emissions.

Table 5. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	**Existing in 2020**	**Proposed Project in 2020**	**Proposed Project in 2030**
Area	<1	<1	<1
Energy Consumption	101	161	161
Mobile	171	272	205
Off-road Equipment	-	18	21
Solid Waste Generation	23	87	87
Water Usage	18	57	57
Total (MT CO_2e/yr)	313	595	531
Net New Emissions (MT CO_2e/yr)		*282*	*218*
Significance Threshold		***1,100 MT CO_2e/yr***	***660 MT CO_2e/yr***
Service Population Emissions (MT CO2e/year/service population)		7.9	7.1
Significance Threshold		***4.6 in 2020***	***2.6 in 2030***
Significant (Exceeds both thresholds)?		*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 is also included in this attachment. Also included are any modeling assumptions.

Attachment 3 is the construction and operational health risk assessment calculations. 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 project and MEI.

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.[11] 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.[12] This HRA used the recent 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.[13] 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 of exposure, and the exposure duration. 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, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways).

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[11] 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.

[12] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

[13] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

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)*		361	1,090	631	572	261
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		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

* 95th percentile breathing rates for 3rd trimester and infants and 80th percentile for children and adults

Non-Cancer Hazards

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). 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

18-169 1605 Industrial Ave Warehouse - Santa Clara County, Annual

18-169 1605 Industrial Ave Warehouse

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	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	175.15	1000sqft	4.02	175,150.00	0
Parking Lot	297.43	1000sqft	6.83	297,430.00	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 Rate = 290

Land Use - Applicant plans provided land use

Construction Phase - Applicant provided construction schedule, added trenching

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Trips and VMT - pavement demo hauling = 78 one-way truck trips + 171 = 249, 480 one-way cement truck trips, asphalt paving = 388 one-wa trips

Demolition - Applicant provided existing building demo = 37,615sf

Grading - Applicant provided export = 11,175cy

Vehicle Trips - warehouse= 1.74, 0.33, 0.17

Energy Use -

Water And Wastewater - WTP treatment 100% aerobic

Operational Off-Road Equipment - Operational - 2 forklifts 4hrs/day, electric

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	300.00	88.00
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tblConstructionPhase	NumDays	30.00	21.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	PhaseEndDate	11/10/2020	2/1/2020
tblConstructionPhase	PhaseEndDate	9/15/2020	1/1/2020
tblConstructionPhase	PhaseEndDate	5/28/2019	6/15/2019
tblConstructionPhase	PhaseEndDate	7/23/2019	7/15/2019
tblConstructionPhase	PhaseEndDate	10/13/2020	3/1/2020
tblConstructionPhase	PhaseEndDate	6/11/2019	7/15/2019
tblConstructionPhase	PhaseStartDate	10/14/2020	9/1/2019
tblConstructionPhase	PhaseStartDate	7/24/2019	9/1/2019
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tblGrading	MaterialExported	0.00	11,175.00
tblOffRoadEquipment	LoadFactor	0.41	0.41

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
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tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripNumber	171.00	249.00
tblTripsAndVMT	HaulingTripNumber	0.00	480.00
tblTripsAndVMT	HaulingTripNumber	0.00	388.00
tblVehicleTrips	ST_TR	2.46	0.33
tblVehicleTrips	ST_TR	1.68	0.33
tblVehicleTrips	SU_TR	1.05	0.17
tblVehicleTrips	SU_TR	1.68	0.17
tblVehicleTrips	WD_TR	11.03	1.74
tblVehicleTrips	WD_TR	1.68	1.74
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					
2019	1.1389	3.1813	2.5349	6.1900e-003	0.2601	0.1343	0.3944	0.0810	0.1285	0.2095	0.0000	560.9614	560.9614	0.0690	0.0000	562.6871
2020	0.2445	0.2139	0.2109	5.3000e-004	0.0167	7.4100e-003	0.0241	4.4100e-003	7.0200e-003	0.0114	0.0000	47.8117	47.8117	6.9700e-003	0.0000	47.9859
Maximum	**1.1389**	**3.1813**	**2.5349**	**6.1900e-003**	**0.2601**	**0.1343**	**0.3944**	**0.0810**	**0.1285**	**0.2095**	**0.0000**	**560.9614**	**560.9614**	**0.0690**	**0.0000**	**562.6871**

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	1.1389	3.1813	2.5349	6.1900e-003	0.2601	0.1343	0.3944	0.0810	0.1285	0.2095	0.0000	560.9610	560.9610	0.0690	0.0000	562.6867
2020	0.2445	0.2139	0.2109	5.3000e-004	0.0167	7.4100e-003	0.0241	4.4100e-003	7.0200e-003	0.0114	0.0000	47.8117	47.8117	6.9700e-003	0.0000	47.9859
Maximum	**1.1389**	**3.1813**	**2.5349**	**6.1900e-003**	**0.2601**	**0.1343**	**0.3944**	**0.0810**	**0.1285**	**0.2095**	**0.0000**	**560.9610**	**560.9610**	**0.0690**	**0.0000**	**562.6867**

	ROG	NOx	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	**5-1-2019**	**7-31-2019**	1.3636	1.3636
2	**8-1-2019**	**10-31-2019**	1.5616	1.5616
3	**11-1-2019**	**1-31-2020**	1.8081	1.8081
4	**2-1-2020**	**4-30-2020**	0.0854	0.0854
		Highest	1.8081	1.8081

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8455	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003
Energy	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	159.6457	159.6457	0.0126	3.2100e-003	160.9170
Mobile	0.0719	0.3156	0.9154	2.9700e-003	0.2616	2.9500e-003	0.2646	0.0700	2.7700e-003	0.0728	0.0000	271.6668	271.6668	9.4400e-003	0.0000	271.9029
Offroad	0.0187	0.1687	0.1534	2.0000e-004		0.0126	0.0126		0.0116	0.0116	0.0000	17.4579	17.4579	5.6500e-003	0.0000	17.5990
Waste						0.0000	0.0000		0.0000	0.0000	35.3083	0.0000	35.3083	2.0867	0.0000	87.4747
Water						0.0000	0.0000		0.0000	0.0000	14.9590	30.5958	45.5548	0.0546	0.0332	56.8014

Total	**0.9403**	**0.5221**	**1.1051**	**3.4000e-003**	**0.2616**	**0.0184**	**0.2800**	**0.0700**	**0.0172**	**0.0873**	**50.2673**	**479.3748**	**529.6420**	**2.1690**	**0.0364**	**594.7042**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8455	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003
Energy	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	159.6457	159.6457	0.0126	3.2100e-003	160.9170
Mobile	0.0719	0.3156	0.9154	2.9700e-003	0.2616	2.9500e-003	0.2646	0.0700	2.7700e-003	0.0728	0.0000	271.6668	271.6668	9.4400e-003	0.0000	271.9029
Offroad	0.0187	0.1687	0.1534	2.0000e-004		0.0126	0.0126		0.0116	0.0116	0.0000	17.4579	17.4579	5.6500e-003	0.0000	17.5990
Waste						0.0000	0.0000		0.0000	0.0000	35.3083	0.0000	35.3083	2.0867	0.0000	87.4747
Water						0.0000	0.0000		0.0000	0.0000	14.9590	30.5958	45.5548	0.0546	0.0332	56.8014
Total	**0.9403**	**0.5221**	**1.1051**	**3.4000e-003**	**0.2616**	**0.0184**	**0.2800**	**0.0700**	**0.0172**	**0.0873**	**50.2673**	**479.3748**	**529.6420**	**2.1690**	**0.0364**	**594.7042**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2019	6/15/2019	5	33	
2	Site Preparation	Site Preparation	6/15/2019	7/15/2019	5	21	
3	Grading	Grading	6/15/2019	7/15/2019	5	21	

4	Trenching	Trenching	7/15/2019	12/15/2019	5	110	
5	Building Construction	Building Construction	9/1/2019	1/1/2020	5	88	
6	Architectural Coating	Architectural Coating	9/1/2019	2/1/2020	5	110	
7	Paving	Paving	1/1/2020	3/1/2020	5	43	

Acres of Grading (Site Preparation Phase): 2.63

Acres of Grading (Grading Phase): 52.5

Acres of Paving: 6.83

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 277,725; Non-Residential Outdoor: 92,575; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	1.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	4.00	85	0.78
Demolition	Excavators	2	5.00	158	0.38
Demolition	Rubber Tired Dozers	2	6.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	2.00	97	0.37
Site Preparation	Graders	1	2.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	4.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	4.00	247	0.40
Grading	Scrapers	4	4.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Trenching	Concrete/Industrial Saws	5	1.00	81	0.73
Trenching	Excavators	2	1.00	158	0.38
Trenching	Plate Compactors	2	1.00	8	0.43
Trenching	Pumps	5	1.00	84	0.74
Trenching	Tractors/Loaders/Backhoes	4	1.00	97	0.37

Building Construction	Cranes	2	1.00	231	0.29
Building Construction	Forklifts	7	4.00	89	0.20
Building Construction	Generator Sets	5	5.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	3	1.00	46	0.45
Architectural Coating	Aerial Lifts	10	4.00	63	0.31
Architectural Coating	Air Compressors	3	3.00	78	0.48
Paving	Cement and Mortar Mixers	5	1.00	9	0.56
Paving	Graders	1	1.00	187	0.41
Paving	Pavers	1	1.00	130	0.42
Paving	Paving Equipment	1	1.00	132	0.36
Paving	Rollers	3	1.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	2.00	97	0.37

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	8	20.00	0.00	249.00	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	7	18.00	0.00	1,397.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	18	45.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	202.00	79.00	480.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	13	40.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	13	33.00	0.00	388.00	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					
Fugitive Dust					0.0185	0.0000	0.0185	2.8000e-003	0.0000	2.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0413	0.4150	0.2360	4.1000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.9299	36.9299	0.0102	0.0000	37.1860
Total	**0.0413**	**0.4150**	**0.2360**	**4.1000e-004**	**0.0185**	**0.0213**	**0.0398**	**2.8000e-003**	**0.0198**	**0.0226**	**0.0000**	**36.9299**	**36.9299**	**0.0102**	**0.0000**	**37.1860**

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	1.1300e-003	0.0388	7.6600e-003	1.0000e-004	2.1100e-003	1.5000e-004	2.2600e-003	5.8000e-004	1.4000e-004	7.2000e-004	0.0000	9.5945	9.5945	4.5000e-004	0.0000	9.6058
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-003	8.9000e-004	9.2200e-003	3.0000e-005	2.6200e-003	2.0000e-005	2.6300e-003	7.0000e-004	2.0000e-005	7.1000e-004	0.0000	2.3169	2.3169	6.0000e-005	0.0000	2.3185
Total	**2.3300e-003**	**0.0397**	**0.0169**	**1.3000e-004**	**4.7300e-003**	**1.7000e-004**	**4.8900e-003**	**1.2800e-003**	**1.6000e-004**	**1.4300e-003**	**0.0000**	**11.9114**	**11.9114**	**5.1000e-004**	**0.0000**	**11.9242**

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					0.0185	0.0000	0.0185	2.8000e-003	0.0000	2.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0413	0.4150	0.2360	4.1000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.9299	36.9299	0.0102	0.0000	37.1859
Total	**0.0413**	**0.4150**	**0.2360**	**4.1000e-004**	**0.0185**	**0.0213**	**0.0398**	**2.8000e-003**	**0.0198**	**0.0226**	**0.0000**	**36.9299**	**36.9299**	**0.0102**	**0.0000**	**37.1859**

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	1.1300e-003	0.0388	7.6600e-003	1.0000e-004	2.1100e-003	1.5000e-004	2.2600e-003	5.8000e-004	1.4000e-004	7.2000e-004	0.0000	9.5945	9.5945	4.5000e-004	0.0000	9.6058
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-003	8.9000e-004	9.2200e-003	3.0000e-005	2.6200e-003	2.0000e-005	2.6300e-003	7.0000e-004	2.0000e-005	7.1000e-004	0.0000	2.3169	2.3169	6.0000e-005	0.0000	2.3185
Total	**2.3300e-003**	**0.0397**	**0.0169**	**1.3000e-004**	**4.7300e-003**	**1.7000e-004**	**4.8900e-003**	**1.2800e-003**	**1.6000e-004**	**1.4300e-003**	**0.0000**	**11.9114**	**11.9114**	**5.1000e-004**	**0.0000**	**11.9242**

3.3 Site Preparation - 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					
Fugitive Dust					0.0330	0.0000	0.0330	0.0175	0.0000	0.0175	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4600e-003	0.0929	0.0394	8.0000e-005		4.4600e-003	4.4600e-003		4.1100e-003	4.1100e-003	0.0000	7.0573	7.0573	2.2300e-003	0.0000	7.1131
Total	**8.4600e-003**	**0.0929**	**0.0394**	**8.0000e-005**	**0.0330**	**4.4600e-003**	**0.0375**	**0.0175**	**4.1100e-003**	**0.0216**	**0.0000**	**7.0573**	**7.0573**	**2.2300e-003**	**0.0000**	**7.1131**

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	3.1000e-004	2.3000e-004	2.3500e-003	1.0000e-005	6.7000e-004	0.0000	6.7000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5898	0.5898	2.0000e-005	0.0000	0.5902
Total	**3.1000e-004**	**2.3000e-004**	**2.3500e-003**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**6.7000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5898**	**0.5898**	**2.0000e-005**	**0.0000**	**0.5902**

