Appendix E

Air Quality Assessment

COMMUNICATIONS HILL 2 KB HOME RESIDENTIAL PROJECT – DRAFT AIR QUALITY ASSESSMENT SAN JOSÉ, CALIFORNIA

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Introduction

This report addresses air quality impacts associated with the proposed Communications Hill 2 KB HOME development project in San José, California. We understand that the project would allow for the development of up to 2,300 residential units, 64,800 square feet (s.f.) of commercial and retail uses, and 1,400,000 s.f. of industrial/office park uses in the Communications Hill Specific Plan Area. In 1992, the City Council certified the Communications Hill Specific Plan EIR. Accordingly, this report highlights applicable regulatory changes since then, identifies any new or more significant impacts, and recommends any new or updated mitigation measures, as appropriate. Air pollutant impacts from the proposed residential, commercial, and industrial/office development at the project site are evaluated using project-level analysis. The school site is analyzed at a plan level in terms of construction emissions and construction-related health risk impacts. The methodologies for evaluating air quality impacts from this project are contained in the Bay Area Air Quality Management District (BAAQMD) CEQA Air Quality Guidelines.[1] This report addresses air quality environmental checklist questions for compliance with CEQA, assuming the ultimate development of the project site as described above.

Setting

The project is located in the northern portion of 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 ($PM_{2.5}$).

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 attempt 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, reduce lung function, and increase coughing and chest discomfort.

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

Toxic air contaminants (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 listed above. 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 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

[1] Bay Area Air Quality Management District, 2011. *BAAQMD CEQA Air Quality Guidelines*. May.

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.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of diesel particulate matter (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 2011 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.

BAAQMD is the regional agency tasked with managing air quality in the region. CARB (a part of the California Environmental Protection Agency) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published CEQA Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.[3]

National and State Ambient Air Quality Standards

The ambient air quality in a given area depends on the quantities of pollutants emitted within the area, transport of pollutants to and from surrounding areas, local and regional meteorological conditions, as well as the surrounding topography of the air basin. Air quality is described by the concentration of various pollutants in the atmosphere. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

As required by the Federal Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter, including respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$), sulfur oxides, and lead. Pursuant to the California Clean Air Act, the State of California has established the California Ambient Air Quality Standards (CAAQS). Both State and Federal standards are summarized in Table 1. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare. CAAQS are generally the same or more stringent than NAAQS.

Air Quality Monitoring Data

The significance of a pollutant concentration is determined by comparing the concentration to an appropriate ambient air quality standard. The standards represent the allowable pollutant concentrations designed to ensure that the public health and welfare are protected, while including a reasonable margin

[2] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: January 24, 2014.
[3] Bay Area Air Quality Management District, 2011, op. cit.

of safety to protect the more sensitive individuals in the population. The San Francisco Bay Area is considered to be one of the cleanest metropolitan areas in the country with respect to air quality. BAAQMD monitors air quality conditions at more than 28 locations throughout the Bay Area. There is a monitoring station in San José. Summarized air pollutant data for this station are provided in Table 2. This table shows the highest air pollutant concentrations measured at the station over the five year period from 2008 through 2012.

Attainment Status

Areas with air quality that exceed adopted air quality standards are designated as "nonattainment" areas for the relevant air pollutants. Nonattainment areas are sometimes further classified by degree (marginal, moderate, serious, severe, and extreme for ozone, and moderate and serious for carbon monoxide and PM_{10}) or status ("nonattainment-transitional"). Areas that comply with air quality standards are designated as "attainment" areas for the relevant air pollutants. "Unclassified" areas are those with insufficient air quality monitoring data to support a designation of attainment or nonattainment, but are generally presumed to comply with the ambient air quality standard. State Implementation Plans must be prepared by States for areas designated as federal nonattainment areas to demonstrate how the area will come into attainment of the exceeded federal ambient air quality standard.

The Bay Area as a whole is considered by U.S. EPA as nonattainment for the ozone and $PM_{2.5}$ NAAQS. The area is attainment or unclassified for all other pollutants under the NAAQS, including carbon monoxide and PM_{10}. At the State level, the region is designated as nonattainment for ozone, PM_{10} and $PM_{2.5}$. The region is attainment for all other pollutants regulated under the CAAQS.

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 14, 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, elementary schools, and parks. The closest off-site sensitive receptors to the project site are residences located adjacent to the southern and northwestern boundary of the project site. The project would include residences that would be considered sensitive receptors.

Table 1 Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards [a]	
			Primary [b,c]	Secondary [b,d]
Ozone (O_3)	8-hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	Same as primary
	1-hour	0.09 ppm (180 µg/m^3)	—[e]	Same as primary
Carbon Monoxide (CO)	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
Nitrogen Dioxide (NO_2)	Annual	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as primary
	1-hour	0.18 ppm (339 µg/m^3)	0.100 ppm[f] (188 µg/m^3)	—
Sulfur Dioxide (SO_2)	Annual	—	—[g]	—
	24-hour	0.04 ppm (105 µg/m^3)	—[g]	—
	3-hour	—	—	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	0.075 ppm[g] (196 µg/m^3)	—
PM_{10}	Annual	20 µg/m^3	—	Same as primary
	24-hour	50 µg/m^3	150 µg/m^3	Same as primary
$PM_{2.5}$	Annual	12 µg/m^3	12 µg/m^3	
	24-hour	No Separate State Standard	35 µg/m^3	
Lead	Calendar quarter	—	1.5 µg/m^3	Same as primary
	30-day average	1.5 µg/m^3	—	—

Notes: ppm = parts per million
µg/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter

(a) California standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are not to be exceeded. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

(b) Concentrations are expressed first in units in which they were promulgated. Equivalent units given in parenthesis.

(c) Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than 3 years after that state's implementation plan is approved by the EPA.

(d) Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

(e) The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005. A new 8-hour standard was established in May 2008.

(f) The form of the 1-hour NO_2 standard is the 3-year average of the 98th percentile of the daily maximum 1-hour average concentration.

(g) On June 2, 2010 the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of the 1-hour daily maximum. The EPA also revoked both the existing 24-hour and annual average SO_2 standards.

Table 2 Highest Measured Air Pollutant Concentrations in San José

Pollutant	Average Time	Measured Air Pollutant Levels				
		2008	2009	2010	2011	2012
Ozone (O_3)	1-Hour	**0.118 ppm**	0.088 ppm	**0.126 ppm**	**0.098 ppm**	**0.101 ppm**
	8-Hour	**0.080 ppm**	0.069 ppm	**0.086 ppm**	0.067 ppm	0.062 ppm
Carbon Monoxide (CO)	8-Hour	2.5 ppm	2.5 ppm	2.2 ppm	2.2 ppm	1.9 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.080 ppm	0.069 ppm	0.064 ppm	0.061 ppm	0.067 ppm
	Annual	0.017 ppm	0.015 ppm	0.014 ppm	0.015 ppm	0.013 ppm
Respirable Particulate Matter (PM_{10})	24-Hour	**57.3 ug/m^3**	43.3 ug/m^3	46.8 ug/m^3	44.3 ug/m^3	**60 ug/m^3**
	Annual	**23.4 ug/m^3**	20.3 ug/m^3	19.5 ug/m^3	19.2 ug/m^3	18.8 ug/m^3
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	**41.9 ug/m^3**	35.0 ug/m^3	**41.5 ug/m^3**	**50.5 ug/m^3**	**38.4 ug/m^3**
	Annual	11.5 ug/m^3	10.1 ug/m^3	9.0 ug/m^3	9.9 ug/m^3	9.1 ug/m^3

Source: BAAQMD Air Pollution Summaries for 2008 through 2012 see http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx.
Note: ppm = parts per million and ug/m^3 = micrograms per cubic meter
Values reported in bold exceed ambient air quality standard

Project Impacts

Thresholds of Significance

The CEQA Guidelines prepared by the Natural Resources Agency include the following significance criteria to evaluate project air quality impacts:

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people; and
- Conflict with or obstruct implementation of the applicable air quality plan.

BAAQMD provides guidance in assessing impacts to lead agencies in the Bay Area. In May 2011, BAAQMD adopted new CEQA Air Quality Guidelines that included thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on BAAQMD's website and included in the Air District's updated CEQA Guidelines.[4] The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 3.

[4] Bay Area Air Quality Management District, 2011, op. cit.

BAAQMD's adoption of the thresholds was called into question by an order issued March 5, 2012, in California Building Industry Association v. BAAQMD (Alameda Superior Court Case No. RGI0548693). This order required BAAQMD to set aside its approval of the thresholds until it has conducted environmental review under CEQA. The ruling made in the case concerned the environmental impacts of adopting the thresholds and how the thresholds would indirectly affect land use development patterns. Those issues were not relevant to the scientific basis of BAAQMD's analysis of what levels of pollutants should be deemed significant. This analysis considers the science informing the thresholds as being supported by substantial evidence. Scientific information supporting the thresholds was documented in BAAQMD's proposed thresholds of significance analysis.[5] Accordingly, the analysis herein uses the thresholds and methodologies from BAAQMD's May 2011 CEQA Air Quality Guidelines to determine the potential impacts of the project on the existing environment.

Table 3 Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG	54	54	10
NO_x	54	54	10
PM_{10} Exhaust	82	82	15
$PM_{2.5}$ Exhaust	54	54	10
CO	Not Applicable	9.0 ppm (8-hr avg) or 20.0 ppm (1-hr avg)	
Fugitive Dust – PM_{10} and $PM_{2.5}$	Construction Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sensitive Receptors (from Single Sources within 1,000 foot zone of influence) and New Sources of Emissions			
Excess Cancer Risk	10 in one million	10 in one million	
Chronic or Acute Hazard Index	1.0	1.0	
Incremental annual average $PM_{2.5}$	0.3 µg/m^3	0.3 µg/m^3	
Health Risks and Hazards for Sensitive Receptors (Cumulative from all sources within 1,000 foot zone of influence) and Cumulative Thresholds for New Sources			
Excess Cancer Risk	100 in one million		
Chronic Hazard Index	10.0		
Annual Average $PM_{2.5}$	0.8 µg/m^3		
Odors			
Complaints	5 confirmed complaints per year averaged over 3 years		

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, and $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.

[5] BAAQMD. 2009. California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance. December.

Impact 1: Conflict with or obstruct implementation of the applicable air quality plan?

The Specific Plan EIR recommended implementation of transportation control measures contained within a then future Bay Area Congestion Management Plan. Since then, a new clean air plan has been published and, therefore, the consistency of the project with the newer plan is assessed. The most recent clean air plan is the *Bay Area 2010 Clean Air Plan* (CAP) that was adopted by BAAQMD in September 2010. This plan addresses air quality impacts with respect to obtaining ambient air quality standards for non-attainment pollutants (i.e., ozone and particulate matter or PM_{10} and $PM_{2.5}$), and reducing exposure of sensitive receptors to TACs.

Emissions of non-attainment air pollutants from the project are addressed under *Impact 2 and 3*. Exposure of sensitive receptors associated with the project is addressed under *Impact 4*.

Clean Air Plan Projections

The project would include a Specific Plan Amendment to change the existing land use designations of the site to be consistent with the City's recently updated *Envision San José 2040 General Plan*. A General Plan amendment would also be required to eliminate the 10 large lot single-family residential units originally proposed to be located in the northwestern part of the Plan area. The consistency of this action with the regional clean air plan is primarily a question of the consistency with the population/employment assumptions utilized in developing the 2010 Clean Air Plan, which were based on ABAG Projections. Because the Specific Plan would be modified to be consistent with the new General Plan, which was found to be consistent with the 2010 Clean Air Plan, the project would not directly conflict with the applicable air quality plan. The project's consistency with specific Clean Air Plan control measures are discussed below.

Consistency with Clean Air Plan Control Measures

The 2010 CAP includes about 55 control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. The control measures are divided in to five categories that include:

- 18 Measures to reduce stationary and area sources;
- 10 Mobile source measures;
- 17 Transportation control measures;
- 6 Land use and local impact measures; and
- 4 Energy and climate measures.

In developing the control strategy, BAAQMD identified the full range of tools and resources available, both regulatory and non-regulatory, to develop each measure. Implementation of each control measure will rely on some combination of the following:

- Adoption and enforcement of rules to reduce emissions from stationary sources, area sources, and indirect sources;
- Revisions to the BAAQMD's permitting requirements for stationary sources;
- Enforcement of CARB rules to reduce emissions from heavy‐duty diesel engines;

- Allocation of grants and other funding by the Air District and/or partner agencies;
- Promotion of best policies and practices that can be implemented by local agencies through guidance documents, model ordinances, etc.;
- Partnerships with local governments, other public agencies, the business community, non‑profits, etc.;
- Public outreach and education;
- Enhanced air quality monitoring;
- Development of land use guidance and CEQA guidelines, and Air District review and comment on Bay Area projects pursuant to CEQA; and
- Leadership and advocacy.

This approach relies upon lead agencies to assist in implementing some of the control measures. A key tool for local agency implementation is the development of land use policies and implementing measures that address new development or redevelopment in local communities. The consistency of the Planned Development rezoning is evaluated with respect to each set of control measures.

Stationary and Area Source Control Measures

The CAP includes Stationary Source Control measures that BAAQMD adopts as rules or regulations through their authority to control emissions from stationary and area sources. The BAAQMD is the implementing agency, since these control measures are applicable to sources of air pollution that must obtain District permits. Any new stationary sources would be required to obtain proper permits through BAAQMD. In addition, the City uses BAAQMD's CEQA Air Quality Guidelines to evaluate air pollutant emissions from new sources.

Mobile Source Measures

The CAP includes Mobile Source Measures that would reduce emissions by accelerating the replacement of older, dirtier vehicles and equipment through programs such as the BAAQMD's Vehicle Buy-Back and Smoking Vehicle Programs, and promoting advanced technology vehicles that reduce emissions. The implementation of these measures rely heavily upon incentive programs, such as the Carl Moyer Program and the Transportation Fund for Clean Air, to achieve voluntary emission reductions in advance of, or in addition to, CARB requirements. CARB has new regulations that require the replacement or retrofit of on-road trucks, construction equipment, and other specific equipment that is diesel powered.

Transportation Control Measures

The CAP includes transportation control measures (TCMs) that are strategies meant to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions. While most of the TCMs are implemented at the regional level (e.g., by MTC or Caltrans), there are measures that the CAP relies upon local communities to assist with implementation. In addition, the CAP includes land use measures and energy and climate measures where implementation is aided by proper land use planning decisions. The City's latest General Plan update includes measures to reduce vehicle travel that are consistent with the CAP TCMs. In addition, the General Plan committed the City to developing and adopting a Climate Action Plan that would require additional TCMs consistent with CAP measures intended to reduce automobile use and to facilitate non-auto linkages through a network.

TAC Exposure

The City uses the BAAQMD CEQA Air Quality Guidelines to identify community risk impacts and develop appropriate mitigation measures, as necessary. The CAP includes measures to reduce TAC exposure to sensitive receptors. The impacts of TACs associated with construction and operation of the project are analyzed under *Impact 4*.

Envision San José 2040 General Plan

The recently adopted Envision San José 2040 General Plan was found to be consistent with the 2010 CAP.

The following General Plan Air Quality goals, policies and actions are directly relevant to the proposed project:

Goal MS-10 – Air Pollutant Emission Reduction: Minimize air pollutant emissions from new and existing development.

> **MS-10.1** Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.
>
> **MS-10.2** Consider the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.
>
> **MS-10.4** Encourage effective regulation of mobile and stationary sources of air pollution, both inside and outside of San José. In particular, support Federal and State regulations to improve automobile emission controls.
>
> **MS-10.5** In order to reduce vehicle miles traveled and traffic congestion, require new development within 2,000 feet of an existing or planned transit station to encourage the use of public transit and minimize the dependence on the automobile through the application of site design guidelines and transit incentives.
>
> **MS-10.6** Encourage mixed land use development near transit lines and provide retail and other types of service oriented uses within walking distance to minimize automobile dependent development.
>
> **MS-10.7** Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality.
>
> **MS-10.10** Actively enforce the City's ozone-depleting compound ordinance and supporting policy to ban the use of chlorofluorocarbon compounds (CFCs) in packaging and in building construction and remodeling. The City may consider adopting other policies or ordinances to reinforce this effort to help reduce damage to the global atmospheric ozone layer.

MS-10.11 Enforce the City's wood-burning appliance ordinance to limit air pollutant emissions from residential and commercial buildings.

MS-10.14 Review and evaluate the effectiveness of site design measures, transit incentives, and new transportation technologies and encourage those that most successfully reduce air pollutant emissions.

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

MS-11.1 Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.

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

MS-11.3 Review projects generating significant heavy duty truck traffic to designate truck routes that minimize exposure of sensitive receptors to TACs and particulate matter.

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

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

Goal MS-12 – Objectionable Odors: Minimize and avoid exposure of residents to objectionable odors.

MS-12.2 Require new residential development projects and projects categorized as sensitive receptors to be located an adequate distance from facilities that are existing and potential sources of odor. An adequate separation distance will be determined based upon the type, size and operations of the facility.

Goal MS-13 – Construction Air Emissions: Minimize air pollutant emissions during demolition and construction activities.

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.

In addition, the following General Plan Transportation goals would help to reduce air emissions regionally and in the project area:

Goal TR-1 – Balanced Transportation System: Complete and maintain a multimodal transportation system that gives priority to the mobility needs of bicyclists, pedestrians, and public transit users while also providing for the safe and efficient movement of automobiles, buses, and trucks.

Goal TR-2 – Walking and Bicycling: Improve walking and bicycling facilities to be more convenient, comfortable, and safe, so that they become primary transportation modes in San José.

Goal TR-3 – Maximize use of Public Transit: Maximize use of existing and future public transportation services to increase ridership and decrease the use of private automobiles.

Goal TR-4 – Passenger Rail Service: Provide maximum opportunities for upgrading passenger rail service for faster and more frequent trains, while making this improved service a positive asset to San José that is attractive, accessible, and safe.

Goal TR-5 – Vehicular Circulation: Maintain the City's street network to promote the safe and efficient movement of automobile and truck traffic while also providing for the safe and efficient movement of bicyclists, pedestrian, and transit vehicles.

Goal TR-6 – Goods Movement: Provide for safe and efficient movement of goods to support commerce and industry.

Goal TR-7 – Transportation Demand Management: Implement effective Transportation Demand Management (TDM) strategies that minimize vehicle trips and vehicle miles traveled.

Goal TR-8 – Parking Strategies: Develop and implement parking strategies that reduce automobile travel through parking supply and pricing management.

Goal TR-9 – Tier I Reduction of Vehicle Miles Traveled: Reduce Vehicle Miles Traveled (VMT) by 10%, from 2009 levels, as an interim goal.

Goal TR-10 – Tier II Vehicle Miles Traveled Reduction: Reduce vehicle miles traveled by an additional 10% above Goal TR-9 (a 20% reduction as measured from 2009), at a later date to be determined by the City Council, based on staff analysis of the City's achieved and anticipated success in reducing VMT.

Goal TR-11 – Regional and State VMT Reduction Efforts: Reduce VMT an additional 20% above Goals TR-9 and TR-10 (a total reduction of 40% as measured from 2009) by participating and taking a leadership role in on-going regional and statewide efforts to reduce VMT.

Goal TR-12 – Intelligent Transportation System: Develop a sustainable ITS system to effectively

manage, operate, and maintain the current and future transportation network for all modes of travel. A robust and efficient ITS system will provide added opportunities for reducing congestion and greenhouse gas emissions, and increasing safety and the quality of life for all users.

The following, specific General Plan Transportation policies and actions are directly relevant to the proposed project:

> **TR-1.4** Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking and transit facilities. Encourage investments that reduce vehicle travel demand.
>
> **TR-2.8** Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements.
>
> **TR-3.3** As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute toward transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities.
>
> **TR-5.5** Require that new development, which includes new public or private streets, connect these streets with the existing public street network and prohibit the gating of private streets with the intention of restricting public access. Furthermore, where possible, require that the street network within a given project consists of integrated short blocks to facilitate bicycle and pedestrian travel and access.
>
> **TR-6.4** Plan industrial and commercial development so that truck access through residential areas is avoided. Minimize truck travel on streets designated in the *Envision General Plan* as Residential Streets.
>
> **TR-7.1** Require large employers to develop and maintain TDM programs to reduce the vehicle trips generated by their employees.
>
> **TR-7.3** Work together with large employers to develop a system for tracking Transportation Demand Management (TDM) programs implemented by employers to allow ongoing assessment of results.
>
> **TR-8.5** Promote participation in car share programs to minimize the need for parking spaces in new and existing development.
>
> **TR-8.12** As part of the entitlement process, consider opportunities to reduce the number of parking spaces through shared parking, TDM actions, parking pricing or other measures which can reduce parking demand. Consider the use of reserve landscaped open space or recreational areas that can be used on a short-term basis to provide parking or converted to formal parking in the future if necessary.

General Plan policies related to assessing project air quality impacts as they relate to CEQA requirements are fulfilled in this analysis. In addition, cumulative air quality impacts are evaluated. The impacts of mobile and stationary sources of TACs affecting the proposed project and for project sources that would emit TACs are discussed under *Impact 4*. Objectionable odors are evaluated under *Impact 5*. Construction emissions are addressed under *Impact 2* and under *Impact 4* for TACs. The project would encourage mixed land use development and would provide retail and other types of service-oriented uses within walking distance. In addition, the project TIA recommends pedestrian and bicycle connections to each of the transit services nearby. Ensuring and planning a system of non-vehicular pedestrian routes and encouraging mass transit use by residents would also help to fulfill mitigation requirements of the Specific Plan EIR.

However, the project has not at this time developed a Transportation Demand Management Program to reduce vehicle trips generated by larger future office and/or industrial tenants. In addition, future truck routes have not yet been designated to fulfill the requirements of General Plan policies **MS-11.3 and MS-11.8**. This is considered a significant impact.

Mitigation Measure AQ-1a: Develop and implement a TDM program.

The project shall develop and implement a TDM Program, consistent with City requirements. At a minimum, the TDM program shall include the following measures:

- Consider providing transit stops on site, such as at convenient locations on Communications Hill Boulevard with pedestrian access no more than 0.25 mile from the project center. Also consider the posting of transit information at high pedestrian traffic areas on-site. Any resulting plans to modify transit stops would have to be made in accordance with the City and VTA;

- Bicycle amenities should be provided for the project. This would include secure bicycle parking for employees and multifamily residents along with the proposed bike lane connections;

- Provide onsite shower and locker room facilities for office employee use;

- Consider providing pedestrian signage and signalization. Enhanced pedestrian crossings at strategic areas with countdown signals should be considered;

- Encourage employers at the project site to purchase Eco Passes from VTA to provide transit incentives for employees. In addition, project site employers should be required to promote transit use by providing transit information and incentives to employees; and

- The applicant and City shall explore opportunities to implement a "car share program" and measures that would reduce vehicle travel by reducing parking availability (such as an employee parking cash out program).

Mitigation Measure AQ-1b: Designate future heavy-duty truck routes.

A future heavy-duty truck route(s) to the industrial portions of the site shall be designated, so as to minimize disturbance and exposure of TAC pollutants to project residences and sensitive receptors.

Impact 2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The Bay Area is considered a non-attainment area for ground-level ozone and fine particulate matter ($PM_{2.5}$) under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for respirable particulates or particulate matter with a diameter of less than 10 micrometers (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, PM_{10}, and $PM_{2.5}$, BAAQMD has established thresholds of significance for air pollutants. These thresholds are for ozone precursor pollutants (ROG and NOx), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts. The California Emissions Estimator Model, Version 2013.2.2 (CalEEMod) was used to predict operational and construction emissions. The CalEEMod model was developed by the South Coast Air Quality Management District with assistance from other air districts in California including BAAQMD (SCAQMD 2011).[6]

Construction Period Emissions

Construction Fugitive Dust

During grading and construction activities, dust would be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. Typical winds during late spring through summer are from the north or northwest. Nearby receptors could be adversely affected by dust generated during construction activities. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. This impact is considered significant unless appropriate measures are implemented to reduce fugitive dust generated by the project. The Specific Plan EIR requires application of standard grading permit requirements for dust abatement practices during grading and excavation and compliance with BAAQMD rules and regulations. *Implementation of Mitigation Measure AQ-2 would reduce this impact to a level of less-than-significant.*

Construction Exhaust Emissions

Construction of the project is anticipated to begin in 2015 and last until approximately 2027. A mass grading phase for the entire project site was modeled as occurring during the first two years of construction. Construction of the project is proposed to occur in four discrete phase areas (I, II, III, and IV), and all four phase areas were modeled separately for activities occurring after mass grading, based on information supplied by the project applicant. This included anticipated sub-phasing durations and construction equipment pieces proposed for use. Sub-phases included trenching, concrete curbs, gutters and sidewalks, building – foundation (including the podium and Village Center), building interior/exterior,

[6] CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for lead agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operational from a variety of land use projects.

architectural coating, paving, and landscaping. In addition, construction of the Communications Hill Boulevard vehicle bridge was modeled separately. Construction of the industrial area and slurry mines grading were modeled separately as occurring during Phase 3. Finally, the off-site traffic mitigation improvements for the Narvaez Avenue/Capitol Expressway improvement area, Curtner Corridor improvement area, and the off-site pedestrian pathways and bridge were modeled separately as occurring during Phase 1, 2 and 4, respectively.

Construction of the school area was not included in modeling, as it is not currently being analyzed at the project level. Subsequent environmental review will be required to assess project air quality impacts associated with construction of this site feature.

The CalEEMod default was used for the number of vendor trips during construction phases I through IV (32 daily roundtrips), which is based on the project size. It is anticipated that 20 haul trucks will be needed daily during the mass grading phase, as well as during bridge construction. A total of 250 haul truck trips would be needed for the slurry mines grading. For the building construction sub-phase of the industrial area, 229 daily vendor trips were assumed, based on CalEEMod defaults for the proposed land use square footage. CalEEMod input and output worksheets are included in *Attachment 1*, along with the anticipated phasing duration and equipment list provided by the project applicant.

Table 4 reports emissions in tons per year over the course of the entire construction period. Average daily emissions were computed by dividing the total construction period emissions by the number of anticipated construction days and are displayed at the bottom of Table 4. Much of the emissions were anticipated to occur over about 3,380 work days during the approximately 13-year construction period, based on an average of 260 workdays per year. As shown in Table 4, construction exhaust emissions would exceed BAAQMD thresholds for average daily NO_X emissions.

Table 4. Project Construction Emissions

Description	ROG	NO_X	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
2015– Mass Grading (tons)	1.66	20.99	0.86	0.79
2015 – Phase 1 (tons)	2.33	23.85	1.31	1.21
2016 – Mass Grading (tons)	1.61	20.16	0.83	0.76
2016 – Phase 1 (tons)	3.13	31.69	1.71	1.57
2016 – Off-Site Imprv. Phase I (tons)	0.07	0.80	0.04	0.04
2017 – Phase I (tons)	3.12	31.55	1.71	1.58
2017 – Off-Site Imprv. Phase I (tons)	0.13	1.27	0.08	0.07
2018 – Phase I (tons)	6.66	25.43	1.33	1.22
2018 – Off-Site Imprv. Phase I (tons)	0.06	0.57	0.03	0.03
2019 – Phase II (tons)	2.42	24.29	1.26	1.16
2019 – Off-Site Imprv. Phase II (tons)	0.05	0.58	0.03	0.02
2020 – Phase II (tons)	2.15	21.39	1.08	1.00
2020 – Off-Site Imprv. Phase II (tons)	0.09	0.92	0.05	0.05
2021 – Phase II (tons)	6.16	19.53	0.97	0.90
2021 – Off-Site Imprv. Phase II (tons)	0.05	0.44	0.02	0.02
2022 – Phase III (tons)	1.70	16.10	0.78	0.72
2022 – Bridge Construction (tons)	0.59	6.12	0.27	0.25

2022 – Industrial Phase III (tons)	0.33	2.53	0.12	0.11
2022 – Slurry Mines Phase III (tons)	<0.01	0.05	<0.01	<0.01
2023 – Phase III (tons)	1.38	12.69	0.60	0.55
2023 – Industrial Phase III (tons)	7.63	2.38	0.11	0.10
2024 – Phase III (tons)	5.66	13.79	0.65	0.60
2025 – Phase IV (tons)	1.22	10.65	0.48	0.44
2025 – Off-Site Imprv. Phase IV (tons)	0.13	1.22	0.06	0.05
2026 – Phase IV (tons)	1.39	12.23	0.56	0.52
2026 – Off-Site Imprv. Phase IV (tons)	0.12	1.11	0.05	0.05
2027 – Phase IV (tons)	5.35	10.68	0.48	0.45
2027 – Off-Site Imprv. Phase IV (tons)	<0.01	0.08	<0.01	<0.01
Total Construction Period (tons)	55.21	313.09	15.49	14.28
Average Daily Emissions (pounds per day)*	32.7	185.3	9.2	8.4
BAAQMD Thresholds (pounds per day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	***Yes***	No	No

*Assuming 3,380 construction workdays at an average of 260 workdays per year for 13 years

Table 5 summarizes mitigated construction exhaust emissions. As shown in Table 5, *implementation of Mitigation Measure AQ-3 would reduce this impact to a level of less-than-significant.*

Table 5. Mitigated[1] Project Construction Emissions

Description	ROG	NO_X	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
2015– Mass Grading (tons)	0.22	0.90	0.03	0.03
2015 – Phase 1 (tons)	0.46	2.32	0.04	0.04
2016 – Mass Grading (tons)	0.22	0.91	0.03	0.03
2016 – Phase 1 (tons)	0.67	3.49	0.06	0.06
2016 – Off-Site Imprv. Phase I (tons)	0.07	0.80	0.04	0.04
2017 – Phase I (tons)	0.66	3.51	0.06	0.06
2017 – Off-Site Imprv. Phase I (tons)	0.13	1.27	0.08	0.07
2018 – Phase I (tons)	4.74	3.28	0.06	0.05
2018 – Off-Site Imprv. Phase I (tons)	0.06	0.57	0.03	0.03
2019 – Phase II (tons)	0.61	3.34	0.06	0.06
2019 – Off-Site Imprv. Phase II (tons)	0.05	0.58	0.03	0.02
2020 – Phase II (tons)	0.57	3.10	0.05	0.05
2020 – Off-Site Imprv. Phase II (tons)	0.09	0.92	0.05	0.05
2021 – Phase II (tons)	4.72	3.14	0.06	0.06
2021 – Off-Site Imprv. Phase II (tons)	0.05	0.44	0.02	0.02
2022 – Phase III (tons)	0.54	2.90	0.05	0.05
2022 – Bridge Construction (tons)	0.14	0.66	0.02	0.02
2022 – Industrial Phase III (tons)	0.16	0.73	0.01	0.01
2022 – Slurry Mines Phase III (tons)	<0.01	0.05	<0.01	<0.01
2023 – Phase III (tons)	0.47	2.62	0.05	0.05

2023 – Industrial Phase III (tons)	7.47	0.67	0.02	0.02
2024 – Phase III (tons)	4.66	2.84	0.05	0.05
2025 – Phase IV (tons)	0.46	2.61	0.05	0.05
2025 – Off-Site Imprv. Phase IV (tons)	0.13	1.22	0.06	0.05
2026 – Phase IV (tons)	0.51	2.80	0.05	0.05
2026 – Off-Site Imprv. Phase IV (tons)	0.12	1.11	0.05	0.05
2027 – Phase IV (tons)	4.59	2.60	0.05	0.05
2027 – Off-Site Imprv. Phase IV (tons)	<0.01	0.08	<0.01	<0.01
Total Construction Period (tons)	32.59	49.46	1.18	1.14
Average Daily Emissions (pounds per day)*	19.3	29.3	0.7	0.7
BAAQMD Thresholds (pounds per day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No

*Assuming 3,380 construction workdays at an average of 260 workdays per year for 13 years

[1] Tier 4 engine and NO_X reduction requirement of Mitigation Measure AQ-3 would not apply to the proposed off-site improvements.

Mitigation Measure AQ-2: Include basic measures to control dust and exhaust during construction.

During any construction ground disturbance, 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. The contractors shall implement the following Best Management Practices that are required of all construction 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 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.

Mitigation Measure AQ-3: Include additional measures to control exhaust emissions during construction. Such measures and equipment selection would include the following:

Consistent with guidance from the BAAQMD, the following additional actions shall be required of construction contracts and specifications for the project:

1. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes. Clear signage shall be provided for construction workers at all access points;

2. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average of at least 70 percent NO_X reduction compared to unmitigated emissions. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. Specifically, all diesel-powered off-road equipment larger than 50 horsepower and operating on the site for more than two days continuously shall meet U.S. EPA particulate matter emissions standards for Tier 4 engines or equivalent – this measure would not apply for the proposed off-site improvements;

3. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NO_X;

4. All contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines; and

5. Minimize the number of hours that equipment will operate, including the use of idling restrictions.

Operational Period Emissions

The CalEEMod model along with the project vehicle trip generation rates were used to predict operational period air pollutant emissions associated with operation of a fully developed site under the proposed project. The model uses mobile emission factors from the California Air Resources Board's EMFAC2011 model. This model is sensitive to the year selected, since vehicle emissions have and continue to be reduced due to more stringent exhaust controls, newer vehicle fleet, fuel efficiency standards, and low carbon fuels. Adjustments to the modeling are described below. CalEEMod input and output worksheets are provided in *Attachment 1*.

Year of Analysis

Emissions associated with vehicle travel depend on the year of analysis. The earlier the year, the higher the emission rates as CalEEMod uses the California Air Resources Board's EMFAC2011 motor vehicle

emissions model. This model assumes reduced emission rates as newer vehicles with lower emission rates replace older, more polluting vehicles through attrition of the overall vehicle fleet. The earliest year the project could be possibly constructed and fully operated would be 2028, based on the anticipated construction schedule. However, the year 2025 was used, as CalEEMod inputs are limited to either the choice of year 2025 or 2030. The use of 2025 provides for a more conservative assessment of project impacts. Full build out occurring later than 2025 would result in lower emissions.

Land Use Descriptions

The following land uses types and sizes were input to CalEEMod: "Condo/Townhouse" (2,300 dwelling units), "Strip Mall" (64,800 s.f.), and "Industrial Park" (1,400,000 s.f.).

Trip Generation Rates and Travel Distances

CalEEMod allows the user to enter specific trip generation rates. Hexagon Transportation Consultants provided the trip generation rate for the project, in the TIA, which was entered into the model.[7] In addition, the trip reductions detailed in the TIA, which account for about a 24 percent reduction, were used to adjust operational mobile emissions. These adjustments include the following:

- 90 percent of retail trips were assumed to originate from the existing and proposed residential units on Communications Hill;
- Reduction of 9 percent was applied for housing located centrally to two LRT Stations and a Caltrain Station; and
- Reduction of 15 percent was applied for mixed-use development with housing and retail components.

Stationary Sources

Stationary sources of air pollutant emissions have not been identified. It is possible that the project could include diesel-powered emergency generators at some of the future industrial uses. Specific plans or equipment selection of these generators are not known at this time. If installed, diesel generators would be a source of air pollutant emissions during routine testing. These generators are typically tested for 15 minutes to one hour each month, resulting in emissions of air pollutants. The primary emissions are NO_X and diesel particulate matter. Since these types of generators would likely exceed 50 horsepower, they would be subject to BAAQMD permitting requirements. BAAQMD permitting requirements would limit emission rates and hours of operation. In addition, the generator engines would have to meet CARB emission standards and the BAAQMD would be required to ensure that health risks associated with diesel particulate matter emissions would be acceptable.[8] Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality impact. Stationary sources that are exempt from BAAQMD permit requirements due to low emission thresholds would not be considered to have a significant air quality impact.

[7] Hexagon Transportation Consultants. 2013. *Communications Hill Residential and Industrial Buildout Traffic Impact Analysis*. September 22.

[8] BAAQMD risk policy requires that these sources have a cancer risk of less than 10 in one million, which is the same as BAAQMD's recommended CEQA threshold.

Summary of Project Operational Emissions

Table 6 reports the predicted average daily operational emissions and Table 7 reports annual emissions. As shown in Tables 6 and 7, average daily and annual emissions of ROG, NO_X, and PM_{10} associated with project operation would exceed the BAAQMD significance thresholds.

ROG emissions from the project are mostly attributable to evaporative emissions. About 51 percent of ROG emissions are associated with consumer products that would mostly be used by project residences. These include solvents, hairsprays, charcoal fluid, etc. The formulation of many of these products is regulated by U.S. EPA, CARB, and/or BAAQMD. The use of architectural coatings (e.g., paints) by project users to repaint surfaces results in about 8 percent of the project ROG emissions. These coatings are also regulated by BAAQMD. Together, these sources of mostly regulated emissions represent about 59 percent of the total project operational ROG emissions. About 37 percent of the emissions would be attributable to motor vehicle use. These emissions reflect the mixed-use nature of the project and the proximity of transit. As a result, mobile emissions from the project are reduced by about 24 percent, per the project trip generation estimates.

Approximately 85 percent of NO_X emissions and 99 percent of PM_{10} emissions are from motor vehicle travel associated with the project. As with motor vehicle ROG emissions, the computed NO_X and PM_{10} emissions reflect features of the project that reduce motor vehicle use by about 24 percent.

In any event, the predicted emissions of ROG, NO_X, and PM_{10} exceed the BAAQMD-recommended thresholds. *Therefore, this impact is considered significant.*

Table 6. Daily Air Pollutant Emissions from Operation of the Project (pounds/day)

Scenario	ROG	NO_X	PM_{10}	$PM_{2.5}$
Proposed Project 2025 - CalEEMod	157.2	124.4	139.5	40.2
Daily Emission Thresholds	*54*	*54*	*82*	*54*
Exceed Threshold?	***Yes***	***Yes***	***Yes***	No

Table 7. Annual Air Pollutant Emissions from Operation of the Project (tons/year)

Scenario	ROG	NO_X	PM_{10}	$PM_{2.5}$
Proposed Project 2025	28.69	22.71	25.46	7.33
Annual Emission Thresholds	*10*	*10*	*15*	*10*
Exceed Threshold?	***Yes***	***Yes***	***Yes***	No

Mitigation Measure AQ-1a: Develop and implement a TDM program

Implementation of a TDM program would reduce operational mobile emissions, however without a draft TDM in place it is not possible to quantify these potential reductions. Even with implementation of a TDM program, ROG, NO_X, and PM_{10} operational emissions are likely to exceed the BAAQMD significance threshold of 10 tons per year for ROG and NO_X and 15 tons year for PM_{10}, respectively. The Specific Plan EIR also determined that the cumulative impact from operational criteria pollutant

emissions would be significant and unavoidable. *This impact would remain significant and unavoidable with mitigation.*

Impact 3: Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As discussed under *Impact 2*, the project would have operational emissions that exceed the significance thresholds adopted by BAAQMD for evaluating impacts to ozone and particulate matter. Therefore, the project would contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. There is an ambient air quality monitoring station in San José that measures carbon monoxide concentrations. The highest measured level over any 8-hour averaging period during the last 5 years is 2.5 parts per million (ppm), compared to the ambient air quality standard of 9.0 ppm. The project would generate traffic that could affect these levels. CO hot spot modeling was performed using the California Line Source Dispersion Model (CALINE4 version 2.1) with weighted vehicle emissions factors from EMFAC2011. Methodology used followed the modeling recommendations contained in the Carbon Monoxide Protocol.[9] 2028 emissions factors were used to represent full project build-out.

The intersection of Capitol Expressway and Quimby Road, which is projected to have the highest traffic volume in the study area, was modeled. Twelve receptors were modeled at the intersection at seven meter distances from roadway segments. Ambient background CO concentrations reported by the CARB were added to the model output results to obtain the predicted build-out CO concentrations at the modeled receptors. Table 8 shows the predicted build-out CO concentrations at the most affected receptor for the intersection. The State and federal ambient air quality standard for 8-hour CO is 9.0 ppm. As shown in Table 8, the highest volume intersection in the study area would be well below the established standard for CO. CALINE4 model worksheets are provided in *Attachment 2*.

Table 8. CO Hot Spot Modeling Results, parts per million (ppm)

Intersection Scenario	Modeled 8-Hour CO	Background 8-Hour CO Concentration[1]	Predicted 8-Hour Build-Out CO
Capitol Expwy. & Quimby Rd.	0.4	2.5	2.9

[1] BAAQMD Air Pollution Summaries for 2008 through 2012 see http://www.baaqmd.gov/Divisions/Communications-and Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx.

[9] California Department of Transportation, 1997. *Transportation Project-Level Carbon Monoxide Protocol*. Revised December.

Impact 4a: Expose sensitive receptors to substantial pollutant concentrations during construction?

Construction of the project would expose sensitive receptors in the project area to DPM from construction related activities. Sensitive receptors in the project area include existing nearby off-site residences, off-site residents near the construction truck travel routes, and, since the project will be constructed in phases over a number of years, new on-site residences whose construction has been completed that would be potentially occupied while construction is continuing in other areas of the project site. The closest existing residences to the project site are located adjacent to the southern and northwestern boundaries of the project site (see Figure 1). It was assumed that new residences would be occupied shortly after construction of each respective phase is completed.

A health risk assessment of the project construction activities was conducted that evaluated potential health effects at nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$. A dispersion model was used to predict concentrations resulting from project construction so that lifetime cancer risks could be predicted. Figure 1 shows the project site and sensitive receptor locations (residences) used in the air quality dispersion modeling analysis where potential health impacts were evaluated.

Construction TAC and $PM_{2.5}$ Emissions

Construction period emissions were computed using CalEEMod and with the EMFAC2011 model for off-site truck emissions (e.g., haul trucks and vendor trucks), along with the expected schedule for construction of the different project phases and projected construction activities, as discussed previously. The number and types of construction equipment and diesel vehicles, along with the anticipated length of their use for different phases of construction, were developed based on type of construction for each phase and the construction activity schedule. Construction of the project is expected to occur in four phase areas (I, II, III, and IV) starting in 2015 with completion in 2027. In addition, off-site traffic mitigation improvements for the Narvaez Avenue/Capitol Expressway improvement area, Curtner Corridor improvement area, and the off-site pedestrian pathways and bridge would be required. The CalEEMod model provided total annual $PM_{2.5}$ exhaust emissions (assumed to be diesel particulate matter) for each construction phase of the project for the off road construction equipment used for construction of the project and for the exhaust emissions from on-road vehicles (haul trucks, vendor trucks, and worker vehicles). The on-road emissions are a result of on-road haul truck travel during grading activities and vendor deliveries during construction. Trip lengths of 2 miles and 0.7 miles (10 percent of the total off-site trip length used by CalEEMod) were assumed for haul trucks and vendor trucks, respectively, to represent vehicle travel while at the construction site. Fugitive emissions of $PM_{2.5}$ from ground disturbance were based on CalEEMod model computations. Construction of the proposed pedestrian trail south of the State Route 87 (SR 87)/Curtner Avenue interchange is expected to be relatively short in duration and limited in magnitude of construction activity (trail construction only with no roadway improvements). Therefore, refined health risk modeling was not conducted for this specific off-site improvement.

Off-site emissions from trucks (haul trucks and construction vendor trucks) associated with construction activities were calculated using emission factors from CARB's EMFAC2011 mobile source emissions model. Based on the CalEEMod model 64 vendor one-way trips per day (or 32 roundtrips) were used for building construction activities, which were assumed to occur for the entire construction period except the first 6 months of construction. In addition, an average of 40 haul truck one-way trips per day would occur during grading activities and 40 truck one-way trips per day would occur during bridge construction

activities. A total of 250 haul truck trips would be needed for the slurry mines grading. For the building construction sub-phase of the industrial area, 229 daily vendor trips were used based on the CalEEMod default. In calculating emissions from haul trucks, all trucks were assumed to be heavy heavy-duty trucks, and for vendor trucks it was assumed that one half would be medium heavy-duty trucks and one half would be heavy heavy-duty trucks. All trucks were assumed to be diesel fueled. DPM emissions from off-site truck travel were used in evaluating health risk impacts to sensitive receptors near the off-site truck travel routes. Details of the emissions used for the construction modeling are provided in *Attachment 3*.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ at existing off-site sensitive receptors in the vicinity of the project construction site and within the new residential areas of the project. The AERMOD model predicts pollutant concentrations at receptors located in areas of flat or complex terrain from a variety of emission source types including point, area, volume, and line sources. Emissions from these source types can be continuous or vary by hour, day of the week, month, or season. For this analysis, the model was run using regulatory default modeling options and urban dispersion coefficients due to the urban nature of the project area. One year of hourly meteorological data for 2004 from the San José Airport, located about 6 miles north-northwest of the project site, was used in the modeling. This data set was prepared by the BAAQMD for use with the AERMOD model. Since there is significant variation in terrain elevation in the project area, the model was run using USGS 10 meter digital terrain data for the project area.

DPM and $PM_{2.5}$ emissions would occur on-site within the project construction areas and off-site from trucks traveling on local roads to and from the construction site. On-site construction activities were modeled on a year-by-year basis for each project phase using area sources. For each project phase, areas where construction activities or grading would occur were identified and representative area sources developed. The modeling utilized between two and eight area sources to represent the on-site emissions during each phase of construction, with a total of 23 area sources for all phases. Off-site construction activities were also modeled using area sources. Modeling of the road improvement construction activities along Curtner Avenue and Narvaez Avenue were modeled separately, with two area sources used to represent construction along Curtner Avenue and one area source representing construction along Narvaez Avenue. Modeling of the pedestrian pathways and Foot Bridge were modeled using a single area source. Each area source was modeled twice, once for DPM exhaust emissions and once for fugitive $PM_{2.5}$ dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (20 feet) was used for each area source. The elevated source height reflects the height of the equipment exhaust pipes and buoyancy of the exhaust plume. For modeling fugitive $PM_{2.5}$ emissions, a near ground level release height of 2 meters (7 feet) was used for each area source. Construction activities were assumed to occur daily between 7 a.m. and 6 p.m. and were modeled as occurring during these hours.

Off-site emissions from local truck travel were modeled as line sources (a series of volume sources along a path) representing the truck travel routes shown in Figure 1. There are two truck routes that would be used for project construction, a northern and a southern route. The southern route along Hillsdale Avenue would initially be used for the first two phases of the project until the bridge over the rail line in the northern part of the project is constructed (in about 2022) and connects internal project roads to the existing Communications Hill Boulevard north of the project site. Once this bridge is established,

construction trucks in the northwestern part of the site (Phase IV construction) could access Curtner Avenue via Communications Hill Boulevard. This would be the northern truck route.

Receptors were placed about every 15 meters (49 feet) within the off-site and on-site residential areas. Annual average DPM and $PM_{2.5}$ concentrations from construction activities were predicted for each year of construction (2015 through 2027). Concentrations were calculated at off-site and on-site sensitive receptors at a height of 1.5 meters (4.9 feet). The locations of the on-site and off-site receptors used in the modeling and locations of maximum-modeled concentrations (locations of maximum cancer risk) are identified on Figure 1.

Construction Cancer Risk, Hazards, and $PM_{2.5}$

Table 9 summarizes cancer risk, hazards, and annual $PM_{2.5}$ concentrations at both the maximally affected on- and off-site sensitive receptors.

Table 9. Construction Maximum Increased Cancer Risk, Hazards, and $PM_{2.5}$

Receptor Location	Child Cancer Risk (per million)	Adult Cancer Risk (per million	Hazard Index (HI)	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Off-Site – adjacent to southern boundary	161.7	13.3	0.14	0.71
On-Site – new residences in Phase I area	104.8	6.7	0.09	0.54
On-Site – new residences in Phase II area	44.0	2.9	0.05	025
On-Site – new residences in Phase III area	31.9	2.0	0.03	0.18
Along North Truck Route and Curtner Ave Construction Area	5.1	0.3	0.01	0.05
Along South Truck Route and Narvaez Ave Construction Area	6.2	0.6	0.01	0.09
BAAQMD Thresholds	10.0	10.0	1.0	0.3

Increased cancer risks were calculated using maximum modeled annual average DPM concentrations and BAAQMD recommended risk assessment methods that include both child exposures (3rd trimester through two years of age) and adult exposures. Infant and child exposures were assumed to occur at residences throughout the entire construction period.

Results of this assessment indicate that the maximum off-site residential child cancer risk is 161.7 in one million and a residential adult cancer risk of 13.3 in one million. The maximum on-site child cancer risk from construction is 104.8 in one million and a residential adult cancer risk of 6.7 in one million. The maximum off-site cancer risks from truck travel and off-site road improvement construction are 6.2 in one million for a child exposure and 0.6 for an adult exposure. These maximum on-site and off-site cancer risks from on-site construction activities would exceed the BAAQMD significance threshold of 10 excess cancer cases in one million and be considered significant. Maximum cancer risks to residents near the north and south truck routes and associated road improvement construction areas along Curtner and Narvaez Avenues would be below the BAAAQMD significance threshold and would be considered less than significant. The location of the receptors with the maximum on-site and off-site increased cancer risks are identified on Figure 1. Cancer risks at other residential receptors would be lower than the

maximum cancer risks identified above. Mitigation measures are presented below to reduce this impact to a less-than-significant level.

Potential non-cancer health effects due to chronic exposure to DPM were also evaluated. The chronic inhalation reference exposure level (REL) for DPM is 5 $\mu g/m^3$. The maximum predicted annual DPM concentrations of 0.14 $\mu g/m^3$ and 0.09 $\mu g/m^3$ for off-site and on-site receptors, respectively, are lower than the REL. The maximum Hazard Index (HI) for off-site or on-site receptors, which is the ratio of the annual DPM concentration to the REL, is 0.03. This HI is much lower than the BAAQMD significance criterion of a HI greater than 1.0.

The modeled maximum annual $PM_{2.5}$ concentrations (which include fugitive dust emissions) would be 0.71 $\mu g/m^3$ and 0.54 $\mu g/m^3$ for off-site and on-site receptors, respectively, which are above the threshold of 0.3 $\mu g/m^3$ used to judge the significance of impacts for $PM_{2.5}$. The exposure of sensitive receptors to annual $PM_{2.5}$ concentrations above 0.3 $\mu g/m^3$ represents a *significant* impact. The maximum $PM_{2.5}$ concentrations from off-site truck travel and off-site road improvement construction would be less than the $PM_{2.5}$ significance level. Mitigation measures are presented below to reduce the impacts from on-site construction activities to a less-than-significant level.

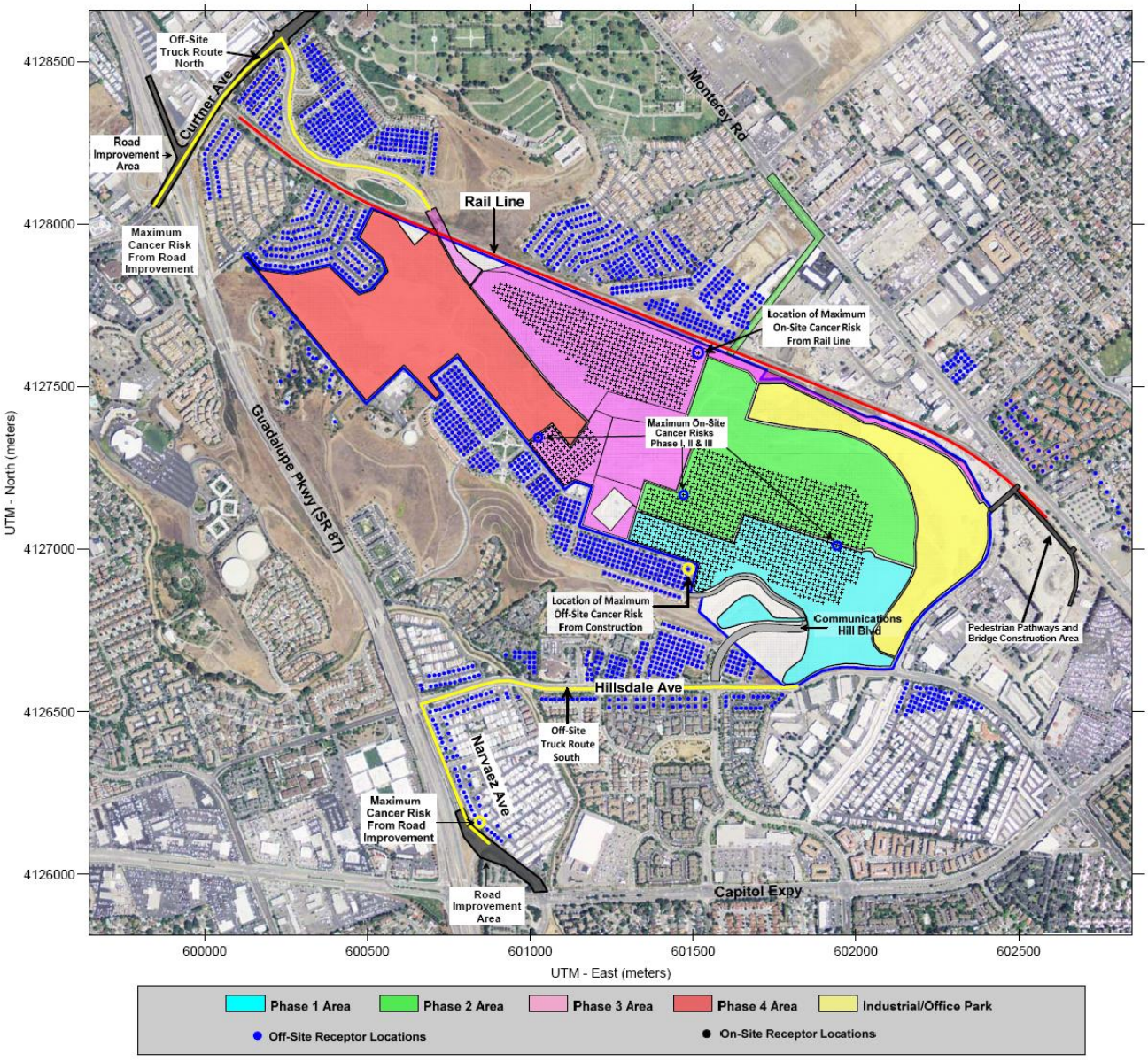
Implementation of *Mitigation Measure AQ-2*, described earlier, is considered to reduce exhaust emissions by 5 percent. Implementation of *Mitigation Measure AQ-3*, described earlier, would further reduce on-site diesel exhaust emissions. The computed excess child and adult cancer risk with implementation of *Mitigation Measures AQ-2 and AQ-3* for off-site and on-site receptors are summarized below. As shown in Table 10, the project with mitigation measures would have *a less-than-significant* impact with respect to community risk caused by construction activities.

Table 10. Construction Maximum Mitigated Increased Cancer Risk, Hazards and $PM_{2.5}$

Receptor Location	Child Cancer Risk (per million)	Adult Cancer Risk (per million	Hazard Index (HI)	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Off-Site – adjacent to southern boundary	6.5	0.6	0.01	0.05
On-Site – new residences in Phase I area	5.7	0.4	0.01	0.04
On-Site – new residences in Phase II area	3.5	0.2	0.00	0.03
On-Site – new residences in Phase III area	3.3	0.2	0.00	0.03
BAAQMD Thresholds	10.0	10.0	1.0	0.3

Attachment 3 includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Figure 1. Project Site, Construction Areas, Sensitive Receptors, and Locations of On-Site and Off-Site Maximum Exposed Individual (MEI)



Impact 4b: Expose sensitive receptors to substantial pollutant concentrations during operation?

BAAQMD has published specific thresholds for analyzing the impact of health risk on nearby sensitive receptors, which are used in this assessment. Implementation of the project would locate new residences near SR 87, nearby rail activity, and several stationary sources (e.g., backup diesel generators at nearby facilities and a concrete plant) that emit TACs. The BAAQMD Guidelines include thresholds to evaluate single source and cumulative source impacts of TACs and $PM_{2.5}$ on proposed sensitive receptors. Annual concentrations of DPM, $PM_{2.5}$, and total organic compounds were obtained and used to predict cancer and non-cancer health risks, in accordance with BAAQMD recommended methodology. In addition, the proposed school could be exposed to substantial pollutant concentrations if it is ultimately developed. TAC impacts to the proposed site during project operation are discussed below.

Roadway TAC Emissions

SR 87 is the primary source of roadway TAC and $PM_{2.5}$ emissions. BAAQMD provides screening tools that indicate predicted community risk impacts that roadways pose. BAAQMD's Google Earth Highway Screening Analysis Tool is a Google Earth map tool used to identify estimated risk and hazard impacts from highways throughout the Bay Area. This tool was used to identify potential TAC exposure from SR 87 at the project site and is available online.[10]

At a distance of approximately 750 feet east of SR 87, estimated cancer risk at the proposed project site would be 8.4 in one million, which is below the BAAQMD community risk significance threshold of 10 in one million. A $PM_{2.5}$ concentration of 0.09 $\mu g/m^3$ and a Hazard Index of 0.01 associated with this source would be well below the BAAQMD community risk significance thresholds.

Caltrain & Union Pacific Railroad TAC Emissions

A Caltrain/Union Pacific Railroad rail line is adjacent to, and runs parallel to, the northern project site boundary. Some of the new residences in the Phase III project area will be as close as 150 feet from the railroad tracks. This rail line is used by trains for both passenger and freight service. Due to the proximity of the rail line to new project residences, potential health risks to future residents from diesel particulate matter emissions from diesel locomotive engines were evaluated.

Future project residences potentially affected by train emissions would be those constructed in the northern portion of the project site during Phase III and IV. These residences are not likely to be occupied until 2022 or later. As such, this evaluation conservatively assumed that all residents in these areas would be affected by train emissions starting in 2022.

Based on the current Caltrain schedule, along this portion of the rail line Caltrain operates 3 trains per weekday between Gilroy and San José; Amtrak has one passenger train daily; and there are between 4 to 6 freight trains that also use this rail line on a daily basis.[11] For this analysis it was assumed that 14 diesel trains would pass by the project site daily.

[10] BAAQMD, 2013.Updated August 6. Available online: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx. Accessed: January 24, 2014.

[11] *Bay Area Regional Rail Plan, Technical Memorandum 4a, Conditions, Configuration & Traffic on Existing System*, Metropolitan Transportation Commission, November 15, 2006.

Rail Line Emissions

DPM and $PM_{2.5}$ emissions from trains passing by the project were calculated using EPA emission factors for locomotives[12] and information from Caltrain.[13] Caltrain and other passenger train engines range from 3,200 to 3,600 horsepower (hp) and are currently using EPA Tier 0+ or Tier 1 engines.[14] Caltrain stated that the locomotive engines will go through mid-level overhaul around the year 2017, and at that time the best engine tier level will be used. These would be EPA Tier 4 engines because Tier 4 engines are required for new or remanufactured locomotives in 2015 or later. The freight trains are larger locomotives, about 4,300 hp, with about 50 percent of them assumed to be using EPA Tier 2 engines and 50 percent EPA Tier 4 engines by 2020. By 2025 it is expected that all locomotive engines will either be replaced or remanufactured to meet EPA's Tier 4 emission standards.

Each passenger and freight train was assumed to use one locomotive. Although the freight trains may have more than one locomotive, it was assumed that only one locomotive would be powering the trains along this portion of the rail line. Emissions from the freight trains were calculated assuming they would use locomotives with 4,300 hp engines and would be traveling at about 30 mph with the engines operating at about 70 percent load. Freight train emissions were calculated for years 2020 and 2025.

Trains for the Caltrain system are planned to be electrified in the near future. This would eliminate DPM emissions from these trains. There would still be several diesel powered locomotives in the Caltrain system that would be used for trains traveling to and from Gilroy during the weekdays (3 northbound and 3 southbound) since the electrification of Caltrain will not extend all the way to Gilroy. For this evaluation it was assumed that all of the trains passing the site would use diesel locomotives. DPM emissions from passenger train locomotives were assumed to use 3,200 hp diesel engines operating at 70 percent load and traveling at 30 mph.

Rail Line Dispersion Modeling

Modeling of locomotive emissions was conducted using the EPA's AERMOD dispersion model and the same meteorological data from the San José Airport that was used for the project construction modeling. Locomotive emissions were modeled as a line source (series of volume sources) along the rail line in the vicinity of project. DPM and $PM_{2.5}$ emissions from the trains used in the modeling were based on emissions for 2020, discussed above. The portion of the rail line included in the modeling is shown in Figure 1. Receptors were placed every 15 meters in the Phase III residential area that would be within about 500 feet of the rail line. A receptor height of 1.5 meters was used for each receptor location. Terrain elevations of the receptors and rail line were included in the modeling based on digital elevation data for the project area. *Attachment 4* includes details on the assumptions used with the modeling and the DPM and $PM_{2.5}$ locomotive emission rates used.

Cancer Risk, Hazards, and $PM_{2.5}$ from Roadways & Rail Line

Using the maximum modeled annual average DPM concentration, the maximum individual cancer risk at the project site was computed using the most recent methods recommended by BAAQMD.[15] The factors used to compute cancer risk are highly dependent on modeled concentrations, exposure period or

[12] *Emission Factors for Locomotives*, USEPA 2009 (EPA-420-F-09-025)

[13] Personal communication with Mr. Stephen Coleman, Manager, Rail Equipment, Caltrain. March 9, 2011.

[14] http://www.caltrain.com/about/statsandreports/commutefleets.html

[15] BAAQMD, *Air Toxics NSR Program Health Risk Screening Analysis (HSRA) Guidelines*, January 2010.

duration, and the type of receptor. The exposure level is determined by the modeled concentration; however, it has to be averaged over a representative exposure period. The averaging period is dependent on many factors, but mostly the type of sensitive receptor that would reside at a site. This assessment conservatively assumed long-term residential exposures. BAAQMD has developed exposure assumptions for typical types of sensitive receptors. These include nearly continuous exposures of 70 years for residences. It should be noted that the cancer risk calculations for 70-year residential exposures reflect use of BAAQMD's most recent cancer risk calculation method, adopted in January 2010. This method applies BAAQMD recommended Age Sensitivity Factors to the cancer risks for residential exposures, accounting for age sensitivity to toxic air contaminants. Age-sensitivity factors reflect the greater sensitivity of infants and children to cancer causing TACs. The cancer risk calculations are provided in *Attachment 4*.

The maximum increased cancer risk was computed as 5.0 in one million. This was modeled at a receptor in the northeast portion of the of the Phase III residential area closest to railroad lines. The location of maximum cancer risk is shown on Figure 1. Cancer risks at other residential areas within the project site would be lower than the maximum cancer risk. Under the BAAQMD CEQA Air Quality Guidelines, an incremental risk of greater than 10.0 cases per million from a single source at the Maximally Exposed Individual (MEI) would be a significant impact.

The air quality assessment predicted a maximum annual DPM exposure much lower than the 5 $\mu g/m^3$ REL for DPM. Thus, the HI would be much lower than significance criterion of a HI greater than 1.0. The maximum $PM_{2.5}$ concentration at the MEI location was 0.0093 $\mu g/m^3$. This concentration is well below the BAAQMD $PM_{2.5}$ threshold of greater than 0.3 $\mu g/m^3$.

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 to identify the location of stationary sources and their estimated risk impacts. This tool identified five sources, listed below, that could affect the project site. At BAAQMD's direction, risk from the San José Water Company generator was adjusted for distance based on BAAQMD distance adjustment factors. Another facility, Concrete ReadyMix, Inc., was modeled using the AERMOD model and BAAQMD provided source emissions data for PM to calculate maximum $PM_{2.5}$ concentrations at the nearest future residents of the project in the Phase II area.

- Plant 15330, a San José Water Company generator located at 487 Batista Drive, is about 500 feet southwest of the closest residential component of the project. According to BAAQMD, the screening risk level is 17.0 per million. This risk was adjusted to account for the 500-foot or greater setback. As a result, this facility would result in an excess cancer risk of 2.0 per million.
- Plant 18120, a San José Fire Department generator located at 2933 Saint Florian Way, is about 360 feet southeast of the closest residential component of the project. According to BAAQMD, the screening risk level is 73.6 per million. A prior evaluation of potential cancer risks from this source was conducted and identified that the maximum residential cancer risk from the emergency generator would be 3.7 in one million at a distance of about 220 feet south-southwest

of the fire station (opposite direction from project residences).[16] The cancer risk of 3.7 in one million does not account for the age sensitivity for child exposures. Accounting for the age sensitivity of children using the BAAQMD cancer risk adjustment factor of 1.7 gives a maximum cancer risk of 6.2 in one million.

- Plant 9910, Concrete ReadyMix, Inc., located at 111 Hillsdale Avenue is located adjacent to the northeastern project boundary and the industrial/office park area of the project. It is about 650 feet from the Phase II project boundary and about 1,000 feet from future project residences in the Phase II area. According to BAAQMD, the screening risk level is 1.96 per million and the $PM_{2.5}$ concentration is 33.0 $\mu g/m^3$. Dispersion modeling of this facility was conducted using the AERMOD model and BAAQMD provided emissions data for PM to calculate maximum $PM_{2.5}$ concentrations at the nearest future residents of the project in the Phase II area. Emission sources at the facility include fugitive sources (stockpiles, grizzlys, hoppers, conveyors, stackers) and baghouses for the cement and batching silos. Since specific source information was not provided by the BAAQMD, all emission sources were modeled using volume sources. Two volume sources were used to represent the fugitive sources and one volume source was used to represent the silo baghouse emissions. Although $PM_{2.5}$ represents only a small fraction of PM_{10} emissions (about 15%), the BAAQMD PM emissions (assumed to be PM_{10}) were used to provide a conservative estimate of potential $PM_{2.5}$ impacts from the concrete plant. The results of the modeling show that the maximum annual $PM_{2.5}$ concentration in the Phase II residential area would be 0.06 $\mu g/m^3$. This concentration is well below the significance threshold of 0.3 $\mu g/m^3$. For related correspondence with BAAQMD, District-provided stationary source information, and health risk computations, please see Attachment 4.
- Plant 1262, Azevedo Quarry, located at 55 Hillsdale Avenue, is currently decommissioned, but an aggregate recycling facility will operate until 2023. The site will be completely decommissioned by the time that residences are living within close proximity of the old facility.
- Plant 12286, Granite Rock Company, located at 100 Granite Rock Way, is located over 1,000 feet from future project residences and, therefore, was not evaluated.

Impacts to Proposed School

It is not possible at this time to analyze the potential TAC impacts to the proposed school. If, and when, the proposed school is analyzed at the project level, a subsequent analysis of potential health risk impacts should be conducted. Implementation of Mitigation Measure AQ-4 would reduce this impact to a less than significant level.

Impacts from Future Industrial Uses

The Specific Plan EIR requires the planning and regulation of future industrial activities to minimize adverse impacts on nearby land uses. At this time, there is not enough information to assess specific proposed industrial uses at the project-level. A subsequent analysis of potential health risk impacts should be conducted when specific uses are known. Implementation of Mitigation Measure AQ-4 would reduce this impact to a less than significant level.

[16] Illingworth & Rodkin, Inc. 2006. *San José Fire Department No. 33, Air Quality and Health Risk Assessment for Installation of a 150-kW Emergency Standby Generator*.

Mitigation Measure AQ-4: Subsequent project-level health risk analyses of TAC impacts on project school use and from project industrial uses.

New significant TAC exposures to the proposed school and potentially from new industrial uses shall require refined analyses of the potential health risks at the project-level once project-specific information becomes available. These analyses would identify the level of exposure and identify the measures to reduce exposures to a less-than-significant level. Mitigation measures which comply with adopted standards of BAAQMD for control of TACs for sensitive receptors shall be identified to reduce these risks to acceptable levels. Such measures could include site design, use of appropriate filtration in ventilation systems, vegetative barriers, or a combination of measures.

Cumulative Operational TAC Exposure

The project site is affected by several sources of TACs. Table 11 shows the cancer risk, hazard index, and $PM_{2.5}$ concentrations associated with each source affecting the project site. The sum of impacts from cumulative sources (i.e., sources within 1,000 feet of the project) would be below the thresholds used by BAAQMD.

Table 11. Impacts from Cumulative Sources

Source	Maximum Cancer Risk (per million)	Maximum Hazard Index	Maximum Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Highway 87	8.4	0.01	0.09
Caltrain and Union Pacific Railroad	5.0	<0.01	0.01
Plant No. 15330 – San José Water Company generator	2.0	<0.01	<0.01
Plant No. 18120 – San José Fire Department generator	6.2	0.03	0.02
Plant. No. 9910 – Concrete ReadyMix, Inc.	2.0	<0.01	0.06
Maximum Single Source	8.4	0.03	0.09
BAAQMD Threshold - Single Source	***10***	***1.0***	***0.3***
Cumulative Sources	23.6	<0.07	<0.19
BAAQMD Threshold – Cumulative Sources	***100***	***10.0***	***0.8***

Impact 5: Create objectionable odors affecting a substantial number of people?

The project would generate localized emissions of diesel exhaust during equipment operation and truck activity. These emissions may be noticeable from time to time by adjacent receptors. However, they would be temporary, and localized, and are not likely to adversely affect people off site to the extent that they would result in confirmed odor complaints. The project site is not affected by existing odor sources that would cause odor complaints. This would be a *less-than-significant impact*.

Communications Hill - Construction Schedule

Year	Activity	Duration Months	Days	Start Date	End Date	Notes	Assumptions
2015	**Phase I**						
	Mass Grading/Excavation	6	130	1/1/2015	6/30/2015	Two 6-month grading operations for 1st two years (2015 and 2016)	
	Trenching	4	80	5/1/2015	8/20/2015	Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	2	20	6/1/2015	6/30/2015	Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	0	0			Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	6	125	6/1/2015	12/31/2015	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0.45	10	9/1/2015	9/15/2015	Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	3	66	10/1/2015	12/31/2015	Ongoing during **12 year** buildout	every year 2015 - 2027
2016	**Phase I**						
	Mass Grading/Excavation	6	130	1/1/2016	6/30/2016	Two 6-month grading operations for 1st two years (2015 and 2016)	
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	1.5	30	9/1/2016	10/15/2016	Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2016	12/31/2016	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2016	12/31/2016	Ongoing during **12 year** buildout	every year 2015 - 2027
2016	***Phase I Off-Site Improvments (Narvaez)***						
	Grading/Rock/Paving	0.5	11	12/5/2016	12/19/2016		
	Trenching	0.4	9	12/20/2016	12/31/2016		
2017	**Phase I**						
	Trenching	4	80	5/1/2017	8/20/2017	Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	2	20	6/1/2017	6/30/2017	Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	0	0			Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2017	12/31/2017	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0.45	10	9/1/2017	9/15/2017	Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2017	12/31/2017	Ongoing during **12 year** buildout	every year 2015 - 2027
2017	***Phase I Off-Site Improvments (Narvaez)***						
	Trenching	3.3	72	1/1/2017	4/11/2017		
	Concrete	1	22	4/12/2017	5/11/2017		
	Landscaping	7.5	166	5/12/2017	12/31/2017		
2018	**Phase I**						
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	1.5	30	9/1/2018	10/15/2018	Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2018	12/31/2018	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2018	12/31/2018	Ongoing during **12 year** buildout	every year 2015 - 2027
	Architectural Coating	3.4	75	9/18/2018	12/31/2018		
2018	***Phase I Off-Site Improvments (Narvaez)***						
	Landcaping	1	260	1/1/2018	12/31/2018		
2019	**Phase II**						
	Trenching	4	80	5/1/2019	8/20/2019	Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	2	20	6/1/2019	6/30/2019	Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	0	0			Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2019	12/31/2019	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0.45	10	9/1/2019	9/15/2019	Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2019	12/31/2019	Ongoing during **12 year** buildout	every year 2015 - 2027
2019	***Phase II Off-Site Improvments (Curtner)***						
	Grading/Rock/Paving	0.5	11	12/5/2019	12/19/2019		
	Trenching	0.4	9	12/20/2019	12/31/2019		
2020	**Phase II**						
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021

	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	1.5	30	9/1/2020	10/15/2020	Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2020	12/31/2020	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2020	12/31/2020	Ongoing during **12 year** buildout	every year 2015 - 2027
2020	***Phase II Off-Site Improvments (Curtner)***						
	Trenching	3.3	72	1/1/2020	4/11/2020		
	Concrete	1	22	4/12/2020	5/11/2020		
	Landscaping	7.5	166	5/12/2020	12/31/2020		
2021	**Phase II**						
	Trenching	4	80	5/1/2021	8/20/2021	Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	2	20	6/1/2021		Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	0	0			Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2021	12/31/2021	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0.45	10	9/1/2019	9/15/2019	Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2021	12/31/2021	Ongoing during **12 year** buildout	every year 2015 - 2027
	Architectural Coating	3.4	75	9/18/2021	12/31/2021		
2021	***Phase II Off-Site Improvments (Curtner)***						
	Landcaping	1	260	1/1/2021	12/31/2021		
2022	**Phase III**						
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	1.5	30	9/1/2022	10/15/2022	Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2022	12/31/2022	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2022	12/31/2022	Ongoing during **12 year** buildout	every year 2015 - 2027
2022	***Bridge Construction (Phase III)***	8	160	4/1/2022	11/31/2022	3 month foundation, 2 month abutment & 3 month super structure	
2022	***Industrial (Phase III)***						
	Trenching	1.3	29	1/3/2022	2/10/2022		
	Concrete	0.3	7	2/11/2022	2/21/2022		
	Landscaping	6.8	150	2/22/2022	9/19/2022		
	Building Construction	3.4	74	9/20/2022	12/31/2022		
2022	***Mine slurry (Phase III)***						
	Grading	0.2	5	1/1/2022	1/7/2022		
2023	**Phase III**						
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	0	0			Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2023	12/31/2023	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2023	12/31/2023	Ongoing during **12 year** buildout	every year 2015 - 2027
2023	***Industrial (Phase III)***						
	Building Construction	4.1	90	1/1/2023	5/5/2023		
	Architectural Coating	0.7	15	5/8/2023	5/26/2023		
2024	**Phase III**						
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	1.5	30	9/1/2024	10/15/2024	Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2024	12/31/2024	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2024	12/31/2024	Ongoing during **12 year** buildout	every year 2015 - 2027
	Architectural Coating	3.4	75	9/18/2024	12/31/2024		
2025	**Phase IV**						
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021

	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	0	0			Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2025	12/31/2025	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2025	12/31/2025	Ongoing during **12 year** buildout	every year 2015 - 2027
2025	***Phase IV Off-Site Improvements***						
	Grading/Rock/Paving	3.5	76	1/1/2025	4/16/2025		
	Trenching	0.5	11	4/17/2025	5/1/2025		
	Building Construction	7.9	174	5/2/2025	12/31/2025		
2026	**Phase IV**						
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	1.5	30	9/1/2026	10/15/2026	Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2026	12/31/2026	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	9/1/2026	10/15/2026	Ongoing during **12 year** buildout	every year 2015 - 2027
2026	***Phase IV Off-Site Improvements***						
	Building Construction	12	260	1/1/2026	12/31/2026		
2027	**Phase IV**						
	Trenching	0	0			Four 4-month operations, once every 2 years	2015, 2017, 2019, 2021
	Concrete Curbs, Gutters, Sidewalks	0	0			Four 2-month operations, once every 2 years	2015, 2017, 2019, 2021
	Building - Foundation (Podium & Village Center)	0	0			Six 30-Day operations - 4 Podium Buildings & Village Center - once every 2 years	Use 2016, 2018, 2020, 2022, 2024, 2026 (**this ass**
	Building Interior/Exterior	12	260	1/1/2027	12/31/2027	Ongoing during **12 year** buildout -Townhome/Flats, Single Family Detached	every year 2015 - 2027
	Paving	0	0			Four 2-week operations, once every 2 years	2015, 2017, 2019, 2021
	Landscaping	12	260	1/1/2027	12/31/2027	Ongoing during **12 year** buildout	every year 2015 - 2027
	Architectural Coating	3.4	75	9/18/2027	12/31/2027		
2027	***Phase IV Off-Site Improvements***						
	Building Construction	0.9	19	1/1/2027	1/27/2027		

Project Name:		Communications Hill						
2015-2027								
Qty	Description	Horsepower	Load Factor	Hours/ Day	Work Days	Total Annual Hours	HP hours	Comments
Demolition		*Not Applicable*						
Mass Grading / Excavation								Hauling volume
10	Scraper	361	0.48	10	260	26000	4,505,280	Export volume = 0 cubic yards
4	Crawler Tractors	208	0.43	10	260	10400	930,176	Import volume = 0 cubic yards
2	Plate Compactors	300	0.37	10	260	5200	577,200	Two 6-month grading operations
2	Rubber Tire Loader	199	0.36	10	260	5200	372,528	First during year 1
2	Graders	174	0.41	10	260	5200	370,968	Second during year 2
Trenching								
8	Excavator	162	0.38	8	320	20480	1,260,749	Four 4-month operations
9	Tractor/Loader/Backhoe	97	0.37	8	320	23040	826,906	Including both Wet & Dry Utilities
10	Other Material Handling	167	0.4	8	320	25600	1,710,080	1 operation every two years
Concrete Curbs, Gutter, Sidewalks								
20	Other Constr. Equip.	171	0.42	8	80	12800	919,296	Four 2-month operations
								1 operation every two years
Paving								
2	Paving Equipment	130	0.36	10	40	800	37,440	Four 2-week operations
2	Roller	80	0.38	10	40	800	24,320	1 operation every two years
Landscaping								
2	Tractor/Loader/Backhoe	97	0.37	8	2500	40000	1,435,600	Ongoing during 10 year buildout
1	Skid Steer Loader	64	0.37	8	2500	20000	473,600	
1	Other Material Handling	167	0.4	8	2500	20000	1,336,000	
2	Dumpers/Tenders	16	0.38	8	2500	40000	243,200	
Building - Foundation								
2	Cranes	226	0.29	12	180	4320	283,133	4 Podium Buildings & Village Center
21	Other Constr. Equip.	171	0.42	12	180	45360	3,257,755	Six 30-Day operations
								1 operation every two years
Building - Interior/Exterior								
5	Forklift	89	0.2	10	2500	125000	2,225,000	Townhome/Flats, Single Family Detached
5	Skid Steer Loaders	64	0.37	10	2500	125000	2,960,000	Ongoing during 10 year buildout
5	Cranes	226	0.29	10	2500	125000	8,192,500	
5	Tractor/Loader/Backhoe	97	0.37	10	2500	125000	4,486,250	
10	Other Constr. Equip.	171	0.42	10	2500	250000	17,955,000	
Architectural Coating								
1	Air Compressor	78	0.48	6	75	450	16,848	

Bridge Construction								Eight month total duration:
1	Scraper	361	0.48	8	160	1280	221,798	3 month foundation, 2 month abutment &
1	Grader	174	0.41	8	160	1280	91,315	3 month super structure
2	Crawler Tractors	208	0.43	8	160	2560	228,966	
2	Compactors	300	0.37	8	160	2560	284,160	
1	Rubber Tire Loader	199	0.36	8	160	1280	91,699	
2	Cranes	226	0.29	8	160	2560	167,782	
2	Excavator	162	0.38	8	160	2560	157,594	
1	Bore/Drill Rig	205	0.5	8	60	480	49,200	
4	Other Constr. Equip.	171	0.42	8	160	5120	367,718	
2	Tractor/Loader/Backhoe	97	0.37	8	160	2560	91,878	
Slurry Mines (Phase 3)								Hauling volume = 250 total truck trips
2	Off-Highway Trucks	400	0.38	8	5	80	12,160	
2	Pumps	84	0.74	8	5	80	4,973	
Off-Site Phases 1 and 2 (each)								
Grading/Rock/Paving								
4	Scrapers	361	0.48	8	11	352	60,995	
2	Dozers	255	0.4	8	11	176	17,952	
2	Compactors	300	0.37	8	11	176	19,536	
2	Tractor/Loader/Backhoe	97	0.37	8	11	176	6,317	
2	Graders	174	0.41	8	11	176	12,556	
1	Paver	125	0.42	8	11	88	4,620	
1	Roller	80	0.38	8	11	88	2,675	
Trenching								
1	Excavator	162	0.38	8	81	648	39,891	
3	Tractor/Loader/Backhoe	97	0.37	8	81	1944	69,770	
Concrete								
5	Other Constr. Equip.	171	0.42	8	22	880	63,202	
Landscape								
1	Tractor/Loader/Backhoe	97	0.37	8	427	3416	122,600	
1	Skid Steer Loader	64	0.37	8	427	3416	80,891	
1	Dumper/Tender	16	0.38	8	427	3416	20,769	
Off-Site Phase 4								
Grading/Rock/Paving								
1	Dozer	255	0.4	8	76	608	62,016	
1	Compactor	300	0.37	8	76	608	67,488	
2	Tractor/Loader/Backhoe	97	0.37	8	76	1216	43,642	
1	Grader	174	0.41	8	76	608	43,375	
Trenching								
2	Tractor/Loader/Backhoe	97	0.37	8	11	176	6,317	
Vertical Construction								
2	Other Constr. Equip.	171	0.42	8	454	7264	521,700	
1	Crane	226	0.29	8	454	3632	238,041	

Industrial Site (Phase 3)								
Trenching								
1	Excavator	162	0.38	8	29	232	14,282	
3	Tractor/Loader/Backhoe	97	0.37	8	29	696	24,979	
Concrete								
3	Other Constr. Equip.	171	0.42	8	7	168	12,066	
Landscape								
1	Tractor/Loader/Backhoe	97	0.37	8	150	1200	43,068	
1	Skid Steer Loader	64	0.37	8	150	1200	28,416	
1	Dumper/Tender	16	0.38	8	150	1200	7,296	
Vertical Construction								
3	Forklift	89	0.2	8	164	3936	70,061	
5	Other Constr. Equip.	171	0.42	8	164	6560	471,139	
7	Tractor/Loader/Backhoe	97	0.37	8	164	9184	329,614	
2	Pumps	84	0.74	8	164	2624	163,108	
1	Crane	226	0.29	8	164	1312	85,988	
1	Other Material Handling	167	0.4	8	164	1312	87,642	
Architectural Coating								
1	Air Compressor	78	0.48	6	15	90	3,370	

Communications Hill - Mass Grading

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Residential	1.00	Dwelling Unit	319.00	0.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - User defined use - no architectural coating emissions (s.f. = 0), mass grading only.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Estimated sub-phase durations from information provided by project applicant.

Trips and VMT - Model defaults + 20 haul trips per day (dump trucks).