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					0.0330	0.0000	0.0330	0.0175	0.0000	0.0175	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4600e-003	0.0929	0.0394	8.0000e-005		4.4600e-003	4.4600e-003		4.1100e-003	4.1100e-003	0.0000	7.0573	7.0573	2.2300e-003	0.0000	7.1131
Total	**8.4600e-003**	**0.0929**	**0.0394**	**8.0000e-005**	**0.0330**	**4.4600e-003**	**0.0375**	**0.0175**	**4.1100e-003**	**0.0216**	**0.0000**	**7.0573**	**7.0573**	**2.2300e-003**	**0.0000**	**7.1131**

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	3.1000e-004	2.3000e-004	2.3500e-003	1.0000e-005	6.7000e-004	0.0000	6.7000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5898	0.5898	2.0000e-005	0.0000	0.5902
Total	**3.1000e-004**	**2.3000e-004**	**2.3500e-003**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**6.7000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5898**	**0.5898**	**2.0000e-005**	**0.0000**	**0.5902**

3.4 Grading - 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					
Fugitive Dust					0.0601	0.0000	0.0601	0.0205	0.0000	0.0205	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0353	0.4221	0.2292	4.6000e-004		0.0172	0.0172		0.0158	0.0158	0.0000	41.0606	41.0606	0.0130	0.0000	41.3854
Total	**0.0353**	**0.4221**	**0.2292**	**4.6000e-004**	**0.0601**	**0.0172**	**0.0773**	**0.0205**	**0.0158**	**0.0363**	**0.0000**	**41.0606**	**41.0606**	**0.0130**	**0.0000**	**41.3854**

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	6.3500e-003	0.2175	0.0430	5.6000e-004	0.0118	8.3000e-004	0.0127	3.2600e-003	8.0000e-004	4.0500e-003	0.0000	53.8295	53.8295	2.5200e-003	0.0000	53.8926

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	6.9000e-004	5.1000e-004	5.2800e-003	1.0000e-005	1.5000e-003	1.0000e-005	1.5100e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3269	1.3269	4.0000e-005	0.0000	1.3278
Total	**7.0400e-003**	**0.2180**	**0.0482**	**5.7000e-004**	**0.0133**	**8.4000e-004**	**0.0142**	**3.6600e-003**	**8.1000e-004**	**4.6600e-003**	**0.0000**	**55.1565**	**55.1565**	**2.5600e-003**	**0.0000**	**55.2204**

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					0.0601	0.0000	0.0601	0.0205	0.0000	0.0205	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0353	0.4221	0.2292	4.6000e-004		0.0172	0.0172		0.0158	0.0158	0.0000	41.0606	41.0606	0.0130	0.0000	41.3853
Total	**0.0353**	**0.4221**	**0.2292**	**4.6000e-004**	**0.0601**	**0.0172**	**0.0773**	**0.0205**	**0.0158**	**0.0363**	**0.0000**	**41.0606**	**41.0606**	**0.0130**	**0.0000**	**41.3853**

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	6.3500e-003	0.2175	0.0430	5.6000e-004	0.0118	8.3000e-004	0.0127	3.2600e-003	8.0000e-004	4.0500e-003	0.0000	53.8295	53.8295	2.5200e-003	0.0000	53.8926
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	6.9000e-004	5.1000e-004	5.2800e-003	1.0000e-005	1.5000e-003	1.0000e-005	1.5100e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3269	1.3269	4.0000e-005	0.0000	1.3278
Total	**7.0400e-003**	**0.2180**	**0.0482**	**5.7000e-004**	**0.0133**	**8.4000e-004**	**0.0142**	**3.6600e-003**	**8.1000e-004**	**4.6600e-003**	**0.0000**	**55.1565**	**55.1565**	**2.5600e-003**	**0.0000**	**55.2204**

3.5 Trenching - 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	0.0426	0.3598	0.3683	6.0000e-004		0.0223	0.0223		0.0218	0.0218	0.0000	52.3892	52.3892	7.0900e-003	0.0000	52.5664
Total	**0.0426**	**0.3598**	**0.3683**	**6.0000e-004**		**0.0223**	**0.0223**		**0.0218**	**0.0218**	**0.0000**	**52.3892**	**52.3892**	**7.0900e-003**	**0.0000**	**52.5664**

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	8.9900e-003	6.6900e-003	0.0691	1.9000e-004	0.0196	1.3000e-004	0.0198	5.2200e-003	1.2000e-004	5.3400e-003	0.0000	17.3766	17.3766	4.7000e-004	0.0000	17.3884
Total	**8.9900e-003**	**6.6900e-003**	**0.0691**	**1.9000e-004**	**0.0196**	**1.3000e-004**	**0.0198**	**5.2200e-003**	**1.2000e-004**	**5.3400e-003**	**0.0000**	**17.3766**	**17.3766**	**4.7000e-004**	**0.0000**	**17.3884**

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	0.0426	0.3598	0.3683	6.0000e-004		0.0223	0.0223		0.0218	0.0218	0.0000	52.3891	52.3891	7.0900e-003	0.0000	52.5663
Total	**0.0426**	**0.3598**	**0.3683**	**6.0000e-004**		**0.0223**	**0.0223**		**0.0218**	**0.0218**	**0.0000**	**52.3891**	**52.3891**	**7.0900e-003**	**0.0000**	**52.5663**

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	8.9900e-003	6.6900e-003	0.0691	1.9000e-004	0.0196	1.3000e-004	0.0198	5.2200e-003	1.2000e-004	5.3400e-003	0.0000	17.3766	17.3766	4.7000e-004	0.0000	17.3884
Total	**8.9900e-003**	**6.6900e-003**	**0.0691**	**1.9000e-004**	**0.0196**	**1.3000e-004**	**0.0198**	**5.2200e-003**	**1.2000e-004**	**5.3400e-003**	**0.0000**	**17.3766**	**17.3766**	**4.7000e-004**	**0.0000**	**17.3884**

3.6 Building Construction - 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	0.0965	0.8228	0.7423	1.2300e-003		0.0519	0.0519		0.0504	0.0504	0.0000	106.4388	106.4388	0.0138	0.0000	106.7832

Total	**0.0965**	**0.8228**	**0.7423**	**1.2300e-003**		**0.0519**	**0.0519**		**0.0504**	**0.0504**	**0.0000**	**106.4388**	**106.4388**	**0.0138**	**0.0000**	**106.7832**

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	2.1600e-003	0.0739	0.0146	1.9000e-004	4.0600e-003	2.8000e-004	4.3400e-003	1.1100e-003	2.7000e-004	1.3900e-003	0.0000	18.2853	18.2853	8.6000e-004	0.0000	18.3067
Vendor	0.0169	0.4340	0.1165	9.4000e-004	0.0226	3.1200e-003	0.0257	6.5400e-003	2.9800e-003	9.5200e-003	0.0000	90.3978	90.3978	4.4800e-003	0.0000	90.5099
Worker	0.0319	0.0238	0.2455	6.8000e-004	0.0697	4.6000e-004	0.0702	0.0185	4.2000e-004	0.0190	0.0000	61.6921	61.6921	1.6800e-003	0.0000	61.7341
Total	**0.0509**	**0.5316**	**0.3766**	**1.8100e-003**	**0.0964**	**3.8600e-003**	**0.1002**	**0.0262**	**3.6700e-003**	**0.0299**	**0.0000**	**170.3751**	**170.3751**	**7.0200e-003**	**0.0000**	**170.5506**

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	0.0965	0.8228	0.7423	1.2300e-003		0.0519	0.0519		0.0504	0.0504	0.0000	106.4387	106.4387	0.0138	0.0000	106.7831
Total	**0.0965**	**0.8228**	**0.7423**	**1.2300e-003**		**0.0519**	**0.0519**		**0.0504**	**0.0504**	**0.0000**	**106.4387**	**106.4387**	**0.0138**	**0.0000**	**106.7831**

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	2.1600e-003	0.0739	0.0146	1.9000e-004	4.0600e-003	2.8000e-004	4.3400e-003	1.1100e-003	2.7000e-004	1.3900e-003	0.0000	18.2853	18.2853	8.6000e-004	0.0000	18.3067
Vendor	0.0169	0.4340	0.1165	9.4000e-004	0.0226	3.1200e-003	0.0257	6.5400e-003	2.9800e-003	9.5200e-003	0.0000	90.3978	90.3978	4.4800e-003	0.0000	90.5099
Worker	0.0319	0.0238	0.2455	6.8000e-004	0.0697	4.6000e-004	0.0702	0.0185	4.2000e-004	0.0190	0.0000	61.6921	61.6921	1.6800e-003	0.0000	61.7341
Total	**0.0509**	**0.5316**	**0.3766**	**1.8100e-003**	**0.0964**	**3.8600e-003**	**0.1002**	**0.0262**	**3.6700e-003**	**0.0299**	**0.0000**	**170.3751**	**170.3751**	**7.0200e-003**	**0.0000**	**170.5506**

3.6 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	1.0000e-003	8.6700e-003	8.4500e-003	1.0000e-005		5.2000e-004	5.2000e-004		5.0000e-004	5.0000e-004	0.0000	1.2168	1.2168	1.5000e-004	0.0000	1.2206
Total	**1.0000e-003**	**8.6700e-003**	**8.4500e-003**	**1.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**1.2168**	**1.2168**	**1.5000e-004**	**0.0000**	**1.2206**

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	2.0000e-005	7.9000e-004	1.6000e-004	0.0000	3.0600e-003	0.0000	3.0600e-003	7.5000e-004	0.0000	7.5000e-004	0.0000	0.2080	0.2080	1.0000e-005	0.0000	0.2083
Vendor	1.6000e-004	4.5000e-003	1.2000e-003	1.0000e-005	2.6000e-004	2.0000e-005	2.8000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.0327	1.0327	5.0000e-005	0.0000	1.0339
Worker	3.4000e-004	2.4000e-004	2.5300e-003	1.0000e-005	8.0000e-004	1.0000e-005	8.1000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6870	0.6870	2.0000e-005	0.0000	0.6874
Total	**5.2000e-004**	**5.5300e-003**	**3.8900e-003**	**2.0000e-005**	**4.1200e-003**	**3.0000e-005**	**4.1500e-003**	**1.0400e-003**	**2.0000e-005**	**1.0700e-003**	**0.0000**	**1.9277**	**1.9277**	**8.0000e-005**	**0.0000**	**1.9295**

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	8.6700e-003	8.4500e-003	1.0000e-005		5.2000e-004	5.2000e-004		5.0000e-004	5.0000e-004	0.0000	1.2168	1.2168	1.5000e-004	0.0000	1.2206
Total	**1.0000e-003**	**8.6700e-003**	**8.4500e-003**	**1.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**1.2168**	**1.2168**	**1.5000e-004**	**0.0000**	**1.2206**

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	2.0000e-005	7.9000e-004	1.6000e-004	0.0000	3.0600e-003	0.0000	3.0600e-003	7.5000e-004	0.0000	7.5000e-004	0.0000	0.2080	0.2080	1.0000e-005	0.0000	0.2083
Vendor	1.6000e-004	4.5000e-003	1.2000e-003	1.0000e-005	2.6000e-004	2.0000e-005	2.8000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.0327	1.0327	5.0000e-005	0.0000	1.0339

Worker	3.4000e-004	2.4000e-004	2.5300e-003	1.0000e-005	8.0000e-004	1.0000e-005	8.1000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6870	0.6870	2.0000e-005	0.0000	0.6874
Total	**5.2000e-004**	**5.5300e-003**	**3.8900e-003**	**2.0000e-005**	**4.1200e-003**	**3.0000e-005**	**4.1500e-003**	**1.0400e-003**	**2.0000e-005**	**1.0700e-003**	**0.0000**	**1.9277**	**1.9277**	**8.0000e-005**	**0.0000**	**1.9295**

3.7 Architectural Coating - 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					
Archit. Coating	0.8126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0262	0.2678	0.3578	5.6000e-004		0.0120	0.0120		0.0118	0.0118	0.0000	49.4600	49.4600	0.0118	0.0000	49.7546
Total	**0.8389**	**0.2678**	**0.3578**	**5.6000e-004**		**0.0120**	**0.0120**		**0.0118**	**0.0118**	**0.0000**	**49.4600**	**49.4600**	**0.0118**	**0.0000**	**49.7546**

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	6.3200e-003	4.7100e-003	0.0486	1.4000e-004	0.0138	9.0000e-005	0.0139	3.6700e-003	8.0000e-005	3.7500e-003	0.0000	12.2163	12.2163	3.3000e-004	0.0000	12.2246
Total	**6.3200e-003**	**4.7100e-003**	**0.0486**	**1.4000e-004**	**0.0138**	**9.0000e-005**	**0.0139**	**3.6700e-003**	**8.0000e-005**	**3.7500e-003**	**0.0000**	**12.2163**	**12.2163**	**3.3000e-004**	**0.0000**	**12.2246**

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	0.8126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0262	0.2678	0.3578	5.6000e-004		0.0120	0.0120		0.0118	0.0118	0.0000	49.4599	49.4599	0.0118	0.0000	49.7545
Total	**0.8389**	**0.2678**	**0.3578**	**5.6000e-004**		**0.0120**	**0.0120**		**0.0118**	**0.0118**	**0.0000**	**49.4599**	**49.4599**	**0.0118**	**0.0000**	**49.7545**

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	6.3200e-003	4.7100e-003	0.0486	1.4000e-004	0.0138	9.0000e-005	0.0139	3.6700e-003	8.0000e-005	3.7500e-003	0.0000	12.2163	12.2163	3.3000e-004	0.0000	12.2246
Total	**6.3200e-003**	**4.7100e-003**	**0.0486**	**1.4000e-004**	**0.0138**	**9.0000e-005**	**0.0139**	**3.6700e-003**	**8.0000e-005**	**3.7500e-003**	**0.0000**	**12.2163**	**12.2163**	**3.3000e-004**	**0.0000**	**12.2246**