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	620.00	129.00
tblConstructionPhase	NumDays	620.00	130.00
tblConstructionPhase	PhaseEndDate	12/29/2015	6/30/2016
tblConstructionPhase	PhaseStartDate	7/1/2015	1/1/2016
tblGrading	AcresOfGrading	2,096.25	1,550.00
tblGrading	AcresOfGrading	2,112.50	1,550.00
tblLandUse	LotAcreage	0.00	319.00
tblOffRoadEquipment	HorsePower	8.00	300.00
tblOffRoadEquipment	HorsePower	8.00	300.00
tblOffRoadEquipment	LoadFactor	0.43	0.04
tblOffRoadEquipment	LoadFactor	0.43	0.04
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	8.00	10.00

tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00

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					
2015	1.6607	20.9927	11.5504	0.0169	0.8516	0.8624	1.7140	0.0967	0.7934	0.8900	0.0000	1,599.4350	1,599.4350	0.4706	0.0000	1,609.3179
2016	1.6121	20.1568	11.1480	0.0170	0.8518	0.8267	1.6785	0.0967	0.7605	0.8573	0.0000	1,593.5795	1,593.5795	0.4738	0.0000	1,603.5294
Total	**3.2728**	**41.1495**	**22.6984**	**0.0338**	**1.7034**	**1.6891**	**3.3925**	**0.1934**	**1.5539**	**1.7473**	**0.0000**	**3,193.0144**	**3,193.0144**	**0.9444**	**0.0000**	**3,212.8472**

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					
2015	0.2166	0.9044	7.9272	0.0169	0.0667	0.0274	0.0941	0.0119	0.0274	0.0393	0.0000	1,599.4331	1,599.4331	0.4706	0.0000	1,609.3160
2016	0.2169	0.9084	7.9688	0.0170	0.0669	0.0276	0.0945	0.0120	0.0275	0.0395	0.0000	1,593.5776	1,593.5776	0.4738	0.0000	1,603.5275

Total	**0.4335**	**1.8128**	**15.8961**	**0.0338**	**0.1336**	**0.0550**	**0.1885**	**0.0239**	**0.0549**	**0.0787**	**0.0000**	**3,193.0107**	**3,193.0107**	**0.9444**	**0.0000**	**3,212.8435**

	ROG	NOx	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	**86.75**	**95.59**	**29.97**	**0.00**	**92.16**	**96.75**	**94.44**	**87.67**	**96.47**	**95.49**	**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	Mass Grading 2015	Grading	1/1/2015	6/30/2015	5	129	
2	Mass Grading 2016	Grading	1/1/2016	6/30/2016	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mass Grading 2015	Crawler Tractors	4	10.00	208	0.43
Mass Grading 2015	Excavators	0	8.00	162	0.38
Mass Grading 2015	Graders	2	10.00	174	0.41
Mass Grading 2015	Plate Compactors	2	10.00	300	0.04
Mass Grading 2015	Rubber Tired Dozers	0	8.00	255	0.40
Mass Grading 2015	Rubber Tired Loaders	2	10.00	199	0.36
Mass Grading 2015	Scrapers	10	10.00	361	0.48
Mass Grading 2015	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Mass Grading 2016	Crawler Tractors	4	10.00	208	0.43
Mass Grading 2016	Excavators	0	8.00	162	0.38

Mass Grading 2016	Graders	2	10.00	174	0.41
Mass Grading 2016	Plate Compactors	2	10.00	300	0.04
Mass Grading 2016	Rubber Tired Dozers	0	8.00	255	0.40
Mass Grading 2016	Rubber Tired Loaders	2	10.00	199	0.36
Mass Grading 2016	Scrapers	10	10.00	361	0.48
Mass Grading 2016	Tractors/Loaders/Backhoes	0	8.00	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
Mass Grading 2015	20	50.00	0.00	40.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Mass Grading 2016	20	50.00	0.00	40.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Mass Grading 2015 - 2015

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					0.8219	0.0000	0.8219	0.0887	0.0000	0.0887	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6468	20.9670	11.3621	0.0165		0.8620	0.8620		0.7931	0.7931	0.0000	1,571.2500	1,571.2500	0.4691	0.0000	1,581.1007

Total	**1.6468**	**20.9670**	**11.3621**	**0.0165**	**0.8219**	**0.8620**	**1.6839**	**0.0887**	**0.7931**	**0.8818**	**0.0000**	**1,571.2500**	**1,571.2500**	**0.4691**	**0.0000**	**1,581.1007**

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	4.9000e-004	6.9200e-003	4.9800e-003	2.0000e-005	3.4000e-004	1.0000e-004	4.4000e-004	9.0000e-005	9.0000e-005	1.9000e-004	0.0000	1.3863	1.3863	1.0000e-005	0.0000	1.3865
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0134	0.0189	0.1833	3.4000e-004	0.0294	2.5000e-004	0.0296	7.8100e-003	2.3000e-004	8.0400e-003	0.0000	26.7988	26.7988	1.5200e-003	0.0000	26.8307
Total	**0.0139**	**0.0258**	**0.1883**	**3.6000e-004**	**0.0297**	**3.5000e-004**	**0.0301**	**7.9000e-003**	**3.2000e-004**	**8.2300e-003**	**0.0000**	**28.1850**	**28.1850**	**1.5300e-003**	**0.0000**	**28.2172**

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					0.0370	0.0000	0.0370	3.9900e-003	0.0000	3.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2028	0.8786	7.7389	0.0165		0.0270	0.0270		0.0270	0.0270	0.0000	1,571.2481	1,571.2481	0.4691	0.0000	1,581.0988
Total	**0.2028**	**0.8786**	**7.7389**	**0.0165**	**0.0370**	**0.0270**	**0.0640**	**3.9900e-003**	**0.0270**	**0.0310**	**0.0000**	**1,571.2481**	**1,571.2481**	**0.4691**	**0.0000**	**1,581.0988**

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	4.9000e-004	6.9200e-003	4.9800e-003	2.0000e-005	3.4000e-004	1.0000e-004	4.4000e-004	9.0000e-005	9.0000e-005	1.9000e-004	0.0000	1.3863	1.3863	1.0000e-005	0.0000	1.3865
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0134	0.0189	0.1833	3.4000e-004	0.0294	2.5000e-004	0.0296	7.8100e-003	2.3000e-004	8.0400e-003	0.0000	26.7988	26.7988	1.5200e-003	0.0000	26.8307
Total	**0.0139**	**0.0258**	**0.1883**	**3.6000e-004**	**0.0297**	**3.5000e-004**	**0.0301**	**7.9000e-003**	**3.2000e-004**	**8.2300e-003**	**0.0000**	**28.1850**	**28.1850**	**1.5300e-003**	**0.0000**	**28.2172**

3.3 Mass Grading 2016 - 2016

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					0.8219	0.0000	0.8219	0.0887	0.0000	0.0887	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5996	20.1338	10.9781	0.0166		0.8264	0.8264		0.7603	0.7603	0.0000	1,566.1364	1,566.1364	0.4724	0.0000	1,576.0568
Total	**1.5996**	**20.1338**	**10.9781**	**0.0166**	**0.8219**	**0.8264**	**1.6483**	**0.0887**	**0.7603**	**0.8490**	**0.0000**	**1,566.1364**	**1,566.1364**	**0.4724**	**0.0000**	**1,576.0568**

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	4.4000e-004	5.9700e-003	4.6800e-003	2.0000e-005	3.4000e-004	8.0000e-005	4.2000e-004	9.0000e-005	7.0000e-005	1.6000e-004	0.0000	1.3705	1.3705	1.0000e-005	0.0000	1.3707
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0121	0.0170	0.1652	3.4000e-004	0.0296	2.4000e-004	0.0298	7.8700e-003	2.2000e-004	8.0900e-003	0.0000	26.0726	26.0726	1.3900e-003	0.0000	26.1019
Total	**0.0125**	**0.0230**	**0.1699**	**3.6000e-004**	**0.0299**	**3.2000e-004**	**0.0303**	**7.9600e-003**	**2.9000e-004**	**8.2500e-003**	**0.0000**	**27.4431**	**27.4431**	**1.4000e-003**	**0.0000**	**27.4726**

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					0.0370	0.0000	0.0370	3.9900e-003	0.0000	3.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2043	0.8855	7.7989	0.0166		0.0272	0.0272		0.0272	0.0272	0.0000	1,566.1345	1,566.1345	0.4724	0.0000	1,576.0549
Total	**0.2043**	**0.8855**	**7.7989**	**0.0166**	**0.0370**	**0.0272**	**0.0642**	**3.9900e-003**	**0.0272**	**0.0312**	**0.0000**	**1,566.1345**	**1,566.1345**	**0.4724**	**0.0000**	**1,576.0549**

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	4.4000e-004	5.9700e-003	4.6800e-003	2.0000e-005	3.4000e-004	8.0000e-005	4.2000e-004	9.0000e-005	7.0000e-005	1.6000e-004	0.0000	1.3705	1.3705	1.0000e-005	0.0000	1.3707
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0121	0.0170	0.1652	3.4000e-004	0.0296	2.4000e-004	0.0298	7.8700e-003	2.2000e-004	8.0900e-003	0.0000	26.0726	26.0726	1.3900e-003	0.0000	26.1019
Total	**0.0125**	**0.0230**	**0.1699**	**3.6000e-004**	**0.0299**	**3.2000e-004**	**0.0303**	**7.9600e-003**	**2.9000e-004**	**8.2500e-003**	**0.0000**	**27.4431**	**27.4431**	**1.4000e-003**	**0.0000**	**27.4726**

Communications Hill - Phase 1 Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	575.00	Dwelling Unit	47.00	575,000.00	1645
Strip Mall	16.20	1000sqft	0.00	16,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Phase 1 acreage supplied by project applicant.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

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Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Trips and VMT - Model defaults for vendor trips.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	92.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	25.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	55.00	75.00
tblConstructionPhase	NumDays	740.00	31.00

tblConstructionPhase	NumDays	740.00	936.00
tblConstructionPhase	NumDays	740.00	32.00
tblConstructionPhase	NumDays	55.00	22.00
tblConstructionPhase	NumDays	55.00	11.00
tblConstructionPhase	NumDays	55.00	22.00
tblConstructionPhase	NumDays	55.00	11.00
tblConstructionPhase	NumDays	30.00	848.00
tblConstructionPhase	PhaseEndDate	1/28/2019	12/31/2018
tblConstructionPhase	PhaseEndDate	10/30/2017	10/15/2018
tblConstructionPhase	PhaseEndDate	3/22/2019	12/31/2018
tblConstructionPhase	PhaseEndDate	2/13/2019	10/15/2016
tblConstructionPhase	PhaseEndDate	1/30/2019	6/30/2015
tblConstructionPhase	PhaseEndDate	7/15/2015	9/15/2015
tblConstructionPhase	PhaseEndDate	9/19/2017	6/30/2017
tblConstructionPhase	PhaseEndDate	7/17/2017	9/15/2017
tblConstructionPhase	PhaseEndDate	12/14/2018	12/31/2018
tblConstructionPhase	PhaseEndDate	2/3/2017	8/20/2017
tblConstructionPhase	PhaseStartDate	10/16/2018	9/18/2018
tblConstructionPhase	PhaseStartDate	9/16/2017	9/1/2018
tblConstructionPhase	PhaseStartDate	8/21/2015	6/1/2015
tblConstructionPhase	PhaseStartDate	1/1/2019	9/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2019	6/1/2015
tblConstructionPhase	PhaseStartDate	7/1/2015	9/1/2015
tblConstructionPhase	PhaseStartDate	8/21/2017	6/1/2017
tblConstructionPhase	PhaseStartDate	7/1/2017	9/1/2017
tblConstructionPhase	PhaseStartDate	9/16/2015	10/1/2015
tblConstructionPhase	PhaseStartDate	10/16/2016	5/1/2017
tblLandUse	LotAcreage	35.94	47.00
tblLandUse	LotAcreage	0.37	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	12.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	7.00	12.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00

tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblTripsAndVMT	VendorTripNumber	64.00	0.00
tblTripsAndVMT	VendorTripNumber	64.00	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					
2015	2.3284	23.8485	15.7644	0.0239	0.3604	1.3097	1.6701	0.0965	1.2050	1.3015	0.0000	2,207.9128	2,207.9128	0.5547	0.0000	2,219.5620
2016	3.1294	31.6865	21.5398	0.0341	0.6306	1.7078	2.3385	0.1688	1.5716	1.7404	0.0000	3,084.7302	3,084.7302	0.7485	0.0000	3,100.4495
2017	3.1171	31.5463	22.8561	0.0368	0.5977	1.7135	2.3112	0.1601	1.5768	1.7369	0.0000	3,283.7645	3,283.7645	0.8327	0.0000	3,301.2503
2018	6.6599	25.4297	20.0007	0.0344	0.6574	1.3304	1.9878	0.1760	1.2248	1.4007	0.0000	2,986.9501	2,986.9501	0.7425	0.0000	3,002.5426
Total	**15.2348**	**112.5109**	**80.1611**	**0.1292**	**2.2461**	**6.0614**	**8.3075**	**0.6013**	**5.5782**	**6.1795**	**0.0000**	**11,563.3576**	**11,563.3576**	**2.8784**	**0.0000**	**11,623.8044**

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					
2015	0.4599	2.3158	16.2464	0.0239	0.3604	0.0430	0.4033	0.0965	0.0420	0.1385	0.0000	2,207.9106	2,207.9106	0.5547	0.0000	2,219.5598

2016	0.6700	3.4947	22.0529	0.0341	0.6306	0.0586	0.6893	0.1688	0.0572	0.2261	0.0000	3,084.7274	3,084.7274	0.7485	0.0000	3,100.4466
2017	0.6586	3.5140	23.8848	0.0368	0.5977	0.0615	0.6592	0.1601	0.0603	0.2204	0.0000	3,283.7614	3,283.7614	0.8327	0.0000	3,301.2471
2018	4.7440	3.2842	21.3763	0.0344	0.6574	0.0560	0.7134	0.1760	0.0548	0.2308	0.0000	2,986.9473	2,986.9473	0.7425	0.0000	3,002.5398
Total	**6.5325**	**12.6087**	**83.5604**	**0.1292**	**2.2461**	**0.2190**	**2.4651**	**0.6013**	**0.2143**	**0.8157**	**0.0000**	**11,563.3467**	**11,563.3467**	**2.8784**	**0.0000**	**11,623.7934**

	ROG	NOx	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	**57.12**	**88.79**	**-4.24**	**0.00**	**0.00**	**96.39**	**70.33**	**0.00**	**96.16**	**86.80**	**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	Trenching 2015	Trenching	5/1/2015	8/20/2015	5	80	
2	Building Construction	Building Construction	6/1/2015	12/31/2018	5	936	
3	Concrete Curbs 2015	Paving	6/1/2015	6/30/2015	5	22	
4	Paving 2015	Paving	9/1/2015	9/15/2015	5	11	
5	Landscaping	Site Preparation	10/1/2015	12/31/2018	5	848	
6	Foundation 2016	Building Construction	9/1/2016	10/15/2016	5	32	
7	Trenching 2017	Trenching	5/1/2017	8/20/2017	5	80	
8	Concrete Curbs 2017	Paving	6/1/2017	6/30/2017	5	22	
9	Paving 2017	Paving	9/1/2017	9/15/2017	5	11	
10	Foundation 2018	Building Construction	9/1/2018	10/15/2018	5	31	
11	Architectural Coating	Architectural Coating	9/18/2018	12/31/2018	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,164,375; Residential Outdoor: 388,125; Non-Residential Indoor: 24,300; Non-Residential Outdoor: 8,100

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching 2015	Excavators	8	8.00	162	0.38
Trenching 2015	Other Material Handling Equipment	10	8.00	167	0.40
Trenching 2015	Tractors/Loaders/Backhoes	9	8.00	97	0.37
Building Construction	Cranes	5	10.00	226	0.29
Building Construction	Forklifts	5	10.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Other Construction Equipment	10	10.00	171	0.42
Building Construction	Skid Steer Loaders	5	10.00	64	0.37
Building Construction	Tractors/Loaders/Backhoes	5	10.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Concrete Curbs 2015	Other Construction Equipment	20	8.00	171	0.42
Concrete Curbs 2015	Pavers	0	8.00	125	0.42
Concrete Curbs 2015	Paving Equipment	0	8.00	130	0.36
Concrete Curbs 2015	Rollers	0	8.00	80	0.38
Paving 2015	Pavers	0	8.00	125	0.42
Paving 2015	Paving Equipment	2	10.00	130	0.36
Paving 2015	Rollers	2	10.00	80	0.38
Landscaping	Dumpers/Tenders	2	8.00	16	0.38
Landscaping	Other Material Handling Equipment	1	8.00	167	0.40
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Skid Steer Loaders	1	8.00	64	0.37
Landscaping	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Foundation 2016	Cranes	2	12.00	226	0.29
Foundation 2016	Forklifts	0	8.00	89	0.20
Foundation 2016	Generator Sets	0	8.00	84	0.74
Foundation 2016	Other Construction Equipment	21	12.00	171	0.42
Foundation 2016	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Foundation 2016	Welders	0	8.00	46	0.45

Trenching 2017	Excavators	8	8.00	162	0.38
Trenching 2017	Other Material Handling Equipment	10	8.00	167	0.40
Trenching 2017	Tractors/Loaders/Backhoes	9	8.00	97	0.37
Concrete Curbs 2017	Other Construction Equipment	20	8.00	171	0.42
Concrete Curbs 2017	Pavers	0	8.00	125	0.42
Concrete Curbs 2017	Paving Equipment	0	8.00	130	0.36
Concrete Curbs 2017	Rollers	0	8.00	80	0.38
Paving 2017	Pavers	0	8.00	125	0.42
Paving 2017	Paving Equipment	2	10.00	130	0.36
Paving 2017	Rollers	2	10.00	80	0.38
Foundation 2018	Cranes	2	12.00	226	0.29
Foundation 2018	Forklifts	0	8.00	89	0.20
Foundation 2018	Generator Sets	0	8.00	84	0.74
Foundation 2018	Other Construction Equipment	21	12.00	171	0.42
Foundation 2018	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Foundation 2018	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching 2015	27	68.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	30	419.00	64.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Curbs 2015	20	50.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2015	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Foundation 2016	23	419.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching 2017	27	68.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Curbs 2017	20	50.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2017	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Foundation 2018	23	419.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	84.00	0.00	0.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Trenching 2015 - 2015

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	0.5105	5.4524	3.5916	5.1100e-003		0.3178	0.3178		0.2923	0.2923	0.0000	486.9370	486.9370	0.1454	0.0000	489.9898
Total	**0.5105**	**5.4524**	**3.5916**	**5.1100e-003**		**0.3178**	**0.3178**		**0.2923**	**0.2923**	**0.0000**	**486.9370**	**486.9370**	**0.1454**	**0.0000**	**489.9898**

Unmitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0113	0.0159	0.1546	2.9000e-004	0.0248	2.1000e-004	0.0250	6.5900e-003	1.9000e-004	6.7800e-003	0.0000	22.6024	22.6024	1.2800e-003	0.0000	22.6293
Total	**0.0113**	**0.0159**	**0.1546**	**2.9000e-004**	**0.0248**	**2.1000e-004**	**0.0250**	**6.5900e-003**	**1.9000e-004**	**6.7800e-003**	**0.0000**	**22.6024**	**22.6024**	**1.2800e-003**	**0.0000**	**22.6293**

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	0.0628	0.2721	3.8723	5.1100e-003		8.3700e-003	8.3700e-003		8.3700e-003	8.3700e-003	0.0000	486.9364	486.9364	0.1454	0.0000	489.9892
Total	**0.0628**	**0.2721**	**3.8723**	**5.1100e-003**		**8.3700e-003**	**8.3700e-003**		**8.3700e-003**	**8.3700e-003**	**0.0000**	**486.9364**	**486.9364**	**0.1454**	**0.0000**	**489.9892**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0113	0.0159	0.1546	2.9000e-004	0.0248	2.1000e-004	0.0250	6.5900e-003	1.9000e-004	6.7800e-003	0.0000	22.6024	22.6024	1.2800e-003	0.0000	22.6293
Total	**0.0113**	**0.0159**	**0.1546**	**2.9000e-004**	**0.0248**	**2.1000e-004**	**0.0250**	**6.5900e-003**	**1.9000e-004**	**6.7800e-003**	**0.0000**	**22.6024**	**22.6024**	**1.2800e-003**	**0.0000**	**22.6293**

3.3 Building Construction - 2015

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	1.3851	15.2509	8.0512	0.0118		0.8488	0.8488		0.7809	0.7809	0.0000	1,128.1898	1,128.1898	0.3368	0.0000	1,135.2629
Total	**1.3851**	**15.2509**	**8.0512**	**0.0118**		**0.8488**	**0.8488**		**0.7809**	**0.7809**	**0.0000**	**1,128.1898**	**1,128.1898**	**0.3368**	**0.0000**	**1,135.2629**

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	0.0652	0.5659	0.7086	1.1800e-003	0.0318	9.2200e-003	0.0410	9.1300e-003	8.4700e-003	0.0176	0.0000	107.8105	107.8105	9.7000e-004	0.0000	107.8308
Worker	0.1337	0.1886	1.8340	3.4000e-003	0.2937	2.4900e-003	0.2962	0.0781	2.2800e-003	0.0804	0.0000	268.0957	268.0957	0.0152	0.0000	268.4147
Total	**0.1989**	**0.7545**	**2.5426**	**4.5800e-003**	**0.3256**	**0.0117**	**0.3373**	**0.0873**	**0.0108**	**0.0980**	**0.0000**	**375.9061**	**375.9061**	**0.0162**	**0.0000**	**376.2455**

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	0.1580	1.1308	8.1646	0.0118		0.0195	0.0195		0.0195	0.0195	0.0000	1,128.1885	1,128.1885	0.3368	0.0000	1,135.2615
Total	**0.1580**	**1.1308**	**8.1646**	**0.0118**		**0.0195**	**0.0195**		**0.0195**	**0.0195**	**0.0000**	**1,128.1885**	**1,128.1885**	**0.3368**	**0.0000**	**1,135.2615**

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	0.0652	0.5659	0.7086	1.1800e-003	0.0318	9.2200e-003	0.0410	9.1300e-003	8.4700e-003	0.0176	0.0000	107.8105	107.8105	9.7000e-004	0.0000	107.8308
Worker	0.1337	0.1886	1.8340	3.4000e-003	0.2937	2.4900e-003	0.2962	0.0781	2.2800e-003	0.0804	0.0000	268.0957	268.0957	0.0152	0.0000	268.4147
Total	**0.1989**	**0.7545**	**2.5426**	**4.5800e-003**	**0.3256**	**0.0117**	**0.3373**	**0.0873**	**0.0108**	**0.0980**	**0.0000**	**375.9061**	**375.9061**	**0.0162**	**0.0000**	**376.2455**

3.3 Building Construction - 2016

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	2.2268	24.4314	13.5019	0.0201		1.3528	1.3528		1.2446	1.2446	0.0000	1,891.8460	1,891.8460	0.5707	0.0000	1,903.8296
Total	**2.2268**	**24.4314**	**13.5019**	**0.0201**		**1.3528**	**1.3528**		**1.2446**	**1.2446**	**0.0000**	**1,891.8460**	**1,891.8460**	**0.5707**	**0.0000**	**1,903.8296**

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	0.0991	0.8340	1.1292	1.9900e-003	0.0539	0.0125	0.0664	0.0155	0.0115	0.0270	0.0000	180.6167	180.6167	1.4500e-003	0.0000	180.6472
Worker	0.2036	0.2862	2.7800	5.7700e-003	0.4978	3.9700e-003	0.5018	0.1324	3.6500e-003	0.1360	0.0000	438.6579	438.6579	0.0234	0.0000	439.1502
Total	**0.3027**	**1.1202**	**3.9092**	**7.7600e-003**	**0.5518**	**0.0165**	**0.5683**	**0.1479**	**0.0151**	**0.1630**	**0.0000**	**619.2746**	**619.2746**	**0.0249**	**0.0000**	**619.7974**

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	0.2678	1.9165	13.8374	0.0201		0.0330	0.0330		0.0330	0.0330	0.0000	1,891.8438	1,891.8438	0.5707	0.0000	1,903.8273
Total	**0.2678**	**1.9165**	**13.8374**	**0.0201**		**0.0330**	**0.0330**		**0.0330**	**0.0330**	**0.0000**	**1,891.8438**	**1,891.8438**	**0.5707**	**0.0000**	**1,903.8273**

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	0.0991	0.8340	1.1292	1.9900e-003	0.0539	0.0125	0.0664	0.0155	0.0115	0.0270	0.0000	180.6167	180.6167	1.4500e-003	0.0000	180.6472
Worker	0.2036	0.2862	2.7800	5.7700e-003	0.4978	3.9700e-003	0.5018	0.1324	3.6500e-003	0.1360	0.0000	438.6579	438.6579	0.0234	0.0000	439.1502
Total	**0.3027**	**1.1202**	**3.9092**	**7.7600e-003**	**0.5518**	**0.0165**	**0.5683**	**0.1479**	**0.0151**	**0.1630**	**0.0000**	**619.2746**	**619.2746**	**0.0249**	**0.0000**	**619.7974**

3.3 Building Construction - 2017

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	2.0720	22.6319	13.1957	0.0200		1.2445	1.2445		1.1450	1.1450	0.0000	1,854.7042	1,854.7042	0.5683	0.0000	1,866.6380
Total	**2.0720**	**22.6319**	**13.1957**	**0.0200**		**1.2445**	**1.2445**		**1.1450**	**1.1450**	**0.0000**	**1,854.7042**	**1,854.7042**	**0.5683**	**0.0000**	**1,866.6380**

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	0.0865	0.7438	1.0365	1.9800e-003	0.0537	0.0108	0.0645	0.0154	9.8900e-003	0.0253	0.0000	176.8379	176.8379	1.3700e-003	0.0000	176.8667
Worker	0.1815	0.2555	2.4750	5.7400e-003	0.4959	3.7900e-003	0.4997	0.1319	3.4900e-003	0.1354	0.0000	420.2721	420.2721	0.0213	0.0000	420.7202
Total	**0.2681**	**0.9993**	**3.5115**	**7.7200e-003**	**0.5497**	**0.0146**	**0.5642**	**0.1473**	**0.0134**	**0.1607**	**0.0000**	**597.1100**	**597.1100**	**0.0227**	**0.0000**	**597.5869**

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	0.2667	1.9092	13.7844	0.0200		0.0329	0.0329		0.0329	0.0329	0.0000	1,854.7020	1,854.7020	0.5683	0.0000	1,866.6358
Total	**0.2667**	**1.9092**	**13.7844**	**0.0200**		**0.0329**	**0.0329**		**0.0329**	**0.0329**	**0.0000**	**1,854.7020**	**1,854.7020**	**0.5683**	**0.0000**	**1,866.6358**

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	0.0865	0.7438	1.0365	1.9800e-003	0.0537	0.0108	0.0645	0.0154	9.8900e-003	0.0253	0.0000	176.8379	176.8379	1.3700e-003	0.0000	176.8667
Worker	0.1815	0.2555	2.4750	5.7400e-003	0.4959	3.7900e-003	0.4997	0.1319	3.4900e-003	0.1354	0.0000	420.2721	420.2721	0.0213	0.0000	420.7202
Total	**0.2681**	**0.9993**	**3.5115**	**7.7200e-003**	**0.5497**	**0.0146**	**0.5642**	**0.1473**	**0.0134**	**0.1607**	**0.0000**	**597.1100**	**597.1100**	**0.0227**	**0.0000**	**597.5869**

3.3 Building Construction - 2018

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	1.7931	19.6713	12.7674	0.0201		1.0546	1.0546		0.9702	0.9702	0.0000	1,831.7008	1,831.7008	0.5702	0.0000	1,843.6757
Total	**1.7931**	**19.6713**	**12.7674**	**0.0201**		**1.0546**	**1.0546**		**0.9702**	**0.9702**	**0.0000**	**1,831.7008**	**1,831.7008**	**0.5702**	**0.0000**	**1,843.6757**

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	0.0786	0.6759	0.9800	1.9800e-003	0.0539	0.0100	0.0639	0.0155	9.2000e-003	0.0247	0.0000	174.4156	174.4156	1.3500e-003	0.0000	174.4440
Worker	0.1637	0.2309	2.2288	5.7600e-003	0.4978	3.6800e-003	0.5015	0.1324	3.4000e-003	0.1358	0.0000	406.1801	406.1801	0.0197	0.0000	406.5935
Total	**0.2423**	**0.9068**	**3.2089**	**7.7400e-003**	**0.5518**	**0.0137**	**0.5655**	**0.1479**	**0.0126**	**0.1605**	**0.0000**	**580.5957**	**580.5957**	**0.0210**	**0.0000**	**581.0375**

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	0.2678	1.9165	13.8374	0.0201		0.0330	0.0330		0.0330	0.0330	0.0000	1,831.6987	1,831.6987	0.5702	0.0000	1,843.6735
Total	**0.2678**	**1.9165**	**13.8374**	**0.0201**		**0.0330**	**0.0330**		**0.0330**	**0.0330**	**0.0000**	**1,831.6987**	**1,831.6987**	**0.5702**	**0.0000**	**1,843.6735**

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	0.0786	0.6759	0.9800	1.9800e-003	0.0539	0.0100	0.0639	0.0155	9.2000e-003	0.0247	0.0000	174.4156	174.4156	1.3500e-003	0.0000	174.4440
Worker	0.1637	0.2309	2.2288	5.7600e-003	0.4978	3.6800e-003	0.5015	0.1324	3.4000e-003	0.1358	0.0000	406.1801	406.1801	0.0197	0.0000	406.5935
Total	**0.2423**	**0.9068**	**3.2089**	**7.7400e-003**	**0.5518**	**0.0137**	**0.5655**	**0.1479**	**0.0126**	**0.1605**	**0.0000**	**580.5957**	**580.5957**	**0.0210**	**0.0000**	**581.0375**

3.4 Concrete Curbs 2015 - 2015

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	0.1553	1.7363	0.9424	1.3500e-003		0.0910	0.0910		0.0837	0.0837	0.0000	128.7560	128.7560	0.0384	0.0000	129.5633

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1553**	**1.7363**	**0.9424**	**1.3500e-003**		**0.0910**	**0.0910**		**0.0837**	**0.0837**	**0.0000**	**128.7560**	**128.7560**	**0.0384**	**0.0000**	**129.5633**

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	2.2800e-003	3.2200e-003	0.0313	6.0000e-005	5.0100e-003	4.0000e-005	5.0500e-003	1.3300e-003	4.0000e-005	1.3700e-003	0.0000	4.5703	4.5703	2.6000e-004	0.0000	4.5758
Total	**2.2800e-003**	**3.2200e-003**	**0.0313**	**6.0000e-005**	**5.0100e-003**	**4.0000e-005**	**5.0500e-003**	**1.3300e-003**	**4.0000e-005**	**1.3700e-003**	**0.0000**	**4.5703**	**4.5703**	**2.6000e-004**	**0.0000**	**4.5758**

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	0.0167	0.0725	1.0311	1.3500e-003		2.2300e-003	2.2300e-003		2.2300e-003	2.2300e-003	0.0000	128.7559	128.7559	0.0384	0.0000	129.5631
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0167**	**0.0725**	**1.0311**	**1.3500e-003**		**2.2300e-003**	**2.2300e-003**		**2.2300e-003**	**2.2300e-003**	**0.0000**	**128.7559**	**128.7559**	**0.0384**	**0.0000**	**129.5631**

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	2.2800e-003	3.2200e-003	0.0313	6.0000e-005	5.0100e-003	4.0000e-005	5.0500e-003	1.3300e-003	4.0000e-005	1.3700e-003	0.0000	4.5703	4.5703	2.6000e-004	0.0000	4.5758
Total	**2.2800e-003**	**3.2200e-003**	**0.0313**	**6.0000e-005**	**5.0100e-003**	**4.0000e-005**	**5.0500e-003**	**1.3300e-003**	**4.0000e-005**	**1.3700e-003**	**0.0000**	**4.5703**	**4.5703**	**2.6000e-004**	**0.0000**	**4.5758**

3.5 Paving 2015 - 2015

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	9.7000e-003	0.1026	0.0633	9.0000e-005		6.2000e-003	6.2000e-003		5.7000e-003	5.7000e-003	0.0000	8.6842	8.6842	2.5900e-003	0.0000	8.7386
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.7000e-003**	**0.1026**	**0.0633**	**9.0000e-005**		**6.2000e-003**	**6.2000e-003**		**5.7000e-003**	**5.7000e-003**	**0.0000**	**8.6842**	**8.6842**	**2.5900e-003**	**0.0000**	**8.7386**

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	2.3000e-004	3.2000e-004	3.1300e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4570	0.4570	3.0000e-005	0.0000	0.4576
Total	**2.3000e-004**	**3.2000e-004**	**3.1300e-003**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4570**	**0.4570**	**3.0000e-005**	**0.0000**	**0.4576**

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	1.1200e-003	4.8700e-003	0.0693	9.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	8.6842	8.6842	2.5900e-003	0.0000	8.7386
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1200e-003**	**4.8700e-003**	**0.0693**	**9.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**8.6842**	**8.6842**	**2.5900e-003**	**0.0000**	**8.7386**

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	2.3000e-004	3.2000e-004	3.1300e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4570	0.4570	3.0000e-005	0.0000	0.4576
Total	**2.3000e-004**	**3.2000e-004**	**3.1300e-003**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4570**	**0.4570**	**3.0000e-005**	**0.0000**	**0.4576**

3.6 Landscaping - 2015

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0532	0.5297	0.3562	5.1000e-004		0.0340	0.0340		0.0314	0.0314	0.0000	47.6966	47.6966	0.0136	0.0000	47.9811
Total	**0.0532**	**0.5297**	**0.3562**	**5.1000e-004**	**0.0000**	**0.0340**	**0.0340**	**0.0000**	**0.0314**	**0.0314**	**0.0000**	**47.6966**	**47.6966**	**0.0136**	**0.0000**	**47.9811**

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	2.0500e-003	2.8900e-003	0.0281	5.0000e-005	4.5100e-003	4.0000e-005	4.5400e-003	1.2000e-003	3.0000e-005	1.2300e-003	0.0000	4.1133	4.1133	2.3000e-004	0.0000	4.1182
Total	**2.0500e-003**	**2.8900e-003**	**0.0281**	**5.0000e-005**	**4.5100e-003**	**4.0000e-005**	**4.5400e-003**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**0.0000**	**4.1133**	**4.1133**	**2.3000e-004**	**0.0000**	**4.1182**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4900e-003	0.0587	0.3494	5.1000e-004		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	47.6966	47.6966	0.0136	0.0000	47.9811
Total	**6.4900e-003**	**0.0587**	**0.3494**	**5.1000e-004**	**0.0000**	**7.6000e-004**	**7.6000e-004**	**0.0000**	**7.6000e-004**	**7.6000e-004**	**0.0000**	**47.6966**	**47.6966**	**0.0136**	**0.0000**	**47.9811**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	2.0500e-003	2.8900e-003	0.0281	5.0000e-005	4.5100e-003	4.0000e-005	4.5400e-003	1.2000e-003	3.0000e-005	1.2300e-003	0.0000	4.1133	4.1133	2.3000e-004	0.0000	4.1182
Total	**2.0500e-003**	**2.8900e-003**	**0.0281**	**5.0000e-005**	**4.5100e-003**	**4.0000e-005**	**4.5400e-003**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**0.0000**	**4.1133**	**4.1133**	**2.3000e-004**	**0.0000**	**4.1182**

3.6 Landscaping - 2016

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.1982	1.9660	1.4022	2.0200e-003		0.1240	0.1240		0.1145	0.1145	0.0000	186.7225	186.7225	0.0535	0.0000	187.8469
Total	**0.1982**	**1.9660**	**1.4022**	**2.0200e-003**	**0.0000**	**0.1240**	**0.1240**	**0.0000**	**0.1145**	**0.1145**	**0.0000**	**186.7225**	**186.7225**	**0.0535**	**0.0000**	**187.8469**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2900e-003	0.0102	0.0995	2.1000e-004	0.0178	1.4000e-004	0.0180	4.7400e-003	1.3000e-004	4.8700e-003	0.0000	15.7037	15.7037	8.4000e-004	0.0000	15.7214
Total	**7.2900e-003**	**0.0102**	**0.0995**	**2.1000e-004**	**0.0178**	**1.4000e-004**	**0.0180**	**4.7400e-003**	**1.3000e-004**	**4.8700e-003**	**0.0000**	**15.7037**	**15.7037**	**8.4000e-004**	**0.0000**	**15.7214**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0257	0.2323	1.3818	2.0200e-003		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	186.7222	186.7222	0.0535	0.0000	187.8467
Total	**0.0257**	**0.2323**	**1.3818**	**2.0200e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**186.7222**	**186.7222**	**0.0535**	**0.0000**	**187.8467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2900e-003	0.0102	0.0995	2.1000e-004	0.0178	1.4000e-004	0.0180	4.7400e-003	1.3000e-004	4.8700e-003	0.0000	15.7037	15.7037	8.4000e-004	0.0000	15.7214
Total	**7.2900e-003**	**0.0102**	**0.0995**	**2.1000e-004**	**0.0178**	**1.4000e-004**	**0.0180**	**4.7400e-003**	**1.3000e-004**	**4.8700e-003**	**0.0000**	**15.7037**	**15.7037**	**8.4000e-004**	**0.0000**	**15.7214**

3.6 Landscaping - 2017

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1808	1.7788	1.3811	2.0100e-003		0.1103	0.1103		0.1019	0.1019	0.0000	183.2443	183.2443	0.0533	0.0000	184.3638
Total	**0.1808**	**1.7788**	**1.3811**	**2.0100e-003**	**0.0000**	**0.1103**	**0.1103**	**0.0000**	**0.1019**	**0.1019**	**0.0000**	**183.2443**	**183.2443**	**0.0533**	**0.0000**	**184.3638**

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	6.5000e-003	9.1500e-003	0.0886	2.1000e-004	0.0178	1.4000e-004	0.0179	4.7200e-003	1.2000e-004	4.8500e-003	0.0000	15.0455	15.0455	7.6000e-004	0.0000	15.0616
Total	**6.5000e-003**	**9.1500e-003**	**0.0886**	**2.1000e-004**	**0.0178**	**1.4000e-004**	**0.0179**	**4.7200e-003**	**1.2000e-004**	**4.8500e-003**	**0.0000**	**15.0455**	**15.0455**	**7.6000e-004**	**0.0000**	**15.0616**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0256	0.2314	1.3765	2.0100e-003		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	183.2441	183.2441	0.0533	0.0000	184.3636
Total	**0.0256**	**0.2314**	**1.3765**	**2.0100e-003**	**0.0000**	**2.9800e-003**	**2.9800e-003**	**0.0000**	**2.9800e-003**	**2.9800e-003**	**0.0000**	**183.2441**	**183.2441**	**0.0533**	**0.0000**	**184.3636**

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	6.5000e-003	9.1500e-003	0.0886	2.1000e-004	0.0178	1.4000e-004	0.0179	4.7200e-003	1.2000e-004	4.8500e-003	0.0000	15.0455	15.0455	7.6000e-004	0.0000	15.0616
Total	**6.5000e-003**	**9.1500e-003**	**0.0886**	**2.1000e-004**	**0.0178**	**1.4000e-004**	**0.0179**	**4.7200e-003**	**1.2000e-004**	**4.8500e-003**	**0.0000**	**15.0455**	**15.0455**	**7.6000e-004**	**0.0000**	**15.0616**

3.6 Landscaping - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1506	1.4763	1.3490	2.0200e-003		0.0875	0.0875		0.0809	0.0809	0.0000	181.1446	181.1446	0.0535	0.0000	182.2671
Total	**0.1506**	**1.4763**	**1.3490**	**2.0200e-003**	**0.0000**	**0.0875**	**0.0875**	**0.0000**	**0.0809**	**0.0809**	**0.0000**	**181.1446**	**181.1446**	**0.0535**	**0.0000**	**182.2671**

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	5.8600e-003	8.2700e-003	0.0798	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	14.5411	14.5411	7.0000e-004	0.0000	14.5559
Total	**5.8600e-003**	**8.2700e-003**	**0.0798**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**14.5411**	**14.5411**	**7.0000e-004**	**0.0000**	**14.5559**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0257	0.2323	1.3818	2.0200e-003		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	181.1444	181.1444	0.0535	0.0000	182.2669
Total	**0.0257**	**0.2323**	**1.3818**	**2.0200e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**181.1444**	**181.1444**	**0.0535**	**0.0000**	**182.2669**

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	5.8600e-003	8.2700e-003	0.0798	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	14.5411	14.5411	7.0000e-004	0.0000	14.5559
Total	**5.8600e-003**	**8.2700e-003**	**0.0798**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**14.5411**	**14.5411**	**7.0000e-004**	**0.0000**	**14.5559**

3.7 Foundation 2016 - 2016

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	0.3694	4.1236	2.2862	3.3700e-003		0.2139	0.2139		0.1968	0.1968	0.0000	317.4016	317.4016	0.0957	0.0000	319.4121

Total	**0.3694**	**4.1236**	**2.2862**	**3.3700e-003**		**0.2139**	**0.2139**		**0.1968**	**0.1968**	**0.0000**	**317.4016**	**317.4016**	**0.0957**	**0.0000**	**319.4121**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0250	0.0351	0.3408	7.1000e-004	0.0610	4.9000e-004	0.0615	0.0162	4.5000e-004	0.0167	0.0000	53.7818	53.7818	2.8700e-003	0.0000	53.8422
Total	**0.0250**	**0.0351**	**0.3408**	**7.1000e-004**	**0.0610**	**4.9000e-004**	**0.0615**	**0.0162**	**4.5000e-004**	**0.0167**	**0.0000**	**53.7818**	**53.7818**	**2.8700e-003**	**0.0000**	**53.8422**

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	0.0416	0.1804	2.4842	3.3700e-003		5.5500e-003	5.5500e-003		5.5500e-003	5.5500e-003	0.0000	317.4012	317.4012	0.0957	0.0000	319.4117
Total	**0.0416**	**0.1804**	**2.4842**	**3.3700e-003**		**5.5500e-003**	**5.5500e-003**		**5.5500e-003**	**5.5500e-003**	**0.0000**	**317.4012**	**317.4012**	**0.0957**	**0.0000**	**319.4117**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0250	0.0351	0.3408	7.1000e-004	0.0610	4.9000e-004	0.0615	0.0162	4.5000e-004	0.0167	0.0000	53.7818	53.7818	2.8700e-003	0.0000	53.8422
Total	**0.0250**	**0.0351**	**0.3408**	**7.1000e-004**	**0.0610**	**4.9000e-004**	**0.0615**	**0.0162**	**4.5000e-004**	**0.0167**	**0.0000**	**53.7818**	**53.7818**	**2.8700e-003**	**0.0000**	**53.8422**

3.8 Trenching 2017 - 2017

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	0.4311	4.4963	3.5358	5.1100e-003		0.2578	0.2578		0.2371	0.2371	0.0000	474.1678	474.1678	0.1453	0.0000	477.2188
Total	**0.4311**	**4.4963**	**3.5358**	**5.1100e-003**		**0.2578**	**0.2578**		**0.2371**	**0.2371**	**0.0000**	**474.1678**	**474.1678**	**0.1453**	**0.0000**	**477.2188**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0600e-003	0.0128	0.1236	2.9000e-004	0.0248	1.9000e-004	0.0250	6.5900e-003	1.7000e-004	6.7600e-003	0.0000	20.9866	20.9866	1.0700e-003	0.0000	21.0090
Total	**9.0600e-003**	**0.0128**	**0.1236**	**2.9000e-004**	**0.0248**	**1.9000e-004**	**0.0250**	**6.5900e-003**	**1.7000e-004**	**6.7600e-003**	**0.0000**	**20.9866**	**20.9866**	**1.0700e-003**	**0.0000**	**21.0090**

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	0.0628	0.2721	3.8723	5.1100e-003		8.3700e-003	8.3700e-003		8.3700e-003	8.3700e-003	0.0000	474.1672	474.1672	0.1453	0.0000	477.2182
Total	**0.0628**	**0.2721**	**3.8723**	**5.1100e-003**		**8.3700e-003**	**8.3700e-003**		**8.3700e-003**	**8.3700e-003**	**0.0000**	**474.1672**	**474.1672**	**0.1453**	**0.0000**	**477.2182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0600e-003	0.0128	0.1236	2.9000e-004	0.0248	1.9000e-004	0.0250	6.5900e-003	1.7000e-004	6.7600e-003	0.0000	20.9866	20.9866	1.0700e-003	0.0000	21.0090
Total	**9.0600e-003**	**0.0128**	**0.1236**	**2.9000e-004**	**0.0248**	**1.9000e-004**	**0.0250**	**6.5900e-003**	**1.7000e-004**	**6.7600e-003**	**0.0000**	**20.9866**	**20.9866**	**1.0700e-003**	**0.0000**	**21.0090**

3.9 Concrete Curbs 2017 - 2017

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	0.1395	1.5311	0.9301	1.3500e-003		0.0809	0.0809		0.0744	0.0744	0.0000	125.3746	125.3746	0.0384	0.0000	126.1813
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1395**	**1.5311**	**0.9301**	**1.3500e-003**		**0.0809**	**0.0809**		**0.0744**	**0.0744**	**0.0000**	**125.3746**	**125.3746**	**0.0384**	**0.0000**	**126.1813**

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	1.8300e-003	2.5800e-003	0.0250	6.0000e-005	5.0100e-003	4.0000e-005	5.0500e-003	1.3300e-003	4.0000e-005	1.3700e-003	0.0000	4.2436	4.2436	2.2000e-004	0.0000	4.2481
Total	**1.8300e-003**	**2.5800e-003**	**0.0250**	**6.0000e-005**	**5.0100e-003**	**4.0000e-005**	**5.0500e-003**	**1.3300e-003**	**4.0000e-005**	**1.3700e-003**	**0.0000**	**4.2436**	**4.2436**	**2.2000e-004**	**0.0000**	**4.2481**

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	0.0167	0.0725	1.0311	1.3500e-003		2.2300e-003	2.2300e-003		2.2300e-003	2.2300e-003	0.0000	125.3744	125.3744	0.0384	0.0000	126.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0167**	**0.0725**	**1.0311**	**1.3500e-003**		**2.2300e-003**	**2.2300e-003**		**2.2300e-003**	**2.2300e-003**	**0.0000**	**125.3744**	**125.3744**	**0.0384**	**0.0000**	**126.1811**

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	1.8300e-003	2.5800e-003	0.0250	6.0000e-005	5.0100e-003	4.0000e-005	5.0500e-003	1.3300e-003	4.0000e-005	1.3700e-003	0.0000	4.2436	4.2436	2.2000e-004	0.0000	4.2481
Total	**1.8300e-003**	**2.5800e-003**	**0.0250**	**6.0000e-005**	**5.0100e-003**	**4.0000e-005**	**5.0500e-003**	**1.3300e-003**	**4.0000e-005**	**1.3700e-003**	**0.0000**	**4.2436**	**4.2436**	**2.2000e-004**	**0.0000**	**4.2481**

3.10 Paving 2017 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1600e-003	0.0841	0.0623	9.0000e-005		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	8.4637	8.4637	2.5900e-003	0.0000	8.5181

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.1600e-003**	**0.0841**	**0.0623**	**9.0000e-005**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**8.4637**	**8.4637**	**2.5900e-003**	**0.0000**	**8.5181**

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	1.8000e-004	2.6000e-004	2.5000e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4244	0.4244	2.0000e-005	0.0000	0.4248
Total	**1.8000e-004**	**2.6000e-004**	**2.5000e-003**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4244**	**0.4244**	**2.0000e-005**	**0.0000**	**0.4248**

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	1.1200e-003	4.8700e-003	0.0693	9.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	8.4637	8.4637	2.5900e-003	0.0000	8.5181
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1200e-003**	**4.8700e-003**	**0.0693**	**9.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**8.4637**	**8.4637**	**2.5900e-003**	**0.0000**	**8.5181**

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	1.8000e-004	2.6000e-004	2.5000e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4244	0.4244	2.0000e-005	0.0000	0.4248
Total	**1.8000e-004**	**2.6000e-004**	**2.5000e-003**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4244**	**0.4244**	**2.0000e-005**	**0.0000**	**0.4248**

3.11 Foundation 2018 - 2018

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	0.2959	3.2511	2.1331	3.2600e-003		0.1682	0.1682		0.1547	0.1547	0.0000	297.7502	297.7502	0.0927	0.0000	299.6967
Total	**0.2959**	**3.2511**	**2.1331**	**3.2600e-003**		**0.1682**	**0.1682**		**0.1547**	**0.1547**	**0.0000**	**297.7502**	**297.7502**	**0.0927**	**0.0000**	**299.6967**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0194	0.0274	0.2647	6.8000e-004	0.0591	4.4000e-004	0.0596	0.0157	4.0000e-004	0.0161	0.0000	48.2436	48.2436	2.3400e-003	0.0000	48.2927
Total	**0.0194**	**0.0274**	**0.2647**	**6.8000e-004**	**0.0591**	**4.4000e-004**	**0.0596**	**0.0157**	**4.0000e-004**	**0.0161**	**0.0000**	**48.2436**	**48.2436**	**2.3400e-003**	**0.0000**	**48.2927**

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	0.0403	0.1748	2.4066	3.2600e-003		5.3800e-003	5.3800e-003		5.3800e-003	5.3800e-003	0.0000	297.7498	297.7498	0.0927	0.0000	299.6964
Total	**0.0403**	**0.1748**	**2.4066**	**3.2600e-003**		**5.3800e-003**	**5.3800e-003**		**5.3800e-003**	**5.3800e-003**	**0.0000**	**297.7498**	**297.7498**	**0.0927**	**0.0000**	**299.6964**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0194	0.0274	0.2647	6.8000e-004	0.0591	4.4000e-004	0.0596	0.0157	4.0000e-004	0.0161	0.0000	48.2436	48.2436	2.3400e-003	0.0000	48.2927
Total	**0.0194**	**0.0274**	**0.2647**	**6.8000e-004**	**0.0591**	**4.4000e-004**	**0.0596**	**0.0157**	**4.0000e-004**	**0.0161**	**0.0000**	**48.2436**	**48.2436**	**2.3400e-003**	**0.0000**	**48.2927**

3.12 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0112	0.0752	0.0695	1.1000e-004		5.6500e-003	5.6500e-003		5.6500e-003	5.6500e-003	0.0000	9.5747	9.5747	9.1000e-004	0.0000	9.5938
Total	**4.1433**	**0.0752**	**0.0695**	**1.1000e-004**		**5.6500e-003**	**5.6500e-003**		**5.6500e-003**	**5.6500e-003**	**0.0000**	**9.5747**	**9.5747**	**9.1000e-004**	**0.0000**	**9.5938**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4300e-003	0.0133	0.1284	3.3000e-004	0.0287	2.1000e-004	0.0289	7.6300e-003	2.0000e-004	7.8200e-003	0.0000	23.3994	23.3994	1.1300e-003	0.0000	23.4232
Total	**9.4300e-003**	**0.0133**	**0.1284**	**3.3000e-004**	**0.0287**	**2.1000e-004**	**0.0289**	**7.6300e-003**	**2.0000e-004**	**7.8200e-003**	**0.0000**	**23.3994**	**23.3994**	**1.1300e-003**	**0.0000**	**23.4232**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	4.8300e-003	0.0687	1.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	9.5747	9.5747	9.1000e-004	0.0000	9.5938
Total	**4.1332**	**4.8300e-003**	**0.0687**	**1.1000e-004**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**9.5747**	**9.5747**	**9.1000e-004**	**0.0000**	**9.5938**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4300e-003	0.0133	0.1284	3.3000e-004	0.0287	2.1000e-004	0.0289	7.6300e-003	2.0000e-004	7.8200e-003	0.0000	23.3994	23.3994	1.1300e-003	0.0000	23.4232
Total	**9.4300e-003**	**0.0133**	**0.1284**	**3.3000e-004**	**0.0287**	**2.1000e-004**	**0.0289**	**7.6300e-003**	**2.0000e-004**	**7.8200e-003**	**0.0000**	**23.3994**	**23.3994**	**1.1300e-003**	**0.0000**	**23.4232**

Communications Hill - Phase 2 Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	575.00	Dwelling Unit	69.00	575,000.00	1645
Strip Mall	16.20	1000sqft	0.00	16,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Phase 2 acreage supplied by project applicant.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

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Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Trips and VMT - Model defaults for vendor trips.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	71.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	25.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1,110.00	784.00
tblConstructionPhase	NumDays	1,110.00	33.00

tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	75.00	10.00
tblConstructionPhase	NumDays	75.00	22.00
tblConstructionPhase	NumDays	75.00	11.00
tblConstructionPhase	NumDays	40.00	784.00
tblConstructionPhase	PhaseEndDate	12/29/2021	12/31/2021
tblConstructionPhase	PhaseEndDate	1/2/2025	12/31/2021
tblConstructionPhase	PhaseEndDate	10/30/2019	10/15/2020
tblConstructionPhase	PhaseEndDate	9/17/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	7/12/2019	9/15/2019
tblConstructionPhase	PhaseEndDate	9/21/2021	6/30/2021
tblConstructionPhase	PhaseEndDate	7/15/2021	9/15/2021
tblConstructionPhase	PhaseEndDate	4/22/2022	8/20/2019
tblConstructionPhase	PhaseEndDate	2/4/2021	8/20/2021
tblConstructionPhase	PhaseStartDate	9/16/2021	9/18/2021
tblConstructionPhase	PhaseStartDate	1/1/2022	1/1/2019
tblConstructionPhase	PhaseStartDate	9/16/2019	9/1/2020
tblConstructionPhase	PhaseStartDate	8/21/2019	6/1/2019
tblConstructionPhase	PhaseStartDate	7/1/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	8/21/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	7/1/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	1/1/2022	5/1/2019
tblConstructionPhase	PhaseStartDate	10/16/2020	5/1/2021
tblLandUse	LotAcreage	35.94	69.00
tblLandUse	LotAcreage	0.37	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	7.00	12.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblTripsAndVMT	VendorTripNumber	64.00	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	2.4219	24.2868	21.2905	0.0368	0.5994	1.2575	1.8569	0.1605	1.1573	1.3178	0.0000	3,158.3064	3,158.3064	0.8277	0.0000	3,175.6870
2020	2.1516	21.3875	19.0050	0.0343	0.6347	1.0831	1.7178	0.1699	0.9968	1.1667	0.0000	2,857.3010	2,857.3010	0.7462	0.0000	2,872.9711
2021	6.1578	19.5342	20.6914	0.0374	0.6285	0.9736	1.6021	0.1683	0.8964	1.0646	0.0000	3,116.7717	3,116.7717	0.8306	0.0000	3,134.2151
Total	**10.7313**	**65.2085**	**60.9869**	**0.1085**	**1.8626**	**3.3142**	**5.1768**	**0.4987**	**3.0505**	**3.5492**	**0.0000**	**9,132.3790**	**9,132.3790**	**2.4045**	**0.0000**	**9,182.8732**

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	0.6076	3.3384	23.2405	0.0368	0.5994	0.0597	0.6591	0.1605	0.0587	0.2192	0.0000	3,158.3033	3,158.3033	0.8277	0.0000	3,175.6840
2020	0.5672	3.0963	20.9217	0.0343	0.6347	0.0543	0.6890	0.1699	0.0534	0.2233	0.0000	2,857.2983	2,857.2983	0.7462	0.0000	2,872.9684
2021	4.7227	3.1426	23.1468	0.0374	0.6285	0.0584	0.6870	0.1683	0.0575	0.2258	0.0000	3,116.7687	3,116.7687	0.8306	0.0000	3,134.2121
Total	**5.8975**	**9.5774**	**67.3090**	**0.1085**	**1.8626**	**0.1725**	**2.0351**	**0.4987**	**0.1696**	**0.6683**	**0.0000**	**9,132.3703**	**9,132.3703**	**2.4045**	**0.0000**	**9,182.8644**

	ROG	NOx	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	**45.04**	**85.31**	**-10.37**	**0.00**	**0.00**	**94.80**	**60.69**	**0.00**	**94.44**	**81.17**	**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	Landscaping	Site Preparation	1/1/2019	12/31/2021	5	784	
2	Building Construction	Building Construction	1/1/2019	12/31/2021	5	784	
3	Trenching 2019	Trenching	5/1/2019	8/20/2019	5	80	
4	Concrete Curbs 2019	Paving	6/1/2019	6/30/2019	5	20	
5	Paving 2019	Paving	9/1/2019	9/15/2019	5	10	
6	Foundation 2020	Building Construction	9/1/2020	10/15/2020	5	33	
7	Trenching 2021	Trenching	5/1/2021	8/20/2021	5	80	
8	Concrete Curbs 2021	Paving	6/1/2021	6/30/2021	5	22	
9	Paving 2021	Paving	9/1/2021	9/15/2021	5	11	
10	Architectural Coating	Architectural Coating	9/18/2021	12/31/2021	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,164,375; Residential Outdoor: 388,125; Non-Residential Indoor: 24,300; Non-Residential Outdoor: 8,100

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Landscaping	Dumpers/Tenders	2	8.00	16	0.38
Landscaping	Other Material Handling Equipment	1	8.00	167	0.40
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Skid Steer Loaders	1	8.00	64	0.37
Landscaping	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	5	10.00	226	0.29
Building Construction	Forklifts	5	10.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Other Construction Equipment	10	10.00	171	0.42
Building Construction	Skid Steer Loaders	5	10.00	64	0.37
Building Construction	Tractors/Loaders/Backhoes	5	10.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45

Trenching 2019	Excavators	8	8.00	162	0.38
Trenching 2019	Other Material Handling Equipment	10	8.00	167	0.40
Trenching 2019	Tractors/Loaders/Backhoes	9	8.00	97	0.37
Concrete Curbs 2019	Other Construction Equipment	20	8.00	171	0.42
Concrete Curbs 2019	Pavers	0	8.00	125	0.42
Concrete Curbs 2019	Paving Equipment	0	8.00	130	0.36
Concrete Curbs 2019	Rollers	0	8.00	80	0.38
Paving 2019	Pavers	0	8.00	125	0.42
Paving 2019	Paving Equipment	2	10.00	130	0.36
Paving 2019	Rollers	2	10.00	80	0.38
Foundation 2020	Cranes	2	12.00	226	0.29
Foundation 2020	Forklifts	0	8.00	89	0.20
Foundation 2020	Generator Sets	0	8.00	84	0.74
Foundation 2020	Other Construction Equipment	21	12.00	171	0.42
Foundation 2020	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Foundation 2020	Welders	0	8.00	46	0.45
Trenching 2021	Excavators	8	8.00	162	0.38
Trenching 2021	Other Material Handling Equipment	10	8.00	167	0.40
Trenching 2021	Tractors/Loaders/Backhoes	9	8.00	97	0.37
Concrete Curbs 2021	Other Construction Equipment	20	8.00	171	0.42
Concrete Curbs 2021	Pavers	0	8.00	125	0.42
Concrete Curbs 2021	Paving Equipment	0	8.00	130	0.36
Concrete Curbs 2021	Rollers	0	8.00	80	0.38
Paving 2021	Pavers	0	8.00	125	0.42
Paving 2021	Paving Equipment	2	10.00	130	0.36
Paving 2021	Rollers	2	10.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Landscaping	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	30	419.00	64.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching 2019	27	68.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Curbs 2019	20	50.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2019	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Foundation 2020	23	419.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching 2021	27	68.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Curbs 2021	20	50.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2021	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	84.00	0.00	0.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Landscaping - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1338	1.3028	1.3348	2.0200e-003		0.0734	0.0734		0.0679	0.0679	0.0000	178.4264	178.4264	0.0534	0.0000	179.5486

Total	**0.1338**	**1.3028**	**1.3348**	**2.0200e-003**	**0.0000**	**0.0734**	**0.0734**	**0.0000**	**0.0679**	**0.0679**	**0.0000**	**178.4264**	**178.4264**	**0.0534**	**0.0000**	**179.5486**

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	5.3500e-003	7.5200e-003	0.0725	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	14.0173	14.0173	6.5000e-004	0.0000	14.0311
Total	**5.3500e-003**	**7.5200e-003**	**0.0725**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**14.0173**	**14.0173**	**6.5000e-004**	**0.0000**	**14.0311**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0257	0.2323	1.3818	2.0200e-003		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	178.4262	178.4262	0.0534	0.0000	179.5484
Total	**0.0257**	**0.2323**	**1.3818**	**2.0200e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**178.4262**	**178.4262**	**0.0534**	**0.0000**	**179.5484**

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	5.3500e-003	7.5200e-003	0.0725	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	14.0173	14.0173	6.5000e-004	0.0000	14.0311
Total	**5.3500e-003**	**7.5200e-003**	**0.0725**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**14.0173**	**14.0173**	**6.5000e-004**	**0.0000**	**14.0311**

3.2 Landscaping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1233	1.1756	1.3317	2.0300e-003		0.0637	0.0637		0.0589	0.0589	0.0000	175.5109	175.5109	0.0536	0.0000	176.6372
Total	**0.1233**	**1.1756**	**1.3317**	**2.0300e-003**	**0.0000**	**0.0637**	**0.0637**	**0.0000**	**0.0589**	**0.0589**	**0.0000**	**175.5109**	**175.5109**	**0.0536**	**0.0000**	**176.6372**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-003	6.9500e-003	0.0671	2.1000e-004	0.0179	1.3000e-004	0.0180	4.7600e-003	1.2000e-004	4.8800e-003	0.0000	13.5055	13.5055	6.2000e-004	0.0000	13.5185
Total	**5.0000e-003**	**6.9500e-003**	**0.0671**	**2.1000e-004**	**0.0179**	**1.3000e-004**	**0.0180**	**4.7600e-003**	**1.2000e-004**	**4.8800e-003**	**0.0000**	**13.5055**	**13.5055**	**6.2000e-004**	**0.0000**	**13.5185**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0258	0.2332	1.3871	2.0300e-003		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	175.5107	175.5107	0.0536	0.0000	176.6370
Total	**0.0258**	**0.2332**	**1.3871**	**2.0300e-003**	**0.0000**	**3.0000e-003**	**3.0000e-003**	**0.0000**	**3.0000e-003**	**3.0000e-003**	**0.0000**	**175.5107**	**175.5107**	**0.0536**	**0.0000**	**176.6370**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-003	6.9500e-003	0.0671	2.1000e-004	0.0179	1.3000e-004	0.0180	4.7600e-003	1.2000e-004	4.8800e-003	0.0000	13.5055	13.5055	6.2000e-004	0.0000	13.5185
Total	**5.0000e-003**	**6.9500e-003**	**0.0671**	**2.1000e-004**	**0.0179**	**1.3000e-004**	**0.0180**	**4.7600e-003**	**1.2000e-004**	**4.8800e-003**	**0.0000**	**13.5055**	**13.5055**	**6.2000e-004**	**0.0000**	**13.5185**

3.2 Landscaping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1160	1.0904	1.3254	2.0200e-003		0.0565	0.0565		0.0523	0.0523	0.0000	174.8756	174.8756	0.0534	0.0000	175.9979
Total	**0.1160**	**1.0904**	**1.3254**	**2.0200e-003**	**0.0000**	**0.0565**	**0.0565**	**0.0000**	**0.0523**	**0.0523**	**0.0000**	**174.8756**	**174.8756**	**0.0534**	**0.0000**	**175.9979**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-003	6.4400e-003	0.0624	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	13.2186	13.2186	5.8000e-004	0.0000	13.2309
Total	**4.7000e-003**	**6.4400e-003**	**0.0624**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**13.2186**	**13.2186**	**5.8000e-004**	**0.0000**	**13.2309**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0257	0.2323	1.3818	2.0200e-003		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	174.8754	174.8754	0.0534	0.0000	175.9977
Total	**0.0257**	**0.2323**	**1.3818**	**2.0200e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**174.8754**	**174.8754**	**0.0534**	**0.0000**	**175.9977**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-003	6.4400e-003	0.0624	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	13.2186	13.2186	5.8000e-004	0.0000	13.2309
Total	**4.7000e-003**	**6.4400e-003**	**0.0624**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**13.2186**	**13.2186**	**5.8000e-004**	**0.0000**	**13.2309**

3.3 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	1.6419	17.9295	12.5265	0.0201		0.9446	0.9446		0.8690	0.8690	0.0000	1,802.7020	1,802.7020	0.5704	0.0000	1,814.6794

Total	**1.6419**	**17.9295**	**12.5265**	**0.0201**		**0.9446**	**0.9446**		**0.8690**	**0.8690**	**0.0000**	**1,802.7020**	**1,802.7020**	**0.5704**	**0.0000**	**1,814.6794**

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	0.0713	0.6170	0.9292	1.9800e-003	0.0539	9.2800e-003	0.0632	0.0155	8.5400e-003	0.0240	0.0000	171.3824	171.3824	1.3200e-003	0.0000	171.4101
Worker	0.1496	0.2101	2.0258	5.7600e-003	0.4978	3.6000e-003	0.5014	0.1324	3.3400e-003	0.1357	0.0000	391.5498	391.5498	0.0183	0.0000	391.9339
Total	**0.2209**	**0.8271**	**2.9550**	**7.7400e-003**	**0.5518**	**0.0129**	**0.5646**	**0.1479**	**0.0119**	**0.1597**	**0.0000**	**562.9322**	**562.9322**	**0.0196**	**0.0000**	**563.3441**

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	0.2678	1.9165	13.8374	0.0201		0.0330	0.0330		0.0330	0.0330	0.0000	1,802.6998	1,802.6998	0.5704	0.0000	1,814.6773
Total	**0.2678**	**1.9165**	**13.8374**	**0.0201**		**0.0330**	**0.0330**		**0.0330**	**0.0330**	**0.0000**	**1,802.6998**	**1,802.6998**	**0.5704**	**0.0000**	**1,814.6773**

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	0.0713	0.6170	0.9292	1.9800e-003	0.0539	9.2800e-003	0.0632	0.0155	8.5400e-003	0.0240	0.0000	171.3824	171.3824	1.3200e-003	0.0000	171.4101
Worker	0.1496	0.2101	2.0258	5.7600e-003	0.4978	3.6000e-003	0.5014	0.1324	3.3400e-003	0.1357	0.0000	391.5498	391.5498	0.0183	0.0000	391.9339
Total	**0.2209**	**0.8271**	**2.9550**	**7.7400e-003**	**0.5518**	**0.0129**	**0.5646**	**0.1479**	**0.0119**	**0.1597**	**0.0000**	**562.9322**	**562.9322**	**0.0196**	**0.0000**	**563.3441**

3.3 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	1.5213	16.4903	12.3585	0.0201		0.8533	0.8533		0.7850	0.7850	0.0000	1,770.1609	1,770.1609	0.5725	0.0000	1,782.1835
Total	**1.5213**	**16.4903**	**12.3585**	**0.0201**		**0.8533**	**0.8533**		**0.7850**	**0.7850**	**0.0000**	**1,770.1609**	**1,770.1609**	**0.5725**	**0.0000**	**1,782.1835**

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	0.0674	0.5277	0.9041	1.9800e-003	0.0541	8.3400e-003	0.0625	0.0155	7.6700e-003	0.0232	0.0000	168.1039	168.1039	1.2900e-003	0.0000	168.1309
Worker	0.1397	0.1942	1.8750	5.7800e-003	0.4998	3.5800e-003	0.5033	0.1329	3.3200e-003	0.1362	0.0000	377.2533	377.2533	0.0173	0.0000	377.6157
Total	**0.2071**	**0.7219**	**2.7791**	**7.7600e-003**	**0.5539**	**0.0119**	**0.5658**	**0.1484**	**0.0110**	**0.1594**	**0.0000**	**545.3573**	**545.3573**	**0.0185**	**0.0000**	**545.7466**

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	0.2688	1.9239	13.8905	0.0201		0.0331	0.0331		0.0331	0.0331	0.0000	1,770.1588	1,770.1588	0.5725	0.0000	1,782.1814
Total	**0.2688**	**1.9239**	**13.8905**	**0.0201**		**0.0331**	**0.0331**		**0.0331**	**0.0331**	**0.0000**	**1,770.1588**	**1,770.1588**	**0.5725**	**0.0000**	**1,782.1814**

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	0.0674	0.5277	0.9041	1.9800e-003	0.0541	8.3400e-003	0.0625	0.0155	7.6700e-003	0.0232	0.0000	168.1039	168.1039	1.2900e-003	0.0000	168.1309
Worker	0.1397	0.1942	1.8750	5.7800e-003	0.4998	3.5800e-003	0.5033	0.1329	3.3200e-003	0.1362	0.0000	377.2533	377.2533	0.0173	0.0000	377.6157
Total	**0.2071**	**0.7219**	**2.7791**	**7.7600e-003**	**0.5539**	**0.0119**	**0.5658**	**0.1484**	**0.0110**	**0.1594**	**0.0000**	**545.3573**	**545.3573**	**0.0185**	**0.0000**	**545.7466**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3293	14.2884	12.0710	0.0201		0.7209	0.7209		0.6632	0.6632	0.0000	1,763.0752	1,763.0752	0.5702	0.0000	1,775.0497
Total	**1.3293**	**14.2884**	**12.0710**	**0.0201**		**0.7209**	**0.7209**		**0.6632**	**0.6632**	**0.0000**	**1,763.0752**	**1,763.0752**	**0.5702**	**0.0000**	**1,775.0497**

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	0.0639	0.4319	0.8731	1.9700e-003	0.0539	7.4700e-003	0.0614	0.0155	6.8700e-003	0.0223	0.0000	167.2549	167.2549	1.2800e-003	0.0000	167.2817
Worker	0.1312	0.1800	1.7441	5.7600e-003	0.4978	3.5500e-003	0.5014	0.1324	3.2900e-003	0.1357	0.0000	369.2392	369.2392	0.0163	0.0000	369.5816
Total	**0.1951**	**0.6118**	**2.6172**	**7.7300e-003**	**0.5518**	**0.0110**	**0.5628**	**0.1479**	**0.0102**	**0.1580**	**0.0000**	**536.4941**	**536.4941**	**0.0176**	**0.0000**	**536.8634**

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	0.2678	1.9165	13.8374	0.0201		0.0330	0.0330		0.0330	0.0330	0.0000	1,763.0731	1,763.0731	0.5702	0.0000	1,775.0476
Total	**0.2678**	**1.9165**	**13.8374**	**0.0201**		**0.0330**	**0.0330**		**0.0330**	**0.0330**	**0.0000**	**1,763.0731**	**1,763.0731**	**0.5702**	**0.0000**	**1,775.0476**

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	0.0639	0.4319	0.8731	1.9700e-003	0.0539	7.4700e-003	0.0614	0.0155	6.8700e-003	0.0223	0.0000	167.2549	167.2549	1.2800e-003	0.0000	167.2817
Worker	0.1312	0.1800	1.7441	5.7600e-003	0.4978	3.5500e-003	0.5014	0.1324	3.2900e-003	0.1357	0.0000	369.2392	369.2392	0.0163	0.0000	369.5816
Total	**0.1951**	**0.6118**	**2.6172**	**7.7300e-003**	**0.5518**	**0.0110**	**0.5628**	**0.1479**	**0.0102**	**0.1580**	**0.0000**	**536.4941**	**536.4941**	**0.0176**	**0.0000**	**536.8634**

3.4 Trenching 2019 - 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	0.3011	3.0285	3.4007	5.1100e-003		0.1640	0.1640		0.1509	0.1509	0.0000	458.9443	458.9443	0.1452	0.0000	461.9936

Total	**0.3011**	**3.0285**	**3.4007**	**5.1100e-003**		**0.1640**	**0.1640**		**0.1509**	**0.1509**	**0.0000**	**458.9443**	**458.9443**	**0.1452**	**0.0000**	**461.9936**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4400e-003	0.0105	0.1008	2.9000e-004	0.0248	1.8000e-004	0.0249	6.5900e-003	1.7000e-004	6.7500e-003	0.0000	19.4774	19.4774	9.1000e-004	0.0000	19.4965
Total	**7.4400e-003**	**0.0105**	**0.1008**	**2.9000e-004**	**0.0248**	**1.8000e-004**	**0.0249**	**6.5900e-003**	**1.7000e-004**	**6.7500e-003**	**0.0000**	**19.4774**	**19.4774**	**9.1000e-004**	**0.0000**	**19.4965**

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	0.0628	0.2721	3.8723	5.1100e-003		8.3700e-003	8.3700e-003		8.3700e-003	8.3700e-003	0.0000	458.9437	458.9437	0.1452	0.0000	461.9930
Total	**0.0628**	**0.2721**	**3.8723**	**5.1100e-003**		**8.3700e-003**	**8.3700e-003**		**8.3700e-003**	**8.3700e-003**	**0.0000**	**458.9437**	**458.9437**	**0.1452**	**0.0000**	**461.9930**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4400e-003	0.0105	0.1008	2.9000e-004	0.0248	1.8000e-004	0.0249	6.5900e-003	1.7000e-004	6.7500e-003	0.0000	19.4774	19.4774	9.1000e-004	0.0000	19.4965
Total	**7.4400e-003**	**0.0105**	**0.1008**	**2.9000e-004**	**0.0248**	**1.8000e-004**	**0.0249**	**6.5900e-003**	**1.7000e-004**	**6.7500e-003**	**0.0000**	**19.4774**	**19.4774**	**9.1000e-004**	**0.0000**	**19.4965**

3.5 Concrete Curbs 2019 - 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	0.1044	1.1231	0.8249	1.2300e-003		0.0591	0.0591		0.0544	0.0544	0.0000	110.4193	110.4193	0.0349	0.0000	111.1530
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**1.1231**	**0.8249**	**1.2300e-003**		**0.0591**	**0.0591**		**0.0544**	**0.0544**	**0.0000**	**110.4193**	**110.4193**	**0.0349**	**0.0000**	**111.1530**

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	1.3700e-003	1.9200e-003	0.0185	5.0000e-005	4.5500e-003	3.0000e-005	4.5900e-003	1.2100e-003	3.0000e-005	1.2400e-003	0.0000	3.5804	3.5804	1.7000e-004	0.0000	3.5839
Total	**1.3700e-003**	**1.9200e-003**	**0.0185**	**5.0000e-005**	**4.5500e-003**	**3.0000e-005**	**4.5900e-003**	**1.2100e-003**	**3.0000e-005**	**1.2400e-003**	**0.0000**	**3.5804**	**3.5804**	**1.7000e-004**	**0.0000**	**3.5839**

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	0.0152	0.0659	0.9374	1.2300e-003		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003	0.0000	110.4192	110.4192	0.0349	0.0000	111.1529
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0152**	**0.0659**	**0.9374**	**1.2300e-003**		**2.0300e-003**	**2.0300e-003**		**2.0300e-003**	**2.0300e-003**	**0.0000**	**110.4192**	**110.4192**	**0.0349**	**0.0000**	**111.1529**

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	1.3700e-003	1.9200e-003	0.0185	5.0000e-005	4.5500e-003	3.0000e-005	4.5900e-003	1.2100e-003	3.0000e-005	1.2400e-003	0.0000	3.5804	3.5804	1.7000e-004	0.0000	3.5839
Total	**1.3700e-003**	**1.9200e-003**	**0.0185**	**5.0000e-005**	**4.5500e-003**	**3.0000e-005**	**4.5900e-003**	**1.2100e-003**	**3.0000e-005**	**1.2400e-003**	**0.0000**	**3.5804**	**3.5804**	**1.7000e-004**	**0.0000**	**3.5839**

3.6 Paving 2019 - 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	5.4500e-003	0.0558	0.0549	8.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	7.4490	7.4490	2.3600e-003	0.0000	7.4985
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.4500e-003**	**0.0558**	**0.0549**	**8.0000e-005**		**3.2200e-003**	**3.2200e-003**		**2.9600e-003**	**2.9600e-003**	**0.0000**	**7.4490**	**7.4490**	**2.3600e-003**	**0.0000**	**7.4985**

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	1.4000e-004	1.9000e-004	1.8500e-003	1.0000e-005	4.6000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3580	0.3580	2.0000e-005	0.0000	0.3584
Total	**1.4000e-004**	**1.9000e-004**	**1.8500e-003**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**4.6000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3580**	**0.3580**	**2.0000e-005**	**0.0000**	**0.3584**

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	1.0200e-003	4.4300e-003	0.0630	8.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	7.4490	7.4490	2.3600e-003	0.0000	7.4985
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0200e-003**	**4.4300e-003**	**0.0630**	**8.0000e-005**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**7.4490**	**7.4490**	**2.3600e-003**	**0.0000**	**7.4985**

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	1.4000e-004	1.9000e-004	1.8500e-003	1.0000e-005	4.6000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3580	0.3580	2.0000e-005	0.0000	0.3584
Total	**1.4000e-004**	**1.9000e-004**	**1.8500e-003**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**4.6000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3580**	**0.3580**	**2.0000e-005**	**0.0000**	**0.3584**

3.7 Foundation 2020 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2772	2.9683	2.2324	3.4700e-003		0.1536	0.1536		0.1413	0.1413	0.0000	305.2498	305.2498	0.0987	0.0000	307.3230

Total	**0.2772**	**2.9683**	**2.2324**	**3.4700e-003**		**0.1536**	**0.1536**		**0.1413**	**0.1413**	**0.0000**	**305.2498**	**305.2498**	**0.0987**	**0.0000**	**307.3230**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0176	0.0245	0.2362	7.3000e-004	0.0630	4.5000e-004	0.0634	0.0167	4.2000e-004	0.0172	0.0000	47.5166	47.5166	2.1700e-003	0.0000	47.5623
Total	**0.0176**	**0.0245**	**0.2362**	**7.3000e-004**	**0.0630**	**4.5000e-004**	**0.0634**	**0.0167**	**4.2000e-004**	**0.0172**	**0.0000**	**47.5166**	**47.5166**	**2.1700e-003**	**0.0000**	**47.5623**

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	0.0429	0.1861	2.5618	3.4700e-003		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	305.2495	305.2495	0.0987	0.0000	307.3227
Total	**0.0429**	**0.1861**	**2.5618**	**3.4700e-003**		**5.7200e-003**	**5.7200e-003**		**5.7200e-003**	**5.7200e-003**	**0.0000**	**305.2495**	**305.2495**	**0.0987**	**0.0000**	**307.3227**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0176	0.0245	0.2362	7.3000e-004	0.0630	4.5000e-004	0.0634	0.0167	4.2000e-004	0.0172	0.0000	47.5166	47.5166	2.1700e-003	0.0000	47.5623
Total	**0.0176**	**0.0245**	**0.2362**	**7.3000e-004**	**0.0630**	**4.5000e-004**	**0.0634**	**0.0167**	**4.2000e-004**	**0.0172**	**0.0000**	**47.5166**	**47.5166**	**2.1700e-003**	**0.0000**	**47.5623**

3.8 Trenching 2021 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2599	2.4476	3.3935	5.1100e-003		0.1281	0.1281		0.1179	0.1179	0.0000	449.0345	449.0345	0.1452	0.0000	452.0842
Total	**0.2599**	**2.4476**	**3.3935**	**5.1100e-003**		**0.1281**	**0.1281**		**0.1179**	**0.1179**	**0.0000**	**449.0345**	**449.0345**	**0.1452**	**0.0000**	**452.0842**

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	6.5300e-003	8.9500e-003	0.0868	2.9000e-004	0.0248	1.8000e-004	0.0249	6.5900e-003	1.6000e-004	6.7500e-003	0.0000	18.3676	18.3676	8.1000e-004	0.0000	18.3846
Total	**6.5300e-003**	**8.9500e-003**	**0.0868**	**2.9000e-004**	**0.0248**	**1.8000e-004**	**0.0249**	**6.5900e-003**	**1.6000e-004**	**6.7500e-003**	**0.0000**	**18.3676**	**18.3676**	**8.1000e-004**	**0.0000**	**18.3846**

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	0.0628	0.2721	3.8723	5.1100e-003		8.3700e-003	8.3700e-003		8.3700e-003	8.3700e-003	0.0000	449.0339	449.0339	0.1452	0.0000	452.0837
Total	**0.0628**	**0.2721**	**3.8723**	**5.1100e-003**		**8.3700e-003**	**8.3700e-003**		**8.3700e-003**	**8.3700e-003**	**0.0000**	**449.0339**	**449.0339**	**0.1452**	**0.0000**	**452.0837**

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	6.5300e-003	8.9500e-003	0.0868	2.9000e-004	0.0248	1.8000e-004	0.0249	6.5900e-003	1.6000e-004	6.7500e-003	0.0000	18.3676	18.3676	8.1000e-004	0.0000	18.3846
Total	**6.5300e-003**	**8.9500e-003**	**0.0868**	**2.9000e-004**	**0.0248**	**1.8000e-004**	**0.0249**	**6.5900e-003**	**1.6000e-004**	**6.7500e-003**	**0.0000**	**18.3676**	**18.3676**	**8.1000e-004**	**0.0000**	**18.3846**

3.9 Concrete Curbs 2021 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0918	0.9582	0.8869	1.3500e-003		0.0501	0.0501		0.0461	0.0461	0.0000	118.7594	118.7594	0.0384	0.0000	119.5660
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0918**	**0.9582**	**0.8869**	**1.3500e-003**		**0.0501**	**0.0501**		**0.0461**	**0.0461**	**0.0000**	**118.7594**	**118.7594**	**0.0384**	**0.0000**	**119.5660**

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	1.3200e-003	1.8100e-003	0.0175	6.0000e-005	5.0100e-003	4.0000e-005	5.0400e-003	1.3300e-003	3.0000e-005	1.3600e-003	0.0000	3.7140	3.7140	1.6000e-004	0.0000	3.7175
Total	**1.3200e-003**	**1.8100e-003**	**0.0175**	**6.0000e-005**	**5.0100e-003**	**4.0000e-005**	**5.0400e-003**	**1.3300e-003**	**3.0000e-005**	**1.3600e-003**	**0.0000**	**3.7140**	**3.7140**	**1.6000e-004**	**0.0000**	**3.7175**

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	0.0167	0.0725	1.0311	1.3500e-003		2.2300e-003	2.2300e-003		2.2300e-003	2.2300e-003	0.0000	118.7593	118.7593	0.0384	0.0000	119.5659
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0167**	**0.0725**	**1.0311**	**1.3500e-003**		**2.2300e-003**	**2.2300e-003**		**2.2300e-003**	**2.2300e-003**	**0.0000**	**118.7593**	**118.7593**	**0.0384**	**0.0000**	**119.5659**

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	1.3200e-003	1.8100e-003	0.0175	6.0000e-005	5.0100e-003	4.0000e-005	5.0400e-003	1.3300e-003	3.0000e-005	1.3600e-003	0.0000	3.7140	3.7140	1.6000e-004	0.0000	3.7175
Total	**1.3200e-003**	**1.8100e-003**	**0.0175**	**6.0000e-005**	**5.0100e-003**	**4.0000e-005**	**5.0400e-003**	**1.3300e-003**	**3.0000e-005**	**1.3600e-003**	**0.0000**	**3.7140**	**3.7140**	**1.6000e-004**	**0.0000**	**3.7175**

3.10 Paving 2021 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.2100e-003	0.0527	0.0603	9.0000e-005		2.9100e-003	2.9100e-003		2.6800e-003	2.6800e-003	0.0000	8.0153	8.0153	2.5900e-003	0.0000	8.0697

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.2100e-003**	**0.0527**	**0.0603**	**9.0000e-005**		**2.9100e-003**	**2.9100e-003**		**2.6800e-003**	**2.6800e-003**	**0.0000**	**8.0153**	**8.0153**	**2.5900e-003**	**0.0000**	**8.0697**

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	1.3000e-004	1.8000e-004	1.7500e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.3714	0.3714	2.0000e-005	0.0000	0.3718
Total	**1.3000e-004**	**1.8000e-004**	**1.7500e-003**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3714**	**0.3714**	**2.0000e-005**	**0.0000**	**0.3718**

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	1.1200e-003	4.8700e-003	0.0693	9.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	8.0153	8.0153	2.5900e-003	0.0000	8.0697
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1200e-003**	**4.8700e-003**	**0.0693**	**9.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**8.0153**	**8.0153**	**2.5900e-003**	**0.0000**	**8.0697**

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	1.3000e-004	1.8000e-004	1.7500e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.3714	0.3714	2.0000e-005	0.0000	0.3718
Total	**1.3000e-004**	**1.8000e-004**	**1.7500e-003**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3714**	**0.3714**	**2.0000e-005**	**0.0000**	**0.3718**

3.11 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2100e-003	0.0573	0.0682	1.1000e-004		3.5300e-003	3.5300e-003		3.5300e-003	3.5300e-003	0.0000	9.5747	9.5747	6.6000e-004	0.0000	9.5885
Total	**4.1403**	**0.0573**	**0.0682**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.5300e-003**	**3.5300e-003**	**0.0000**	**9.5747**	**9.5747**	**6.6000e-004**	**0.0000**	**9.5885**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5600e-003	0.0104	0.1005	3.3000e-004	0.0287	2.0000e-004	0.0289	7.6300e-003	1.9000e-004	7.8200e-003	0.0000	21.2713	21.2713	9.4000e-004	0.0000	21.2910
Total	**7.5600e-003**	**0.0104**	**0.1005**	**3.3000e-004**	**0.0287**	**2.0000e-004**	**0.0289**	**7.6300e-003**	**1.9000e-004**	**7.8200e-003**	**0.0000**	**21.2713**	**21.2713**	**9.4000e-004**	**0.0000**	**21.2910**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	4.8300e-003	0.0687	1.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	9.5747	9.5747	6.6000e-004	0.0000	9.5885
Total	**4.1332**	**4.8300e-003**	**0.0687**	**1.1000e-004**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**9.5747**	**9.5747**	**6.6000e-004**	**0.0000**	**9.5885**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5600e-003	0.0104	0.1005	3.3000e-004	0.0287	2.0000e-004	0.0289	7.6300e-003	1.9000e-004	7.8200e-003	0.0000	21.2713	21.2713	9.4000e-004	0.0000	21.2910
Total	**7.5600e-003**	**0.0104**	**0.1005**	**3.3000e-004**	**0.0287**	**2.0000e-004**	**0.0289**	**7.6300e-003**	**1.9000e-004**	**7.8200e-003**	**0.0000**	**21.2713**	**21.2713**	**9.4000e-004**	**0.0000**	**21.2910**