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	0.2148					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4500e-003	0.0661	0.0945	1.5000e-004		2.7400e-003	2.7400e-003		2.6700e-003	2.6700e-003	0.0000	12.8871	12.8871	3.0800e-003	0.0000	12.9642
Total	**0.2213**	**0.0661**	**0.0945**	**1.5000e-004**		**2.7400e-003**	**2.7400e-003**		**2.6700e-003**	**2.6700e-003**	**0.0000**	**12.8871**	**12.8871**	**3.0800e-003**	**0.0000**	**12.9642**

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	1.5300e-003	1.1000e-003	0.0115	3.0000e-005	3.6500e-003	2.0000e-005	3.6700e-003	9.7000e-004	2.0000e-005	9.9000e-004	0.0000	3.1287	3.1287	8.0000e-005	0.0000	3.1306
Total	**1.5300e-003**	**1.1000e-003**	**0.0115**	**3.0000e-005**	**3.6500e-003**	**2.0000e-005**	**3.6700e-003**	**9.7000e-004**	**2.0000e-005**	**9.9000e-004**	**0.0000**	**3.1287**	**3.1287**	**8.0000e-005**	**0.0000**	**3.1306**

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	0.2148					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4500e-003	0.0661	0.0945	1.5000e-004		2.7400e-003	2.7400e-003		2.6700e-003	2.6700e-003	0.0000	12.8871	12.8871	3.0800e-003	0.0000	12.9642

Total	**0.2213**	**0.0661**	**0.0945**	**1.5000e-004**		**2.7400e-003**	**2.7400e-003**		**2.6700e-003**	**2.6700e-003**	**0.0000**	**12.8871**	**12.8871**	**3.0800e-003**	**0.0000**	**12.9642**

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	1.5300e-003	1.1000e-003	0.0115	3.0000e-005	3.6500e-003	2.0000e-005	3.6700e-003	9.7000e-004	2.0000e-005	9.9000e-004	0.0000	3.1287	3.1287	8.0000e-005	0.0000	3.1306
Total	**1.5300e-003**	**1.1000e-003**	**0.0115**	**3.0000e-005**	**3.6500e-003**	**2.0000e-005**	**3.6700e-003**	**9.7000e-004**	**2.0000e-005**	**9.9000e-004**	**0.0000**	**3.1287**	**3.1287**	**8.0000e-005**	**0.0000**	**3.1306**

3.8 Paving - 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	7.2500e-003	0.0745	0.0633	1.1000e-004		3.8800e-003	3.8800e-003		3.5900e-003	3.5900e-003	0.0000	9.0293	9.0293	2.7900e-003	0.0000	9.0989
Paving	8.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0162**	**0.0745**	**0.0633**	**1.1000e-004**		**3.8800e-003**	**3.8800e-003**		**3.5900e-003**	**3.5900e-003**	**0.0000**	**9.0293**	**9.0293**	**2.7900e-003**	**0.0000**	**9.0989**

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	1.6100e-003	0.0563	0.0115	1.5000e-004	3.2900e-003	1.8000e-004	3.4700e-003	9.0000e-004	1.7000e-004	1.0800e-003	0.0000	14.7965	14.7965	6.8000e-004	0.0000	14.8135
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	2.3600e-003	1.6900e-003	0.0178	5.0000e-005	5.6300e-003	4.0000e-005	5.6600e-003	1.5000e-003	3.0000e-005	1.5300e-003	0.0000	4.8257	4.8257	1.2000e-004	0.0000	4.8286
Total	**3.9700e-003**	**0.0580**	**0.0293**	**2.0000e-004**	**8.9200e-003**	**2.2000e-004**	**9.1300e-003**	**2.4000e-003**	**2.0000e-004**	**2.6100e-003**	**0.0000**	**19.6222**	**19.6222**	**8.0000e-004**	**0.0000**	**19.6421**

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	7.2500e-003	0.0745	0.0633	1.1000e-004		3.8800e-003	3.8800e-003		3.5900e-003	3.5900e-003	0.0000	9.0292	9.0292	2.7900e-003	0.0000	9.0989
Paving	8.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0162**	**0.0745**	**0.0633**	**1.1000e-004**		**3.8800e-003**	**3.8800e-003**		**3.5900e-003**	**3.5900e-003**	**0.0000**	**9.0292**	**9.0292**	**2.7900e-003**	**0.0000**	**9.0989**

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	1.6100e-003	0.0563	0.0115	1.5000e-004	3.2900e-003	1.8000e-004	3.4700e-003	9.0000e-004	1.7000e-004	1.0800e-003	0.0000	14.7965	14.7965	6.8000e-004	0.0000	14.8135
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	2.3600e-003	1.6900e-003	0.0178	5.0000e-005	5.6300e-003	4.0000e-005	5.6600e-003	1.5000e-003	3.0000e-005	1.5300e-003	0.0000	4.8257	4.8257	1.2000e-004	0.0000	4.8286
Total	**3.9700e-003**	**0.0580**	**0.0293**	**2.0000e-004**	**8.9200e-003**	**2.2000e-004**	**9.1300e-003**	**2.4000e-003**	**2.0000e-004**	**2.6100e-003**	**0.0000**	**19.6222**	**19.6222**	**8.0000e-004**	**0.0000**	**19.6421**

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	0.0719	0.3156	0.9154	2.9700e-003	0.2616	2.9500e-003	0.2646	0.0700	2.7700e-003	0.0728	0.0000	271.6668	271.6668	9.4400e-003	0.0000	271.9029
Unmitigated	0.0719	0.3156	0.9154	2.9700e-003	0.2616	2.9500e-003	0.2646	0.0700	2.7700e-003	0.0728	0.0000	271.6668	271.6668	9.4400e-003	0.0000	271.9029

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	17.40	3.30	1.70	31,408	31,408
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	304.76	57.80	29.78	672,063	672,063
Total	322.16	61.10	31.48	703,471	703,471

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Unrefrigerated Warehouse-No Rail	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

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	118.4771	118.4771	0.0119	2.4500e-003	119.5037
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	118.4771	118.4771	0.0119	2.4500e-003	119.5037
NaturalGas Mitigated	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1686	41.1686	7.9000e-004	7.5000e-004	41.4133
NaturalGas Unmitigated	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1686	41.1686	7.9000e-004	7.5000e-004	41.4133

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					
General Office Building	163700	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	607771	3.2800e-003	0.0298	0.0250	1.8000e-004		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	32.4330	32.4330	6.2000e-004	5.9000e-004	32.6257
Total		**4.1600e-003**	**0.0378**	**0.0318**	**2.3000e-004**		**2.8700e-003**	**2.8700e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**41.1686**	**41.1686**	**7.9000e-004**	**7.5000e-004**	**41.4133**

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					
General Office Building	163700	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	607771	3.2800e-003	0.0298	0.0250	1.8000e-004		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	32.4330	32.4330	6.2000e-004	5.9000e-004	32.6257
Total		**4.1600e-003**	**0.0378**	**0.0318**	**2.3000e-004**		**2.8700e-003**	**2.8700e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**41.1686**	**41.1686**	**7.9000e-004**	**7.5000e-004**	**41.4133**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
General Office Building	178300	23.4539	2.3500e-003	4.9000e-004	23.6571
Parking Lot	104101	13.6936	1.3700e-003	2.8000e-004	13.8122
Unrefrigerated Warehouse-No Rail	618280	81.3296	8.1300e-003	1.6800e-003	82.0344
Total		**118.4771**	**0.0119**	**2.4500e-003**	**119.5037**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	178300	23.4539	2.3500e-003	4.9000e-004	23.6571
Parking Lot	104101	13.6936	1.3700e-003	2.8000e-004	13.8122
Unrefrigerated Warehouse-No Rail	618280	81.3296	8.1300e-003	1.6800e-003	82.0344
Total		**118.4771**	**0.0119**	**2.4500e-003**	**119.5037**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.8455	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003
Unmitigated	0.8455	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1028					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003
Total	**0.8455**	**4.0000e-005**	**4.4600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6200e-003**	**8.6200e-003**	**2.0000e-005**	**0.0000**	**9.2000e-003**

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	0.1028					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003

Total	**0.8455**	**4.0000e-005**	**4.4600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6200e-003**	**8.6200e-003**	**2.0000e-005**	**0.0000**	**9.2000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	45.5548	0.0546	0.0332	56.8014
Unmitigated	45.5548	0.0546	0.0332	56.8014

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	2.3954	2.3400e-003	1.4000e-003	2.8723
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	40.5034 / 0	43.1594	0.0522	0.0318	53.9290
Total		**45.5548**	**0.0546**	**0.0332**	**56.8014**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	2.3954	2.3400e-003	1.4000e-003	2.8723
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	40.5034 / 0	43.1594	0.0522	0.0318	53.9290
Total		**45.5548**	**0.0546**	**0.0332**	**56.8014**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.3083	2.0867	0.0000	87.4747
Unmitigated	35.3083	2.0867	0.0000	87.4747

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	164.64	33.4204	1.9751	0.0000	82.7977
Total		**35.3083**	**2.0867**	**0.0000**	**87.4747**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	164.64	33.4204	1.9751	0.0000	82.7977
Total		**35.3083**	**2.0867**	**0.0000**	**87.4747**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	4.00	260	89	0.20	Electrical

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					
Forklifts	0.0187	0.1687	0.1534	2.0000e-004		0.0126	0.0126		0.0116	0.0116	0.0000	17.4579	17.4579	5.6500e-003	0.0000	17.5990
Total	**0.0187**	**0.1687**	**0.1534**	**2.0000e-004**		**0.0126**	**0.0126**		**0.0116**	**0.0116**	**0.0000**	**17.4579**	**17.4579**	**5.6500e-003**	**0.0000**	**17.5990**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: Construction and Operational Health Risk Calculations

Construction Health Risk Calculations

1605 Industrial Ave, San Jose, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction 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 ($g/s/m^2$)
2019-2020	Construction	0.1372	CON_DPM	274.3	0.08351	1.05E-02	43577.59	2.41E-07

Construction Hours

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

1605 Industrial Ave, 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 $g/s/m^2$
2019-2020	Construction	CON_FUG	0.04505	90.1	0.02743	3.46E-03	43,578	7.93E-08

Construction Hours

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

18-169 1605 Industrial Ave Warehouse - Existing - Santa Clara County, Annual

18-169 1605 Industrial Ave Warehouse - Existing

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	37.62	1000sqft	0.86	37,615.00	0
Other Non-Asphalt Surfaces	299.57	1000sqft	6.88	299,571.00	0
Parking Lot	140.39	1000sqft	3.22	140,394.00	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 Rate = 290

Land Use - Existing Land Use

Construction Phase - Existing Use

Off-road Equipment - Existing Use

Vehicle Trips - existing = 5.32, 1.01, 0.52

Operational Off-Road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	PhaseEndDate	5/14/2019	5/1/2019
tblLandUse	LandUseSquareFeet	299,570.00	299,571.00
tblLandUse	LandUseSquareFeet	140,390.00	140,394.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	0.00	18.00
tblVehicleTrips	ST_TR	1.50	1.01
tblVehicleTrips	SU_TR	1.50	0.52
tblVehicleTrips	WD_TR	1.50	5.32

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	0.2046	4.0000e-005	4.4200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5300e-003	8.5300e-003	2.0000e-005	0.0000	9.1100e-003
Energy	5.3500e-003	0.0487	0.0409	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	100.2982	100.2982	5.7500e-003	1.9500e-003	101.0231
Mobile	0.0448	0.1973	0.5730	1.8600e-003	0.1641	1.8500e-003	0.1660	0.0439	1.7400e-003	0.0457	0.0000	170.3569	170.3569	5.9100e-003	0.0000	170.5047
Waste						0.0000	0.0000		0.0000	0.0000	9.4695	0.0000	9.4695	0.5596	0.0000	23.4604

Water						0.0000	0.0000		0.0000	0.0000	2.7600	6.1922	8.9521	0.2841	6.8200e-003	18.0874
Total	**0.2548**	**0.2460**	**0.6183**	**2.1500e-003**	**0.1641**	**5.5700e-003**	**0.1697**	**0.0439**	**5.4600e-003**	**0.0494**	**12.2295**	**276.8558**	**289.0854**	**0.8554**	**8.7700e-003**	**313.0848**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2046	4.0000e-005	4.4200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5300e-003	8.5300e-003	2.0000e-005	0.0000	9.1100e-003
Energy	5.3500e-003	0.0487	0.0409	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	100.2982	100.2982	5.7500e-003	1.9500e-003	101.0231
Mobile	0.0448	0.1973	0.5730	1.8600e-003	0.1641	1.8500e-003	0.1660	0.0439	1.7400e-003	0.0457	0.0000	170.3569	170.3569	5.9100e-003	0.0000	170.5047
Waste						0.0000	0.0000		0.0000	0.0000	9.4695	0.0000	9.4695	0.5596	0.0000	23.4604
Water						0.0000	0.0000		0.0000	0.0000	2.7600	6.1922	8.9521	0.2841	6.8200e-003	18.0874
Total	**0.2548**	**0.2460**	**0.6183**	**2.1500e-003**	**0.1641**	**5.5700e-003**	**0.1697**	**0.0439**	**5.4600e-003**	**0.0494**	**12.2295**	**276.8558**	**289.0854**	**0.8554**	**8.7700e-003**	**313.0848**