Communications Hill - Phase 3 (non-Ind.) Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	575.00	Dwelling Unit	84.00	575,000.00	1645
Strip Mall	16.20	1000sqft	0.00	16,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Phase 3 acreage supplied by project applicant.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Trips and VMT - Model defaults for vendor trips.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	52.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	110.00	75.00
tblConstructionPhase	NumDays	1,550.00	782.00
tblConstructionPhase	NumDays	1,550.00	32.00
tblConstructionPhase	NumDays	1,550.00	32.00
tblConstructionPhase	NumDays	60.00	782.00
tblConstructionPhase	PhaseEndDate	1/28/2025	12/31/2024
tblConstructionPhase	PhaseEndDate	12/30/2027	12/31/2024
tblConstructionPhase	PhaseEndDate	2/13/2025	10/15/2022
tblConstructionPhase	PhaseEndDate	11/29/2022	10/15/2024
tblConstructionPhase	PhaseStartDate	10/16/2024	9/18/2024
tblConstructionPhase	PhaseStartDate	1/1/2025	1/1/2022
tblConstructionPhase	PhaseStartDate	1/1/2025	9/1/2022
tblConstructionPhase	PhaseStartDate	10/16/2022	9/1/2024

tblLandUse	LotAcreage	35.94	84.00
tblLandUse	LotAcreage	0.37	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	7.00	12.00
tblOffRoadEquipment	UsageHours	7.00	12.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblTripsAndVMT	VendorTripNumber	64.00	0.00
tblTripsAndVMT	VendorTripNumber	64.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	1.7026	16.0992	18.0152	0.0340	0.6285	0.7847	1.4132	0.1682	0.7223	0.8906	0.0000	2,812.4368	2,812.4368	0.7363	0.0000	2,827.8981
2023	1.3798	12.6911	15.4815	0.0299	0.5674	0.6024	1.1699	0.1520	0.5546	0.7066	0.0000	2,466.3666	2,466.3666	0.6380	0.0000	2,479.7644
2024	5.6627	13.7916	17.8918	0.0347	0.6615	0.6468	1.3083	0.1771	0.5956	0.7727	0.0000	2,849.4785	2,849.4785	0.7411	0.0000	2,865.0421
Total	**8.7451**	**42.5818**	**51.3885**	**0.0986**	**1.8574**	**2.0339**	**3.8913**	**0.4973**	**1.8726**	**2.3699**	**0.0000**	**8,128.2819**	**8,128.2819**	**2.1154**	**0.0000**	**8,172.7045**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.5396	2.8955	20.3812	0.0340	0.6285	0.0528	0.6813	0.1682	0.0519	0.2202	0.0000	2,812.4341	2,812.4341	0.7363	0.0000	2,827.8954
2023	0.4715	2.6238	17.5581	0.0299	0.5674	0.0466	0.6141	0.1520	0.0458	0.1978	0.0000	2,466.3643	2,466.3643	0.6380	0.0000	2,479.7620
2024	4.6628	2.8442	20.4057	0.0347	0.6615	0.0534	0.7149	0.1771	0.0525	0.2295	0.0000	2,849.4758	2,849.4758	0.7411	0.0000	2,865.0394
Total	**5.6739**	**8.3636**	**58.3450**	**0.0986**	**1.8574**	**0.1528**	**2.0102**	**0.4973**	**0.1502**	**0.6475**	**0.0000**	**8,128.2742**	**8,128.2742**	**2.1154**	**0.0000**	**8,172.6968**

	ROG	NOx	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	**35.12**	**80.36**	**-13.54**	**0.00**	**0.00**	**92.49**	**48.34**	**0.00**	**91.98**	**72.68**	**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	Landscaping	Site Preparation	1/1/2022	12/31/2024	5	782	
2	Building Construction	Building Construction	1/1/2022	12/31/2024	5	782	
3	Foundation 2022	Building Construction	9/1/2022	10/15/2022	5	32	
4	Foundation 2024	Building Construction	9/1/2024	10/15/2024	5	32	
5	Architectural Coating	Architectural Coating	9/18/2024	12/31/2024	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,164,375; Residential Outdoor: 388,125; Non-Residential Indoor: 24,300; Non-Residential Outdoor: 8,100

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Landscaping	Dumpers/Tenders	2	8.00	16	0.38
Landscaping	Other Material Handling Equipment	1	8.00	167	0.40
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Skid Steer Loaders	1	8.00	64	0.37
Landscaping	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	5	10.00	226	0.29
Building Construction	Forklifts	5	10.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Other Construction Equipment	10	10.00	171	0.42
Building Construction	Skid Steer Loaders	5	10.00	64	0.37
Building Construction	Tractors/Loaders/Backhoes	5	10.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Foundation 2022	Cranes	2	12.00	226	0.29
Foundation 2022	Forklifts	0	8.00	89	0.20
Foundation 2022	Generator Sets	0	8.00	84	0.74
Foundation 2022	Other Construction Equipment	21	12.00	171	0.42

Foundation 2022	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Foundation 2022	Welders	0	8.00	46	0.45
Foundation 2024	Cranes	2	12.00	226	0.29
Foundation 2024	Forklifts	0	8.00	89	0.20
Foundation 2024	Generator Sets	0	8.00	84	0.74
Foundation 2024	Other Construction Equipment	21	12.00	171	0.42
Foundation 2024	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Foundation 2024	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Landscaping	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	30	419.00	64.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Foundation 2022	23	419.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Foundation 2024	23	419.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	84.00	0.00	0.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Landscaping - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1054	0.9654	1.3111	2.0200e-003		0.0481	0.0481		0.0446	0.0446	0.0000	174.3079	174.3079	0.0533	0.0000	175.4266
Total	**0.1054**	**0.9654**	**1.3111**	**2.0200e-003**	**0.0000**	**0.0481**	**0.0481**	**0.0000**	**0.0446**	**0.0446**	**0.0000**	**174.3079**	**174.3079**	**0.0533**	**0.0000**	**175.4266**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4200e-003	6.0000e-003	0.0583	2.1000e-004	0.0178	1.3000e-004	0.0179	4.7200e-003	1.2000e-004	4.8400e-003	0.0000	12.9543	12.9543	5.5000e-004	0.0000	12.9659
Total	**4.4200e-003**	**6.0000e-003**	**0.0583**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0179**	**4.7200e-003**	**1.2000e-004**	**4.8400e-003**	**0.0000**	**12.9543**	**12.9543**	**5.5000e-004**	**0.0000**	**12.9659**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0256	0.2314	1.3765	2.0200e-003		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	174.3077	174.3077	0.0533	0.0000	175.4264
Total	**0.0256**	**0.2314**	**1.3765**	**2.0200e-003**	**0.0000**	**2.9800e-003**	**2.9800e-003**	**0.0000**	**2.9800e-003**	**2.9800e-003**	**0.0000**	**174.3077**	**174.3077**	**0.0533**	**0.0000**	**175.4264**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4200e-003	6.0000e-003	0.0583	2.1000e-004	0.0178	1.3000e-004	0.0179	4.7200e-003	1.2000e-004	4.8400e-003	0.0000	12.9543	12.9543	5.5000e-004	0.0000	12.9659
Total	**4.4200e-003**	**6.0000e-003**	**0.0583**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0179**	**4.7200e-003**	**1.2000e-004**	**4.8400e-003**	**0.0000**	**12.9543**	**12.9543**	**5.5000e-004**	**0.0000**	**12.9659**

3.2 Landscaping - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1000	0.9017	1.3083	2.0200e-003		0.0427	0.0427		0.0396	0.0396	0.0000	174.3986	174.3986	0.0533	0.0000	175.5178
Total	**0.1000**	**0.9017**	**1.3083**	**2.0200e-003**	**0.0000**	**0.0427**	**0.0427**	**0.0000**	**0.0396**	**0.0396**	**0.0000**	**174.3986**	**174.3986**	**0.0533**	**0.0000**	**175.5178**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1900e-003	5.6300e-003	0.0547	2.1000e-004	0.0178	1.3000e-004	0.0179	4.7200e-003	1.2000e-004	4.8400e-003	0.0000	12.7607	12.7607	5.3000e-004	0.0000	12.7718
Total	**4.1900e-003**	**5.6300e-003**	**0.0547**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0179**	**4.7200e-003**	**1.2000e-004**	**4.8400e-003**	**0.0000**	**12.7607**	**12.7607**	**5.3000e-004**	**0.0000**	**12.7718**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0256	0.2314	1.3765	2.0200e-003		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	174.3984	174.3984	0.0533	0.0000	175.5176
Total	**0.0256**	**0.2314**	**1.3765**	**2.0200e-003**	**0.0000**	**2.9800e-003**	**2.9800e-003**	**0.0000**	**2.9800e-003**	**2.9800e-003**	**0.0000**	**174.3984**	**174.3984**	**0.0533**	**0.0000**	**175.5176**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1900e-003	5.6300e-003	0.0547	2.1000e-004	0.0178	1.3000e-004	0.0179	4.7200e-003	1.2000e-004	4.8400e-003	0.0000	12.7607	12.7607	5.3000e-004	0.0000	12.7718
Total	**4.1900e-003**	**5.6300e-003**	**0.0547**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0179**	**4.7200e-003**	**1.2000e-004**	**4.8400e-003**	**0.0000**	**12.7607**	**12.7607**	**5.3000e-004**	**0.0000**	**12.7718**

3.2 Landscaping - 2024

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0971	0.8607	1.3210	2.0300e-003		0.0389	0.0389		0.0362	0.0362	0.0000	175.7948	175.7948	0.0537	0.0000	176.9230
Total	**0.0971**	**0.8607**	**1.3210**	**2.0300e-003**	**0.0000**	**0.0389**	**0.0389**	**0.0000**	**0.0362**	**0.0362**	**0.0000**	**175.7948**	**175.7948**	**0.0537**	**0.0000**	**176.9230**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-003	5.3500e-003	0.0521	2.1000e-004	0.0179	1.3000e-004	0.0180	4.7600e-003	1.2000e-004	4.8800e-003	0.0000	12.6836	12.6836	5.1000e-004	0.0000	12.6943
Total	**4.0000e-003**	**5.3500e-003**	**0.0521**	**2.1000e-004**	**0.0179**	**1.3000e-004**	**0.0180**	**4.7600e-003**	**1.2000e-004**	**4.8800e-003**	**0.0000**	**12.6836**	**12.6836**	**5.1000e-004**	**0.0000**	**12.6943**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0258	0.2332	1.3871	2.0300e-003		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	175.7946	175.7946	0.0537	0.0000	176.9228
Total	**0.0258**	**0.2332**	**1.3871**	**2.0300e-003**	**0.0000**	**3.0000e-003**	**3.0000e-003**	**0.0000**	**3.0000e-003**	**3.0000e-003**	**0.0000**	**175.7946**	**175.7946**	**0.0537**	**0.0000**	**176.9228**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-003	5.3500e-003	0.0521	2.1000e-004	0.0179	1.3000e-004	0.0180	4.7600e-003	1.2000e-004	4.8800e-003	0.0000	12.6836	12.6836	5.1000e-004	0.0000	12.6943
Total	**4.0000e-003**	**5.3500e-003**	**0.0521**	**2.1000e-004**	**0.0179**	**1.3000e-004**	**0.0180**	**4.7600e-003**	**1.2000e-004**	**4.8800e-003**	**0.0000**	**12.6836**	**12.6836**	**5.1000e-004**	**0.0000**	**12.6943**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1857	12.4511	11.8647	0.0200		0.6173	0.6173		0.5679	0.5679	0.0000	1,756.4928	1,756.4928	0.5681	0.0000	1,768.4226
Total	**1.1857**	**12.4511**	**11.8647**	**0.0200**		**0.6173**	**0.6173**		**0.5679**	**0.5679**	**0.0000**	**1,756.4928**	**1,756.4928**	**0.5681**	**0.0000**	**1,768.4226**

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	0.0625	0.3804	0.8504	1.9600e-003	0.0537	7.3300e-003	0.0611	0.0154	6.7500e-003	0.0222	0.0000	166.5034	166.5034	1.3000e-003	0.0000	166.5307
Worker	0.1235	0.1676	1.6272	5.7400e-003	0.4959	3.5300e-003	0.4995	0.1319	3.2700e-003	0.1352	0.0000	361.8557	361.8557	0.0155	0.0000	362.1807
Total	**0.1860**	**0.5479**	**2.4776**	**7.7000e-003**	**0.5497**	**0.0109**	**0.5605**	**0.1473**	**0.0100**	**0.1573**	**0.0000**	**528.3591**	**528.3591**	**0.0168**	**0.0000**	**528.7114**

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	0.2667	1.9092	13.7844	0.0200		0.0329	0.0329		0.0329	0.0329	0.0000	1,756.4907	1,756.4907	0.5681	0.0000	1,768.4205

Total	**0.2667**	**1.9092**	**13.7844**	**0.0200**		**0.0329**	**0.0329**		**0.0329**	**0.0329**	**0.0000**	**1,756.4907**	**1,756.4907**	**0.5681**	**0.0000**	**1,768.4205**

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	0.0625	0.3804	0.8504	1.9600e-003	0.0537	7.3300e-003	0.0611	0.0154	6.7500e-003	0.0222	0.0000	166.5034	166.5034	1.3000e-003	0.0000	166.5307
Worker	0.1235	0.1676	1.6272	5.7400e-003	0.4959	3.5300e-003	0.4995	0.1319	3.2700e-003	0.1352	0.0000	361.8557	361.8557	0.0155	0.0000	362.1807
Total	**0.1860**	**0.5479**	**2.4776**	**7.7000e-003**	**0.5497**	**0.0109**	**0.5605**	**0.1473**	**0.0100**	**0.1573**	**0.0000**	**528.3591**	**528.3591**	**0.0168**	**0.0000**	**528.7114**

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1006	11.3061	11.7760	0.0200		0.5490	0.5490		0.5051	0.5051	0.0000	1,756.7005	1,756.7005	0.5682	0.0000	1,768.6317
Total	**1.1006**	**11.3061**	**11.7760**	**0.0200**		**0.5490**	**0.5490**		**0.5051**	**0.5051**	**0.0000**	**1,756.7005**	**1,756.7005**	**0.5682**	**0.0000**	**1,768.6317**

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	0.0581	0.3203	0.8141	1.9600e-003	0.0537	7.1500e-003	0.0609	0.0154	6.5800e-003	0.0220	0.0000	166.0589	166.0589	1.2000e-003	0.0000	166.0842
Worker	0.1170	0.1573	1.5284	5.7400e-003	0.4959	3.5300e-003	0.4995	0.1319	3.2700e-003	0.1352	0.0000	356.4479	356.4479	0.0148	0.0000	356.7588
Total	**0.1750**	**0.4777**	**2.3425**	**7.7000e-003**	**0.5497**	**0.0107**	**0.5604**	**0.1473**	**9.8500e-003**	**0.1571**	**0.0000**	**522.5068**	**522.5068**	**0.0160**	**0.0000**	**522.8430**

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	0.2667	1.9092	13.7844	0.0200		0.0329	0.0329		0.0329	0.0329	0.0000	1,756.6985	1,756.6985	0.5682	0.0000	1,768.6296
Total	**0.2667**	**1.9092**	**13.7844**	**0.0200**		**0.0329**	**0.0329**		**0.0329**	**0.0329**	**0.0000**	**1,756.6985**	**1,756.6985**	**0.5682**	**0.0000**	**1,768.6296**

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	0.0581	0.3203	0.8141	1.9600e-003	0.0537	7.1500e-003	0.0609	0.0154	6.5800e-003	0.0220	0.0000	166.0589	166.0589	1.2000e-003	0.0000	166.0842
Worker	0.1170	0.1573	1.5284	5.7400e-003	0.4959	3.5300e-003	0.4995	0.1319	3.2700e-003	0.1352	0.0000	356.4479	356.4479	0.0148	0.0000	356.7588
Total	**0.1750**	**0.4777**	**2.3425**	**7.7000e-003**	**0.5497**	**0.0107**	**0.5604**	**0.1473**	**9.8500e-003**	**0.1571**	**0.0000**	**522.5068**	**522.5068**	**0.0160**	**0.0000**	**522.8430**

3.3 Building Construction - 2024

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	1.0513	10.6098	11.8337	0.0202		0.5041	0.5041		0.4638	0.4638	0.0000	1,770.3803	1,770.3803	0.5726	0.0000	1,782.4044
Total	**1.0513**	**10.6098**	**11.8337**	**0.0202**		**0.5041**	**0.5041**		**0.4638**	**0.4638**	**0.0000**	**1,770.3803**	**1,770.3803**	**0.5726**	**0.0000**	**1,782.4044**

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	0.0575	0.3202	0.8058	1.9700e-003	0.0542	7.2400e-003	0.0614	0.0155	6.6600e-003	0.0222	0.0000	167.3994	167.3994	1.2200e-003	0.0000	167.4250
Worker	0.1119	0.1495	1.4559	5.7800e-003	0.4998	3.5500e-003	0.5033	0.1329	3.3000e-003	0.1362	0.0000	354.2945	354.2945	0.0143	0.0000	354.5953
Total	**0.1693**	**0.4697**	**2.2617**	**7.7500e-003**	**0.5539**	**0.0108**	**0.5647**	**0.1484**	**9.9600e-003**	**0.1584**	**0.0000**	**521.6939**	**521.6939**	**0.0156**	**0.0000**	**522.0203**

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	0.2688	1.9239	13.8905	0.0202		0.0331	0.0331		0.0331	0.0331	0.0000	1,770.3782	1,770.3782	0.5726	0.0000	1,782.4023
Total	**0.2688**	**1.9239**	**13.8905**	**0.0202**		**0.0331**	**0.0331**		**0.0331**	**0.0331**	**0.0000**	**1,770.3782**	**1,770.3782**	**0.5726**	**0.0000**	**1,782.4023**

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	0.0575	0.3202	0.8058	1.9700e-003	0.0542	7.2400e-003	0.0614	0.0155	6.6600e-003	0.0222	0.0000	167.3994	167.3994	1.2200e-003	0.0000	167.4250
Worker	0.1119	0.1495	1.4559	5.7800e-003	0.4998	3.5500e-003	0.5033	0.1329	3.3000e-003	0.1362	0.0000	354.2945	354.2945	0.0143	0.0000	354.5953
Total	**0.1693**	**0.4697**	**2.2617**	**7.7500e-003**	**0.5539**	**0.0108**	**0.5647**	**0.1484**	**9.9600e-003**	**0.1584**	**0.0000**	**521.6939**	**521.6939**	**0.0156**	**0.0000**	**522.0203**

3.4 Foundation 2022 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2059	2.1081	2.1033	3.3700e-003		0.1079	0.1079		0.0993	0.0993	0.0000	295.7866	295.7866	0.0957	0.0000	297.7956
Total	**0.2059**	**2.1081**	**2.1033**	**3.3700e-003**		**0.1079**	**0.1079**		**0.0993**	**0.0993**	**0.0000**	**295.7866**	**295.7866**	**0.0957**	**0.0000**	**297.7956**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0152	0.0206	0.2003	7.1000e-004	0.0610	4.3000e-004	0.0615	0.0162	4.0000e-004	0.0166	0.0000	44.5361	44.5361	1.9000e-003	0.0000	44.5761
Total	**0.0152**	**0.0206**	**0.2003**	**7.1000e-004**	**0.0610**	**4.3000e-004**	**0.0615**	**0.0162**	**4.0000e-004**	**0.0166**	**0.0000**	**44.5361**	**44.5361**	**1.9000e-003**	**0.0000**	**44.5761**

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	0.0416	0.1804	2.4842	3.3700e-003		5.5500e-003	5.5500e-003		5.5500e-003	5.5500e-003	0.0000	295.7863	295.7863	0.0957	0.0000	297.7952

Total	**0.0416**	**0.1804**	**2.4842**	**3.3700e-003**		**5.5500e-003**	**5.5500e-003**		**5.5500e-003**	**5.5500e-003**	**0.0000**	**295.7863**	**295.7863**	**0.0957**	**0.0000**	**297.7952**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0152	0.0206	0.2003	7.1000e-004	0.0610	4.3000e-004	0.0615	0.0162	4.0000e-004	0.0166	0.0000	44.5361	44.5361	1.9000e-003	0.0000	44.5761
Total	**0.0152**	**0.0206**	**0.2003**	**7.1000e-004**	**0.0610**	**4.3000e-004**	**0.0615**	**0.0162**	**4.0000e-004**	**0.0166**	**0.0000**	**44.5361**	**44.5361**	**1.9000e-003**	**0.0000**	**44.5761**

3.5 Foundation 2024 - 2024

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	0.1819	1.7735	2.0940	3.3700e-003		0.0899	0.0899		0.0827	0.0827	0.0000	295.7463	295.7463	0.0957	0.0000	297.7549
Total	**0.1819**	**1.7735**	**2.0940**	**3.3700e-003**		**0.0899**	**0.0899**		**0.0827**	**0.0827**	**0.0000**	**295.7463**	**295.7463**	**0.0957**	**0.0000**	**297.7549**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0137	0.0183	0.1778	7.1000e-004	0.0610	4.3000e-004	0.0615	0.0162	4.0000e-004	0.0166	0.0000	43.2726	43.2726	1.7500e-003	0.0000	43.3094
Total	**0.0137**	**0.0183**	**0.1778**	**7.1000e-004**	**0.0610**	**4.3000e-004**	**0.0615**	**0.0162**	**4.0000e-004**	**0.0166**	**0.0000**	**43.2726**	**43.2726**	**1.7500e-003**	**0.0000**	**43.3094**

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	0.0416	0.1804	2.4842	3.3700e-003		5.5500e-003	5.5500e-003		5.5500e-003	5.5500e-003	0.0000	295.7459	295.7459	0.0957	0.0000	297.7546
Total	**0.0416**	**0.1804**	**2.4842**	**3.3700e-003**		**5.5500e-003**	**5.5500e-003**		**5.5500e-003**	**5.5500e-003**	**0.0000**	**295.7459**	**295.7459**	**0.0957**	**0.0000**	**297.7546**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0137	0.0183	0.1778	7.1000e-004	0.0610	4.3000e-004	0.0615	0.0162	4.0000e-004	0.0166	0.0000	43.2726	43.2726	1.7500e-003	0.0000	43.3094
Total	**0.0137**	**0.0183**	**0.1778**	**7.1000e-004**	**0.0610**	**4.3000e-004**	**0.0615**	**0.0162**	**4.0000e-004**	**0.0166**	**0.0000**	**43.2726**	**43.2726**	**1.7500e-003**	**0.0000**	**43.3094**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7800e-003	0.0457	0.0679	1.1000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	9.5747	9.5747	5.4000e-004	0.0000	9.5860
Total	**4.1389**	**0.0457**	**0.0679**	**1.1000e-004**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**9.5747**	**9.5747**	**5.4000e-004**	**0.0000**	**9.5860**

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	6.4200e-003	8.5800e-003	0.0836	3.3000e-004	0.0287	2.0000e-004	0.0289	7.6300e-003	1.9000e-004	7.8200e-003	0.0000	20.3324	20.3324	8.2000e-004	0.0000	20.3497
Total	**6.4200e-003**	**8.5800e-003**	**0.0836**	**3.3000e-004**	**0.0287**	**2.0000e-004**	**0.0289**	**7.6300e-003**	**1.9000e-004**	**7.8200e-003**	**0.0000**	**20.3324**	**20.3324**	**8.2000e-004**	**0.0000**	**20.3497**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	4.8300e-003	0.0687	1.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	9.5747	9.5747	5.4000e-004	0.0000	9.5860
Total	**4.1332**	**4.8300e-003**	**0.0687**	**1.1000e-004**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**9.5747**	**9.5747**	**5.4000e-004**	**0.0000**	**9.5860**

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	6.4200e-003	8.5800e-003	0.0836	3.3000e-004	0.0287	2.0000e-004	0.0289	7.6300e-003	1.9000e-004	7.8200e-003	0.0000	20.3324	20.3324	8.2000e-004	0.0000	20.3497
Total	**6.4200e-003**	**8.5800e-003**	**0.0836**	**3.3000e-004**	**0.0287**	**2.0000e-004**	**0.0289**	**7.6300e-003**	**1.9000e-004**	**7.8200e-003**	**0.0000**	**20.3324**	**20.3324**	**8.2000e-004**	**0.0000**	**20.3497**

Communications Hill - Industrial (Phase 3)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,400.00	1000sqft	55.00	1,400,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Industrial (Phase 3) acreage supplied by project applicant.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Construction equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Construction equipment list provided by project applicant.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	75.00	15.00
tblConstructionPhase	NumDays	1,110.00	164.00
tblConstructionPhase	NumDays	75.00	7.00
tblConstructionPhase	NumDays	40.00	150.00
tblConstructionPhase	PhaseStartDate	5/6/2023	5/8/2023
tblLandUse	LotAcreage	32.14	55.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3270	2.5332	3.9640	8.1700e-003	0.2748	0.1169	0.3916	0.0740	0.1085	0.1826	0.0000	649.9511	649.9511	0.1013	0.0000	652.0780
2023	7.6281	2.3773	4.1261	9.0000e-003	0.3155	0.1073	0.4228	0.0853	0.0998	0.1851	0.0000	708.1498	708.1498	0.0989	0.0000	710.2273
Total	**7.9551**	**4.9106**	**8.0901**	**0.0172**	**0.5903**	**0.2242**	**0.8144**	**0.1593**	**0.2083**	**0.3676**	**0.0000**	**1,358.1009**	**1,358.1009**	**0.2002**	**0.0000**	**1,362.3053**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1621	0.7276	4.2160	8.1700e-003	0.2748	0.0149	0.2896	0.0740	0.0142	0.0882	0.0000	649.9507	649.9507	0.1013	0.0000	652.0776
2023	7.4748	0.6666	4.4141	9.0000e-003	0.3155	0.0165	0.3320	0.0853	0.0157	0.1010	0.0000	708.1494	708.1494	0.0989	0.0000	710.2269

Total	**7.6369**	**1.3942**	**8.6301**	**0.0172**	**0.5903**	**0.0314**	**0.6216**	**0.1593**	**0.0298**	**0.1891**	**0.0000**	**1,358.1002**	**1,358.1002**	**0.2002**	**0.0000**	**1,362.3045**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.00**	**71.61**	**-6.67**	**0.00**	**0.00**	**86.01**	**23.67**	**0.00**	**85.69**	**48.55**	**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	Trenching	Trenching	1/3/2022	2/10/2022	5	29	
2	Concrete	Paving	2/11/2022	2/21/2022	5	7	
3	Landscaping	Site Preparation	2/22/2022	9/19/2022	5	150	
4	Building Construction	Building Construction	9/20/2022	5/5/2023	5	164	
5	Architectural Coating	Architectural Coating	5/8/2023	5/26/2023	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,100,000; Non-Residential Outdoor: 700,000 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Concrete	Other Construction Equipment	3	8.00	171	0.42
Concrete	Pavers	0	8.00	125	0.42
Concrete	Paving Equipment	0	8.00	130	0.36
Concrete	Rollers	0	8.00	80	0.38
Landscaping	Dumpers/Tenders	1	8.00	16	0.38

Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Skid Steer Loaders	1	8.00	64	0.37
Landscaping	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Other Construction Equipment	5	8.00	171	0.42
Building Construction	Other Material Handling Equipment	1	8.00	167	0.40
Building Construction	Pumps	2	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	7	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	19	588.00	229.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	118.00	0.00	0.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.0993	0.1457	2.1000e-004		5.2000e-003	5.2000e-003		4.7800e-003	4.7800e-003	0.0000	18.6315	18.6315	6.0300e-003	0.0000	18.7580
Total	**0.0102**	**0.0993**	**0.1457**	**2.1000e-004**		**5.2000e-003**	**5.2000e-003**		**4.7800e-003**	**4.7800e-003**	**0.0000**	**18.6315**	**18.6315**	**6.0300e-003**	**0.0000**	**18.7580**

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	3.3000e-004	4.5000e-004	4.3300e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	0.9633	0.9633	4.0000e-005	0.0000	0.9641
Total	**3.3000e-004**	**4.5000e-004**	**4.3300e-003**	**2.0000e-005**	**1.3200e-003**	**1.0000e-005**	**1.3300e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**0.9633**	**0.9633**	**4.0000e-005**	**0.0000**	**0.9641**

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	2.6000e-003	0.0113	0.1601	2.1000e-004		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	18.6314	18.6314	6.0300e-003	0.0000	18.7580
Total	**2.6000e-003**	**0.0113**	**0.1601**	**2.1000e-004**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**18.6314**	**18.6314**	**6.0300e-003**	**0.0000**	**18.7580**

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	3.3000e-004	4.5000e-004	4.3300e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	0.9633	0.9633	4.0000e-005	0.0000	0.9641
Total	**3.3000e-004**	**4.5000e-004**	**4.3300e-003**	**2.0000e-005**	**1.3200e-003**	**1.0000e-005**	**1.3300e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**0.9633**	**0.9633**	**4.0000e-005**	**0.0000**	**0.9641**

3.3 Concrete - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9200e-003	0.0398	0.0420	6.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.6662	5.6662	1.8300e-003	0.0000	5.7047
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**3.9200e-003**	**0.0398**	**0.0420**	**6.0000e-005**		**2.0800e-003**	**2.0800e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**5.6662**	**5.6662**	**1.8300e-003**	**0.0000**	**5.7047**

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	6.0000e-005	9.0000e-005	8.4000e-004	0.0000	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1860	0.1860	1.0000e-005	0.0000	0.1862
Total	**6.0000e-005**	**9.0000e-005**	**8.4000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.6000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1860**	**0.1860**	**1.0000e-005**	**0.0000**	**0.1862**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.0000e-004	3.4600e-003	0.0492	6.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	5.6662	5.6662	1.8300e-003	0.0000	5.7047
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.0000e-004**	**3.4600e-003**	**0.0492**	**6.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**5.6662**	**5.6662**	**1.8300e-003**	**0.0000**	**5.7047**

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	6.0000e-005	9.0000e-005	8.4000e-004	0.0000	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1860	0.1860	1.0000e-005	0.0000	0.1862
Total	**6.0000e-005**	**9.0000e-005**	**8.4000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.6000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1860**	**0.1860**	**1.0000e-005**	**0.0000**	**0.1862**

3.4 Landscaping - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2291	0.2891	4.4000e-004		0.0106	0.0106		9.8700e-003	9.8700e-003	0.0000	38.0669	38.0669	0.0114	0.0000	38.3066
Total	**0.0230**	**0.2291**	**0.2891**	**4.4000e-004**	**0.0000**	**0.0106**	**0.0106**	**0.0000**	**9.8700e-003**	**9.8700e-003**	**0.0000**	**38.0669**	**38.0669**	**0.0114**	**0.0000**	**38.3066**

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	2.7200e-003	3.6900e-003	0.0359	1.3000e-004	0.0204	8.0000e-005	0.0205	5.2200e-003	7.0000e-005	5.3000e-003	0.0000	7.9719	7.9719	3.4000e-004	0.0000	7.9790
Total	**2.7200e-003**	**3.6900e-003**	**0.0359**	**1.3000e-004**	**0.0204**	**8.0000e-005**	**0.0205**	**5.2200e-003**	**7.0000e-005**	**5.3000e-003**	**0.0000**	**7.9719**	**7.9719**	**3.4000e-004**	**0.0000**	**7.9790**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6100e-003	0.0982	0.2916	4.4000e-004		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	38.0669	38.0669	0.0114	0.0000	38.3066
Total	**6.6100e-003**	**0.0982**	**0.2916**	**4.4000e-004**	**0.0000**	**6.3000e-004**	**6.3000e-004**	**0.0000**	**6.3000e-004**	**6.3000e-004**	**0.0000**	**38.0669**	**38.0669**	**0.0114**	**0.0000**	**38.3066**

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	2.7200e-003	3.6900e-003	0.0359	1.3000e-004	0.0204	8.0000e-005	0.0205	5.2200e-003	7.0000e-005	5.3000e-003	0.0000	7.9719	7.9719	3.4000e-004	0.0000	7.9790
Total	**2.7200e-003**	**3.6900e-003**	**0.0359**	**1.3000e-004**	**0.0204**	**8.0000e-005**	**0.0205**	**5.2200e-003**	**7.0000e-005**	**5.3000e-003**	**0.0000**	**7.9719**	**7.9719**	**3.4000e-004**	**0.0000**	**7.9790**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1738	1.7065	1.9302	3.0200e-003		0.0900	0.0900		0.0837	0.0837	0.0000	264.3705	264.3705	0.0741	0.0000	265.9268
Total	**0.1738**	**1.7065**	**1.9302**	**3.0200e-003**		**0.0900**	**0.0900**		**0.0837**	**0.0837**	**0.0000**	**264.3705**	**264.3705**	**0.0741**	**0.0000**	**265.9268**

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	0.0636	0.3874	0.8660	2.0000e-003	0.0547	7.4700e-003	0.0622	0.0157	6.8700e-003	0.0226	0.0000	169.5653	169.5653	1.3300e-003	0.0000	169.5931
Worker	0.0493	0.0669	0.6499	2.2900e-003	0.1981	1.4100e-003	0.1995	0.0527	1.3100e-003	0.0540	0.0000	144.5297	144.5297	6.1800e-003	0.0000	144.6595
Total	**0.1129**	**0.4543**	**1.5160**	**4.2900e-003**	**0.2528**	**8.8800e-003**	**0.2617**	**0.0684**	**8.1800e-003**	**0.0765**	**0.0000**	**314.0950**	**314.0950**	**7.5100e-003**	**0.0000**	**314.2526**

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	0.0360	0.1562	2.1581	3.0200e-003		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003	0.0000	264.3701	264.3701	0.0741	0.0000	265.9265
Total	**0.0360**	**0.1562**	**2.1581**	**3.0200e-003**		**4.8000e-003**	**4.8000e-003**		**4.8000e-003**	**4.8000e-003**	**0.0000**	**264.3701**	**264.3701**	**0.0741**	**0.0000**	**265.9265**

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	0.0636	0.3874	0.8660	2.0000e-003	0.0547	7.4700e-003	0.0622	0.0157	6.8700e-003	0.0226	0.0000	169.5653	169.5653	1.3300e-003	0.0000	169.5931
Worker	0.0493	0.0669	0.6499	2.2900e-003	0.1981	1.4100e-003	0.1995	0.0527	1.3100e-003	0.0540	0.0000	144.5297	144.5297	6.1800e-003	0.0000	144.6595
Total	**0.1129**	**0.4543**	**1.5160**	**4.2900e-003**	**0.2528**	**8.8800e-003**	**0.2617**	**0.0684**	**8.1800e-003**	**0.0765**	**0.0000**	**314.0950**	**314.0950**	**7.5100e-003**	**0.0000**	**314.2526**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1959	1.8918	2.3369	3.6700e-003		0.0962	0.0962		0.0894	0.0894	0.0000	321.6135	321.6135	0.0899	0.0000	323.5013

Total	**0.1959**	**1.8918**	**2.3369**	**3.6700e-003**		**0.0962**	**0.0962**		**0.0894**	**0.0894**	**0.0000**	**321.6135**	**321.6135**	**0.0899**	**0.0000**	**323.5013**

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	0.0719	0.3968	1.0083	2.4200e-003	0.0666	8.8500e-003	0.0754	0.0191	8.1400e-003	0.0272	0.0000	205.6775	205.6775	1.4900e-003	0.0000	205.7088
Worker	0.0568	0.0764	0.7424	2.7900e-003	0.2409	1.7100e-003	0.2426	0.0641	1.5900e-003	0.0657	0.0000	173.1524	173.1524	7.1900e-003	0.0000	173.3034
Total	**0.1288**	**0.4732**	**1.7508**	**5.2100e-003**	**0.3075**	**0.0106**	**0.3180**	**0.0832**	**9.7300e-003**	**0.0929**	**0.0000**	**378.8299**	**378.8299**	**8.6800e-003**	**0.0000**	**379.0123**

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	0.0438	0.1899	2.6248	3.6700e-003		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003	0.0000	321.6132	321.6132	0.0899	0.0000	323.5009
Total	**0.0438**	**0.1899**	**2.6248**	**3.6700e-003**		**5.8400e-003**	**5.8400e-003**		**5.8400e-003**	**5.8400e-003**	**0.0000**	**321.6132**	**321.6132**	**0.0899**	**0.0000**	**323.5009**

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	0.0719	0.3968	1.0083	2.4200e-003	0.0666	8.8500e-003	0.0754	0.0191	8.1400e-003	0.0272	0.0000	205.6775	205.6775	1.4900e-003	0.0000	205.7088
Worker	0.0568	0.0764	0.7424	2.7900e-003	0.2409	1.7100e-003	0.2426	0.0641	1.5900e-003	0.0657	0.0000	173.1524	173.1524	7.1900e-003	0.0000	173.3034
Total	**0.1288**	**0.4732**	**1.7508**	**5.2100e-003**	**0.3075**	**0.0106**	**0.3180**	**0.0832**	**9.7300e-003**	**0.0929**	**0.0000**	**378.8299**	**378.8299**	**8.6800e-003**	**0.0000**	**379.0123**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	7.3001					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4400e-003	9.7700e-003	0.0136	2.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	1.9149	1.9149	1.1000e-004	0.0000	1.9174
Total	**7.3016**	**9.7700e-003**	**0.0136**	**2.0000e-005**		**5.3000e-004**	**5.3000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.9149**	**1.9149**	**1.1000e-004**	**0.0000**	**1.9174**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	2.5600e-003	0.0248	9.0000e-005	8.0600e-003	6.0000e-005	8.1100e-003	2.1400e-003	5.0000e-005	2.2000e-003	0.0000	5.7914	5.7914	2.4000e-004	0.0000	5.7964
Total	**1.9000e-003**	**2.5600e-003**	**0.0248**	**9.0000e-005**	**8.0600e-003**	**6.0000e-005**	**8.1100e-003**	**2.1400e-003**	**5.0000e-005**	**2.2000e-003**	**0.0000**	**5.7914**	**5.7914**	**2.4000e-004**	**0.0000**	**5.7964**

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	7.3001					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2000e-004	9.7000e-004	0.0137	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.9149	1.9149	1.1000e-004	0.0000	1.9173
Total	**7.3004**	**9.7000e-004**	**0.0137**	**2.0000e-005**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**1.9149**	**1.9149**	**1.1000e-004**	**0.0000**	**1.9173**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	2.5600e-003	0.0248	9.0000e-005	8.0600e-003	6.0000e-005	8.1100e-003	2.1400e-003	5.0000e-005	2.2000e-003	0.0000	5.7914	5.7914	2.4000e-004	0.0000	5.7964
Total	**1.9000e-003**	**2.5600e-003**	**0.0248**	**9.0000e-005**	**8.0600e-003**	**6.0000e-005**	**8.1100e-003**	**2.1400e-003**	**5.0000e-005**	**2.2000e-003**	**0.0000**	**5.7914**	**5.7914**	**2.4000e-004**	**0.0000**	**5.7964**

Communications Hill - Bridge Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - User defined use. Acreage estimated from phasing exhibit.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Trips and VMT - Approx. 20 vendor trips per day (40 one-way).

Construction Off-road Equipment Mitigation - Tier IV engines.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	100.00	174.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	8.00	300.00
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.5927	6.1215	5.1640	0.0102	0.0225	0.2715	0.2940	6.4400e-003	0.2498	0.2562	0.0000	891.4352	891.4352	0.2663	0.0000	897.0281
Total	**0.5927**	**6.1215**	**5.1640**	**0.0102**	**0.0225**	**0.2715**	**0.2940**	**6.4400e-003**	**0.2498**	**0.2562**	**0.0000**	**891.4352**	**891.4352**	**0.2663**	**0.0000**	**897.0281**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1411	0.6573	5.8454	0.0102	0.0225	0.0184	0.0409	6.4400e-003	0.0182	0.0246	0.0000	891.4342	891.4342	0.2663	0.0000	897.0271
Total	**0.1411**	**0.6573**	**5.8454**	**0.0102**	**0.0225**	**0.0184**	**0.0409**	**6.4400e-003**	**0.0182**	**0.0246**	**0.0000**	**891.4342**	**891.4342**	**0.2663**	**0.0000**	**897.0271**

	ROG	NOx	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	**76.19**	**89.26**	**-13.20**	**0.00**	**0.00**	**93.22**	**86.10**	**0.00**	**92.73**	**90.40**	**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	Bridge Construction	Building Construction	4/1/2022	11/30/2022	5	174	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Bridge Construction	Bore/Drill Rigs	1	3.00	205	0.50
Bridge Construction	Cranes	2	8.00	226	0.29
Bridge Construction	Crawler Tractors	2	8.00	208	0.43
Bridge Construction	Excavators	2	8.00	162	0.38
Bridge Construction	Forklifts	0	8.00	89	0.20
Bridge Construction	Generator Sets	0	8.00	84	0.74
Bridge Construction	Graders	1	8.00	174	0.41
Bridge Construction	Other Construction Equipment	4	8.00	171	0.42
Bridge Construction	Plate Compactors	2	8.00	300	0.37
Bridge Construction	Rubber Tired Dozers	1	8.00	255	0.40
Bridge Construction	Rubber Tired Loaders	1	8.00	199	0.36
Bridge Construction	Scrapers	1	8.00	361	0.48
Bridge Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Bridge Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Bridge Construction	19	0.00	40.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

3.2 Bridge Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5666	5.9624	4.8083	9.3500e-003		0.2684	0.2684		0.2469	0.2469	0.0000	821.7920	821.7920	0.2658	0.0000	827.3734
Total	**0.5666**	**5.9624**	**4.8083**	**9.3500e-003**		**0.2684**	**0.2684**		**0.2469**	**0.2469**	**0.0000**	**821.7920**	**821.7920**	**0.2658**	**0.0000**	**827.3734**

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	0.0261	0.1591	0.3557	8.2000e-004	0.0225	3.0700e-003	0.0255	6.4400e-003	2.8200e-003	9.2700e-003	0.0000	69.6432	69.6432	5.4000e-004	0.0000	69.6547
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0261**	**0.1591**	**0.3557**	**8.2000e-004**	**0.0225**	**3.0700e-003**	**0.0255**	**6.4400e-003**	**2.8200e-003**	**9.2700e-003**	**0.0000**	**69.6432**	**69.6432**	**5.4000e-004**	**0.0000**	**69.6547**

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	0.1150	0.4982	5.4897	9.3500e-003		0.0153	0.0153		0.0153	0.0153	0.0000	821.7910	821.7910	0.2658	0.0000	827.3724
Total	**0.1150**	**0.4982**	**5.4897**	**9.3500e-003**		**0.0153**	**0.0153**		**0.0153**	**0.0153**	**0.0000**	**821.7910**	**821.7910**	**0.2658**	**0.0000**	**827.3724**

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	0.0261	0.1591	0.3557	8.2000e-004	0.0225	3.0700e-003	0.0255	6.4400e-003	2.8200e-003	9.2700e-003	0.0000	69.6432	69.6432	5.4000e-004	0.0000	69.6547
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0261**	**0.1591**	**0.3557**	**8.2000e-004**	**0.0225**	**3.0700e-003**	**0.0255**	**6.4400e-003**	**2.8200e-003**	**9.2700e-003**	**0.0000**	**69.6432**	**69.6432**	**5.4000e-004**	**0.0000**	**69.6547**

Communications Hill - Slurry Mines (Phase 3)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - User defined use. Acreage estimated from phasing exhibit.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Trips and VMT - 15 construction worker trips/day. 250 total haul truck trips.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Off-road Equipment - 2 concrete pump trucks.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	5.00
tblGrading	AcresOfGrading	0.00	1.88

tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	250.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	6.6400e-003	0.0527	0.0622	2.0000e-004	3.7900e-003	1.9100e-003	5.7100e-003	8.7000e-004	1.8200e-003	2.6900e-003	0.0000	17.0556	17.0556	2.1100e-003	0.0000	17.0998
Total	**6.6400e-003**	**0.0527**	**0.0622**	**2.0000e-004**	**3.7900e-003**	**1.9100e-003**	**5.7100e-003**	**8.7000e-004**	**1.8200e-003**	**2.6900e-003**	**0.0000**	**17.0556**	**17.0556**	**2.1100e-003**	**0.0000**	**17.0998**

Mitigated Construction

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

2022	6.6400e-003	0.0527	0.0622	2.0000e-004	2.8400e-003	1.9100e-003	4.7500e-003	7.7000e-004	1.8200e-003	2.5900e-003	0.0000	17.0556	17.0556	2.1100e-003	0.0000	17.0998
Total	**6.6400e-003**	**0.0527**	**0.0622**	**2.0000e-004**	**2.8400e-003**	**1.9100e-003**	**4.7500e-003**	**7.7000e-004**	**1.8200e-003**	**2.5900e-003**	**0.0000**	**17.0556**	**17.0556**	**2.1100e-003**	**0.0000**	**17.0998**

	ROG	NOx	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**	**25.07**	**0.00**	**16.81**	**11.49**	**0.00**	**3.72**	**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	Mine slurry	Grading	1/1/2022	1/7/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mine slurry	Graders	0	6.00	174	0.41
Mine slurry	Rubber Tired Dozers	0	6.00	255	0.40
Mine slurry	Off-Highway Trucks	2	8.00	400	0.38
Mine slurry	Pumps	2	8.00	84	0.74
Mine slurry	Tractors/Loaders/Backhoes	0	7.00	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
Mine slurry	4	30.00	0.00	250.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Mine slurry - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-003	0.0000	1.0000e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4000e-003	0.0349	0.0355	1.0000e-004		1.5100e-003	1.5100e-003		1.4500e-003	1.4500e-003	0.0000	8.6274	8.6274	2.0200e-003	0.0000	8.6699
Total	**4.4000e-003**	**0.0349**	**0.0355**	**1.0000e-004**	**1.0000e-003**	**1.5100e-003**	**2.5100e-003**	**1.1000e-004**	**1.4500e-003**	**1.5600e-003**	**0.0000**	**8.6274**	**8.6274**	**2.0200e-003**	**0.0000**	**8.6699**

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	2.0700e-003	0.0176	0.0245	9.0000e-005	2.1100e-003	4.0000e-004	2.5100e-003	5.8000e-004	3.7000e-004	9.5000e-004	0.0000	7.9299	7.9299	6.0000e-005	0.0000	7.9313
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.3000e-004	2.2400e-003	1.0000e-005	6.8000e-004	0.0000	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.4982	0.4982	2.0000e-005	0.0000	0.4987
Total	**2.2400e-003**	**0.0178**	**0.0267**	**1.0000e-004**	**2.7900e-003**	**4.0000e-004**	**3.2000e-003**	**7.6000e-004**	**3.7000e-004**	**1.1400e-003**	**0.0000**	**8.4282**	**8.4282**	**8.0000e-005**	**0.0000**	**8.4299**

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					4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4000e-003	0.0349	0.0355	1.0000e-004		1.5100e-003	1.5100e-003		1.4500e-003	1.4500e-003	0.0000	8.6274	8.6274	2.0200e-003	0.0000	8.6698
Total	**4.4000e-003**	**0.0349**	**0.0355**	**1.0000e-004**	**4.0000e-005**	**1.5100e-003**	**1.5500e-003**	**0.0000**	**1.4500e-003**	**1.4500e-003**	**0.0000**	**8.6274**	**8.6274**	**2.0200e-003**	**0.0000**	**8.6698**

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	2.0700e-003	0.0176	0.0245	9.0000e-005	2.1100e-003	4.0000e-004	2.5100e-003	5.8000e-004	3.7000e-004	9.5000e-004	0.0000	7.9299	7.9299	6.0000e-005	0.0000	7.9313
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.3000e-004	2.2400e-003	1.0000e-005	6.8000e-004	0.0000	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.4982	0.4982	2.0000e-005	0.0000	0.4987
Total	**2.2400e-003**	**0.0178**	**0.0267**	**1.0000e-004**	**2.7900e-003**	**4.0000e-004**	**3.2000e-003**	**7.6000e-004**	**3.7000e-004**	**1.1400e-003**	**0.0000**	**8.4282**	**8.4282**	**8.0000e-005**	**0.0000**	**8.4299**

Communications Hill - Phase 4 Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	575.00	Dwelling Unit	63.00	575,000.00	1645
Strip Mall	16.20	1000sqft	0.00	16,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Phase 4 acreage supplied by project applicant.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Trips and VMT - Model defaults for vendor trips.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Table Name	Column Name	Default Value	New Value

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	31.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1,110.00	783.00
tblConstructionPhase	NumDays	1,110.00	33.00
tblConstructionPhase	NumDays	40.00	783.00
tblConstructionPhase	PhaseEndDate	1/28/2027	12/31/2027
tblConstructionPhase	PhaseEndDate	1/1/2031	12/31/2027
tblConstructionPhase	PhaseEndDate	2/16/2028	10/15/2026
tblConstructionPhase	PhaseStartDate	10/16/2026	9/18/2027
tblConstructionPhase	PhaseStartDate	1/1/2028	1/1/2025
tblConstructionPhase	PhaseStartDate	1/1/2028	9/1/2026
tblLandUse	LotAcreage	35.94	63.00
tblLandUse	LotAcreage	0.37	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	7.00	12.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblTripsAndVMT	VendorTripNumber	64.00	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					
2025	1.2179	10.6484	15.2520	0.0300	0.5696	0.4820	1.0516	0.1526	0.4438	0.5964	0.0000	2,467.4759	2,467.4759	0.6397	0.0000	2,480.9085
2026	1.3944	12.2333	17.4922	0.0342	0.6326	0.5626	1.1952	0.1694	0.5180	0.6874	0.0000	2,812.4266	2,812.4266	0.7396	0.0000	2,827.9577
2027	5.3510	10.6782	15.2569	0.0305	0.5983	0.4840	1.0824	0.1603	0.4459	0.6061	0.0000	2,489.5795	2,489.5795	0.6401	0.0000	2,503.0208
Total	**7.9633**	**33.5598**	**48.0011**	**0.0948**	**1.8006**	**1.5287**	**3.3292**	**0.4822**	**1.4077**	**1.8899**	**0.0000**	**7,769.4820**	**7,769.4820**	**2.0193**	**0.0000**	**7,811.8869**

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					
2025	0.4600	2.6120	17.4422	0.0300	0.5696	0.0469	0.6165	0.1526	0.0461	0.1987	0.0000	2,467.4736	2,467.4736	0.6397	0.0000	2,480.9062
2026	0.5098	2.8026	20.0952	0.0342	0.6326	0.0530	0.6856	0.1694	0.0521	0.2214	0.0000	2,812.4240	2,812.4240	0.7396	0.0000	2,827.9550
2027	4.5879	2.6037	17.4480	0.0305	0.5983	0.0472	0.6455	0.1603	0.0463	0.2066	0.0000	2,489.5772	2,489.5772	0.6401	0.0000	2,503.0184
Total	**5.5578**	**8.0183**	**54.9854**	**0.0948**	**1.8006**	**0.1470**	**1.9476**	**0.4822**	**0.1445**	**0.6267**	**0.0000**	**7,769.4747**	**7,769.4747**	**2.0193**	**0.0000**	**7,811.8796**

	ROG	NOx	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	**30.21**	**76.11**	**-14.55**	**0.01**	**0.00**	**90.38**	**41.50**	**0.00**	**89.74**	**66.84**	**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	Landscaping	Site Preparation	1/1/2025	12/31/2027	5	783	
2	Building Construction	Building Construction	1/1/2025	12/31/2027	5	783	
3	Foundation	Building Construction	9/1/2026	10/15/2026	5	33	
4	Architectural Coating	Architectural Coating	9/18/2027	12/31/2027	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,164,375; Residential Outdoor: 388,125; Non-Residential Indoor: 24,300; Non-Residential Outdoor: 8,100

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Landscaping	Dumpers/Tenders	2	8.00	16	0.38
Landscaping	Other Material Handling Equipment	1	8.00	167	0.40
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Skid Steer Loaders	1	8.00	64	0.37
Landscaping	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	5	10.00	226	0.29
Building Construction	Forklifts	5	10.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Other Construction Equipment	10	10.00	171	0.42
Building Construction	Skid Steer Loaders	5	10.00	64	0.37
Building Construction	Tractors/Loaders/Backhoes	5	10.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Foundation	Cranes	2	12.00	226	0.29
Foundation	Forklifts	0	8.00	89	0.20
Foundation	Generator Sets	0	8.00	84	0.74
Foundation	Other Construction Equipment	21	12.00	171	0.42
Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Foundation	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Landscaping	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	30	419.00	64.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Foundation	23	419.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	84.00	0.00	0.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Landscaping - 2025

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0904	0.7861	1.3117	2.0300e-003		0.0328	0.0328		0.0306	0.0306	0.0000	175.1815	175.1815	0.0535	0.0000	176.3058
Total	**0.0904**	**0.7861**	**1.3117**	**2.0300e-003**	**0.0000**	**0.0328**	**0.0328**	**0.0000**	**0.0306**	**0.0306**	**0.0000**	**175.1815**	**175.1815**	**0.0535**	**0.0000**	**176.3058**

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	3.8100e-003	5.0600e-003	0.0494	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	12.4813	12.4813	4.9000e-004	0.0000	12.4916
Total	**3.8100e-003**	**5.0600e-003**	**0.0494**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**12.4813**	**12.4813**	**4.9000e-004**	**0.0000**	**12.4916**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0257	0.2323	1.3818	2.0300e-003		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	175.1813	175.1813	0.0535	0.0000	176.3056
Total	**0.0257**	**0.2323**	**1.3818**	**2.0300e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**175.1813**	**175.1813**	**0.0535**	**0.0000**	**176.3056**

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	3.8100e-003	5.0600e-003	0.0494	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	12.4813	12.4813	4.9000e-004	0.0000	12.4916
Total	**3.8100e-003**	**5.0600e-003**	**0.0494**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**12.4813**	**12.4813**	**4.9000e-004**	**0.0000**	**12.4916**

3.2 Landscaping - 2026

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0904	0.7861	1.3117	2.0300e-003		0.0328	0.0328		0.0306	0.0306	0.0000	175.1815	175.1815	0.0535	0.0000	176.3058
Total	**0.0904**	**0.7861**	**1.3117**	**2.0300e-003**	**0.0000**	**0.0328**	**0.0328**	**0.0000**	**0.0306**	**0.0306**	**0.0000**	**175.1815**	**175.1815**	**0.0535**	**0.0000**	**176.3058**

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	3.6400e-003	4.8300e-003	0.0473	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	12.3480	12.3480	4.8000e-004	0.0000	12.3580
Total	**3.6400e-003**	**4.8300e-003**	**0.0473**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**12.3480**	**12.3480**	**4.8000e-004**	**0.0000**	**12.3580**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0257	0.2323	1.3818	2.0300e-003		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	175.1813	175.1813	0.0535	0.0000	176.3056
Total	**0.0257**	**0.2323**	**1.3818**	**2.0300e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**175.1813**	**175.1813**	**0.0535**	**0.0000**	**176.3056**

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	3.6400e-003	4.8300e-003	0.0473	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	12.3480	12.3480	4.8000e-004	0.0000	12.3580
Total	**3.6400e-003**	**4.8300e-003**	**0.0473**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**12.3480**	**12.3480**	**4.8000e-004**	**0.0000**	**12.3580**

3.2 Landscaping - 2027

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0904	0.7861	1.3117	2.0300e-003		0.0328	0.0328		0.0306	0.0306	0.0000	175.1815	175.1815	0.0535	0.0000	176.3058
Total	**0.0904**	**0.7861**	**1.3117**	**2.0300e-003**	**0.0000**	**0.0328**	**0.0328**	**0.0000**	**0.0306**	**0.0306**	**0.0000**	**175.1815**	**175.1815**	**0.0535**	**0.0000**	**176.3058**

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	3.4900e-003	4.6300e-003	0.0454	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	12.2313	12.2313	4.6000e-004	0.0000	12.2410
Total	**3.4900e-003**	**4.6300e-003**	**0.0454**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**12.2313**	**12.2313**	**4.6000e-004**	**0.0000**	**12.2410**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0257	0.2323	1.3818	2.0300e-003		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	175.1813	175.1813	0.0535	0.0000	176.3056
Total	**0.0257**	**0.2323**	**1.3818**	**2.0300e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**2.9900e-003**	**2.9900e-003**	**0.0000**	**175.1813**	**175.1813**	**0.0535**	**0.0000**	**176.3056**

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	3.4900e-003	4.6300e-003	0.0454	2.1000e-004	0.0178	1.3000e-004	0.0180	4.7400e-003	1.2000e-004	4.8600e-003	0.0000	12.2313	12.2313	4.6000e-004	0.0000	12.2410
Total	**3.4900e-003**	**4.6300e-003**	**0.0454**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7400e-003**	**1.2000e-004**	**4.8600e-003**	**0.0000**	**12.2313**	**12.2313**	**4.6000e-004**	**0.0000**	**12.2410**

3.3 Building Construction - 2025

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	0.9609	9.3991	11.7174	0.0201		0.4382	0.4382		0.4032	0.4032	0.0000	1,764.3430	1,764.3430	0.5706	0.0000	1,776.3261
Total	**0.9609**	**9.3991**	**11.7174**	**0.0201**		**0.4382**	**0.4382**		**0.4032**	**0.4032**	**0.0000**	**1,764.3430**	**1,764.3430**	**0.5706**	**0.0000**	**1,776.3261**

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	0.0565	0.3168	0.7931	1.9600e-003	0.0540	7.2500e-003	0.0612	0.0155	6.6700e-003	0.0222	0.0000	166.8267	166.8267	1.2200e-003	0.0000	166.8523
Worker	0.1063	0.1414	1.3804	5.7600e-003	0.4978	3.5500e-003	0.5014	0.1324	3.2900e-003	0.1357	0.0000	348.6434	348.6434	0.0138	0.0000	348.9326

Total	**0.1628**	**0.4582**	**2.1735**	**7.7200e-003**	**0.5518**	**0.0108**	**0.5626**	**0.1479**	**9.9600e-003**	**0.1578**	**0.0000**	**515.4701**	**515.4701**	**0.0150**	**0.0000**	**515.7849**

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	0.2678	1.9165	13.8374	0.0201		0.0330	0.0330		0.0330	0.0330	0.0000	1,764.3409	1,764.3409	0.5706	0.0000	1,776.3240
Total	**0.2678**	**1.9165**	**13.8374**	**0.0201**		**0.0330**	**0.0330**		**0.0330**	**0.0330**	**0.0000**	**1,764.3409**	**1,764.3409**	**0.5706**	**0.0000**	**1,776.3240**

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	0.0565	0.3168	0.7931	1.9600e-003	0.0540	7.2500e-003	0.0612	0.0155	6.6700e-003	0.0222	0.0000	166.8267	166.8267	1.2200e-003	0.0000	166.8523
Worker	0.1063	0.1414	1.3804	5.7600e-003	0.4978	3.5500e-003	0.5014	0.1324	3.2900e-003	0.1357	0.0000	348.6434	348.6434	0.0138	0.0000	348.9326
Total	**0.1628**	**0.4582**	**2.1735**	**7.7200e-003**	**0.5518**	**0.0108**	**0.5626**	**0.1479**	**9.9600e-003**	**0.1578**	**0.0000**	**515.4701**	**515.4701**	**0.0150**	**0.0000**	**515.7849**

3.3 Building Construction - 2026

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	0.9609	9.3991	11.7174	0.0201		0.4382	0.4382		0.4032	0.4032	0.0000	1,764.3430	1,764.3430	0.5706	0.0000	1,776.3261
Total	**0.9609**	**9.3991**	**11.7174**	**0.0201**		**0.4382**	**0.4382**		**0.4032**	**0.4032**	**0.0000**	**1,764.3430**	**1,764.3430**	**0.5706**	**0.0000**	**1,776.3261**

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	0.0552	0.3108	0.7785	1.9600e-003	0.0540	7.1200e-003	0.0611	0.0155	6.5500e-003	0.0220	0.0000	166.8561	166.8561	1.2000e-003	0.0000	166.8813
Worker	0.1018	0.1350	1.3213	5.7600e-003	0.4978	3.5700e-003	0.5014	0.1324	3.3100e-003	0.1357	0.0000	344.9200	344.9200	0.0134	0.0000	345.2003
Total	**0.1570**	**0.4458**	**2.0998**	**7.7200e-003**	**0.5518**	**0.0107**	**0.5625**	**0.1479**	**9.8600e-003**	**0.1577**	**0.0000**	**511.7761**	**511.7761**	**0.0146**	**0.0000**	**512.0816**

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	0.2678	1.9165	13.8374	0.0201		0.0330	0.0330		0.0330	0.0330	0.0000	1,764.3409	1,764.3409	0.5706	0.0000	1,776.3240
Total	**0.2678**	**1.9165**	**13.8374**	**0.0201**		**0.0330**	**0.0330**		**0.0330**	**0.0330**	**0.0000**	**1,764.3409**	**1,764.3409**	**0.5706**	**0.0000**	**1,776.3240**

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	0.0552	0.3108	0.7785	1.9600e-003	0.0540	7.1200e-003	0.0611	0.0155	6.5500e-003	0.0220	0.0000	166.8561	166.8561	1.2000e-003	0.0000	166.8813
Worker	0.1018	0.1350	1.3213	5.7600e-003	0.4978	3.5700e-003	0.5014	0.1324	3.3100e-003	0.1357	0.0000	344.9200	344.9200	0.0134	0.0000	345.2003
Total	**0.1570**	**0.4458**	**2.0998**	**7.7200e-003**	**0.5518**	**0.0107**	**0.5625**	**0.1479**	**9.8600e-003**	**0.1577**	**0.0000**	**511.7761**	**511.7761**	**0.0146**	**0.0000**	**512.0816**

3.3 Building Construction - 2027

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	0.9609	9.3991	11.7174	0.0201		0.4382	0.4382		0.4032	0.4032	0.0000	1,764.3430	1,764.3430	0.5706	0.0000	1,776.3261
Total	**0.9609**	**9.3991**	**11.7174**	**0.0201**		**0.4382**	**0.4382**		**0.4032**	**0.4032**	**0.0000**	**1,764.3430**	**1,764.3430**	**0.5706**	**0.0000**	**1,776.3261**

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	0.0546	0.3088	0.7731	1.9600e-003	0.0540	7.1300e-003	0.0611	0.0155	6.5600e-003	0.0221	0.0000	166.9059	166.9059	1.2000e-003	0.0000	166.9312
Worker	0.0975	0.1292	1.2685	5.7600e-003	0.4978	3.5900e-003	0.5014	0.1324	3.3300e-003	0.1357	0.0000	341.6605	341.6605	0.0130	0.0000	341.9327
Total	**0.1521**	**0.4380**	**2.0416**	**7.7200e-003**	**0.5518**	**0.0107**	**0.5626**	**0.1479**	**9.8900e-003**	**0.1578**	**0.0000**	**508.5665**	**508.5665**	**0.0142**	**0.0000**	**508.8639**

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	0.2678	1.9165	13.8374	0.0201		0.0330	0.0330		0.0330	0.0330	0.0000	1,764.3409	1,764.3409	0.5706	0.0000	1,776.3240
Total	**0.2678**	**1.9165**	**13.8374**	**0.0201**		**0.0330**	**0.0330**		**0.0330**	**0.0330**	**0.0000**	**1,764.3409**	**1,764.3409**	**0.5706**	**0.0000**	**1,776.3240**

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	0.0546	0.3088	0.7731	1.9600e-003	0.0540	7.1300e-003	0.0611	0.0155	6.5600e-003	0.0221	0.0000	166.9059	166.9059	1.2000e-003	0.0000	166.9312
Worker	0.0975	0.1292	1.2685	5.7600e-003	0.4978	3.5900e-003	0.5014	0.1324	3.3300e-003	0.1357	0.0000	341.6605	341.6605	0.0130	0.0000	341.9327
Total	**0.1521**	**0.4380**	**2.0416**	**7.7200e-003**	**0.5518**	**0.0107**	**0.5626**	**0.1479**	**9.8900e-003**	**0.1578**	**0.0000**	**508.5665**	**508.5665**	**0.0142**	**0.0000**	**508.8639**

3.4 Foundation - 2026

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	0.1697	1.5804	2.1490	3.4700e-003		0.0803	0.0803		0.0739	0.0739	0.0000	305.1674	305.1674	0.0987	0.0000	307.2401
Total	**0.1697**	**1.5804**	**2.1490**	**3.4700e-003**		**0.0803**	**0.0803**		**0.0739**	**0.0739**	**0.0000**	**305.1674**	**305.1674**	**0.0987**	**0.0000**	**307.2401**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0129	0.0171	0.1671	7.3000e-004	0.0630	4.5000e-004	0.0634	0.0167	4.2000e-004	0.0172	0.0000	43.6106	43.6106	1.6900e-003	0.0000	43.6460

Total	**0.0129**	**0.0171**	**0.1671**	**7.3000e-004**	**0.0630**	**4.5000e-004**	**0.0634**	**0.0167**	**4.2000e-004**	**0.0172**	**0.0000**	**43.6106**	**43.6106**	**1.6900e-003**	**0.0000**	**43.6460**

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	0.0429	0.1861	2.5618	3.4700e-003		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003	0.0000	305.1671	305.1671	0.0987	0.0000	307.2397
Total	**0.0429**	**0.1861**	**2.5618**	**3.4700e-003**		**5.7200e-003**	**5.7200e-003**		**5.7200e-003**	**5.7200e-003**	**0.0000**	**305.1671**	**305.1671**	**0.0987**	**0.0000**	**307.2397**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0129	0.0171	0.1671	7.3000e-004	0.0630	4.5000e-004	0.0634	0.0167	4.2000e-004	0.0172	0.0000	43.6106	43.6106	1.6900e-003	0.0000	43.6460
Total	**0.0129**	**0.0171**	**0.1671**	**7.3000e-004**	**0.0630**	**4.5000e-004**	**0.0634**	**0.0167**	**4.2000e-004**	**0.0172**	**0.0000**	**43.6106**	**43.6106**	**1.6900e-003**	**0.0000**	**43.6460**

3.5 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4100e-003	0.0430	0.0678	1.1000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	9.5747	9.5747	5.2000e-004	0.0000	9.5857
Total	**4.1385**	**0.0430**	**0.0678**	**1.1000e-004**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**9.5747**	**9.5747**	**5.2000e-004**	**0.0000**	**9.5857**

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	5.6200e-003	7.4400e-003	0.0731	3.3000e-004	0.0287	2.1000e-004	0.0289	7.6300e-003	1.9000e-004	7.8200e-003	0.0000	19.6825	19.6825	7.5000e-004	0.0000	19.6982
Total	**5.6200e-003**	**7.4400e-003**	**0.0731**	**3.3000e-004**	**0.0287**	**2.1000e-004**	**0.0289**	**7.6300e-003**	**1.9000e-004**	**7.8200e-003**	**0.0000**	**19.6825**	**19.6825**	**7.5000e-004**	**0.0000**	**19.6982**

Mitigated Construction On-Site

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

Archit. Coating	4.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	4.8300e-003	0.0687	1.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	9.5747	9.5747	5.2000e-004	0.0000	9.5857
Total	**4.1332**	**4.8300e-003**	**0.0687**	**1.1000e-004**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**9.5747**	**9.5747**	**5.2000e-004**	**0.0000**	**9.5857**

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	5.6200e-003	7.4400e-003	0.0731	3.3000e-004	0.0287	2.1000e-004	0.0289	7.6300e-003	1.9000e-004	7.8200e-003	0.0000	19.6825	19.6825	7.5000e-004	0.0000	19.6982
Total	**5.6200e-003**	**7.4400e-003**	**0.0731**	**3.3000e-004**	**0.0287**	**2.1000e-004**	**0.0289**	**7.6300e-003**	**1.9000e-004**	**7.8200e-003**	**0.0000**	**19.6825**	**19.6825**	**7.5000e-004**	**0.0000**	**19.6982**

Communications Hill - Off-Site Phase 1 (Narvaez)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	3.70	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Narvaez off-site improvements acreage estimated from plan drawings.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Off-road Equipment - Construction equipment list provided by project applicant.

Off-road Equipment - Construction equipment list provided by project applicant.

Off-road Equipment - Construction equipment list provided by project applicant.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	5.00	427.00
tblConstructionPhase	NumDays	8.00	11.00
tblConstructionPhase	NumDays	18.00	22.00
tblGrading	AcresOfGrading	55.00	5.50
tblLandUse	LotAcreage	0.00	3.70
tblOffRoadEquipment	HorsePower	8.00	300.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.42

tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

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					
2016	0.0704	0.7981	0.5262	6.6000e-004	0.0713	0.0388	0.1101	0.0373	0.0357	0.0730	0.0000	61.7309	61.7309	0.0182	0.0000	62.1120
2017	0.1290	1.2653	1.0290	1.5400e-003	0.0271	0.0786	0.1057	7.0000e-003	0.0724	0.0794	0.0000	138.1725	138.1725	0.0378	0.0000	138.9667
2018	0.0623	0.5688	0.6017	9.9000e-004	0.0355	0.0344	0.0699	9.0900e-003	0.0319	0.0410	0.0000	83.9859	83.9859	0.0206	0.0000	84.4185
Total	**0.2617**	**2.6321**	**2.1569**	**3.1900e-003**	**0.1339**	**0.1518**	**0.2857**	**0.0534**	**0.1399**	**0.1933**	**0.0000**	**283.8893**	**283.8893**	**0.0766**	**0.0000**	**285.4972**

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					
2016	8.6600e-003	0.0349	0.3603	6.6000e-004	5.2700e-003	1.0500e-003	6.3300e-003	2.2300e-003	1.0500e-003	3.2800e-003	0.0000	61.7308	61.7308	0.0182	0.0000	62.1119
2017	0.0240	0.1631	1.0581	1.5400e-003	0.0271	2.2400e-003	0.0294	7.0000e-003	2.2300e-003	9.2200e-003	0.0000	138.1724	138.1724	0.0378	0.0000	138.9666
2018	0.0178	0.1796	0.5924	9.9000e-004	0.0355	1.2400e-003	0.0367	9.0900e-003	1.2300e-003	0.0103	0.0000	83.9859	83.9859	0.0206	0.0000	84.4184
Total	**0.0504**	**0.3776**	**2.0108**	**3.1900e-003**	**0.0678**	**4.5300e-003**	**0.0724**	**0.0183**	**4.5100e-003**	**0.0228**	**0.0000**	**283.8890**	**283.8890**	**0.0766**	**0.0000**	**285.4969**

	ROG	NOx	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	**80.74**	**85.65**	**6.77**	**0.00**	**49.33**	**97.02**	**74.67**	**65.69**	**96.78**	**88.20**	**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	Grading/Rock/Paving	Grading	12/5/2016	12/19/2016	5	11	
2	Trenching	Trenching	12/20/2016	4/11/2017	5	81	
3	Concrete	Paving	4/12/2017	5/11/2017	5	22	
4	Landscaping	Site Preparation	5/12/2017	12/31/2018	5	427	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Rock/Paving	Excavators	0	8.00	162	0.38
Concrete	Other Construction Equipment	5	8.00	171	0.42
Concrete	Cement and Mortar Mixers	0	6.00	9	0.56
Grading/Rock/Paving	Graders	2	8.00	174	0.41
Grading/Rock/Paving	Rubber Tired Dozers	2	8.00	255	0.40
Grading/Rock/Paving	Scrapers	4	8.00	361	0.48
Grading/Rock/Paving	Plate Compactors	2	8.00	300	0.37
Grading/Rock/Paving	Pavers	1	8.00	125	0.42
Grading/Rock/Paving	Rollers	1	8.00	80	0.38
Trenching	Excavators	1	8.00	162	0.38
Landscaping	Skid Steer Loaders	1	8.00	64	0.37
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Landscaping	Dumpers/Tenders	1	8.00	16	0.38
Concrete	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Concrete	Pavers	0	8.00	125	0.42
Concrete	Paving Equipment	0	6.00	130	0.36

Concrete	Rollers	0	6.00	80	0.38
Grading/Rock/Paving	Tractors/Loaders/Backhoes	2	8.00	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
Trenching	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Rock/Paving	14	35.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	3	8.00	0.00	0.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Grading/Rock/Paving - 2016

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					0.0692	0.0000	0.0692	0.0367	0.0000	0.0367	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0632	0.7331	0.4662	5.7000e-004		0.0344	0.0344		0.0317	0.0317	0.0000	53.6214	53.6214	0.0162	0.0000	53.9610
Total	**0.0632**	**0.7331**	**0.4662**	**5.7000e-004**	**0.0692**	**0.0344**	**0.1036**	**0.0367**	**0.0317**	**0.0684**	**0.0000**	**53.6214**	**53.6214**	**0.0162**	**0.0000**	**53.9610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	1.0100e-003	9.7900e-003	2.0000e-005	1.7500e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.5443	1.5443	8.0000e-005	0.0000	1.5460
Total	**7.2000e-004**	**1.0100e-003**	**9.7900e-003**	**2.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.5443**	**1.5443**	**8.0000e-005**	**0.0000**	**1.5460**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1100e-003	0.0000	3.1100e-003	1.6500e-003	0.0000	1.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9700e-003	0.0302	0.2986	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	53.6213	53.6213	0.0162	0.0000	53.9610
Total	**6.9700e-003**	**0.0302**	**0.2986**	**5.7000e-004**	**3.1100e-003**	**9.3000e-004**	**4.0400e-003**	**1.6500e-003**	**9.3000e-004**	**2.5800e-003**	**0.0000**	**53.6213**	**53.6213**	**0.0162**	**0.0000**	**53.9610**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	1.0100e-003	9.7900e-003	2.0000e-005	1.7500e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.5443	1.5443	8.0000e-005	0.0000	1.5460
Total	**7.2000e-004**	**1.0100e-003**	**9.7900e-003**	**2.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.5443**	**1.5443**	**8.0000e-005**	**0.0000**	**1.5460**

3.3 Trenching - 2016

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	6.3300e-003	0.0638	0.0479	7.0000e-005		4.3600e-003	4.3600e-003		4.0100e-003	4.0100e-003	0.0000	6.2042	6.2042	1.8700e-003	0.0000	6.2435
Total	**6.3300e-003**	**0.0638**	**0.0479**	**7.0000e-005**		**4.3600e-003**	**4.3600e-003**		**4.0100e-003**	**4.0100e-003**	**0.0000**	**6.2042**	**6.2042**	**1.8700e-003**	**0.0000**	**6.2435**

Unmitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.4000e-004	2.2900e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3610	0.3610	2.0000e-005	0.0000	0.3614
Total	**1.7000e-004**	**2.4000e-004**	**2.2900e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3610**	**0.3610**	**2.0000e-005**	**0.0000**	**0.3614**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1000e-004	3.4900e-003	0.0497	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	6.2042	6.2042	1.8700e-003	0.0000	6.2435
Total	**8.1000e-004**	**3.4900e-003**	**0.0497**	**7.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**6.2042**	**6.2042**	**1.8700e-003**	**0.0000**	**6.2435**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.4000e-004	2.2900e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3610	0.3610	2.0000e-005	0.0000	0.3614
Total	**1.7000e-004**	**2.4000e-004**	**2.2900e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3610**	**0.3610**	**2.0000e-005**	**0.0000**	**0.3614**

3.3 Trenching - 2017

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	0.0472	0.4727	0.3813	5.3000e-004		0.0318	0.0318		0.0292	0.0292	0.0000	48.8212	48.8212	0.0150	0.0000	49.1353
Total	**0.0472**	**0.4727**	**0.3813**	**5.3000e-004**		**0.0318**	**0.0318**		**0.0292**	**0.0292**	**0.0000**	**48.8212**	**48.8212**	**0.0150**	**0.0000**	**49.1353**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-003	1.6900e-003	0.0164	4.0000e-005	3.2800e-003	3.0000e-005	3.3000e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.7776	2.7776	1.4000e-004	0.0000	2.7806
Total	**1.2000e-003**	**1.6900e-003**	**0.0164**	**4.0000e-005**	**3.2800e-003**	**3.0000e-005**	**3.3000e-003**	**8.7000e-004**	**2.0000e-005**	**8.9000e-004**	**0.0000**	**2.7776**	**2.7776**	**1.4000e-004**	**0.0000**	**2.7806**

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	6.4400e-003	0.0279	0.3973	5.3000e-004		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	48.8211	48.8211	0.0150	0.0000	49.1352
Total	**6.4400e-003**	**0.0279**	**0.3973**	**5.3000e-004**		**8.6000e-004**	**8.6000e-004**		**8.6000e-004**	**8.6000e-004**	**0.0000**	**48.8211**	**48.8211**	**0.0150**	**0.0000**	**49.1352**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-003	1.6900e-003	0.0164	4.0000e-005	3.2800e-003	3.0000e-005	3.3000e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.7776	2.7776	1.4000e-004	0.0000	2.7806
Total	**1.2000e-003**	**1.6900e-003**	**0.0164**	**4.0000e-005**	**3.2800e-003**	**3.0000e-005**	**3.3000e-003**	**8.7000e-004**	**2.0000e-005**	**8.9000e-004**	**0.0000**	**2.7776**	**2.7776**	**1.4000e-004**	**0.0000**	**2.7806**

3.4 Concrete - 2017

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	0.0345	0.3786	0.2300	3.3000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	31.0004	31.0004	9.5000e-003	0.0000	31.1998
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0345**	**0.3786**	**0.2300**	**3.3000e-004**		**0.0200**	**0.0200**		**0.0184**	**0.0184**	**0.0000**	**31.0004**	**31.0004**	**9.5000e-003**	**0.0000**	**31.1998**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	6.7000e-004	6.5000e-003	2.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1033	1.1033	6.0000e-005	0.0000	1.1045
Total	**4.8000e-004**	**6.7000e-004**	**6.5000e-003**	**2.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.1033**	**1.1033**	**6.0000e-005**	**0.0000**	**1.1045**

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	4.1300e-003	0.0179	0.2550	3.3000e-004		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	31.0003	31.0003	9.5000e-003	0.0000	31.1998
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.1300e-003**	**0.0179**	**0.2550**	**3.3000e-004**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**31.0003**	**31.0003**	**9.5000e-003**	**0.0000**	**31.1998**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	6.7000e-004	6.5000e-003	2.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1033	1.1033	6.0000e-005	0.0000	1.1045
Total	**4.8000e-004**	**6.7000e-004**	**6.5000e-003**	**2.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.1033**	**1.1033**	**6.0000e-005**	**0.0000**	**1.1045**

3.5 Landscaping - 2017

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0413	0.4054	0.3346	4.9000e-004		0.0266	0.0266		0.0246	0.0246	0.0000	44.2236	44.2236	0.0126	0.0000	44.4892
Total	**0.0413**	**0.4054**	**0.3346**	**4.9000e-004**	**0.0000**	**0.0266**	**0.0266**	**0.0000**	**0.0246**	**0.0246**	**0.0000**	**44.2236**	**44.2236**	**0.0126**	**0.0000**	**44.4892**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4300e-003	6.2300e-003	0.0603	1.4000e-004	0.0225	9.0000e-005	0.0226	5.7800e-003	9.0000e-005	5.8700e-003	0.0000	10.2464	10.2464	5.2000e-004	0.0000	10.2573
Total	**4.4300e-003**	**6.2300e-003**	**0.0603**	**1.4000e-004**	**0.0225**	**9.0000e-005**	**0.0226**	**5.7800e-003**	**9.0000e-005**	**5.8700e-003**	**0.0000**	**10.2464**	**10.2464**	**5.2000e-004**	**0.0000**	**10.2573**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3100e-003	0.1086	0.3227	4.9000e-004		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	44.2236	44.2236	0.0126	0.0000	44.4891
Total	**7.3100e-003**	**0.1086**	**0.3227**	**4.9000e-004**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**44.2236**	**44.2236**	**0.0126**	**0.0000**	**44.4891**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4300e-003	6.2300e-003	0.0603	1.4000e-004	0.0225	9.0000e-005	0.0226	5.7800e-003	9.0000e-005	5.8700e-003	0.0000	10.2464	10.2464	5.2000e-004	0.0000	10.2573
Total	**4.4300e-003**	**6.2300e-003**	**0.0603**	**1.4000e-004**	**0.0225**	**9.0000e-005**	**0.0226**	**5.7800e-003**	**9.0000e-005**	**5.8700e-003**	**0.0000**	**10.2464**	**10.2464**	**5.2000e-004**	**0.0000**	**10.2573**

3.5 Landscaping - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0561	0.5599	0.5166	7.7000e-004		0.0343	0.0343		0.0317	0.0317	0.0000	68.4755	68.4755	0.0199	0.0000	68.8922
Total	**0.0561**	**0.5599**	**0.5166**	**7.7000e-004**	**0.0000**	**0.0343**	**0.0343**	**0.0000**	**0.0317**	**0.0317**	**0.0000**	**68.4755**	**68.4755**	**0.0199**	**0.0000**	**68.8922**

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	6.2500e-003	8.8200e-003	0.0851	2.2000e-004	0.0355	1.4000e-004	0.0356	9.0900e-003	1.3000e-004	9.2200e-003	0.0000	15.5105	15.5105	7.5000e-004	0.0000	15.5262
Total	**6.2500e-003**	**8.8200e-003**	**0.0851**	**2.2000e-004**	**0.0355**	**1.4000e-004**	**0.0356**	**9.0900e-003**	**1.3000e-004**	**9.2200e-003**	**0.0000**	**15.5105**	**15.5105**	**7.5000e-004**	**0.0000**	**15.5262**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0115	0.1708	0.5073	7.7000e-004		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	68.4754	68.4754	0.0199	0.0000	68.8922
Total	**0.0115**	**0.1708**	**0.5073**	**7.7000e-004**	**0.0000**	**1.1000e-003**	**1.1000e-003**	**0.0000**	**1.1000e-003**	**1.1000e-003**	**0.0000**	**68.4754**	**68.4754**	**0.0199**	**0.0000**	**68.8922**

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	6.2500e-003	8.8200e-003	0.0851	2.2000e-004	0.0355	1.4000e-004	0.0356	9.0900e-003	1.3000e-004	9.2200e-003	0.0000	15.5105	15.5105	7.5000e-004	0.0000	15.5262
Total	**6.2500e-003**	**8.8200e-003**	**0.0851**	**2.2000e-004**	**0.0355**	**1.4000e-004**	**0.0356**	**9.0900e-003**	**1.3000e-004**	**9.2200e-003**	**0.0000**	**15.5105**	**15.5105**	**7.5000e-004**	**0.0000**	**15.5262**

Communications Hill - Off-Site Phase 2 (Curtner)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	6.30	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Curtner off-site improvements acreage estimated from plan drawings.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Off-road Equipment - Construction equipment list provided by project applicant.

Off-road Equipment - Construction equipment list provided by project applicant.