	ROG	NOx	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**

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	0.0448	0.1973	0.5730	1.8600e-003	0.1641	1.8500e-003	0.1660	0.0439	1.7400e-003	0.0457	0.0000	170.3569	170.3569	5.9100e-003	0.0000	170.5047
Unmitigated	0.0448	0.1973	0.5730	1.8600e-003	0.1641	1.8500e-003	0.1660	0.0439	1.7400e-003	0.0457	0.0000	170.3569	170.3569	5.9100e-003	0.0000	170.5047

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	200.14	38.00	19.56	441,368	441,368
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	200.14	38.00	19.56	441,368	441,368

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
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Other Non-Asphalt Surfaces	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

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	47.3391	47.3391	4.7300e-003	9.8000e-004	47.7494
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47.3391	47.3391	4.7300e-003	9.8000e-004	47.7494
NaturalGas Mitigated	5.3500e-003	0.0487	0.0409	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	52.9591	52.9591	1.0200e-003	9.7000e-004	53.2738
NaturalGas Unmitigated	5.3500e-003	0.0487	0.0409	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	52.9591	52.9591	1.0200e-003	9.7000e-004	53.2738

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					
General Heavy Industry	992416	5.3500e-003	0.0487	0.0409	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	52.9591	52.9591	1.0200e-003	9.7000e-004	53.2738
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.3500e-003**	**0.0487**	**0.0409**	**2.9000e-004**		**3.7000e-003**	**3.7000e-003**		**3.7000e-003**	**3.7000e-003**	**0.0000**	**52.9591**	**52.9591**	**1.0200e-003**	**9.7000e-004**	**53.2738**

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					
General Heavy Industry	992416	5.3500e-003	0.0487	0.0409	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	52.9591	52.9591	1.0200e-003	9.7000e-004	53.2738
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.3500e-003**	**0.0487**	**0.0409**	**2.9000e-004**		**3.7000e-003**	**3.7000e-003**		**3.7000e-003**	**3.7000e-003**	**0.0000**	**52.9591**	**52.9591**	**1.0200e-003**	**9.7000e-004**	**53.2738**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	310741	40.8755	4.0900e-003	8.5000e-004	41.2297
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	49137.9	6.4637	6.5000e-004	1.3000e-004	6.5197
Total		**47.3391**	**4.7400e-003**	**9.8000e-004**	**47.7494**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
General Heavy Industry	310741	40.8755	4.0900e-003	8.5000e-004	41.2297
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	49137.9	6.4637	6.5000e-004	1.3000e-004	6.5197
Total		**47.3391**	**4.7400e-003**	**9.8000e-004**	**47.7494**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2046	4.0000e-005	4.4200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5300e-003	8.5300e-003	2.0000e-005	0.0000	9.1100e-003
Unmitigated	0.2046	4.0000e-005	4.4200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5300e-003	8.5300e-003	2.0000e-005	0.0000	9.1100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

Architectural Coating	0.0288					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1754					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5300e-003	8.5300e-003	2.0000e-005	0.0000	9.1100e-003
Total	**0.2046**	**4.0000e-005**	**4.4200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.5300e-003**	**8.5300e-003**	**2.0000e-005**	**0.0000**	**9.1100e-003**

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	0.0288					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1754					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5300e-003	8.5300e-003	2.0000e-005	0.0000	9.1100e-003
Total	**0.2046**	**4.0000e-005**	**4.4200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.5300e-003**	**8.5300e-003**	**2.0000e-005**	**0.0000**	**9.1100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.9521	0.2841	6.8200e-003	18.0874

Unmitigated	8.9521	0.2841	6.8200e-003	18.0874

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	8.69962 / 0	8.9521	0.2841	6.8200e-003	18.0874
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**8.9521**	**0.2841**	**6.8200e-003**	**18.0874**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	8.69962 / 0	8.9521	0.2841	6.8200e-003	18.0874
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**8.9521**	**0.2841**	**6.8200e-003**	**18.0874**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.4695	0.5596	0.0000	23.4604
Unmitigated	9.4695	0.5596	0.0000	23.4604

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	46.65	9.4695	0.5596	0.0000	23.4604
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**9.4695**	**0.5596**	**0.0000**	**23.4604**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	46.65	9.4695	0.5596	0.0000	23.4604
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**9.4695**	**0.5596**	**0.0000**	**23.4604**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

18-169 1605 Industrial Ave Warehouse - Santa Clara County, Annual

18-169 1605 Industrial Ave Warehouse - Construction

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	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	175.15	1000sqft	4.02	175,150.00	0
Parking Lot	297.43	1000sqft	6.83	297,430.00	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 Rate = 290

Land Use - Applicant plans provided land use

Construction Phase - Applicant provided construction schedule, added trenching

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Trips and VMT - pavement demo hauling = 78 one-way truck trips + 171 = 249, 480 one-way cement truck trips, asphalt paving = 388 one-wa trips

Demolition - Applicant provided existing building demo = 37,615sf

Grading - Applicant provided export = 11,175cy

Vehicle Trips - warehouse= 1.74, 0.33, 0.17

Energy Use -

Water And Wastewater - WTP treatment 100% aerobic

Operational Off-Road Equipment - Operational - 2 forklifts 4hrs/day, electric

Construction Off-road Equipment Mitigation - BMPs, Tier 2 mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	300.00	88.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	30.00	21.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	PhaseEndDate	11/10/2020	2/1/2020
tblConstructionPhase	PhaseEndDate	9/15/2020	1/1/2020
tblConstructionPhase	PhaseEndDate	5/28/2019	6/15/2019

tblConstructionPhase	PhaseEndDate	7/23/2019	7/15/2019
tblConstructionPhase	PhaseEndDate	10/13/2020	3/1/2020
tblConstructionPhase	PhaseEndDate	6/11/2019	7/15/2019
tblConstructionPhase	PhaseStartDate	10/14/2020	9/1/2019
tblConstructionPhase	PhaseStartDate	7/24/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	6/12/2019	6/15/2019
tblConstructionPhase	PhaseStartDate	9/16/2020	1/1/2020
tblConstructionPhase	PhaseStartDate	5/29/2019	6/15/2019
tblGrading	MaterialExported	0.00	11,175.00
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	3.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
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	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	171.00	249.00
tblTripsAndVMT	HaulingTripNumber	0.00	480.00
tblTripsAndVMT	HaulingTripNumber	0.00	388.00
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
tblVehicleTrips	ST_TR	2.46	0.33
tblVehicleTrips	ST_TR	1.68	0.33
tblVehicleTrips	SU_TR	1.05	0.17
tblVehicleTrips	SU_TR	1.68	0.17
tblVehicleTrips	WD_TR	11.03	1.74
tblVehicleTrips	WD_TR	1.68	1.74

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					
2019	1.0898	2.7439	2.1623	3.9000e-003	0.1258	0.1301	0.2559	0.0447	0.1245	0.1692	0.0000	346.0444	346.0444	0.0632	0.0000	347.6252
2020	0.2404	0.1728	0.1786	3.1000e-004	1.3000e-003	7.1800e-003	8.4800e-003	3.5000e-004	6.8000e-003	7.1500e-003	0.0000	27.0385	27.0385	6.3700e-003	0.0000	27.1977
Maximum	**1.0898**	**2.7439**	**2.1623**	**3.9000e-003**	**0.1258**	**0.1301**	**0.2559**	**0.0447**	**0.1245**	**0.1692**	**0.0000**	**346.0444**	**346.0444**	**0.0632**	**0.0000**	**347.6252**

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	0.9636	3.1685	2.3123	3.9000e-003	0.0644	0.1018	0.1662	0.0131	0.1017	0.1148	0.0000	346.0441	346.0441	0.0632	0.0000	347.6248
2020	0.2367	0.2579	0.1947	3.1000e-004	1.3000e-003	9.0200e-003	0.0103	3.5000e-004	9.0100e-003	9.3600e-003	0.0000	27.0385	27.0385	6.3700e-003	0.0000	27.1977
Maximum	**0.9636**	**3.1685**	**2.3123**	**3.9000e-003**	**0.0644**	**0.1018**	**0.1662**	**0.0131**	**0.1017**	**0.1148**	**0.0000**	**346.0441**	**346.0441**	**0.0632**	**0.0000**	**347.6248**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.77**	**-17.47**	**-7.10**	**0.00**	**48.29**	**19.30**	**33.24**	**70.21**	**15.66**	**29.60**	**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	**5-1-2019**	**7-31-2019**	1.1849	0.9914
2	**8-1-2019**	**10-31-2019**	1.4055	1.6665
3	**11-1-2019**	**1-31-2020**	1.6239	1.9231
4	**2-1-2020**	**4-30-2020**	0.0647	0.0719
		Highest	1.6239	1.9231

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	5/1/2019	6/15/2019	5	33	
2	Site Preparation	Site Preparation	6/15/2019	7/15/2019	5	21	
3	Grading	Grading	6/15/2019	7/15/2019	5	21	
4	Trenching	Trenching	7/15/2019	12/15/2019	5	110	
5	Building Construction	Building Construction	9/1/2019	1/1/2020	5	88	
6	Architectural Coating	Architectural Coating	9/1/2019	2/1/2020	5	110	
7	Paving	Paving	1/1/2020	3/1/2020	5	43	

Acres of Grading (Site Preparation Phase): 2.63

Acres of Grading (Grading Phase): 52.5

Acres of Paving: 6.83

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 277,725; Non-Residential Outdoor: 92,575; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	1.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	4.00	85	0.78
Demolition	Excavators	2	5.00	158	0.38
Demolition	Rubber Tired Dozers	2	6.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	2.00	97	0.37
Site Preparation	Graders	1	2.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	4.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	4.00	247	0.40
Grading	Scrapers	4	4.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Trenching	Concrete/Industrial Saws	5	1.00	81	0.73
Trenching	Excavators	2	1.00	158	0.38
Trenching	Plate Compactors	2	1.00	8	0.43
Trenching	Pumps	5	1.00	84	0.74
Trenching	Tractors/Loaders/Backhoes	4	1.00	97	0.37
Building Construction	Cranes	2	1.00	231	0.29
Building Construction	Forklifts	7	4.00	89	0.20
Building Construction	Generator Sets	5	5.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	3	1.00	46	0.45

Architectural Coating	Aerial Lifts	10	4.00	63	0.31
Architectural Coating	Air Compressors	3	3.00	78	0.48
Paving	Cement and Mortar Mixers	5	1.00	9	0.56
Paving	Graders	1	1.00	187	0.41
Paving	Pavers	1	1.00	130	0.42
Paving	Paving Equipment	1	1.00	132	0.36
Paving	Rollers	3	1.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	2.00	97	0.37

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	8	20.00	0.00	249.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	1,397.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	18	45.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	202.00	79.00	480.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	13	40.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	13	33.00	0.00	388.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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					
Fugitive Dust					0.0185	0.0000	0.0185	2.8000e-003	0.0000	2.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0413	0.4150	0.2360	4.1000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.9299	36.9299	0.0102	0.0000	37.1860
Total	**0.0413**	**0.4150**	**0.2360**	**4.1000e-004**	**0.0185**	**0.0213**	**0.0398**	**2.8000e-003**	**0.0198**	**0.0226**	**0.0000**	**36.9299**	**36.9299**	**0.0102**	**0.0000**	**37.1860**

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	3.0000e-004	0.0133	2.2300e-003	2.0000e-005	1.1000e-004	2.0000e-005	1.2000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	1.6129	1.6129	1.9000e-004	0.0000	1.6176
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-004	1.9000e-004	2.4400e-003	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2768	0.2768	1.0000e-005	0.0000	0.2772
Total	**7.0000e-004**	**0.0135**	**4.6700e-003**	**2.0000e-005**	**3.6000e-004**	**2.0000e-005**	**3.7000e-004**	**1.0000e-004**	**2.0000e-005**	**1.2000e-004**	**0.0000**	**1.8897**	**1.8897**	**2.0000e-004**	**0.0000**	**1.8948**

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					8.3300e-003	0.0000	8.3300e-003	6.3000e-004	0.0000	6.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.3509	0.2559	4.1000e-004		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	36.9299	36.9299	0.0102	0.0000	37.1859
Total	**0.0132**	**0.3509**	**0.2559**	**4.1000e-004**	**8.3300e-003**	**9.8600e-003**	**0.0182**	**6.3000e-004**	**9.8600e-003**	**0.0105**	**0.0000**	**36.9299**	**36.9299**	**0.0102**	**0.0000**	**37.1859**

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	3.0000e-004	0.0133	2.2300e-003	2.0000e-005	1.1000e-004	2.0000e-005	1.2000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	1.6129	1.6129	1.9000e-004	0.0000	1.6176
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-004	1.9000e-004	2.4400e-003	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2768	0.2768	1.0000e-005	0.0000	0.2772
Total	**7.0000e-004**	**0.0135**	**4.6700e-003**	**2.0000e-005**	**3.6000e-004**	**2.0000e-005**	**3.7000e-004**	**1.0000e-004**	**2.0000e-005**	**1.2000e-004**	**0.0000**	**1.8897**	**1.8897**	**2.0000e-004**	**0.0000**	**1.8948**

3.3 Site Preparation - 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					
Fugitive Dust					0.0330	0.0000	0.0330	0.0175	0.0000	0.0175	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4600e-003	0.0929	0.0394	8.0000e-005		4.4600e-003	4.4600e-003		4.1100e-003	4.1100e-003	0.0000	7.0573	7.0573	2.2300e-003	0.0000	7.1131
Total	**8.4600e-003**	**0.0929**	**0.0394**	**8.0000e-005**	**0.0330**	**4.4600e-003**	**0.0375**	**0.0175**	**4.1100e-003**	**0.0216**	**0.0000**	**7.0573**	**7.0573**	**2.2300e-003**	**0.0000**	**7.1131**