Off-road Equipment - Construction equipment list provided by project applicant.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	10.00	427.00
tblConstructionPhase	PhaseEndDate	4/10/2020	4/11/2020
tblGrading	AcresOfGrading	55.00	10.00
tblLandUse	LotAcreage	0.00	6.30
tblOffRoadEquipment	HorsePower	8.00	300.00
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00

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	0.0526	0.5788	0.4197	6.5000e-004	0.0737	0.0270	0.1006	0.0376	0.0248	0.0624	0.0000	57.9002	57.9002	0.0179	0.0000	58.2755
2020	0.0940	0.9158	0.9859	1.5600e-003	0.0273	0.0506	0.0779	7.0500e-003	0.0466	0.0537	0.0000	131.5631	131.5631	0.0380	0.0000	132.3618
2021	0.0486	0.4422	0.5707	9.9000e-004	0.0353	0.0222	0.0575	9.0500e-003	0.0206	0.0296	0.0000	79.9661	79.9661	0.0204	0.0000	80.3942
Total	**0.1952**	**1.9367**	**1.9763**	**3.2000e-003**	**0.1363**	**0.0997**	**0.2360**	**0.0537**	**0.0920**	**0.1457**	**0.0000**	**269.4294**	**269.4294**	**0.0763**	**0.0000**	**271.0315**

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	8.3000e-003	0.0341	0.3510	6.5000e-004	5.3400e-003	1.0400e-003	6.3700e-003	2.2300e-003	1.0400e-003	3.2600e-003	0.0000	57.9001	57.9001	0.0179	0.0000	58.2754
2020	0.0228	0.1623	1.0484	1.5600e-003	0.0273	2.2500e-003	0.0296	7.0500e-003	2.2400e-003	9.2900e-003	0.0000	131.5630	131.5630	0.0380	0.0000	132.3617
2021	0.0164	0.1770	0.5717	9.9000e-004	0.0353	1.2300e-003	0.0365	9.0500e-003	1.2200e-003	0.0103	0.0000	79.9660	79.9660	0.0204	0.0000	80.3941
Total	**0.0475**	**0.3734**	**1.9711**	**3.2000e-003**	**0.0680**	**4.5200e-003**	**0.0725**	**0.0183**	**4.5000e-003**	**0.0228**	**0.0000**	**269.4291**	**269.4291**	**0.0763**	**0.0000**	**271.0312**

	ROG	NOx	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	**75.66**	**80.72**	**0.26**	**0.00**	**50.13**	**95.47**	**69.29**	**65.83**	**95.11**	**84.33**	**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	Grading/Rock/Paving	Grading	12/5/2019	12/19/2019	5	11	
2	Trenching	Trenching	12/20/2019	4/11/2020	5	81	
3	Concrete	Paving	4/12/2020	5/12/2020	5	22	
4	Landscaping	Site Preparation	5/13/2020	12/30/2021	5	427	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Rock/Paving	Excavators	0	8.00	162	0.38
Grading/Rock/Paving	Graders	2	8.00	174	0.41

Grading/Rock/Paving	Pavers	1	8.00	125	0.42
Grading/Rock/Paving	Plate Compactors	2	8.00	300	0.37
Grading/Rock/Paving	Rollers	1	8.00	80	0.38
Grading/Rock/Paving	Rubber Tired Dozers	2	8.00	255	0.40
Grading/Rock/Paving	Scrapers	4	8.00	361	0.48
Grading/Rock/Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Concrete	Cement and Mortar Mixers	0	6.00	9	0.56
Concrete	Other Construction Equipment	5	8.00	171	0.42
Concrete	Pavers	0	8.00	125	0.42
Concrete	Paving Equipment	0	6.00	130	0.36
Concrete	Rollers	0	6.00	80	0.38
Concrete	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Landscaping	Dumpers/Tenders	1	8.00	16	0.38
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Skid Steer Loaders	1	8.00	64	0.37
Landscaping	Tractors/Loaders/Backhoes	1	8.00	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
Trenching	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Rock/Paving	14	35.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	3	8.00	0.00	0.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Grading/Rock/Paving - 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					0.0716	0.0000	0.0716	0.0370	0.0000	0.0370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0481	0.5388	0.3701	5.7000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	50.9857	50.9857	0.0161	0.0000	51.3244
Total	**0.0481**	**0.5388**	**0.3701**	**5.7000e-004**	**0.0716**	**0.0245**	**0.0961**	**0.0370**	**0.0226**	**0.0596**	**0.0000**	**50.9857**	**50.9857**	**0.0161**	**0.0000**	**51.3244**

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	5.3000e-004	7.4000e-004	7.1300e-003	2.0000e-005	1.7500e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3785	1.3785	6.0000e-005	0.0000	1.3798
Total	**5.3000e-004**	**7.4000e-004**	**7.1300e-003**	**2.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.3785**	**1.3785**	**6.0000e-005**	**0.0000**	**1.3798**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2200e-003	0.0000	3.2200e-003	1.6600e-003	0.0000	1.6600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9500e-003	0.0301	0.2982	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	50.9856	50.9856	0.0161	0.0000	51.3244
Total	**6.9500e-003**	**0.0301**	**0.2982**	**5.7000e-004**	**3.2200e-003**	**9.3000e-004**	**4.1500e-003**	**1.6600e-003**	**9.3000e-004**	**2.5900e-003**	**0.0000**	**50.9856**	**50.9856**	**0.0161**	**0.0000**	**51.3244**

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	5.3000e-004	7.4000e-004	7.1300e-003	2.0000e-005	1.7500e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3785	1.3785	6.0000e-005	0.0000	1.3798
Total	**5.3000e-004**	**7.4000e-004**	**7.1300e-003**	**2.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.3785**	**1.3785**	**6.0000e-005**	**0.0000**	**1.3798**

3.3 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	3.8600e-003	0.0391	0.0410	6.0000e-005		2.4000e-003	2.4000e-003		2.2100e-003	2.2100e-003	0.0000	5.2497	5.2497	1.6600e-003	0.0000	5.2845
Total	**3.8600e-003**	**0.0391**	**0.0410**	**6.0000e-005**		**2.4000e-003**	**2.4000e-003**		**2.2100e-003**	**2.2100e-003**	**0.0000**	**5.2497**	**5.2497**	**1.6600e-003**	**0.0000**	**5.2845**

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	1.1000e-004	1.5000e-004	1.4800e-003	0.0000	3.6000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2864	0.2864	1.0000e-005	0.0000	0.2867
Total	**1.1000e-004**	**1.5000e-004**	**1.4800e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2864**	**0.2864**	**1.0000e-005**	**0.0000**	**0.2867**

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	7.2000e-004	3.1000e-003	0.0442	6.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	5.2497	5.2497	1.6600e-003	0.0000	5.2845
Total	**7.2000e-004**	**3.1000e-003**	**0.0442**	**6.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**5.2497**	**5.2497**	**1.6600e-003**	**0.0000**	**5.2845**

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	1.1000e-004	1.5000e-004	1.4800e-003	0.0000	3.6000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2864	0.2864	1.0000e-005	0.0000	0.2867
Total	**1.1000e-004**	**1.5000e-004**	**1.4800e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2864**	**0.2864**	**1.0000e-005**	**0.0000**	**0.2867**

3.3 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0321	0.3208	0.3719	5.3000e-004		0.0190	0.0190		0.0174	0.0174	0.0000	46.8566	46.8566	0.0152	0.0000	47.1749
Total	**0.0321**	**0.3208**	**0.3719**	**5.3000e-004**		**0.0190**	**0.0190**		**0.0174**	**0.0174**	**0.0000**	**46.8566**	**46.8566**	**0.0152**	**0.0000**	**47.1749**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e-004	1.2900e-003	0.0125	4.0000e-005	3.3200e-003	2.0000e-005	3.3500e-003	8.8000e-004	2.0000e-005	9.1000e-004	0.0000	2.5087	2.5087	1.1000e-004	0.0000	2.5111
Total	**9.3000e-004**	**1.2900e-003**	**0.0125**	**4.0000e-005**	**3.3200e-003**	**2.0000e-005**	**3.3500e-003**	**8.8000e-004**	**2.0000e-005**	**9.1000e-004**	**0.0000**	**2.5087**	**2.5087**	**1.1000e-004**	**0.0000**	**2.5111**

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	6.5400e-003	0.0283	0.4031	5.3000e-004		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	46.8566	46.8566	0.0152	0.0000	47.1748
Total	**6.5400e-003**	**0.0283**	**0.4031**	**5.3000e-004**		**8.7000e-004**	**8.7000e-004**		**8.7000e-004**	**8.7000e-004**	**0.0000**	**46.8566**	**46.8566**	**0.0152**	**0.0000**	**47.1748**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e-004	1.2900e-003	0.0125	4.0000e-005	3.3200e-003	2.0000e-005	3.3500e-003	8.8000e-004	2.0000e-005	9.1000e-004	0.0000	2.5087	2.5087	1.1000e-004	0.0000	2.5111
Total	**9.3000e-004**	**1.2900e-003**	**0.0125**	**4.0000e-005**	**3.3200e-003**	**2.0000e-005**	**3.3500e-003**	**8.8000e-004**	**2.0000e-005**	**9.1000e-004**	**0.0000**	**2.5087**	**2.5087**	**1.1000e-004**	**0.0000**	**2.5111**

3.4 Concrete - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0270	0.2865	0.2254	3.4000e-004		0.0151	0.0151		0.0139	0.0139	0.0000	29.7037	29.7037	9.6100e-003	0.0000	29.9055
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0270**	**0.2865**	**0.2254**	**3.4000e-004**		**0.0151**	**0.0151**		**0.0139**	**0.0139**	**0.0000**	**29.7037**	**29.7037**	**9.6100e-003**	**0.0000**	**29.9055**

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	3.6000e-004	5.1000e-004	4.8800e-003	2.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	0.9828	0.9828	4.0000e-005	0.0000	0.9838
Total	**3.6000e-004**	**5.1000e-004**	**4.8800e-003**	**2.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**0.9828**	**0.9828**	**4.0000e-005**	**0.0000**	**0.9838**

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	4.1800e-003	0.0181	0.2578	3.4000e-004		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004	0.0000	29.7037	29.7037	9.6100e-003	0.0000	29.9054
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.1800e-003**	**0.0181**	**0.2578**	**3.4000e-004**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**	**0.0000**	**29.7037**	**29.7037**	**9.6100e-003**	**0.0000**	**29.9054**

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	3.6000e-004	5.1000e-004	4.8800e-003	2.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	0.9828	0.9828	4.0000e-005	0.0000	0.9838
Total	**3.6000e-004**	**5.1000e-004**	**4.8800e-003**	**2.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**0.9828**	**0.9828**	**4.0000e-005**	**0.0000**	**0.9838**

3.5 Landscaping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0302	0.3020	0.3256	4.9000e-004		0.0164	0.0164		0.0152	0.0152	0.0000	42.3289	42.3289	0.0127	0.0000	42.5955
Total	**0.0302**	**0.3020**	**0.3256**	**4.9000e-004**	**0.0000**	**0.0164**	**0.0164**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**42.3289**	**42.3289**	**0.0127**	**0.0000**	**42.5955**

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	3.4000e-003	4.7300e-003	0.0456	1.4000e-004	0.0227	9.0000e-005	0.0228	5.8200e-003	8.0000e-005	5.9000e-003	0.0000	9.1824	9.1824	4.2000e-004	0.0000	9.1912
Total	**3.4000e-003**	**4.7300e-003**	**0.0456**	**1.4000e-004**	**0.0227**	**9.0000e-005**	**0.0228**	**5.8200e-003**	**8.0000e-005**	**5.9000e-003**	**0.0000**	**9.1824**	**9.1824**	**4.2000e-004**	**0.0000**	**9.1912**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	7.3600e-003	0.1093	0.3246	4.9000e-004		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	42.3289	42.3289	0.0127	0.0000	42.5954
Total	**7.3600e-003**	**0.1093**	**0.3246**	**4.9000e-004**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**42.3289**	**42.3289**	**0.0127**	**0.0000**	**42.5954**

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	3.4000e-003	4.7300e-003	0.0456	1.4000e-004	0.0227	9.0000e-005	0.0228	5.8200e-003	8.0000e-005	5.9000e-003	0.0000	9.1824	9.1824	4.2000e-004	0.0000	9.1912
Total	**3.4000e-003**	**4.7300e-003**	**0.0456**	**1.4000e-004**	**0.0227**	**9.0000e-005**	**0.0228**	**5.8200e-003**	**8.0000e-005**	**5.9000e-003**	**0.0000**	**9.1824**	**9.1824**	**4.2000e-004**	**0.0000**	**9.1912**

3.5 Landscaping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0436	0.4353	0.5044	7.7000e-004		0.0220	0.0220		0.0205	0.0205	0.0000	65.9203	65.9203	0.0198	0.0000	66.3354
Total	**0.0436**	**0.4353**	**0.5044**	**7.7000e-004**	**0.0000**	**0.0220**	**0.0220**	**0.0000**	**0.0205**	**0.0205**	**0.0000**	**65.9203**	**65.9203**	**0.0198**	**0.0000**	**66.3354**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9900e-003	6.8500e-003	0.0664	2.2000e-004	0.0353	1.4000e-004	0.0355	9.0500e-003	1.3000e-004	9.1800e-003	0.0000	14.0458	14.0458	6.2000e-004	0.0000	14.0588
Total	**4.9900e-003**	**6.8500e-003**	**0.0664**	**2.2000e-004**	**0.0353**	**1.4000e-004**	**0.0355**	**9.0500e-003**	**1.3000e-004**	**9.1800e-003**	**0.0000**	**14.0458**	**14.0458**	**6.2000e-004**	**0.0000**	**14.0588**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0115	0.1702	0.5054	7.7000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	65.9202	65.9202	0.0198	0.0000	66.3353
Total	**0.0115**	**0.1702**	**0.5054**	**7.7000e-004**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**65.9202**	**65.9202**	**0.0198**	**0.0000**	**66.3353**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9900e-003	6.8500e-003	0.0664	2.2000e-004	0.0353	1.4000e-004	0.0355	9.0500e-003	1.3000e-004	9.1800e-003	0.0000	14.0458	14.0458	6.2000e-004	0.0000	14.0588
Total	**4.9900e-003**	**6.8500e-003**	**0.0664**	**2.2000e-004**	**0.0353**	**1.4000e-004**	**0.0355**	**9.0500e-003**	**1.3000e-004**	**9.1800e-003**	**0.0000**	**14.0458**	**14.0458**	**6.2000e-004**	**0.0000**	**14.0588**

Communications Hill - Phase 4 Off-Site (Ped Bridge & Pathways)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Phase 4 Off-Site (Ped Bridge + pathways) acreage estimated from plan drawings.

Construction Phase - Estimated sub-phase durations from information provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Off-road Equipment - Equipment list provided by project applicant.

Construction Off-road Equipment Mitigation - Basic and Additional Control Measures. Tier IV engines.

Off-road Equipment - Construction equipment list provided by project applicant.

Off-road Equipment - Construction equipment list provided by project applicant.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	4.00	76.00
tblConstructionPhase	NumDays	200.00	454.00
tblGrading	AcresOfGrading	38.00	1.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	HorsePower	8.00	300.00
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

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					
2025	0.1321	1.2238	1.4167	2.5000e-003	0.2464	0.0582	0.3046	0.1302	0.0536	0.1838	0.0000	216.8345	216.8345	0.0683	0.0000	218.2686
2026	0.1167	1.1132	1.2473	2.3200e-003	0.0000	0.0538	0.0538	0.0000	0.0495	0.0495	0.0000	204.0982	204.0982	0.0660	0.0000	205.4844
2027	8.4900e-003	0.0810	0.0908	1.7000e-004	0.0000	3.9200e-003	3.9200e-003	0.0000	3.6100e-003	3.6100e-003	0.0000	14.8577	14.8577	4.8100e-003	0.0000	14.9586
Total	**0.2572**	**2.4180**	**2.7548**	**4.9900e-003**	**0.2464**	**0.1160**	**0.3624**	**0.1302**	**0.1067**	**0.2369**	**0.0000**	**435.7904**	**435.7904**	**0.1391**	**0.0000**	**438.7117**

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					
2025	0.0314	0.1300	1.5844	2.5000e-003	0.0273	3.9800e-003	0.0313	0.0100	3.9800e-003	0.0140	0.0000	216.8343	216.8343	0.0683	0.0000	218.2684
2026	0.0287	0.1242	1.5417	2.3200e-003	0.0000	3.8200e-003	3.8200e-003	0.0000	3.8200e-003	3.8200e-003	0.0000	204.0980	204.0980	0.0660	0.0000	205.4842
2027	2.0900e-003	9.0400e-003	0.1122	1.7000e-004	0.0000	2.8000e-004	2.8000e-004	0.0000	2.8000e-004	2.8000e-004	0.0000	14.8577	14.8577	4.8100e-003	0.0000	14.9586
Total	**0.0621**	**0.2633**	**3.2383**	**4.9900e-003**	**0.0273**	**8.0800e-003**	**0.0354**	**0.0100**	**8.0800e-003**	**0.0181**	**0.0000**	**435.7899**	**435.7899**	**0.1391**	**0.0000**	**438.7111**

	ROG	NOx	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	**75.85**	**89.11**	**-17.55**	**0.00**	**88.90**	**93.03**	**90.22**	**92.30**	**92.43**	**92.36**	**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	Grading/Rock/Paving	Grading	1/1/2025	4/16/2025	5	76	
2	Trenching	Trenching	4/17/2025	5/1/2025	5	11	
3	Building Construction	Building Construction	5/2/2025	1/27/2027	5	454	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Rock/Paving	Plate Compactors	1	8.00	300	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading/Rock/Paving	Graders	1	8.00	174	0.41
Building Construction	Other Construction Equipment	2	8.00	171	0.42
Grading/Rock/Paving	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Rock/Paving	Tractors/Loaders/Backhoes	2	8.00	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
Trenching	2	5.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	0.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Rock/Paving	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Rock/Paving	5	13.00	0.00	0.00	12.40	7.30	20.00	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

Clean Paved Roads

3.2 Grading/Rock/Paving - 2025

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					0.2294	0.0000	0.2294	0.1259	0.0000	0.1259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0508	0.4644	0.5351	8.1000e-004		0.0217	0.0217		0.0200	0.0200	0.0000	71.2921	71.2921	0.0231	0.0000	71.7763
Total	**0.0508**	**0.4644**	**0.5351**	**8.1000e-004**	**0.2294**	**0.0217**	**0.2511**	**0.1259**	**0.0200**	**0.1458**	**0.0000**	**71.2921**	**71.2921**	**0.0231**	**0.0000**	**71.7763**

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	1.9200e-003	2.5500e-003	0.0249	1.0000e-004	0.0168	6.0000e-005	0.0168	4.3000e-003	6.0000e-005	4.3600e-003	0.0000	6.2996	6.2996	2.5000e-004	0.0000	6.3048
Total	**1.9200e-003**	**2.5500e-003**	**0.0249**	**1.0000e-004**	**0.0168**	**6.0000e-005**	**0.0168**	**4.3000e-003**	**6.0000e-005**	**4.3600e-003**	**0.0000**	**6.2996**	**6.2996**	**2.5000e-004**	**0.0000**	**6.3048**

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					0.0103	0.0000	0.0103	5.6600e-003	0.0000	5.6600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.8600e-003	0.0427	0.5053	8.1000e-004		1.3100e-003	1.3100e-003		1.3100e-003	1.3100e-003	0.0000	71.2920	71.2920	0.0231	0.0000	71.7762
Total	**9.8600e-003**	**0.0427**	**0.5053**	**8.1000e-004**	**0.0103**	**1.3100e-003**	**0.0116**	**5.6600e-003**	**1.3100e-003**	**6.9700e-003**	**0.0000**	**71.2920**	**71.2920**	**0.0231**	**0.0000**	**71.7762**

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	1.9200e-003	2.5500e-003	0.0249	1.0000e-004	0.0168	6.0000e-005	0.0168	4.3000e-003	6.0000e-005	4.3600e-003	0.0000	6.2996	6.2996	2.5000e-004	0.0000	6.3048
Total	**1.9200e-003**	**2.5500e-003**	**0.0249**	**1.0000e-004**	**0.0168**	**6.0000e-005**	**0.0168**	**4.3000e-003**	**6.0000e-005**	**4.3600e-003**	**0.0000**	**6.2996**	**6.2996**	**2.5000e-004**	**0.0000**	**6.3048**

3.3 Trenching - 2025

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	1.4500e-003	0.0146	0.0244	3.0000e-005		5.9000e-004	5.9000e-004		5.5000e-004	5.5000e-004	0.0000	3.0020	3.0020	9.7000e-004	0.0000	3.0224
Total	**1.4500e-003**	**0.0146**	**0.0244**	**3.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**3.0020**	**3.0020**	**9.7000e-004**	**0.0000**	**3.0224**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	7.0000e-005	6.9000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1753	0.1753	1.0000e-005	0.0000	0.1755
Total	**5.0000e-005**	**7.0000e-005**	**6.9000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1753**	**0.1753**	**1.0000e-005**	**0.0000**	**0.1755**

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	4.2000e-004	1.8000e-003	0.0257	3.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.0020	3.0020	9.7000e-004	0.0000	3.0224
Total	**4.2000e-004**	**1.8000e-003**	**0.0257**	**3.0000e-005**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**3.0020**	**3.0020**	**9.7000e-004**	**0.0000**	**3.0224**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	7.0000e-005	6.9000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1753	0.1753	1.0000e-005	0.0000	0.1755
Total	**5.0000e-005**	**7.0000e-005**	**6.9000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1753**	**0.1753**	**1.0000e-005**	**0.0000**	**0.1755**

3.4 Building Construction - 2025

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	0.0778	0.7421	0.8315	1.5500e-003		0.0359	0.0359		0.0330	0.0330	0.0000	136.0655	136.0655	0.0440	0.0000	136.9896
Total	**0.0778**	**0.7421**	**0.8315**	**1.5500e-003**		**0.0359**	**0.0359**		**0.0330**	**0.0330**	**0.0000**	**136.0655**	**136.0655**	**0.0440**	**0.0000**	**136.9896**

Unmitigated Construction Off-Site

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

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	0.0191	0.0828	1.0278	1.5500e-003		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	136.0653	136.0653	0.0440	0.0000	136.9895
Total	**0.0191**	**0.0828**	**1.0278**	**1.5500e-003**		**2.5500e-003**	**2.5500e-003**		**2.5500e-003**	**2.5500e-003**	**0.0000**	**136.0653**	**136.0653**	**0.0440**	**0.0000**	**136.9895**

Mitigated Construction Off-Site

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

3.4 Building Construction - 2026

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	0.1167	1.1132	1.2473	2.3200e-003		0.0538	0.0538		0.0495	0.0495	0.0000	204.0982	204.0982	0.0660	0.0000	205.4844
Total	**0.1167**	**1.1132**	**1.2473**	**2.3200e-003**		**0.0538**	**0.0538**		**0.0495**	**0.0495**	**0.0000**	**204.0982**	**204.0982**	**0.0660**	**0.0000**	**205.4844**

Unmitigated Construction Off-Site

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

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	0.0287	0.1242	1.5417	2.3200e-003		3.8200e-003	3.8200e-003		3.8200e-003	3.8200e-003	0.0000	204.0980	204.0980	0.0660	0.0000	205.4842
Total	**0.0287**	**0.1242**	**1.5417**	**2.3200e-003**		**3.8200e-003**	**3.8200e-003**		**3.8200e-003**	**3.8200e-003**	**0.0000**	**204.0980**	**204.0980**	**0.0660**	**0.0000**	**205.4842**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.4900e-003	0.0810	0.0908	1.7000e-004		3.9200e-003	3.9200e-003		3.6100e-003	3.6100e-003	0.0000	14.8577	14.8577	4.8100e-003	0.0000	14.9586
Total	**8.4900e-003**	**0.0810**	**0.0908**	**1.7000e-004**		**3.9200e-003**	**3.9200e-003**		**3.6100e-003**	**3.6100e-003**	**0.0000**	**14.8577**	**14.8577**	**4.8100e-003**	**0.0000**	**14.9586**

Unmitigated Construction Off-Site

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

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	2.0900e-003	9.0400e-003	0.1122	1.7000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	14.8577	14.8577	4.8100e-003	0.0000	14.9586
Total	**2.0900e-003**	**9.0400e-003**	**0.1122**	**1.7000e-004**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**14.8577**	**14.8577**	**4.8100e-003**	**0.0000**	**14.9586**

Mitigated Construction Off-Site

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

Attachment 2: Caline4 CO Hotspot Modeling

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Capitol Expwy & Quimby Worst-Case
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	100. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	4 (D)	VS=	0.0 CM/S		
MIXH=	300. M	AMB=	0.0 PPM		
SIGTH=	5. DEGREES	TEMP=	7.2 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB - App	*	0	-150	0	0	* AG	3299	1.9	0.0	10.0
B. NB - Cr Ap	*	0	-500	0	-150	* AG	3299	0.9	0.0	10.0
C. SB - Dep	*	-13	0	-13	-150	* AG	1766	1.9	0.0	10.0
D. SB - Cr De	*	-13	-150	-13	-500	* AG	1766	0.9	0.0	10.0
E. NB - Dep	*	0	0	0	150	* AG	3095	1.9	0.0	10.0
F. NB - Cr De	*	0	150	0	500	* AG	3095	0.9	0.0	10.0
G. SB - Cr Ap	*	-13	500	-13	150	* AG	2509	0.9	0.0	10.0
H. SB - App	*	-13	150	-13	0	* AG	2509	1.9	0.0	10.0
I. WB - Cr Ap	*	500	7	150	7	* AG	1451	0.9	0.0	10.0
J. WB - App	*	150	7	0	7	* AG	1451	1.9	0.0	10.0
K. WB - Dep	*	-13	7	-150	7	* AG	2259	1.9	0.0	10.0
L. WB - Cr De	*	-150	7	-500	7	* AG	2259	0.9	0.0	10.0
M. EB - Cr Ap	*	-500	-7	-150	-7	* AG	1637	0.9	0.0	10.0
N. EB - App	*	-150	-7	-13	-7	* AG	1637	1.9	0.0	10.0
O. EB - Dep	*	0	-7	150	-7	* AG	1776	1.9	0.0	10.0
P. EB - Cr Dep	*	150	-7	500	-7	* AG	1776	0.9	0.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Capitol Expwy & Quimby Worst-Case
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	17	-24	1.8
2. Recpt 2	*	17	24	1.8
3. Recpt 3	*	-30	24	1.8
4. Recpt 4	*	-30	-24	1.8
5. Recpt 5	*	17	-150	1.8

6. Recpt 6	17	150	1.8
7. Recpt 7	-30	150	1.8
8. Recpt 8	-30	-150	1.8
9. Recpt 9	150	-24	1.8
10. Recpt 10	150	24	1.8
11. Recpt 11	-150	24	1.8
12. Recpt 12	-150	-24	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	346.	0.6	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1
2. Recpt 2	256.	0.6	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1
3. Recpt 3	166.	0.6	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
4. Recpt 4	14.	0.6	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2
5. Recpt 5	352.	0.5	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1
6. Recpt 6	187.	0.5	0.1	0.0	0.1	0.0	0.2	0.0	0.0	0.0
7. Recpt 7	171.	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
8. Recpt 8	7.	0.5	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1
9. Recpt 9	278.	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10. Recpt 10	263.	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11. Recpt 11	99.	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12. Recpt 12	82.	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Capitol Expwy & Quimby Worst-Case
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
2. Recpt 2	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
3. Recpt 3	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
4. Recpt 4	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
5. Recpt 5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6. Recpt 6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7. Recpt 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8. Recpt 8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9. Recpt 9	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
10. Recpt 10	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0
11. Recpt 11	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0
12. Recpt 12	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0

Attachment 3: Construction Modeling and Emission Rates

Communications Hill - Off-Site Construction Truck Emissions for Modeling

Year	Annual Trips[1] MHDT	Annual Trips[1] HHDT	Travel Speed (mph)	PM2.5 Emission Factors (g/mi)[2] MHDT	PM2.5 Emission Factors (g/mi)[2] HHDT	Travel Distance (miles)	Annual Emissions (lb/yr)	Average Hourly Emissons (lb/hr)
South Route								
2015	8320	13520	25	0.0965	0.1004	1.03	4.90	1.22E-03
2016	8320	13520	25	0.0799	0.0696	1.03	3.64	9.04E-04
2017	8320	8320	25	0.0666	0.0594	1.03	2.37	5.90E-04
2018	8320	8320	25	0.0570	0.0581	1.03	2.17	5.39E-04
2019	8320	8320	25	0.0485	0.0568	1.03	1.99	4.93E-04
2020	8320	8320	25	0.0360	0.0548	1.03	1.71	4.25E-04
2021	8320	8320	25	0.0272	0.0532	1.03	1.52	3.77E-04
2022	16485	16735	25	0.0268	0.0523	1.03	2.98	7.41E-04
2023	10695	10695	25	0.0268	0.0523	1.03	1.92	4.76E-04
North Route								
2023	8320	8320	25	0.0256	0.0511	0.91	1.28	3.17E-04
2024	8320	8320	25	0.0258	0.0513	0.91	1.28	3.19E-04
2025	8320	8320	25	0.0259	0.0515	0.91	1.29	3.20E-04
2026	8320	8320	25	0.0260	0.0499	0.91	1.26	3.14E-04
2027	8320	8320	25	0.0260	0.0500	0.91	1.26	3.14E-04

Notes:

Daily operational hours = 11

[1] MHDT = medium heavy-duty truck and HHDT = heavy heavy duty truck

[2] Emission factors from EMFAC2011 for Santa Clara Co. and assumes all trucks are diesel.

Communications Hill Off-Site Construction Truck Trips Summary

Phase/Activity	Year	Activity Construction Days	Truck Trips per day: Vendor Trucks (MHDT)	Truck Trips per day: Vendor Trucks (HHDT)	Truck Trips per day: Haul Trucks (HHDT)	Annual Truck Trips (MHDT)	Annual Truck Trips (HHDT)
South Route							
Mass Grading	2015	130			40	0	5200
Phase 1	2015	260	32	32		8320	8320
Mass Grading	2016	130			40	0	5200
Phase 1	2016	260	32	32		8320	8320
Phase 1	2017	260	32	32		8320	8320
Phase 1	2018	260	32	32		8320	8320
Phase 2	2019	260	32	32		8320	8320
Phase 2	2020	260	32	32		8320	8320
Phase 2	2021	260	32	32		8320	8320
Phase 3	2022	260	32	32		8320	8320
Slurry Mines	2022	5	0	0	50	0	250
Industrial Area	2022	71	115	115		8165	8165
Bridge Construction	2022	174	0	0		0	0
Industrial Area	2023	93	115	115		10695	10695
North Route							
Phase 3	2023	260	32	32		8320	8320
Phase 3	2024	260	32	32		8320	8320
Phase 4	2025	260	32	32		8320	8320
Phase 4	2026	260	32	32		8320	8320
Phase 4	2027	260	32	32		8320	8320

Communications Hill - Summary of DPM and Fugitive PM2.5 Emissions By Phase and Year

Unmitigated					Mitigated				
Phase	**Year**	**Exhaust DPM (tons)**	**Fugitive PM2.5 (tons)**	**Total On-Site PM2.5 (tons)**	**Phase**	**Year**	**Exhaust DPM (tons)**	**Fugitive PM2.5 (tons)**	**Total On-Site PM2.5 (tons)**
On-Site Construction									
I	2015	1.2050	0.0179	1.223	I	2015	0.0420	0.0179	0.060
	2016	1.5716	0.0357	1.607		2016	0.0572	0.0357	0.093
	2017	1.5768	0.0275	1.604		2017	0.0603	0.0275	0.088
	2018	1.2248	0.0429	1.268		2018	0.0548	0.0429	0.098
	Phase Total	5.5782	0.1240	5.702		*Phase Total*	0.2143	0.1240	0.338
II	2019	1.1573	0.0274	1.185	II	2019	0.0587	0.0274	0.086
	2020	0.9968	0.0363	1.033		2020	0.0534	0.0363	0.090
	2021	0.8964	0.0352	0.932		2021	0.0575	0.0352	0.093
	Phase Total	3.0505	0.0989	3.149		*Phase Total*	0.1696	0.0989	0.269
III	2022	0.7223	0.0356	0.758	III	2022	0.0519	0.0356	0.088
	2023	0.5546	0.0194	0.574		2023	0.0458	0.0194	0.065
	2024	0.5956	0.0435	0.639		2024	0.0524	0.0435	0.096
	Phase Total	1.8725	0.0986	1.971		*Phase Total*	0.1501	0.0986	0.249
IV	2025	0.4438	0.0195	0.463	IV	2025	0.0461	0.0195	0.066
	2026	0.5180	0.0363	0.554		2026	0.0521	0.0363	0.088
	2027	0.4459	0.0272	0.473		2027	0.0463	0.0272	0.073
	Phase Total	1.4077	0.0830	1.491		*Phase Total*	0.1445	0.0830	0.227
Grading	2015	0.7934	0.0896	0.883	Grading	2015	0.0274	0.0048	0.032
	2016	0.7605	0.0896	0.850		2016	0.0275	0.0049	0.032
	Phase Total	1.5539	0.1792	1.733		*Phase Total*	0.0549	0.0097	0.065
Industrial/Comm	*2022*	0.1085	0.0124	0.121	Industrial/Comm	*2022*	0.0142	0.0124	0.027
	2023	0.0998	0.0104	0.110		*2023*	0.0157	0.0104	0.026
	Phase Total	0.2083	0.0229	0.231		*Phase Total*	0.0299	0.0229	0.053
Bridge	2022	0.2498	0.0006	0.250	Bridge	2022	0.0182	0.0006	0.019
Slurry Mines	2022	0.0018	0.0002	0.002	Slurry Mines	2022	0.0018	0.0001	0.002
Off-Site Construction									
Phase IV-Off-Site	2025	0.0536	0.1263	0.180	Phase IV-Off-Site	2022	0.0040	0.0061	0.010
	2026	0.0495	0.0000	0.050		2023	0.0038	0.0000	0.004
	2027	0.0036	0.0000	0.004		2024	0.0003	0.0000	0.000
	Total	0.1067	0.1263	0.233		*Phase Total*	0.0081	0.0061	0.014
Narvaez Ave	2016	0.0357	0.0373	0.073	Narvaez Ave	2016	0.0357	0.0373	0.073
	2017	0.0724	0.0070	0.079		2017	0.0724	0.0070	0.079
	2018	0.0319	0.0091	0.041		2018	0.0319	0.0091	0.041
	Total	0.140	0.0534	0.193		*Total*	0.1400	0.0534	0.193
Curtner Ave	2019	0.0248	0.0376	0.062	Curtner Ave	2019	0.0248	0.0376	0.062
	2020	0.0466	0.0071	0.054		2020	0.0466	0.0071	0.054
	2021	0.0206	0.0091	0.030		2021	0.0206	0.0091	0.030
	Total	0.092	0.0537	0.146		*Total*	0.092	0.0537	0.146

Communications Hill, San Jose, CA - Without Mitigation
DPM Construction Emissions and Modeling Emission Rates

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 ($g/s/m^2$)
2015	Phase 1	0.3825	P_IA_15	764.9	0.19052	2.40E-02	31,135	7.71E-07
		0.8225	P_IB_15	1645.1	0.40973	5.16E-02	66,960	7.71E-07
	Subtotal	***1.2050***		***2410.0***	***0.60025***	***0.07563***	***98,095***	-
	Grading	0.28	G_1A_15	555.9	0.13846	1.74E-02	231,294	7.54E-08
		0.50	G_1B_15	996.5	0.24819	3.13E-02	414,608	7.54E-08
		0.02	G_1C_15	34.4	0.00857	1.08E-03	14,319	7.54E-08
	Subtotal	***0.793***		***1586.8***	***0.39522***	***0.04980***	***660,221***	-
	Total	***1.998***						
2016	Phase 1	0.50	P_IA_16	997.6	0.24848	3.13E-02	31,135	1.01E-06
		1.07	P_IB_16	2145.6	0.53439	6.73E-02	66,960	1.01E-06
	Subtotal	***1.572***		***3143.2***	***0.78286***	***0.09864***	***98,095***	-
	Grading	0.02	G_2A_16	46.9	0.01168	1.47E-03	16,029	9.18E-08
		0.17	G_2B_16	337.0	0.08393	1.06E-02	115,194	9.18E-08
		0.10	G_2C_16	200.0	0.04982	6.28E-03	68,372	9.18E-08
		0.18	G_2D_16	362.1	0.09017	1.14E-02	123,763	9.18E-08
		0.25	G_2E_16	495.4	0.12338	1.55E-02	169,337	9.18E-08
		0.04	G_2F_16	79.7	0.01985	2.50E-03	27,242	9.18E-08
	Subtotal	***0.761***		***1,521***	***0.37883***	***0.04773***	***519,937***	-
	Total	***2.332***						
2017	Phase 1	0.50	P_IA_17	1000.9	0.24930	3.14E-02	31,135	1.01E-06
		1.08	P_IB_17	2152.7	0.53615	6.76E-02	66,960	1.01E-06
	Total	***1.577***		***3153.6***	***0.78545***	***0.09897***	***98,095***	-
2018	Phase 1	0.39	P_IA_18	777.5	0.19365	2.44E-02	31,135	7.84E-07
		0.84	P_IB_18	1672.1	0.41646	5.25E-02	66,960	7.84E-07
	Total	***1.225***		***2449.6***	***0.61011***	***0.07687***	***98,095***	-
2019	Phase 2	0.98	P_2A_19	1950.5	0.48579	6.12E-02	153,769	3.98E-07
		0.16	P_2B_19	324.6	0.08084	1.02E-02	25,588	3.98E-07
	Utilities	0.02	P_2U_19	39.6	0.00985	1.24E-03	15,820	7.85E-08
	Total	***1.157***		***2314.6***	***0.57649***	***0.07264***	***195,177***	-
		1.157						
2020	Phase 2	0.85	P_2A_20	1709.2	0.42570	5.36E-02	153,769	3.49E-07
		0.14	P_2B_20	284.4	0.07084	8.93E-03	25,588	3.49E-07
	Total	***0.997***		***1993.6***	***0.49654***	***0.06256***	***179,357***	-
2021	Phase 2	0.77	P_2A_21	1537.0	0.38282	4.82E-02	153,769	3.14E-07
		0.13	P_2B_21	255.8	0.06370	8.03E-03	25,588	3.14E-07
	Total	***0.896***		***1792.8***	***0.44653***	***0.05626***	***179,357***	-
2022	Phase 3	0.09	P_3A_22	178.0	0.04433	5.59E-03	29,890	1.87E-07
		0.14	P_3B_22	276.9	0.06898	8.69E-03	46,505	1.87E-07
		0.49	P_3C_22	989.6	0.24649	3.11E-02	166,180	1.87E-07
	Subtotal	***0.722***		***1444.6***	***0.35980***	***0.04533***	***242,575***	-
	Industrial/Com Const	0.09	IC_A_22	177.4	0.04418	5.57E-03	119,885	4.64E-08
		0.02	IC_B_22	39.6	0.00987	1.24E-03	26,781	4.64E-08
	Subtotal	***0.109***		***217.0***	***0.05405***	***0.00681***	***146,666***	-
	Bridge Const	***0.250***	BRC-P3	499.6	0.12443	1.57E-02	9,029	1.74E-06
	East Road Const	***0.045***	P3_ERd_22	89.4	0.02227	2.81E-03	15,632	1.79E-07
	Slurry Mine	***0.002***	Mine	3.6	0.00091	1.14E-04	119,885	9.53E-10
	Total	***1.127***		***2254.2***	***0.561***	***0.071***	***533,787***	-

2023	Phase 3	0.07	P_3A_23	136.7	0.03404	4.29E-03	29,890	1.43E-07
		0.11	P_3B_23	212.6	0.05296	6.67E-03	46,505	1.43E-07
		0.38	P_3C_23	759.9	0.18926	2.38E-02	166,180	1.43E-07
	Subtotal	***0.555***		***1109.2***	***0.27626***	***0.03481***	***242,575***	-
	Industrial/Com Const	0.08	IC_A_23	163.2	0.04064	5.12E-03	119,885	4.27E-08
		0.02	IC_B_23	36.4	0.00908	1.14E-03	26,781	4.27E-08
	Subtotal	***0.100***		***199.6***	***0.04971***	***0.00626***	***146,666***	-
	Total	***0.654***		***1308.8***	***0.32598***	***0.04107***	***389,241***	
2024	Phase 3	0.07	P_3A_24	146.8	0.03656	4.61E-03	29,890	1.54E-07
		0.11	P_3B_24	228.4	0.05688	7.17E-03	46,505	1.54E-07
		0.41	P_3C_24	816.1	0.20325	2.56E-02	166,180	1.54E-07
	Total	***0.596***		***1191.2***	***0.29669***	***0.03738***	***242,575***	-
2025	Phase 4	0.05	P_4A_25	92.5	0.02304	2.90E-03	17,925	1.62E-07
		0.11	P_4B_25	222.1	0.05531	6.97E-03	43,030	1.62E-07
		0.13	P_4C_25	267.8	0.06671	8.41E-03	51,898	1.62E-07
		0.15	P_4D_25	305.2	0.07602	9.58E-03	59,140	1.62E-07
	Subtotal	***0.444***		***887.6***	***0.22107***	***0.02785***	***171,993***	-
	Off-Site Phase 4	***0.054***	P4-Ped	107.2	0.02670	3.36E-03	6,871	4.90E-07
	Total	***0.497***		***994.8***	***0.24777***	***0.03122***	***178,864***	
2026	Phase 4	0.05	P_4A_26	108.0	0.02689	3.39E-03	17,925	1.89E-07
		0.13	P_4B_26	259.2	0.06456	8.13E-03	43,030	1.89E-07
		0.16	P_4C_26	312.6	0.07786	9.81E-03	51,898	1.89E-07
		0.18	P_4D_26	356.2	0.08872	1.12E-02	59,140	1.89E-07
	Subtotal	***0.518***		***1036.0***	***0.25803***	***0.03251***	***171,993***	-
	Off-Site Phase 4	***0.050***	P4-Ped	99.0	0.02466	3.11E-03	6,871	4.52E-07
	Total	***0.568***		***1135.0***	***0.28269***	***0.03562***	***178,864***	
2027	Phase 4	0.05	P_4A_27	92.9	0.02315	2.92E-03	17,925	1.63E-07
		0.11	P_4B_27	223.1	0.05557	7.00E-03	43,030	1.63E-07
		0.13	P_4C_27	269.1	0.06702	8.44E-03	51,898	1.63E-07
		0.15	P_4D_27	306.6	0.07638	9.62E-03	59,140	1.63E-07
	Subtotal	***0.446***		***891.8***	***0.22212***	***0.02799***	***171,993***	-
	Off-Site Phase 4	***0.004***	P4-Ped	7.2	0.00180	2.27E-04	6,871	3.30E-08
	Total	***0.450***		***899.0***	***0.22392***	***0.02821***	***178,864***	
Off-Site Road Construction								
2016	Narvaez Ave	0.0357	Narv_16	71.4	0.01778	2.24E-03	14,721	1.52E-07
2017		0.0724	Narv_17	144.8	0.03606	4.54E-03	14,721	3.09E-07
2018		0.0319	Narv_18	63.8	0.01589	2.00E-03	14,721	1.36E-07
2019	Curtner Ave	0.0148	CA_A_19	29.6	0.00738	9.29E-04	15,518	5.99E-08
		0.0100	CA_B_19	20.0	0.00498	6.27E-04	10,471	5.99E-08
	Total	***0.0248***		***49.6***	***0.01235***	***0.00156***	***25,989***	-
2020	Curtner Ave	0.0278	CA_A_20	55.6	0.01386	1.75E-03	15,518	1.13E-07
		0.0188	CA_B_20	37.6	0.00935	1.18E-03	10,471	1.13E-07
	Total	***0.0466***		***93.2***	***0.02321***	***0.00292***	***25,989***	-
2021	Curtner Ave	0.0123	CA_A_21	24.6	0.00613	7.72E-04	15,518	4.97E-08
		0.0083	CA_B_21	16.6	0.00413	5.21E-04	10,471	4.97E-08
	Total	***0.0206***		***41.2***	***0.01026***	***0.00129***	***25,989***	-

Notes:

Emissions assumed to be evenly distributed over each construction areas

hr/day =	11	(7am - 6pm)
days/yr =	365	
hours/year =	4015	

Communications Hill, San Jose, CA - Without Mitigation
PM2.5 Fugitive Dust Construction Emissions for Modeling