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	6.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0705	0.0705	0.0000	0.0000	0.0706
Total	**1.0000e-004**	**5.0000e-005**	**6.2000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0705**	**0.0705**	**0.0000**	**0.0000**	**0.0706**

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					0.0149	0.0000	0.0149	3.9400e-003	0.0000	3.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2900e-003	0.0685	0.0453	8.0000e-005		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	7.0573	7.0573	2.2300e-003	0.0000	7.1131
Total	**2.2900e-003**	**0.0685**	**0.0453**	**8.0000e-005**	**0.0149**	**1.7600e-003**	**0.0166**	**3.9400e-003**	**1.7600e-003**	**5.7000e-003**	**0.0000**	**7.0573**	**7.0573**	**2.2300e-003**	**0.0000**	**7.1131**

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	6.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0705	0.0705	0.0000	0.0000	0.0706
Total	**1.0000e-004**	**5.0000e-005**	**6.2000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0705**	**0.0705**	**0.0000**	**0.0000**	**0.0706**

3.4 Grading - 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					
Fugitive Dust					0.0601	0.0000	0.0601	0.0205	0.0000	0.0205	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0353	0.4221	0.2292	4.6000e-004		0.0172	0.0172		0.0158	0.0158	0.0000	41.0606	41.0606	0.0130	0.0000	41.3854
Total	**0.0353**	**0.4221**	**0.2292**	**4.6000e-004**	**0.0601**	**0.0172**	**0.0773**	**0.0205**	**0.0158**	**0.0363**	**0.0000**	**41.0606**	**41.0606**	**0.0130**	**0.0000**	**41.3854**

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	1.7000e-003	0.0748	0.0125	9.0000e-005	6.1000e-004	9.0000e-005	7.0000e-004	1.7000e-004	9.0000e-005	2.6000e-004	0.0000	9.0493	9.0493	1.0600e-003	0.0000	9.0757

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	2.3000e-004	1.1000e-004	1.4000e-003	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1585	0.1585	1.0000e-005	0.0000	0.1587
Total	**1.9300e-003**	**0.0749**	**0.0139**	**9.0000e-005**	**7.5000e-004**	**9.0000e-005**	**8.4000e-004**	**2.1000e-004**	**9.0000e-005**	**3.0000e-004**	**0.0000**	**9.2078**	**9.2078**	**1.0700e-003**	**0.0000**	**9.2344**

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					0.0270	0.0000	0.0270	4.6100e-003	0.0000	4.6100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.3679	0.2488	4.6000e-004		8.7500e-003	8.7500e-003		8.7500e-003	8.7500e-003	0.0000	41.0606	41.0606	0.0130	0.0000	41.3853
Total	**0.0118**	**0.3679**	**0.2488**	**4.6000e-004**	**0.0270**	**8.7500e-003**	**0.0358**	**4.6100e-003**	**8.7500e-003**	**0.0134**	**0.0000**	**41.0606**	**41.0606**	**0.0130**	**0.0000**	**41.3853**

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	1.7000e-003	0.0748	0.0125	9.0000e-005	6.1000e-004	9.0000e-005	7.0000e-004	1.7000e-004	9.0000e-005	2.6000e-004	0.0000	9.0493	9.0493	1.0600e-003	0.0000	9.0757
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	2.3000e-004	1.1000e-004	1.4000e-003	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1585	0.1585	1.0000e-005	0.0000	0.1587
Total	**1.9300e-003**	**0.0749**	**0.0139**	**9.0000e-005**	**7.5000e-004**	**9.0000e-005**	**8.4000e-004**	**2.1000e-004**	**9.0000e-005**	**3.0000e-004**	**0.0000**	**9.2078**	**9.2078**	**1.0700e-003**	**0.0000**	**9.2344**

3.5 Trenching - 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	0.0426	0.3598	0.3683	6.0000e-004		0.0223	0.0223		0.0218	0.0218	0.0000	52.3892	52.3892	7.0900e-003	0.0000	52.5664
Total	**0.0426**	**0.3598**	**0.3683**	**6.0000e-004**		**0.0223**	**0.0223**		**0.0218**	**0.0218**	**0.0000**	**52.3892**	**52.3892**	**7.0900e-003**	**0.0000**	**52.5664**

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	3.0400e-003	1.4400e-003	0.0183	2.0000e-005	1.8400e-003	3.0000e-005	1.8700e-003	4.9000e-004	2.0000e-005	5.2000e-004	0.0000	2.0761	2.0761	1.0000e-004	0.0000	2.0786
Total	**3.0400e-003**	**1.4400e-003**	**0.0183**	**2.0000e-005**	**1.8400e-003**	**3.0000e-005**	**1.8700e-003**	**4.9000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**2.0761**	**2.0761**	**1.0000e-004**	**0.0000**	**2.0786**

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	0.0237	0.4927	0.3904	6.0000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	52.3891	52.3891	7.0900e-003	0.0000	52.5663
Total	**0.0237**	**0.4927**	**0.3904**	**6.0000e-004**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**52.3891**	**52.3891**	**7.0900e-003**	**0.0000**	**52.5663**

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	3.0400e-003	1.4400e-003	0.0183	2.0000e-005	1.8400e-003	3.0000e-005	1.8700e-003	4.9000e-004	2.0000e-005	5.2000e-004	0.0000	2.0761	2.0761	1.0000e-004	0.0000	2.0786
Total	**3.0400e-003**	**1.4400e-003**	**0.0183**	**2.0000e-005**	**1.8400e-003**	**3.0000e-005**	**1.8700e-003**	**4.9000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**2.0761**	**2.0761**	**1.0000e-004**	**0.0000**	**2.0786**

3.6 Building Construction - 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	0.0965	0.8228	0.7423	1.2300e-003		0.0519	0.0519		0.0504	0.0504	0.0000	106.4388	106.4388	0.0138	0.0000	106.7832

Total	**0.0965**	**0.8228**	**0.7423**	**1.2300e-003**		**0.0519**	**0.0519**		**0.0504**	**0.0504**	**0.0000**	**106.4388**	**106.4388**	**0.0138**	**0.0000**	**106.7832**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.8000e-004	0.0254	4.2400e-003	3.0000e-005	2.1000e-004	3.0000e-005	2.4000e-004	6.0000e-005	3.0000e-005	9.0000e-005	0.0000	3.0739	3.0739	3.6000e-004	0.0000	3.0829
Vendor	7.4900e-003	0.2419	0.0697	2.9000e-004	3.1700e-003	5.9000e-004	3.7700e-003	9.3000e-004	5.7000e-004	1.4900e-003	0.0000	27.5603	27.5603	2.9600e-003	0.0000	27.6343
Worker	0.0108	5.1000e-003	0.0649	8.0000e-005	6.5300e-003	9.0000e-005	6.6200e-003	1.7500e-003	8.0000e-005	1.8300e-003	0.0000	7.3708	7.3708	3.6000e-004	0.0000	7.3797
Total	**0.0189**	**0.2725**	**0.1388**	**4.0000e-004**	**9.9100e-003**	**7.1000e-004**	**0.0106**	**2.7400e-003**	**6.8000e-004**	**3.4100e-003**	**0.0000**	**38.0050**	**38.0050**	**3.6800e-003**	**0.0000**	**38.0968**

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	0.0485	1.0158	0.7861	1.2300e-003		0.0406	0.0406		0.0406	0.0406	0.0000	106.4387	106.4387	0.0138	0.0000	106.7831
Total	**0.0485**	**1.0158**	**0.7861**	**1.2300e-003**		**0.0406**	**0.0406**		**0.0406**	**0.0406**	**0.0000**	**106.4387**	**106.4387**	**0.0138**	**0.0000**	**106.7831**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.8000e-004	0.0254	4.2400e-003	3.0000e-005	2.1000e-004	3.0000e-005	2.4000e-004	6.0000e-005	3.0000e-005	9.0000e-005	0.0000	3.0739	3.0739	3.6000e-004	0.0000	3.0829
Vendor	7.4900e-003	0.2419	0.0697	2.9000e-004	3.1700e-003	5.9000e-004	3.7700e-003	9.3000e-004	5.7000e-004	1.4900e-003	0.0000	27.5603	27.5603	2.9600e-003	0.0000	27.6343
Worker	0.0108	5.1000e-003	0.0649	8.0000e-005	6.5300e-003	9.0000e-005	6.6200e-003	1.7500e-003	8.0000e-005	1.8300e-003	0.0000	7.3708	7.3708	3.6000e-004	0.0000	7.3797
Total	**0.0189**	**0.2725**	**0.1388**	**4.0000e-004**	**9.9100e-003**	**7.1000e-004**	**0.0106**	**2.7400e-003**	**6.8000e-004**	**3.4100e-003**	**0.0000**	**38.0050**	**38.0050**	**3.6800e-003**	**0.0000**	**38.0968**

3.6 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	1.0000e-003	8.6700e-003	8.4500e-003	1.0000e-005		5.2000e-004	5.2000e-004		5.0000e-004	5.0000e-004	0.0000	1.2168	1.2168	1.5000e-004	0.0000	1.2206
Total	**1.0000e-003**	**8.6700e-003**	**8.4500e-003**	**1.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**1.2168**	**1.2168**	**1.5000e-004**	**0.0000**	**1.2206**

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	1.0000e-005	2.8000e-004	5.0000e-005	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0354	0.0354	0.0000	0.0000	0.0355
Vendor	7.0000e-005	2.6400e-003	7.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.3171	0.3171	3.0000e-005	0.0000	0.3179
Worker	1.1000e-004	5.0000e-005	6.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0821	0.0821	0.0000	0.0000	0.0822
Total	**1.9000e-004**	**2.9700e-003**	**1.4400e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.4347**	**0.4347**	**3.0000e-005**	**0.0000**	**0.4356**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	0.0117	9.0400e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2168	1.2168	1.5000e-004	0.0000	1.2206
Total	**5.6000e-004**	**0.0117**	**9.0400e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2168**	**1.2168**	**1.5000e-004**	**0.0000**	**1.2206**

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	1.0000e-005	2.8000e-004	5.0000e-005	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0354	0.0354	0.0000	0.0000	0.0355
Vendor	7.0000e-005	2.6400e-003	7.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.3171	0.3171	3.0000e-005	0.0000	0.3179

Worker	1.1000e-004	5.0000e-005	6.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0821	0.0821	0.0000	0.0000	0.0822
Total	**1.9000e-004**	**2.9700e-003**	**1.4400e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.4347**	**0.4347**	**3.0000e-005**	**0.0000**	**0.4356**

3.7 Architectural Coating - 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					
Archit. Coating	0.8126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0262	0.2678	0.3578	5.6000e-004		0.0120	0.0120		0.0118	0.0118	0.0000	49.4600	49.4600	0.0118	0.0000	49.7546
Total	**0.8389**	**0.2678**	**0.3578**	**5.6000e-004**		**0.0120**	**0.0120**		**0.0118**	**0.0118**	**0.0000**	**49.4600**	**49.4600**	**0.0118**	**0.0000**	**49.7546**

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	2.1300e-003	1.0100e-003	0.0129	2.0000e-005	1.2900e-003	2.0000e-005	1.3100e-003	3.5000e-004	2.0000e-005	3.6000e-004	0.0000	1.4596	1.4596	7.0000e-005	0.0000	1.4613
Total	**2.1300e-003**	**1.0100e-003**	**0.0129**	**2.0000e-005**	**1.2900e-003**	**2.0000e-005**	**1.3100e-003**	**3.5000e-004**	**2.0000e-005**	**3.6000e-004**	**0.0000**	**1.4596**	**1.4596**	**7.0000e-005**	**0.0000**	**1.4613**

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	0.8126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0247	0.5094	0.3968	5.6000e-004		0.0206	0.0206		0.0206	0.0206	0.0000	49.4599	49.4599	0.0118	0.0000	49.7545
Total	**0.8373**	**0.5094**	**0.3968**	**5.6000e-004**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**49.4599**	**49.4599**	**0.0118**	**0.0000**	**49.7545**

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	2.1300e-003	1.0100e-003	0.0129	2.0000e-005	1.2900e-003	2.0000e-005	1.3100e-003	3.5000e-004	2.0000e-005	3.6000e-004	0.0000	1.4596	1.4596	7.0000e-005	0.0000	1.4613
Total	**2.1300e-003**	**1.0100e-003**	**0.0129**	**2.0000e-005**	**1.2900e-003**	**2.0000e-005**	**1.3100e-003**	**3.5000e-004**	**2.0000e-005**	**3.6000e-004**	**0.0000**	**1.4596**	**1.4596**	**7.0000e-005**	**0.0000**	**1.4613**

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	0.2148					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4500e-003	0.0661	0.0945	1.5000e-004		2.7400e-003	2.7400e-003		2.6700e-003	2.6700e-003	0.0000	12.8871	12.8871	3.0800e-003	0.0000	12.9642
Total	**0.2213**	**0.0661**	**0.0945**	**1.5000e-004**		**2.7400e-003**	**2.7400e-003**		**2.6700e-003**	**2.6700e-003**	**0.0000**	**12.8871**	**12.8871**	**3.0800e-003**	**0.0000**	**12.9642**

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	5.1000e-004	2.3000e-004	3.0200e-003	0.0000	3.4000e-004	0.0000	3.5000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3741	0.3741	2.0000e-005	0.0000	0.3745
Total	**5.1000e-004**	**2.3000e-004**	**3.0200e-003**	**0.0000**	**3.4000e-004**	**0.0000**	**3.5000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3741**	**0.3741**	**2.0000e-005**	**0.0000**	**0.3745**

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	0.2148					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5200e-003	0.1347	0.1049	1.5000e-004		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	12.8871	12.8871	3.0800e-003	0.0000	12.9642

Total	**0.2214**	**0.1347**	**0.1049**	**1.5000e-004**		**5.4400e-003**	**5.4400e-003**		**5.4400e-003**	**5.4400e-003**	**0.0000**	**12.8871**	**12.8871**	**3.0800e-003**	**0.0000**	**12.9642**

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	5.1000e-004	2.3000e-004	3.0200e-003	0.0000	3.4000e-004	0.0000	3.5000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3741	0.3741	2.0000e-005	0.0000	0.3745
Total	**5.1000e-004**	**2.3000e-004**	**3.0200e-003**	**0.0000**	**3.4000e-004**	**0.0000**	**3.5000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3741**	**0.3741**	**2.0000e-005**	**0.0000**	**0.3745**

3.8 Paving - 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	7.2500e-003	0.0745	0.0633	1.1000e-004		3.8800e-003	3.8800e-003		3.5900e-003	3.5900e-003	0.0000	9.0293	9.0293	2.7900e-003	0.0000	9.0989
Paving	8.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0162**	**0.0745**	**0.0633**	**1.1000e-004**		**3.8800e-003**	**3.8800e-003**		**3.5900e-003**	**3.5900e-003**	**0.0000**	**9.0293**	**9.0293**	**2.7900e-003**	**0.0000**	**9.0989**

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	4.2000e-004	0.0200	3.2700e-003	3.0000e-005	1.7000e-004	2.0000e-005	1.9000e-004	5.0000e-005	2.0000e-005	6.0000e-005	0.0000	2.5197	2.5197	2.7000e-004	0.0000	2.5264
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	7.9000e-004	3.6000e-004	4.6500e-003	1.0000e-005	5.3000e-004	1.0000e-005	5.3000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.5770	0.5770	2.0000e-005	0.0000	0.5776
Total	**1.2100e-003**	**0.0204**	**7.9200e-003**	**4.0000e-005**	**7.0000e-004**	**3.0000e-005**	**7.2000e-004**	**1.9000e-004**	**3.0000e-005**	**2.1000e-004**	**0.0000**	**3.0966**	**3.0966**	**2.9000e-004**	**0.0000**	**3.1040**

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	3.9100e-003	0.0879	0.0684	1.1000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003	0.0000	9.0292	9.0292	2.7900e-003	0.0000	9.0989
Paving	8.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0129**	**0.0879**	**0.0684**	**1.1000e-004**		**3.0700e-003**	**3.0700e-003**		**3.0700e-003**	**3.0700e-003**	**0.0000**	**9.0292**	**9.0292**	**2.7900e-003**	**0.0000**	**9.0989**

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	4.2000e-004	0.0200	3.2700e-003	3.0000e-005	1.7000e-004	2.0000e-005	1.9000e-004	5.0000e-005	2.0000e-005	6.0000e-005	0.0000	2.5197	2.5197	2.7000e-004	0.0000	2.5264
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	7.9000e-004	3.6000e-004	4.6500e-003	1.0000e-005	5.3000e-004	1.0000e-005	5.3000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.5770	0.5770	2.0000e-005	0.0000	0.5776
Total	**1.2100e-003**	**0.0204**	**7.9200e-003**	**4.0000e-005**	**7.0000e-004**	**3.0000e-005**	**7.2000e-004**	**1.9000e-004**	**3.0000e-005**	**2.1000e-004**	**0.0000**	**3.0966**	**3.0966**	**2.9000e-004**	**0.0000**	**3.1040**

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	0.0719	0.3156	0.9154	2.9700e-003	0.2616	2.9500e-003	0.2646	0.0700	2.7700e-003	0.0728	0.0000	271.6668	271.6668	9.4400e-003	0.0000	271.9029
Unmitigated	0.0719	0.3156	0.9154	2.9700e-003	0.2616	2.9500e-003	0.2646	0.0700	2.7700e-003	0.0728	0.0000	271.6668	271.6668	9.4400e-003	0.0000	271.9029

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	17.40	3.30	1.70	31,408	31,408
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	304.76	57.80	29.78	672,063	672,063
Total	322.16	61.10	31.48	703,471	703,471

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Unrefrigerated Warehouse-No Rail	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

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	118.4771	118.4771	0.0119	2.4500e-003	119.5037
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	118.4771	118.4771	0.0119	2.4500e-003	119.5037
NaturalGas Mitigated	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1686	41.1686	7.9000e-004	7.5000e-004	41.4133
NaturalGas Unmitigated	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1686	41.1686	7.9000e-004	7.5000e-004	41.4133

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					
General Office Building	163700	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	607771	3.2800e-003	0.0298	0.0250	1.8000e-004		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	32.4330	32.4330	6.2000e-004	5.9000e-004	32.6257
Total		**4.1600e-003**	**0.0378**	**0.0318**	**2.3000e-004**		**2.8700e-003**	**2.8700e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**41.1686**	**41.1686**	**7.9000e-004**	**7.5000e-004**	**41.4133**

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					
General Office Building	163700	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	607771	3.2800e-003	0.0298	0.0250	1.8000e-004		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	32.4330	32.4330	6.2000e-004	5.9000e-004	32.6257
Total		**4.1600e-003**	**0.0378**	**0.0318**	**2.3000e-004**		**2.8700e-003**	**2.8700e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**41.1686**	**41.1686**	**7.9000e-004**	**7.5000e-004**	**41.4133**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
General Office Building	178300	23.4539	2.3500e-003	4.9000e-004	23.6571
Parking Lot	104101	13.6936	1.3700e-003	2.8000e-004	13.8122
Unrefrigerated Warehouse-No Rail	618280	81.3296	8.1300e-003	1.6800e-003	82.0344
Total		**118.4771**	**0.0119**	**2.4500e-003**	**119.5037**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	178300	23.4539	2.3500e-003	4.9000e-004	23.6571
Parking Lot	104101	13.6936	1.3700e-003	2.8000e-004	13.8122
Unrefrigerated Warehouse-No Rail	618280	81.3296	8.1300e-003	1.6800e-003	82.0344
Total		**118.4771**	**0.0119**	**2.4500e-003**	**119.5037**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.8455	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003
Unmitigated	0.8455	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1028					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003
Total	**0.8455**	**4.0000e-005**	**4.4600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6200e-003**	**8.6200e-003**	**2.0000e-005**	**0.0000**	**9.2000e-003**

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	0.1028					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.2000e-003

Total	**0.8455**	**4.0000e-005**	**4.4600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6200e-003**	**8.6200e-003**	**2.0000e-005**	**0.0000**	**9.2000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	45.5548	0.0546	0.0332	56.8014
Unmitigated	45.5548	0.0546	0.0332	56.8014

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	2.3954	2.3400e-003	1.4000e-003	2.8723
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	40.5034 / 0	43.1594	0.0522	0.0318	53.9290
Total		**45.5548**	**0.0546**	**0.0332**	**56.8014**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	2.3954	2.3400e-003	1.4000e-003	2.8723
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	40.5034 / 0	43.1594	0.0522	0.0318	53.9290
Total		**45.5548**	**0.0546**	**0.0332**	**56.8014**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.3083	2.0867	0.0000	87.4747
Unmitigated	35.3083	2.0867	0.0000	87.4747

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	164.64	33.4204	1.9751	0.0000	82.7977
Total		**35.3083**	**2.0867**	**0.0000**	**87.4747**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	164.64	33.4204	1.9751	0.0000	82.7977
Total		**35.3083**	**2.0867**	**0.0000**	**87.4747**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	4.00	260	89	0.20	Electrical

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					
Forklifts	0.0187	0.1687	0.1534	2.0000e-004		0.0126	0.0126		0.0116	0.0116	0.0000	17.4579	17.4579	5.6500e-003	0.0000	17.5990
Total	**0.0187**	**0.1687**	**0.1534**	**2.0000e-004**		**0.0126**	**0.0126**		**0.0116**	**0.0116**	**0.0000**	**17.4579**	**17.4579**	**5.6500e-003**	**0.0000**	**17.5990**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

18-169 1605 Industrial Ave Warehouse - Santa Clara County, Annual

18-169 1605 Industrial Ave Warehouse - 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	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	175.15	1000sqft	4.02	175,150.00	0
Parking Lot	297.43	1000sqft	6.83	297,430.00	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 Rate = 290

Land Use - Applicant plans provided land use

Construction Phase - Applicant provided construction schedule, added trenching

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Off-road Equipment - Applcant provided construction equipment/hours

Trips and VMT - pavement demo hauling = 78 one-way truck trips + 171 = 249, 480 one-way cement truck trips, asphalt paving = 388 one-wa trips

Demolition - Applicant provided existing building demo = 37,615sf

Grading - Applicant provided export = 11,175cy

Vehicle Trips - warehouse= 1.74, 0.33, 0.17

Energy Use -

Water And Wastewater - WTP treatment 100% aerobic

Operational Off-Road Equipment - Operational - 2 forklifts 4hrs/day, electric

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	300.00	88.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	30.00	21.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	PhaseEndDate	11/10/2020	2/1/2020
tblConstructionPhase	PhaseEndDate	9/15/2020	1/1/2020
tblConstructionPhase	PhaseEndDate	5/28/2019	6/15/2019
tblConstructionPhase	PhaseEndDate	7/23/2019	7/15/2019
tblConstructionPhase	PhaseEndDate	10/13/2020	3/1/2020
tblConstructionPhase	PhaseEndDate	6/11/2019	7/15/2019
tblConstructionPhase	PhaseStartDate	10/14/2020	9/1/2019
tblConstructionPhase	PhaseStartDate	7/24/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	6/12/2019	6/15/2019
tblConstructionPhase	PhaseStartDate	9/16/2020	1/1/2020
tblConstructionPhase	PhaseStartDate	5/29/2019	6/15/2019
tblGrading	MaterialExported	0.00	11,175.00
tblOffRoadEquipment	LoadFactor	0.41	0.41

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	3.00
tblOffRoadEquipment	UsageHours	8.00	1.00

tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripNumber	171.00	249.00
tblTripsAndVMT	HaulingTripNumber	0.00	480.00
tblTripsAndVMT	HaulingTripNumber	0.00	388.00
tblVehicleTrips	ST_TR	2.46	0.33
tblVehicleTrips	ST_TR	1.68	0.33
tblVehicleTrips	SU_TR	1.05	0.17
tblVehicleTrips	SU_TR	1.68	0.17
tblVehicleTrips	WD_TR	11.03	1.74
tblVehicleTrips	WD_TR	1.68	1.74
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	0.8455	4.0000e-005	4.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.1800e-003
Energy	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	159.6457	159.6457	0.0126	3.2100e-003	160.9170
Mobile	0.0397	0.1737	0.4992	2.2300e-003	0.2615	1.4700e-003	0.2630	0.0700	1.3600e-003	0.0714	0.0000	204.7653	204.7653	5.7000e-003	0.0000	204.9078
Offroad	0.0116	0.0635	0.1550	2.4000e-004		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	21.0407	21.0407	9.3000e-004	0.0000	21.0638
Waste						0.0000	0.0000		0.0000	0.0000	35.3083	0.0000	35.3083	2.0867	0.0000	87.4747
Water						0.0000	0.0000		0.0000	0.0000	14.9590	30.5958	45.5548	0.0546	0.0332	56.8014
Total	**0.9009**	**0.2750**	**0.6904**	**2.7000e-003**	**0.2615**	**5.2200e-003**	**0.2667**	**0.0700**	**5.1100e-003**	**0.0751**	**50.2673**	**416.0561**	**466.3233**	**2.1605**	**0.0364**	**531.1738**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8455	4.0000e-005	4.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.1800e-003
Energy	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	159.6457	159.6457	0.0126	3.2100e-003	160.9170
Mobile	0.0397	0.1737	0.4992	2.2300e-003	0.2615	1.4700e-003	0.2630	0.0700	1.3600e-003	0.0714	0.0000	204.7653	204.7653	5.7000e-003	0.0000	204.9078
Offroad	0.0116	0.0635	0.1550	2.4000e-004		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	21.0407	21.0407	9.3000e-004	0.0000	21.0638
Waste						0.0000	0.0000		0.0000	0.0000	35.3083	0.0000	35.3083	2.0867	0.0000	87.4747
Water						0.0000	0.0000		0.0000	0.0000	14.9590	30.5958	45.5548	0.0546	0.0332	56.8014
Total	**0.9009**	**0.2750**	**0.6904**	**2.7000e-003**	**0.2615**	**5.2200e-003**	**0.2667**	**0.0700**	**5.1100e-003**	**0.0751**	**50.2673**	**416.0561**	**466.3233**	**2.1605**	**0.0364**	**531.1738**

	ROG	NOx	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**

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	0.0397	0.1737	0.4992	2.2300e-003	0.2615	1.4700e-003	0.2630	0.0700	1.3600e-003	0.0714	0.0000	204.7653	204.7653	5.7000e-003	0.0000	204.9078
Unmitigated	0.0397	0.1737	0.4992	2.2300e-003	0.2615	1.4700e-003	0.2630	0.0700	1.3600e-003	0.0714	0.0000	204.7653	204.7653	5.7000e-003	0.0000	204.9078

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	17.40	3.30	1.70	31,408	31,408
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	304.76	57.80	29.78	672,063	672,063
Total	322.16	61.10	31.48	703,471	703,471

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
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
Parking Lot	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
Unrefrigerated Warehouse-No Rail	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

	ROG	NOx	CO	SO2	Fugitive 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	118.4771	118.4771	0.0119	2.4500e-003	119.5037
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	118.4771	118.4771	0.0119	2.4500e-003	119.5037
NaturalGas Mitigated	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1686	41.1686	7.9000e-004	7.5000e-004	41.4133
NaturalGas Unmitigated	4.1600e-003	0.0378	0.0318	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1686	41.1686	7.9000e-004	7.5000e-004	41.4133

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					
General Office Building	163700	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	607771	3.2800e-003	0.0298	0.0250	1.8000e-004		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	32.4330	32.4330	6.2000e-004	5.9000e-004	32.6257
Total		**4.1600e-003**	**0.0378**	**0.0318**	**2.3000e-004**		**2.8700e-003**	**2.8700e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**41.1686**	**41.1686**	**7.9000e-004**	**7.5000e-004**	**41.4133**

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					
General Office Building	163700	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	607771	3.2800e-003	0.0298	0.0250	1.8000e-004		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	32.4330	32.4330	6.2000e-004	5.9000e-004	32.6257
Total		**4.1600e-003**	**0.0378**	**0.0318**	**2.3000e-004**		**2.8700e-003**	**2.8700e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**41.1686**	**41.1686**	**7.9000e-004**	**7.5000e-004**	**41.4133**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	178300	23.4539	2.3500e-003	4.9000e-004	23.6571
Parking Lot	104101	13.6936	1.3700e-003	2.8000e-004	13.8122
Unrefrigerated Warehouse-No Rail	618280	81.3296	8.1300e-003	1.6800e-003	82.0344
Total		**118.4771**	**0.0119**	**2.4500e-003**	**119.5037**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	178300	23.4539	2.3500e-003	4.9000e-004	23.6571
Parking Lot	104101	13.6936	1.3700e-003	2.8000e-004	13.8122

Unrefrigerated Warehouse-No Rail	618280	81.3296	8.1300e-003	1.6800e-003	82.0344
Total		**118.4771**	**0.0119**	**2.4500e-003**	**119.5037**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8455	4.0000e-005	4.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.1800e-003
Unmitigated	0.8455	4.0000e-005	4.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.1800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1028					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-004	4.0000e-005	4.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.1800e-003

Total	**0.8455**	**4.0000e-005**	**4.4100e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6200e-003**	**8.6200e-003**	**2.0000e-005**	**0.0000**	**9.1800e-003**

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	0.1028					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-004	4.0000e-005	4.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6200e-003	8.6200e-003	2.0000e-005	0.0000	9.1800e-003
Total	**0.8455**	**4.0000e-005**	**4.4100e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6200e-003**	**8.6200e-003**	**2.0000e-005**	**0.0000**	**9.1800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	45.5548	0.0546	0.0332	56.8014
Unmitigated	45.5548	0.0546	0.0332	56.8014

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	2.3954	2.3400e-003	1.4000e-003	2.8723
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	40.5034 / 0	43.1594	0.0522	0.0318	53.9290
Total		**45.5548**	**0.0546**	**0.0332**	**56.8014**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	2.3954	2.3400e-003	1.4000e-003	2.8723
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	40.5034 / 0	43.1594	0.0522	0.0318	53.9290
Total		**45.5548**	**0.0546**	**0.0332**	**56.8014**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.3083	2.0867	0.0000	87.4747
Unmitigated	35.3083	2.0867	0.0000	87.4747

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	164.64	33.4204	1.9751	0.0000	82.7977
Total		**35.3083**	**2.0867**	**0.0000**	**87.4747**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	164.64	33.4204	1.9751	0.0000	82.7977
Total		**35.3083**	**2.0867**	**0.0000**	**87.4747**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	4.00	260	89	0.20	Electrical

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					
Forklifts	0.0116	0.0635	0.1550	2.4000e-004		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	21.0407	21.0407	9.3000e-004	0.0000	21.0638
Total	**0.0116**	**0.0635**	**0.1550**	**2.4000e-004**		**8.6000e-004**	**8.6000e-004**		**8.6000e-004**	**8.6000e-004**	**0.0000**	**21.0407**	**21.0407**	**9.3000e-004**	**0.0000**	**21.0638**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

1605 Industrial Ave, San Jose, CA - Construction Health Impact Summary

Maximum Impacts at Conversation Corps Daycare - Unmitigated

	Unmitigated Emissions				
	Maximum Concentrations				
Construction Year	Exhaust PM2.5/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Infant/Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2019-2020	0.0094	0.0031	**1.5**	**0.002**	**0.01**

Maximum Impacts at Challenger School Berryessa - Unmitigated

	Unmitigated Emissions				
	Maximum Concentrations				
Construction Year	Exhaust PM2.5/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2019-2020	0.0098	0.0032	**0.3**	**0.002**	**0.01**

Maximum Impacts at Residential MEI Location - Unmitigated

	Maximum Concentrations					
Emissions Year	Exhaust PM10/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million) Infant/Child	Cancer Risk (per million) Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2019-2020	0.0026	0.0008	**0.4**	**0.01**	**0.001**	**0.00**

1605 Industrial Ave, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Conservation Corps Daycare - 1.0 Meter Receptor Height - Infant 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

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

Exposure Year	Exposure Duration (years)	Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)	Maximum Fugitive PM2.5	Maximum Total PM2.5
1	1	2019	0.0094	10	1.5	0.0031	0.012

* Daycare infants assumed to be less than 2 years of age.

1605 Industrial Ave, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Challenger School Preschool - 1.0 Meter Receptor Height- Child 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

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

Exposure Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)	Maximum	
		DPM Conc (ug/m3)		Age* Sensitivity Factor		Fugitive PM2.5	Total PM2.5
		Year	Annual				
1	1	2019	0.0098	3	0.3	0.0032	0.013

* Students assumed to be from 2 to 9 years of age

1605 Industrial Ave, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site Residential MEI Location - 1.5 Meter Receptor Height

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	
							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)	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-		
1	1	0 - 1	2019	0.0026	10	0.42	2019	0.0026	1	0.01	0.0008	0.0034
2	1	1 - 2	2020	0.0000	10	0.00	2020	0.0000	1	0.00		
3	1	2 - 3	2021	0.0000	3	0.00	2021	0.0000	1	0.00		
4	1	3 - 4	2022	0.0000	3	0.00	2022	0.0000	1	0.00		
5	1	4 - 5	2023	0.0000	3	0.00	2023	0.0000	1	0.00		
6	1	5 - 6	2024	0.0000	3	0.00	2024	0.0000	1	0.00		
7	1	6 - 7	2025	0.0000	3	0.00	2025	0.0000	1	0.00		
8	1	7 - 8	2026	0.0000	3	0.00	2026	0.0000	1	0.00		
9	1	8 - 9	2027	0.0000	3	0.00	2027	0.0000	1	0.00		
10	1	9 - 10	2028	0.0000	3	0.00	2028	0.0000	1	0.00		
11	1	10 - 11	2029	0.0000	3	0.00	2029	0.0000	1	0.00		
12	1	11 - 12	2030	0.0000	3	0.00	2030	0.0000	1	0.00		
13	1	12 - 13	2031	0.0000	3	0.00	2031	0.0000	1	0.00		
14	1	13 - 14	2032	0.0000	3	0.00	2032	0.0000	1	0.00		
15	1	14 - 15	2033	0.0000	3	0.00	2033	0.0000	1	0.00		
16	1	15 - 16	2034	0.0000	3	0.00	2034	0.0000	1	0.00		
17	1	16-17	2035	0.0000	1	0.00	2035	0.0000	1	0.00		
18	1	17-18	2036	0.0000	1	0.00	2036	0.0000	1	0.00		
19	1	18-19	2037	0.0000	1	0.00	2037	0.0000	1	0.00		
20	1	19-20	2038	0.0000	1	0.00	2038	0.0000	1	0.00		
21	1	20-21	2039	0.0000	1	0.00	2039	0.0000	1	0.00		
22	1	21-22	2040	0.0000	1	0.00	2040	0.0000	1	0.00		
23	1	22-23	2041	0.0000	1	0.00	2041	0.0000	1	0.00		
24	1	23-24	2042	0.0000	1	0.00	2042	0.0000	1	0.00		
25	1	24-25	2043	0.0000	1	0.00	2043	0.0000	1	0.00		
26	1	25-26	2044	0.0000	1	0.00	2044	0.0000	1	0.00		
27	1	26-27	2045	0.0000	1	0.00	2045	0.0000	1	0.00		
28	1	27-28	2046	0.0000	1	0.00	2046	0.0000	1	0.00		
29	1	28-29	2047	0.0000	1	0.00	2047	0.0000	1	0.00		
30	1	29-30	2048	0.0000	1	0.00	2048	0.0000	1	0.00		
Total Increased Cancer Risk						**0.4**				**0.01**		

* Third trimester of pregnancy

Project Name: LBA Industrial Ave

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size

_____ Dwelling Units

_____ s.f. residential

_____ s.f. retail

_____ s.f. office/commercial

180,150 s.f. other, specify: Industrial Warehouse

_____ s.f. parking garage

_____ s.f. parking lot

Construction Hours 7:00 am to 4:00 pm

11 total project acres disturbed

77 constainer parking stalls

_____ spaces

74 spaces

Pile Driving? Ground improvements, if any. Unknown at this time

Qty	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	Demolition	**Start Date:**	**5/1/2019**	**Total phase:**	**33**			**Overall Import/Export Volumes**
		End Date:	**6/15/2019**					
1	Concrete/Industrial Saws	81	0.73	8	2	0	16	**Demolition Volume**
2	Excavators	162	0.38	8	22	5	352	Square footage of buildings to be demolished - estimated at 38,000 sf
2	Rubber-Tired Dozers	247	0.4	8	25	6	400	and 35,000 sf of concrete/AC paving
2	Tractors/Loaders/Backhoes	97	0.37	8	10	2	160	
5	Semi trucks			8	20	5	800	
2	water trucks			8	25	6	400	
1	Crusher	85	0.78	8	15	4	120	**?** Hauling volume (tons
	Site Preparation	**Start Date:**	**6/15/2019**	**Total phase:**	**21**			Any pavement demolished and hauled? To be pulverized/reused on-si
		End Date:	**7/15/2019**					
1	Graders	187	0.41	8	5	2	40	
1	Rubber-Tired Dozers	247	0.4	8	10	4	80	
1	Tractors/Loaders/Backhoes	97	0.37	8	10	4	80	
1	water trucks			4	10			
	Grading / Excavation	**Start Date:**	**6/15/2019**	**Total phase:**	**21**			
		End Date:	**7/15/2019**					**Soil Hauling Volume**
	Excavators	162	0.38	8	0	0	0	Export volume = **11,175** cubic yards?
1	Graders	187	0.41	8	22	8	176	Import volume = **?** cubic yards?
1	Rubber Tired Dozers	247	0.4	8	10	4	80	
1	Tractors/Loaders/Backhoes	97	0.37	8	15	6	120	
2	*water trucks*			4	22	4	176	
4	*scrapers*	361	0.48	8	10	4	320	
	Trenching/Foundation	**Start Date:**	**7/15/2019**	**Total phase:**	**110**			
		End Date:	**12/15/2019**					
4	Tractor/Loader/Backhoe	97	0.37	8	10	1	320	ftgs/plumbing/elect/utilities/offsite/onsite
2	Excavators	162	0.38	8	10	1	160	sewer/storm
2	*rolling compactors*	80	0.38	8	10	1	160	
1	laser screed			8	6	0	48	6 pours/slab/truckyard
5	*concrete saws*	81	0.73	8	6	0	240	6 pours/slab/truckyard
20	*concrete trucks per pour*			8	6	0	960	6 pours/slab/truckyard
5	finish machines			8	6	0	240	6 pours/slab/truckyard
5	*concrete pump*	84	0.74	8	5	0	200	5 panel pours
10	*concrete trucks*			8	2	0	160	footing pours
2	*water trucks*			8	22	2	352	backfill/SWPPP's
	Building - Exterior	**Start Date:**	**9/1/2019**	**Total phase:**	**88**			**Cement Trucks - Estimated 240 Total Round-Trips for a total of 9,000 cu yd**
		End Date:	**1/1/2020**					
2	Cranes	231	0.29	8	5	0	80	diesel/4 days for panels/2 days for steel
7	Forklifts	89	0.2	8	45	4	2520	diesel/roof/concrete/rebar/storm/
5	Generator Sets-	84	0.74	8	60	5	2400	gas/diesel/concrete/roofer/roof/tempower for trailer
	Tractors/Loaders/Backhoes	97	0.37			0	0	otherwise, assume diesel generator
3	Welders	46	0.45	8	10	1	240	diesel
10	concrete trucks			8	5	0	400	curbs
3	*paint rigs*			8	10	1	240	gas
1	water trucks			8	20	2	160	diesel
Building - Interior/Architectural Coatin		**Start Date:**	**9/1/2019**	**Total phase:**	**110**			
		End Date:	**2/1/2020**					
3	Air Compressors	78	0.48	8	40	3	960	roof nailer
10	Aerial Lift-roof/paint/sacking/glazing	62	0.31	8	60	4	4800	roof/sacker/glazer/caulking/paint/
	Paving	**Start Date:**	**1/1/2020**	**Total phase:**	**43**			
		Start Date:	**3/1/2020**					
5	Cement and Mortar Mixers	9	0.56	8	5	1	200	
1	Pavers	130	0.42	8	5	1	40	
1	Paving Equipment	132	0.36	8	5	1	40	**Asphalt/concrete - Estimated 175,000 sf**
3	Rollers	80	0.38	8	5	1	120	
1	blade/grader	174	0.41	8	3	1	24	
1	water trucks			8	10	2	80	
2	Tractors/Loaders/Backhoes	97	0.37	8	10	2	160	
2	*small hand compactors*			8	3	1	48	

Operational Health Risk Calculations

1605 Industrial Ave, San Jose, CA
2020 Project Truck Travel and Idle Emissions

Truck Exhaust Emissions

Road Segment	Truck Trip Length (ft)	Truck Trip Length (mi)	Modeled Road Width (ft)	Release Height (m)	No. of Daily Trips	Travel Speed (mph)	DPM Emission Factor (g/mi)	Truck Travel DPM Emissions			
								Emissions (g/day)	Total Daily (lb/day)	Total Hourly (lb/hr)	Total Annual (lb/year)
On & Off-Site	2,836	0.54	24	3.05	112	15	0.0782	4.711	1.04E-02	4.33E-04	3.79

On-Site Diesel Truck Idle Emissions

Location	Stack[a] Height (m)	Stack[a] Diameter (m)	Stack[a] Velocity (m/s)	Stack[a] Temp (^oK)	No. of Daily Trips	No. of Modeled Emission Points	Idle Emissions per Trip (g/day)	Total Idle Emissions		
								Daily (lb/day)	Hourly (lb/hr)	Annual (lb/year)
Warehouse Dock	3.84	0.1	51.71	366	112	16	0.06287	1.55E-02	6.47E-04	5.67

[a] Point source parameters from SJVAPCD *Guidance for Air Dispersion Modeling* .

Trip Information and DPM (PM_{10} exhaust) Emission Factors

Warehouse Area (sq. ft.) =	175,150
Truck Trip Rate (trips per1,000 sq. ft.)* =	0.64
Daily Truck Trips =	112
Operation Days/year =	365
Delivery Truck Hours (hrs/day) =	24
Truck Speed (mph) =	15
Emission Factor for HHDT @ 15 mph (g/mi) =	0.07824

Trucks assumed to be heavy duty diesel (HHDT)
Truck emissions based on EMFAC2017 for 2020 with default fleet mix for BAAQMD.
Truck emissions (lb/hr) = EF (g/mi) * Road Length (mi) * No. Trips / Hours per day * conversion factors

* ITE, 9th Edition, Land Use 152 High-Cube Warehouse/Distribution Center 152,
Weekday Weighted Average Truck Trip Generation Rate of 0.64 trip ends per 1,000 square feet.

Idle DPM Emission Information (2020)

Emission Factor for HHDT @ 5 mph (g/mi) =	0.15090
HHDT Idle Emission Rate (g/hr) =	0.75
Idle Time per Trip (min)	5

Idle emission factor (g/hr) = EF @5 mph (g/mi) * 5 mph

1605 Industrial Ave, San Jose, CA - Project Truck Travel & Idle Maximum Cancer Risks
Off-Site Residential Receptors (1.5 meter receptor heights)
30-Year Residential Exposure

Cancer Risk Calculation Method

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 (EFH/24) 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)
EFH = Daily exposure (hours/day)
10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - <16	16 - 30
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
EFH =	24	24	24	24
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information				Cancer Risk (per million)			
					Annual TAC Conc (ug/m3)						
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	Total
0	2020	0.25	-0.25 - 0*	10	0.0004	0.0000	0.0000	0.006	0.000	0.000	0.01
1	2020	1	1	10	0.0004	0.0000	0.0000	0.067	0.000	0.000	0.07
2	2021	1	2	10	0.0004	0.0000	0.0000	0.067	0.000	0.000	0.07
3	2022	1	3	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
4	2023	1	4	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
5	2024	1	5	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
6	2025	1	6	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
7	2026	1	7	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
8	2027	1	8	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
9	2028	1	9	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
10	2029	1	10	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
11	2030	1	11	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
12	2031	1	12	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
13	2032	1	13	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
14	2033	1	14	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
15	2034	1	15	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
16	2035	1	16	3	0.0004	0.0000	0.0000	0.011	0.000	0.000	0.01
17	2036	1	17	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
18	2037	1	18	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
19	2038	1	19	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
20	2039	1	20	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
21	2040	1	21	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
22	2041	1	22	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
23	2042	1	23	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
24	2043	1	24	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
25	2044	1	25	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
26	2045	1	26	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
27	2046	1	27	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
28	2047	1	28	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
29	2048	1	29	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
30	2049	1	30	1	0.0004	0.0000	0.0000	0.001	0.000	0.000	0.001
Total Increased Cancer Risk			**Total**					0.31	0.000	0.000	**0.31**

* Third trimester of pregnancy

1605 Industrial Ave, San Jose, CA - Project Truck Travel & Idle Maximum Cancer Risks
California Conservation Corpos Daycare Receptors (1.0 meter receptor heights)
12-Year Infant/Child Exposure

Cancer Risk Calculation Method

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 (EFH/24) 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)
EFH = Daily exposure (hours/day)
10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - <16	16 - 30
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
EFH =	24	12	12	24
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information				Cancer Risk (per million)			
					Annual TAC Conc (ug/m3)						
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	Total
1	2020	1	1	10	0.0009	0.0000	0.0000	0.077	0.000	0.000	0.08
2	2021	1	2	10	0.0009	0.0000	0.0000	0.077	0.000	0.000	0.08
3	2022	1	3	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
4	2023	1	4	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
5	2024	1	5	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
6	2025	1	6	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
7	2026	1	7	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
8	2027	1	8	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
9	2028	1	9	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
10	2029	1	10	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
11	2030	1	11	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
12	2031	1	12	3	0.0009	0.0000	0.0000	0.012	0.000	0.000	0.01
Total Increased Cancer Risk			**Total**					0.28	0.000	0.000	**0.28**

* Third trimester of pregnancy

1605 Industrial Ave, San Jose, CA - Project Truck Travel & Idle Maximum Cancer Risks
Challenger School/Preschool Berryessa - 1.0 meters - Child Exposure
10-Year Infant/Child Exposure

Cancer Risk Calculation Method

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 (EFH/24) 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)
EFH = Daily exposure (hours/day)
10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - <16	16 - 30
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
EFH =	24	12	12	24
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information				Cancer Risk (per million)			
					Annual TAC Conc (ug/m3)						
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	Total
1	2022	1	3	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
2	2023	1	4	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
3	2024	1	5	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
4	2025	1	6	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
5	2026	1	7	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
6	2027	1	8	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
7	2028	1	9	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
8	2029	1	10	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
9	2030	1	11	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
10	2031	1	12	3	0.0013	0.0013	0.0013	0.017	0.000	0.000	0.02
Total Increased Cancer Risk			**Total**					0.17	0.002	0.000	**0.17**

* Third trimester of pregnancy

1605 Industrial Avenue Trip Generation Estimates

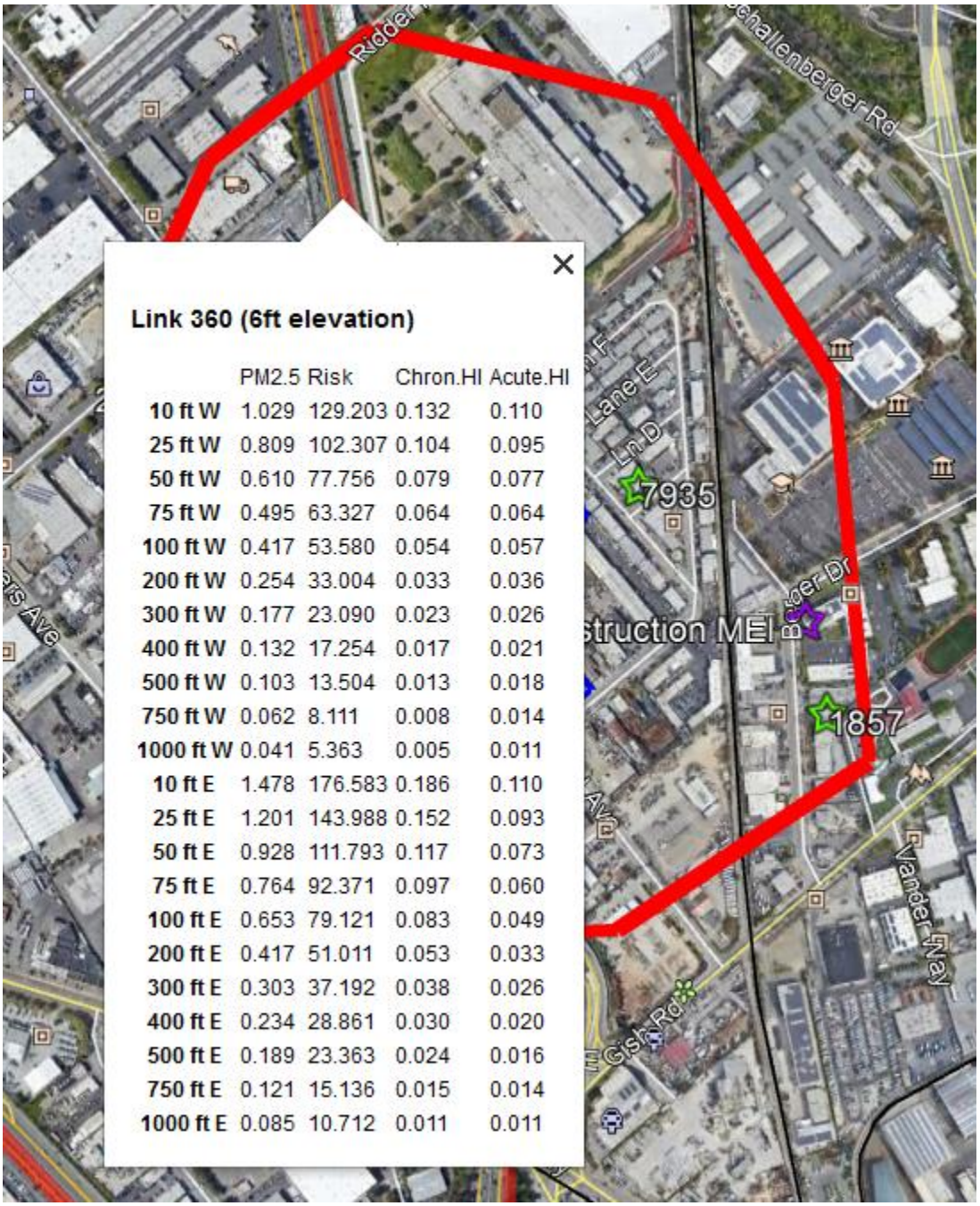
Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
					Trip				Trip		
		Rate[1]	Trips	Rate[1]	In	Out	Total	Rate[1]	In	Out	Total
Proposed Uses											
Warehouse	185,500 s.f.	1.74	323	0.17	25	7	32	0.19	9	26	35
Existing Use											
Specialty Truck Parts Retailer[2]	(37,615) s.f.	5.32	-200	0.56	-18	-3	-21	0.61	-5	-18	-23
Net Project Trips			**123**		**7**	**4**	**11**		**4**	**8**	**12**

[1]Rates per 1,000 s.f. (square feet) based on average rate for land use #150 (Warehousing) from the ITE *Trip Generation Manual, 10th Edition*. Existing use trip generation based on driveway counts.

[2]Existing use trips based on peak-hour driveway counts conducted on 9/25/18. Daily trips estimated based on peak-hour trips and business hours.

Attachment 4: Screening Community Risk Calculations

Highway Screening for I-880



AERMOD Modeling for Plant #12577

1605 Industrial Ave, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Operational Source # 12577

Operational 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 $g/s/m^2$
2019-2020	Operation	CON_FUG	0.98368	1967.4	0.59889	7.55E-02	15,104	5.00E-06

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

1605 Industrial Ave, San Jose, CA - Operatoinal Health Impact Summary

Maximum Impacts at Conversation Corps Daycare - Unmitigated

Operational Year Year	Unmitigated Emissions: Maximum Concentrations Exhaust PM2.5/DPM ($\mu g/m^3$)	Maximum Concentrations Fugitive PM2.5 ($\mu g/m^3$)	Infant/Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2019-2020	-	0.00699	-	-	**0.01**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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	**12/21/2018**
Contact Name	Mimi McNamara
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-040 X111
Email	mmcnamara@illingworthrodkin.com
Project Name	1605 Industrial Avenue
Address	1605 Industrial Avenue
City	San Jose
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Industrial Warehouse
Project Size (# of units or building square feet)	185,500-gross-square-foot

Comments: Please, verify the risks for the remaining five stationary sources. They are listed as having no risk values. Thanks!

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 e 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]	Facility Name	Address	Plant No.	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
1000+	Central Concrete Supply	457 Queens Lane	12577	--	--	0.01		Multiple		Emissions attached	1.00	#VALUE!	#VALUE!	0.01
260	Gorilla Circuits	1509 Berger Drive	1857	0.000	0.0006	0.0004		Multiple		Emissions attached	0.28	0.0	0.00	0.00
1000+	Caltrans-San Jose Maint Sta	500 Queens Lane	107986	9.10	0.04	--		Gas Dispensing Facility		Use GDF Multiplier	0.01	0.1	0.00	#VALUE!
730	Ideal Electric	701 Kings Row	7935	0.0001	0.000001	0.001		Boiler			1.00	0.0	0.00	0.00
1000+	Cowboy Painting & Finishing	1730 Junction Ave, suite 10	21327	--	0.00005	--		Coating operation		Non-cancerous chemicals	1.00	#VALUE!	0.00	#VALUE!

Construction MEI

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
    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
    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.

Date last updated:
03/13/2018