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate $g/s/m^2$
2015	Phase 1	P_IA_15F	0.0057	11.4	0.00283	3.57E-04	31,135	1.15E-08
		P_IB_15F	0.0122	24.4	0.00609	7.67E-04	66,960	1.15E-08
	Subtotal		***0.0179***	***35.8***	***0.009***	***0.001***	***98,095***	-
	Grading	G_1A_15F	0.03	62.8	0.01564	1.97E-03	231,294	8.52E-09
		G_1B_15F	0.06	112.5	0.02803	3.53E-03	414,608	8.52E-09
		G_1C_15F	0.00	3.9	0.00097	1.22E-04	14,319	8.52E-09
	Subtotal		***0.0896***	***179.2***	***0.045***	***0.006***	***660,221***	-
2016	Phase 1	P_IA_16F	0.0113	22.7	0.00564	7.11E-04	31,135	2.28E-08
		P_IB_16F	0.0244	48.7	0.01214	1.53E-03	66,960	2.28E-08
	Subtotal		***0.0357***	***71.4***	***0.018***	***0.002***	***98,095***	-
	Grading	G_2A_16F	0.003	5.5	0.00138	1.73E-04	16,029	1.08E-08
		G_2B_16FF	0.020	39.7	0.00989	1.25E-03	115,194	1.08E-08
		G_2C_16F	0.012	23.6	0.00587	7.40E-04	68,372	1.08E-08
		G_2D_16F	0.021	42.7	0.01062	1.34E-03	123,763	1.08E-08
		G_2E_16F	0.029	58.4	0.01454	1.83E-03	169,337	1.08E-08
		G_2F_16F	0.005	9.4	0.00234	2.95E-04	27,242	1.08E-08
	Subtotal		***0.0896***	***179.2***	***0.045***	***0.0056***	***519,937***	-
2017	Phase 1	P_IA_17F	0.01	17.5	0.00435	5.48E-04	31,135	1.76E-08
		P_IB_17F	0.02	37.5	0.00935	1.18E-03	66,960	1.76E-08
	Total		***0.0275***	***55.0***	***0.014***	***0.002***	***98,095***	-
2018	Phase 1	P_IA_18F	0.01	27.2	0.00678	8.55E-04	31,135	2.74E-08
		P_IB_18F	0.03	58.6	0.01459	1.84E-03	66,960	2.74E-08
	Total		***0.0429***	***85.8***	***0.021***	***0.003***	***98,095***	-
2019	Phase 2	P_2A_19F	0.0228	45.5	0.01133	1.43E-03	153,769	9.29E-09
		P_2B_19F	0.0038	7.6	0.00189	2.38E-04	25,588	9.29E-09
	Utilities	P_2U_19F	0.0009	1.7	0.00043	5.42E-05	15,820	3.43E-09
	Total		***0.0274***	***54.8***	***0.014***	***0.002***	***195,177***	-
2020	Phase 2	P_2A_20F	0.0311	62.2	0.01550	1.95E-03	153,769	1.27E-08
		P_2B_20F	0.0052	10.4	0.00258	3.25E-04	25,588	1.27E-08
	Total		***0.0363***	***72.6***	***0.018***	***0.002***	***179,357***	-
2021	Phase 2	P_2A_21F	0.0302	60.4	0.01503	1.89E-03	153,769	1.23E-08
		P_2B_21F	0.0050	10.0	0.00250	3.15E-04	25,588	1.23E-08
	Total		***0.0352***	***70.4***	***0.018***	***0.002***	***179,357***	-
2022	Phase 3	P_3A_22F	0.0044	8.8	0.00219	2.75E-04	29,890	9.21E-09
		P_3B_22F	0.0068	13.7	0.00340	4.28E-04	46,505	9.21E-09
		P_3C_22F	0.0244	48.8	0.01215	1.53E-03	166,180	9.21E-09
	Subtotal		***0.0356***	***71.2***	***0.01773***	***0.00223***	***242,575***	-
	Industrial/Com Const	IC_A_22F	0.0101	20.3	0.00505	6.36E-04	119,885	5.31E-09
		IC_B_22F	0.0023	4.5	0.00113	1.42E-04	26,781	5.31E-09
	Subtotal		***0.0124***	***24.8***	***0.00618***	***0.00078***	***146,666***	-
	Bridge Const	BRC-P3F	***0.0006***	1.2	0.00030	3.77E-05	9,029	4.17E-09
	East Road Const	P3_ERd_22F	***0.0047***	9.4	0.00235	2.96E-04	15,632	1.90E-08
	Slurry Mine	BRC-P3F	***0.0002***	0.4	0.00010	1.26E-05	119,885	1.05E-10
	Total		***0.054***	***107.0***	***0.027***	***0.003***	***533,787***	-

2023	Phase 3	P_3A_23F	0.0024	4.8	0.00119	1.50E-04	29,890	5.02E-09
		P_3B_23F	0.0037	7.4	0.00185	2.33E-04	46,505	5.02E-09
		P_3C_23F	0.0133	26.6	0.00662	8.34E-04	166,180	5.02E-09
	Subtotal		***0.0194***	***38.8***	***0.00966***	***0.00122***	***242,575***	-
	Industrial/Com Const	IC_A_23F	0.0697	139.4	0.03473	4.38E-03	119,885	3.65E-08
		IC_B_23F	0.0156	31.2	0.00776	9.78E-04	26,781	3.65E-08
	Subtotal		***0.0853***	***170.6***	***0.04249***	***0.00535***	***146,666***	-
		Total	***0.010***	***209.4***	***0.05215***	***0.00657***	***389,241***	
2024	**Phase 3**	P_3A_24F	0.0054	10.7	0.00267	3.36E-04	29,890	1.13E-08
		P_3B_24F	0.0083	16.7	0.00415	5.23E-04	46,505	1.13E-08
		P_3C_24F	0.0298	59.6	0.01484	1.87E-03	166,180	1.13E-08
	Total		***0.0435***	***87.0***	***0.02167***	***0.00273***	***242,575***	-
2025	Phase 4	P_4A_25F	0.0020	4.1	0.00101	1.28E-04	17,925	7.12E-09
		P_4B_25F	0.0049	9.8	0.00243	3.06E-04	43,030	7.12E-09
		P_4C_25F	0.0059	11.8	0.00293	3.69E-04	51,898	7.12E-09
		P_4D_25F	0.0067	13.4	0.00334	4.21E-04	59,140	7.12E-09
	Subtotal		***0.0195***	***39.0***	***0.00971***	***0.00122***	***171,993***	-
	Off-Site Phase 4	P4-PedF	***0.1263***	252.6	0.06291	7.93E-03	6,871	1.15E-06
	Total		***0.146***	***291.6***	***0.07263***	***0.00915***	***178,864***	
2026	Phase 4	P_4A_26F	0.0038	7.6	0.00188	2.37E-04	17,925	1.32E-08
		P_4B_26	0.0091	18.2	0.00452	5.70E-04	43,030	1.32E-08
		P_4C_26F	0.0110	21.9	0.00546	6.87E-04	51,898	1.32E-08
		P_4D_26F	0.0125	25.0	0.00622	7.83E-04	59,140	1.32E-08
	Subtotal		***0.0363***	***72.6***	***0.01808***	***0.00228***	***171,993***	-
	Off-Site Phase 4	P4-PedF	***0.0000***	0.0	0.00000	0.00E+00	6,871	0.00E+00
	Total		***0.036***	***72.6***	***0.01808***	***0.00228***	***178,864***	
2027	Phase 4	P_4A_27F	0.0028	5.7	0.00141	1.78E-04	17,925	9.93E-09
		P_4B_27F	0.0068	13.6	0.00339	4.27E-04	43,030	9.93E-09
		P_4C_27F	0.0082	16.4	0.00409	5.15E-04	51,898	9.93E-09
		P_4D_27F	0.0094	18.7	0.00466	5.87E-04	59,140	9.93E-09
	Subtotal		***0.0272***	***54.4***	***0.01355***	***0.00171***	***171,993***	-
	Off-Site Phase 4	P4-PedF	***0.0000***	0.0	0.00000	0.00E+00	6,871	0.00E+00
	Total		***0.027***	***54.4***	***0.01355***	***0.00171***	***178,864***	
Off-Site Road Construction								
2016	Narvaez Ave	Narv_16F	0.0373	74.6	0.01858	2.34E-03	14,721	1.59E-07
2017		Narv_17F	0.0070	14.0	0.00349	4.39E-04	14,721	2.98E-08
2018		Narv_18F	0.0091	18.2	0.00453	5.71E-04	14,721	3.88E-08
2019	Curtner Ave	P_2A_19F	0.02245	44.9	0.01118	1.41E-03	15,518	9.08E-08
		P_2B_19F	0.01515	30.3	0.00755	9.51E-04	10,471	9.08E-08
	Total		***0.0376***	***75.2***	***0.019***	***0.002***	***25,989***	-
2019	Curtner Ave	P_2A_20F	0.00421	8.4	0.00210	2.64E-04	15,518	1.70E-08
		P_2B_20F	0.00284	5.7	0.00141	1.78E-04	10,471	1.70E-08
	Total		***0.0071***	***14.1***	***0.004***	***0.000***	***25,989***	-
2019	Curtner Ave	P_2A_21F	0.00540	10.8	0.00269	3.39E-04	15,518	2.19E-08
		P_2B_21F	0.00365	7.3	0.00182	2.29E-04	10,471	2.19E-08
	Total		***0.0091***	***18.1***	***0.005***	***0.001***	***25,989***	-

Notes:

Emissions assumed to be evenly distributed over each construction areas

hr/day =	11	(7am - 6pm)
days/yr =	365	
hours/year =	4015	

Communications Hill, San Jose, CA - With Mitigation
DPM Construction Emissions and Modeling Emission Rates

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 ($g/s/m^2$)
2015	Phase 1	0.0133	P_IA_15	26.7	0.00664	8.37E-04	31,135	2.69E-08
		0.0287	P_IB_15	57.3	0.01428	1.80E-03	66,960	2.69E-08
	Subtotal	***0.0420***		***84.0***	***0.02092***	***0.00264***	***98,095***	-
	Grading	0.0096	G_1A_15	19.2	0.00478	6.02E-04	231,294	2.60E-09
		0.0172	G_1B_15	34.4	0.00857	1.08E-03	414,608	2.60E-09
		0.0006	G_1C_15	1.2	0.00030	3.73E-05	14,319	2.60E-09
	Subtotal	***0.0274***		***54.8***	***0.01365***	***0.00172***	***660,221***	-
	Total	***0.0694***						
2016	Phase 1	0.0182	P_IA_16	36.3	0.00904	1.14E-03	31,135	3.66E-08
		0.0390	P_IB_16	78.1	0.01945	2.45E-03	66,960	3.66E-08
	Subtotal	***0.0572***		***114.4***	***0.02849***	***0.00359***	***98,095***	-
	Grading	0.0008	G_2A_16	1.7	0.00042	5.32E-05	16,029	3.32E-09
		0.0061	G_2B_16	12.2	0.00303	3.82E-04	115,194	3.32E-09
		0.0036	G_2C_16	7.2	0.00180	2.27E-04	68,372	3.32E-09
		0.0065	G_2D_16	13.1	0.00326	4.11E-04	123,763	3.32E-09
		0.0090	G_2E_16	17.9	0.00446	5.62E-04	169,337	3.32E-09
		0.0014	G_2F_16	2.9	0.00072	9.04E-05	27,242	3.32E-09
	Subtotal	***0.0275***		***55***	***0.01370***	***0.00173***	***519,937***	-
	Total	***0.0847***						
2017	Phase 1	0.0191	P_IA_17	38.3	0.00953	1.20E-03	31,135	3.86E-08
		0.0412	P_IB_17	82.3	0.02050	2.58E-03	66,960	3.86E-08
	Total	***0.0603***		***120.6***	***0.03004***	***0.00378***	***98,095***	-
2018	Phase 1	0.0174	P_IA_18	34.8	0.00866	1.09E-03	31,135	3.51E-08
		0.0374	P_IB_18	74.8	0.01863	2.35E-03	66,960	3.51E-08
	Total	***0.0548***		***109.6***	***0.02730***	***0.00344***	***98,095***	-
2019	Phase 2	0.0494	P_2A_19	98.7	0.02459	3.10E-03	153,769	2.01E-08
		0.0082	P_2B_19	16.4	0.00409	5.16E-04	25,588	2.01E-08
	Utilities	0.0011	P_2U_19	2.2	0.00056	7.03E-05	15,820	4.44E-09
	Total	***0.0587***		***117.4***	***0.02924***	***0.00368***	***195,177***	-
		0.0587						
2020	Phase 2	0.0458	P_2A_20	91.6	0.02281	2.87E-03	153,769	1.87E-08
		0.0076	P_2B_20	15.2	0.00379	4.78E-04	25,588	1.87E-08
	Total	***0.0534***		***106.8***	***0.02660***	***0.00335***	***179,357***	-
2021	Phase 2	0.0493	P_2A_21	98.6	0.02456	3.09E-03	153,769	2.01E-08
		0.0082	P_2B_21	16.4	0.00409	5.15E-04	25,588	2.01E-08
	Total	***0.0575***		***115.0***	***0.02864***	***0.00361***	***179,357***	-
2022	Phase 3	0.0064	P_3A_22	12.8	0.00319	4.01E-04	29,890	1.34E-08
		0.0099	P_3B_22	19.9	0.00496	6.25E-04	46,505	1.34E-08
		0.0356	P_3C_22	71.1	0.01771	2.23E-03	166,180	1.34E-08
	Subtotal	***0.0519***		***103.8***	***0.02585***	***0.00326***	***242,575***	-
	Industrial/Com Const	0.0116	IC_A_22	23.2	0.00578	7.29E-04	119,885	6.08E-09
		0.0026	IC_B_22	5.2	0.00129	1.63E-04	26,781	6.08E-09
	Subtotal	***0.0142***		***28.4***	***0.00707***	***0.00089***	***146,666***	-
	Bridge Const	***0.0182***	BRC-P3	36.4	0.00907	1.14E-03	9,029	1.27E-07
	East Road Const	***0.0031***	P3_ERd_22	6.2	0.00154	1.95E-04	15,632	1.24E-08
	Slurry Mine	***0.0018***	Mine	3.6	0.00091	1.14E-04	119,885	9.53E-10
	Total	***0.0892***		***178.4***	***0.044***	***0.006***	***533,787***	-

2023	Phase 3	0.0056	P_3A_23	11.3	0.00281	3.54E-04	29,890	1.19E-08
		0.0088	P_3B_23	17.6	0.00437	5.51E-04	46,505	1.19E-08
		0.0314	P_3C_23	62.8	0.01563	1.97E-03	166,180	1.19E-08
	Subtotal	***0.0458***		***91.6***	***0.02281***	***0.00287***	***242,575***	-
	Industrial/Com Const	0.0128	IC_A_23	25.7	0.00639	8.05E-04	119,885	6.72E-09
		0.0029	IC_B_23	5.7	0.00143	1.80E-04	26,781	6.72E-09
	Subtotal	***0.0157***		***31.4***	***0.00782***	***0.00099***	***146,666***	-
	Total	***0.0615***		***123.0***	***0.03064***	***0.00386***	***389,241***	
2024	Phase 3	0.0065	P_3A_24	12.9	0.00322	4.06E-04	29,890	1.36E-08
		0.0101	P_3B_24	20.1	0.00501	6.32E-04	46,505	1.36E-08
		0.0360	P_3C_24	71.9	0.01792	2.26E-03	166,180	1.36E-08
	Total	***0.0525***		***105.0***	***0.02615***	***0.00330***	***242,575***	-
2025	Phase 4	0.0048	P_4A_25	9.6	0.00239	3.02E-04	17,925	1.68E-08
		0.0115	P_4B_25	23.1	0.00575	7.24E-04	43,030	1.68E-08
		0.0139	P_4C_25	27.8	0.00693	8.73E-04	51,898	1.68E-08
		0.0159	P_4D_25	31.7	0.00790	9.95E-04	59,140	1.68E-08
	Subtotal	***0.0461***		***92.2***	***0.02296***	***0.00289***	***171,993***	-
	Off-Site Phase 4	***0.0040***	P4-Ped	8.0	0.00198	2.50E-04	6,871	3.64E-08
	Total	***0.0501***		***100.2***	***0.02495***	***0.00314***	***178,864***	
2026	Phase 4	0.0054	P_4A_26	10.9	0.00270	3.41E-04	17,925	1.90E-08
		0.0130	P_4B_26	26.1	0.00649	8.18E-04	43,030	1.90E-08
		0.0157	P_4C_26	31.4	0.00783	9.87E-04	51,898	1.90E-08
		0.0179	P_4D_26	35.8	0.00892	1.12E-03	59,140	1.90E-08
	Subtotal	***0.0521***		***104.2***	***0.02595***	***0.00327***	***171,993***	-
	Off-Site Phase 4	***0.0038***	P4-Ped	7.6	0.00190	2.40E-04	6,871	3.49E-08
	Total	***0.0559***		***111.8***	***0.02786***	***0.00351***	***178,864***	
2027	Phase 4	0.0048	P_4A_27	9.7	0.00240	3.03E-04	17,925	1.69E-08
		0.0116	P_4B_27	23.2	0.00577	7.27E-04	43,030	1.69E-08
		0.0140	P_4C_27	27.9	0.00696	8.77E-04	51,898	1.69E-08
		0.0159	P_4D_27	31.8	0.00793	9.99E-04	59,140	1.69E-08
	Subtotal	***0.0463***		***92.6***	***0.02306***	***0.00291***	***171,993***	-
	Off-Site Phase 4	***0.0003***	P4-Ped	0.6	0.00014	1.76E-05	6,871	2.56E-09
	Total	***0.0466***		***93.2***	***0.02320***	***0.00292***	***178,864***	

Notes:

Emissions assumed to be evenly distributed over each construction areas

hr/day =	11	(7am - 6pm)
days/yr =	365	
hours/year =	4015	

Communications Hill, San Jose, CA - Construction Impacts Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Off-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2015	0.5490	10	48.06	2015	0.5490	1	2.50	0.0212	0.570
2	1	2016	0.6790	10	59.45	2016	0.6790	1	3.09	0.0294	0.708
3	1	2017	0.6201	4.75	25.79	2017	0.6201	1	2.82	0.0158	0.636
4	1	2018	0.4813	3	12.64	2018	0.4813	1	2.19	0.0246	0.506
5	1	2019	0.1135	3	2.98	2019	0.1135	1	0.52	0.0029	0.116
6	1	2020	0.0994	3	2.61	2020	0.0994	1	0.45	0.0040	0.103
7	1	2021	0.0895	3	2.35	2021	0.0895	1	0.41	0.0039	0.093
8	1	2022	0.0891	3	2.34	2022	0.0891	1	0.41	0.0049	0.094
9	1	2023	0.0621	3	1.63	2023	0.0621	1	0.28	0.0145	0.077
10	1	2024	0.0667	3	1.75	2024	0.0667	1	0.30	0.0059	0.073
11	1	2025	0.0266	3	0.70	2025	0.0266	1	0.12	0.0345	0.061
12	1	2026	0.0296	3	0.78	2026	0.0296	1	0.13	0.0153	0.045
13	1	2027	0.0236	3	0.62	2027	0.0236	1	0.11	0.0115	0.035
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**161.70**				**13.3**		

Communications Hill, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Off-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2015	0.0191	10	1.67	2015	0.0191	1	0.09	0.0212	0.040
2	1	2016	0.0246	10	2.15	2016	0.0246	1	0.11	0.0294	0.054
3	1	2017	0.0237	4.75	0.99	2017	0.0237	1	0.11	0.0158	0.039
4	1	2018	0.0216	3	0.57	2018	0.0216	1	0.10	0.0246	0.046
5	1	2019	0.0057	3	0.15	2019	0.0057	1	0.03	0.0029	0.009
6	1	2020	0.0053	3	0.14	2020	0.0053	1	0.02	0.0040	0.009
7	1	2021	0.0057	3	0.15	2021	0.0057	1	0.03	0.0039	0.010
8	1	2022	0.0070	3	0.18	2022	0.0070	1	0.03	0.0049	0.012
9	1	2023	0.0058	3	0.15	2023	0.0058	1	0.03	0.0145	0.020
10	1	2024	0.0059	3	0.15	2024	0.0059	1	0.03	0.0059	0.012
11	1	2025	0.0022	3	0.06	2025	0.0022	1	0.01	0.0345	0.037
12	1	2026	0.0023	3	0.06	2026	0.0023	1	0.01	0.0153	0.018
13	1	2027	0.0020	3	0.05	2027	0.0020	1	0.01	0.0115	0.014
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**6.48**				**0.60**		

Communications Hill, San Jose, CA - Construction Impacts Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Phase 1 On-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2019	0.5218	10	45.68	2019	0.5218	1	2.37	0.0167	0.538
2	1	2020	0.4570	10	40.01	2020	0.4570	1	2.08	0.0228	0.480
3	1	2021	0.4112	4.75	17.10	2021	0.4112	1	1.87	0.0221	0.433
4	1	2022	0.0285	3	0.75	2022	0.0285	1	0.13	0.0018	0.030
5	1	2023	0.0187	3	0.49	2023	0.0187	1	0.09	0.0035	0.022
6	1	2024	0.0169	3	0.44	2024	0.0169	1	0.08	0.0013	0.018
7	1	2025	0.0044	3	0.12	2025	0.00440	1	0.02	0.0005	0.005
8	1	2026	0.0050	3	0.13	2026	0.0050	1	0.02	0.0004	0.005
9	1	2027	0.0040	3	0.10	2027	0.0040	1	0.02	0.0003	0.004
10	1		0.0000	3	0.00		0.0000	1	0.00		
11	1		0.0000	3	0.00		0.0000	1	0.00		
12	1		0.0000	3	0.00		0.0000	1	0.00		
13	1		0.0000	3	0.00		0.0000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**104.83**				**6.7**		

Communications Hill, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Phase 1 On-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2019	0.0264	10	2.31	2019	0.0264	1	0.12	0.0220	0.048
2	1	2020	0.0245	10	2.14	2020	0.0245	1	0.11	0.0292	0.054
3	1	2021	0.0264	4.75	1.10	2021	0.0264	1	0.12	0.0283	0.055
4	1	2022	0.0023	3	0.06	2022	0.0023	1	0.01	0.0038	0.006
5	1	2023	0.0018	3	0.05	2023	0.0018	1	0.01	0.0009	0.003
6	1	2024	0.0015	3	0.04	2024	0.0015	1	0.01	0.0020	0.003
7	1	2025	0.0005	3	0.01	2025	0.0005	1	0.00	0.0003	0.001
8	1	2026	0.0005	3	0.01	2026	0.0005	1	0.00	0.0005	0.001
9	1	2027	0.0004	3	0.01	2027	0.0004	1	0.00	0.0004	0.001
10	1		0.0000	3	0.00		0.0000	1	0.00		
11	1		0.0000	3	0.00		0.0000	1	0.00		
12	1		0.0000	3	0.00		0.0000	1	0.00		
13	1		0.0000	3	0.00		0.0000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**5.73**				**0.4**		

Communications Hill, San Jose, CA - Construction Impacts Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Phase 2 On-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2022	0.2316	10	20.28	2022	0.2316	1	1.05	0.0131	0.245
2	1	2023	0.1709	10	14.96	2023	0.1709	1	0.78	0.0074	0.178
3	1	2024	0.1837	4.75	7.64	2024	0.1837	1	0.84	0.0160	0.200
4	1	2025	0.0143	3	0.37	2025	0.0143	1	0.06	0.0008	0.015
5	1	2026	0.0163	3	0.43	2026	0.0163	1	0.07	0.0011	0.017
6	1	2027	0.0129	3	0.34	2027	0.0129	1	0.06	0.0008	0.014
7	1		0.0000	3	0.00		0.00000	1	0.00		
8	1		0.0000	3	0.00		0.0000	1	0.00		
9	1		0.0000	3	0.00		0.0000	1	0.00		
10	1		0.0000	3	0.00		0.0000	1	0.00		
11	1		0.0000	3	0.00		0.0000	1	0.00		
12	1		0.0000	3	0.00		0.0000	1	0.00		
13	1		0.0000	3	0.00		0.0000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**44.02**				**2.9**		

Communications Hill, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Phase 2 On-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2022	0.0166	10	1.46	2022	0.0166	1	0.08	0.0131	0.030
2	1	2023	0.0142	10	1.25	2023	0.0142	1	0.06	0.0074	0.022
3	1	2024	0.0162	4.75	0.67	2024	0.0162	1	0.07	0.0160	0.032
4	1	2025	0.0015	3	0.04	2025	0.0015	1	0.01	0.0008	0.002
5	1	2026	0.0017	3	0.04	2026	0.0017	1	0.01	0.0011	0.003
6	1	2027	0.0014	3	0.04	2027	0.0014	1	0.01	0.0008	0.002
7	1		0.0000	3	0.00		0.0000	1	0.00		
8	1		0.0000	3	0.00		0.0000	1	0.00		
9	1		0.0000	3	0.00		0.0000	1	0.00		
10	1		0.0000	3	0.00		0.0000	1	0.00		
11	1		0.0000	3	0.00		0.0000	1	0.00		
12	1		0.0000	3	0.00		0.0000	1	0.00		
13	1		0.0000	3	0.00		0.0000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**3.50**				**0.2**		

Communications Hill, San Jose, CA - Construction Impacts Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Phase 3 On-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2025	0.1416	10	12.39	2025	0.1416	1	0.64	0.0089	0.150
2	1	2026	0.1615	10	14.14	2026	0.1615	1	0.73	0.0164	0.178
3	1	2027	0.1279	4.75	5.32	2027	0.1279	1	0.58	0.0123	0.140
4	1		0.0000	3	0.00		0.0000	1	0.00		
5	1		0.0000	3	0.00		0.0000	1	0.00		
6	1		0.0000	3	0.00		0.0000	1	0.00		
7	1		0.0000	3	0.00		0.0000	1	0.00		
8	1		0.0000	3	0.00		0.0000	1	0.00		
9	1		0.0000	3	0.00		0.0000	1	0.00		
10	1		0.0000	3	0.00		0.0000	1	0.00		
11	1		0.0000	3	0.00		0.0000	1	0.00		
12	1		0.0000	3	0.00		0.0000	1	0.00		
13	1		0.0000	3	0.00		0.0000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**31.85**				**2.0**		

Communications Hill, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Phase 3 On-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2025	0.0147	10	1.29	2025	0.0147	1	0.07	0.0089	0.024
2	1	2026	0.0164	10	1.44	2026	0.0164	1	0.07	0.0164	0.033
3	1	2027	0.0137	4.75	0.57	2027	0.0137	1	0.06	0.0123	0.026
4	1		0.0000	3	0.00		0.0000	1	0.00		
5	1		0.0000	3	0.00		0.0000	1	0.00		
6	1		0.0000	3	0.00		0.0000	1	0.00		
7	1		0.0000	3	0.00		0.0000	1	0.00		
8	1		0.0000	3	0.00		0.0000	1	0.00		
9	1		0.0000	3	0.00		0.0000	1	0.00		
10	1		0.0000	3	0.00		0.0000	1	0.00		
11	1		0.0000	3	0.00		0.0000	1	0.00		
12	1		0.0000	3	0.00		0.0000	1	0.00		
13	1		0.0000	3	0.00		0.0000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**3.29**				**0.2**		

Communications Hill, San Jose, CA - Construction Impacts
Maximum DPM Cancer Risk Calculations From Northern Truck Route
and Curtner Ave Road Improvement Construction
Off-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2019	0.0172	10	1.51	2019	0.0172	1	0.08	0.051	0.068
2	1	2020	0.0325	10	2.85	2020	0.0325	1	0.15	0.010	0.042
3	1	2021	0.0143	4.75	0.59	2021	0.0143	1	0.07	0.012	0.027
4	1	2022	0.0000	3	0.00	2022	0.0000	1	0.00	0.000	0.000
5	1	2023	0.0005	3	0.01	2023	0.00053	1	0.00	0.001	0.001
6	1	2024	0.0005	3	0.01	2024	0.00053	1	0.00	0.001	0.001
7	1	2025	0.0005	3	0.01	2025	0.00053	1	0.00	0.001	0.001
8	1	2026	0.0005	3	0.01	2026	0.00052	1	0.00	0.001	0.001
9	1	2027	0.0005	3	0.01	2027	0.00052	1	0.00	0.001	0.001
10	1		0.0005	3	0.01		0.0005	1	0.00		
11	1		0.0005	3	0.01		0.0005	1	0.00		
12	1		0.0005	3	0.01		0.0005	1	0.00		
13	1		0.0005	3	0.01		0.0005	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**5.07**				**0.3**		

Communications Hill, San Jose, CA - Construction Impacts
Maximum DPM Cancer Risk Calculations From Southern Truck Route
and Narvaez Ave Road Improvement Construction
Off-Site Residential Receptor Locations

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure			Exposure	Cancer	Modeled		Exposure	Cancer		
	Duration	DPM Conc (ug/m3)		Adjust	Risk	DPM Conc (ug/m3)		Adjust	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2015	0.0012	10	0.11	2015	0.00123	1	0.01	0.00	0.002
2	1	2016	0.0309	10	2.71	2016	0.03090	1	0.14	0.06	0.089
3	1	2017	0.0616	4.75	2.56	2017	0.06158	1	0.28	0.01	0.073
4	1	2018	0.0274	3	0.72	2018	0.02738	1	0.12	0.01	0.042
5	1	2019	0.0005	3	0.01	2019	0.00050	1	0.00	0.00	0.001
6	1	2020	0.0004	3	0.01	2020	0.00043	1	0.00	0.00	0.001
7	1	2021	0.0004	3	0.01	2021	0.00038	1	0.00	0.00	0.001
8	1	2022	0.0007	3	0.02	2022	0.00075	1	0.00	0.00	0.001
9	1	2023	0.0005	3	0.01	2023	0.00048	1	0.00	0.00	0.001
10	1	2024	0.0000	3	0.00	2024	0.00000	1	0.00		
11	1	2025	0.0000	3	0.00	2025	0.00000	1	0.00		
12	1	2026	0.0000	3	0.00	2026	0.00000	1	0.00		
13	1	2027	0.0000	3	0.00	2027	0.00000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
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65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**6.16**				**0.6**		

Attachment 4: Operational Health Risk Modeling (Rail Line Information and Emission Rates, and Stationary Source Information and Communications)

Communications Hill, CA - Rail Line Emissions
2022 Rail Emissions - DPM and PM2.5 Emission Rates

Year	Description	Track No.	Average No. Diesel Trains per Day	Train Travel Speed (mph)	Average Daily Emission Rate (g/mi/day)	Average Daily Emission Rate (g/day)
2022	Passenger Trains	1	8	30	18.5	32.04
	Freight Trains	1	6	30	22.1	38.3
	Total					***70.3***

Notes: Emission based on Emission Factors for Locomotives, USEPA 2009 (EPA-420-F-09-025)
Fuel correction factors from Offroad Modeling Change Technical memo, Changes to the Locomotive Inventory, CARB July 2006.
DPM & PM2.5 calculated as 92% of PM emissions (CARB CEIDERS PM2.5 fractions) = 0.92
Assumes all Caltrain locomotives use diesel engines in 2016.
Assumes 2022 emissins are the same as those for 2020.

Trains assumed to operate for 24 hours per day

Passenger Locomotives	
Locomotive horsepower =	3200
Locomotives per train =	1
Locomotive engine load =	0.70
Freight Locomotives	
Locomotive horsepower =	4300
Locomotives per train =	1
Locomotive engine load =	0.7

Emission Factors	Passenger (g/hp-hr)	Freight (g/hp-hr)
Tier 0+	0.20	0.20
Tier 2+	0.08	0.08
Tier 3	0.08	0.08
Tier 4	0.015	0.015

7 days/week

Engine Tier Level Distribution

	Passenger		Freight Trains	
Engine	**2020**	**2025**	**2020**	**2025+**
Tier 0+				
Tier 2+	50%		50%	
Tier 3				
Tier 4	50%	100%	50%	100%
Composite Emission Factor (g/hp-hr) =	***0.048***	***0.015***	***0.048***	***0.015***

CARB Fuel Adj Factor

	2010	2011+
Passenger	0.717	0.709
Freight	0.851	0.840

Communications Hill, CA - Rail Line Emissions
2022 DPM Modeling - Rail Line Information and DPM and PM2.5 Emission Rates

Year	Description	Track No.	Link Width (ft)	Link Width (m)	Link Length (ft)	Link Length (m)	Link Length (miles)	Release Height (m)	Average No. Trains per Day	Train Travel Speed (mph)	Average Daily Emission Rate per Train (g/mi/day)	Average Daily Emission Rate (g/day)	Link Emission Rate (g/s)	Link Emission Rate (lb/hr)
2022	Passenger	1	12	3.7	9,139	2785.7	1.73	5	8	30	18.5	32.04	3.71E-04	2.94E-03
2022	Freight	1	12	3.7	9,139	2785.7	1.73	5	6	30	22.1	38.3	4.43E-04	3.51E-03
	Track Total											***70.3***	***8.13E-04***	***6.46E-03***

Trains assumed to opera 24 hours per day

Communications Hill, San Jose, CA
AERMOD Railroad DPM Risk Modeling Parameters and Maximum Cancer Risk at MEI

Receptor Information

Number of Receptors	328
Receptor Height =	1.5 m
Receptor distances =	grid with receptors every 15 meters

Meteorological Conditions

BAAQMD San Jose Airport Hourly Dat	2004
Land Use Classification	Urban
Wind speed =	variable
Wind direction =	variable

Cancer Risk Calculation Method

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

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)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Inhalation Dose Factors

	Value[1]							
Exposure Type	**DBR (L/kg BW-day)**	**A (-)**	**Exposure (hr/day)**	**Exposure (days/week)**	**Exposure (week/year)**	**EF (days/yr)**	**ED (Years)**	**AT (days)**
Residential (70-Year)	302	1	24	7	50	350	70	25,550

[1] Default values recommended by OEHHA& Bay Area Air Quality Management District

Cancer Risk (per million) = Inhalation Dose x CRAF x CPF x 10^6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
CRAF = Cancer Risk Adjustment Factor

Cancer Potency Factor for DPM and Cancer Risk Adjustment Factor

Exposure Type	**CPF $(mg/kg\text{-}day)^{-1}$**	**Cancer Risk Adjustmant Factor**
Residential (70-Yr Exposure)	1.10E+00	1.7

MEI Cancer Risk Calculations

Meteorological Data Year	**Maximum Annual DPM Concentration ($\mu g/m^3$)**
2004	0.0093
70-yr Cancer Risk per million [b]	***5.0***

Notes:

a Cancer risk (per million) calculated assuming a 70-year exposure to 2022 rail line emissions.

Maximum DPM & PM2.5 concentrations occur in the northeast corner of Phase III residential area, closest to the rail lines.

Joshua Carman

From: Alison Kirk
Sent: Wednesday, October 30, 2013 11:34 AM
To: Joshua Carman
Cc: 'James Reyff'
Subject: RE: Got your voice mail message
Attachments: BAAQMD_RH_Screening_from_Emissions_Beta1.3.xlsx; SSIF - Communications Hill.xlsx

Hello,

I added this source to the SSIF previously done for this site. (attached). Also attached is our Beta calculator.

You can use the calculator to determine the risk and concentration from the sources not included in the HRSA and then add the results together.

Let me know if you have any questions.

Alison Kirk
415-749-5169

From: Joshua Carman [mailto:jcarman@illingworthrodkin.com]
Sent: Tuesday, October 29, 2013 1:17 PM
To: Alison Kirk
Cc: 'James Reyff'
Subject: RE: Got your voice mail message

Thanks, Alison. I'm finding out more information from the project applicant about this recycling facility. It could be that they mean the facilities to the east of Hillsdale. We'll see.

Would you please also provide any information you may have on Source 9910 (SSIF attached) – Concrete ReadyMix? We're not sure how to predict the PM2.5 risk with source level of 33.0 and distance of approx. 750 feet to nearest receptor.

Best,
-Josh

From: Alison Kirk [mailto:AKirk@baaqmd.gov]
Sent: Monday, October 21, 2013 10:42 AM
To: Joshua Carman
Subject: RE: Got your voice mail message

According to my records, both of these plants are closed.

Can you tell me anything more about the recycling facility? This is located at 55 Hillsdale Ave, correct?

Alison Kirk
415-749-5169

From: Joshua Carman [mailto:jcarman@illingworthrodkin.com]
Sent: Thursday, October 17, 2013 12:29 PM
To: Alison Kirk
Cc: 'James Reyff'
Subject: RE: Got your voice mail message

Thanks, Alison. Any additional information you have about these two facilities would be much appreciated. We are not exactly sure how to evaluate them, considering we understand the Quarry is decommissioned, but an aggregate recycling facility is still operating until as late as 2023. We are not sure how to evaluate the other facility either (Granite Construction Company), with such a high screening PM level, that may not be all from PM2.5.

Thank you,
-Josh Carman

From: Alison Kirk [mailto:AKirk@baaqmd.gov]
Sent: Thursday, October 17, 2013 9:45 AM
To: jcarman@illingworthrodkin.com
Subject: Got your voice mail message

Yes, we can try and assist you. Fill out the request form, first item in table "Stationary Source Inquiry Form 5_30_12"

http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx

I'm swamped now and out tomorrow, hope to be able to respond Monday.

Alison Kirk, AICP
Senior Environmental Planner
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Tel. 415-749-5169
Fax 415-749-4741

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.

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

Also see the District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Site

Table A: Requestor Contact Information	
Contact Name:	Josh Carman
Affiliation:	Illingworth & Rodkin, Inc.
Phone:	707-794-0400x35
Email:	jcarman@illingworthrodkin.com
Date of Request	8/6/2013
Project Name:	Communications Hill
Address:	
City:	San Jose
County:	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.):	Mixed-Use Housing
Project size (# of units, or building square feet):	2,300 residential + retail + industrial/office park

Comments:

The Azevedo Quarry has a BAAQMD screening cancer risk of 636.3 and a PM2.5 concentration of 99.5 µg/m3. The Quarry is within about 300 feet of proposed residential development. We understand that the Quarry is currently decommissioned, but an aggregate recycling facility will operate until as long as 2023. In addition, the Granite Construction Company (Raisch Products asphalt/concrete plant?) is located within about 250 feet of proposed residential development. For this facility, cancer risk is below the threshold, but the screening PM2.5 concentration is 261.0 µg/m3, almost 900 times greater than the applicable threshold. James explained that the PM listed is not PM2.5 only, but that it can include larger particles. Thanks, -Josh

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

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

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.

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

Identify stationary sources near the project. Verify that the location of the source on the map matches with the source's address in the Information Table, by using th Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

List the stationary source information in Table B Section 1 below.

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 not 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.

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 informati 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 Alison Kirk at 415-749-5169, or .

Table B: Stationary Sources

Table B Section 1: Requestor fills out these columns based on Google Earth data

Table B Section 2: BAAQMD returns form with additional information in these columns as needed

Distance from Receptor (feet)	Plant # or Gas Dispensary #	Facility Name	Street Address	Screening Level Cancer Risk (1)	Screening Level Hazard Index (1)	Screening Level PM2.5 (1)	Permit #s (2)	Source #s (2)	Fuel Code (3)	Type of Source(s) (4)	HRSA Ap # (5)	HRSA Date (6)	HRSA Engineer (7)	HRSA Cancer Risk in a million	Age Sensitivity Factor (8)	HRSA Adjusted Cancer Risk	HRSA Chronic Health (9)	HRSA PM2.5 Risk	Status/Comments
300	1262	Azevedo Quarry	55 Hillsdale Avenue	636.31	0.226	99.5													Plant closed 1/28/2011.
250	18519	Granite Construction Company	2829 Monterey Rd & SN JS Asphalt Fcl	0.03	0	261													Plant closed 1/3/2013
750	9910	Concrete ReadyMix, Inc.	111 Hillsdale Avenue	1.96	0.001	33	21563, various			see attached spreadsheet	21563	3/18/2010	DYC	2.000	1	2	0.040	0.002131661	HRSA only covers Silo with Weight Hopper and Bag House

Plant# 9910 Concrete ReadyMix, Inc
111 Hillsdale Avenue
San Jose, CA 95136

[C]urrent, [A]rchive, or [F]uture? c
[P]lant, [S]ource, [A]bate. device, or [E]mis. Point? p

CURRENT Sources:

1 Cement Silo (Tumbleweed-Johnson plant)
MINERL> Storage, contained, Cement, 2 min/batch, 3 days/wk, 2 hrs/day
G4067065 /,A1,

2 Conveyor & Weigh Hopper
MINERL> Conveying, Concrete, 123 tons/hr max, 4 min/batch, 3 days/wk
G4030083 /,P2,

6 Conveyor Stacker
MINERL> Conveying, Gravel/sand, 100 tons/hr max, 7 days/wk, 6 hrs/day
G4030244 no train

7 Material Stockpile
MINERL> Storage, contained, Gravel/sand, 7 days/wk, 6 hrs/day
G4067244 no train

8 Weigh Hopper Batch #2
MINERL> Concrete batching, Concrete, 123 tons/hr max, 4 min/batch
G4029083 /,A8,

9 Cement Silo #1
MINERL> Storage, contained, Cement, 2 min/batch, 7 days/wk, 12 hrs/day
G4067065 /,A9,

10 Cement Silo #2
MINERL> Storage, contained, Cement, dry process mfg, 2 min/batch
G4067064 /,A10,

11 Funnel Bin #1
MINERL> Storage, contained, Gravel/sand, 1 min/batch, 7 days/wk
G4067244 no train

12 Funnel Bin #2
MINERL> Storage, contained, Gravel/sand, 1 min/batch, 7 days/wk

S#	SOURCE NAME / MATERIAL	SOURCE CODE / THROUGHPUT	DATE	POLLUTANT	CODE	LBS/DAY
1	Cement Silo (Tumbleweed-Johnson plant)	G4067065				
				Particulates (portion of t	1990	8.55E+00
2	Conveyor & Weigh Hopper	G4030083				
				Particulates (portion of t	1990	9.63E+00
6	Conveyor Stacker	G4030244				
				Particulates (portion of t	1990	9.07E-01
7	Material Stockpile	G4067244				
				Particulates (portion of t	1990	3.17E-01
8	Weigh Hopper Batch #2	G4029083				
				Particulates (portion of t	1990	2.59E-01
9	Cement Silo #1	G4067065				
				Particulates (portion of t	1990	5.20E-02
10	Cement Silo #2	G4067064				
				Particulates (portion of t	1990	2.48E-02
11	Funnel Bin #1	G4067244				
				Particulates (portion of t	1990	1.46E-02
12	Funnel Bin #2	G4067244				
				Particulates (portion of t	1990	4.23E-02
13	Grizzly #1	G4067244				
				Particulates (portion of t	1990	2.92E-02
14	Grizzly #2	G4067244				
				Particulates (portion of t	1990	1.31E-01
15	Material Stockpiles (4)	G4076244				
				Particulates (portion of t	1990	6.19E-01
16	Cement Weigh Hopper					

G4067244 no train

13 Grizzly #1
MINERL> Storage, contained, Gravel/sand, 20 min/batch, 7 days/wk
G4067244 no train

14 Grizzly #2
MINERL> Storage, contained, Gravel/sand, 15 min/batch, 7 days/wk
G4067244 /,S6,

15 Material Stockpiles (4)
MINERL> Storage, open, Gravel/sand, 60 tons/hr max, 7 days/wk
G4076244 no train

16 Cement Weigh Hopper
MINERL> Concrete batching, Cement, dry process mfg, 8 tons/hr max
G4029064 /,A8,

17 Diesel Engine, Generac model 95A005365, emergency standby
Standby Diesel engine, 240 hp, Generac S/N 2018530, 390 cu in
C22AG098 /,P3,

19 Lo-Pro Batching Silo covered under HRSA
MINERL> Concrete batching, Flyash, 27 tons/hr max, 1 min/batch
G4029123 /,A11,

CURRENT Abatement Devices:

1 Baghouse
Baghouse, Simple
train: ,S1,/,P1,

8 Water Sprayer
Water Spray System
train: ,S8,S16,/

9 Cement Bag House
Baghouse, Shaking
train: ,S9,/

10 Cement Bag House
Baghouse, Shaking
train: ,S10,/

G4029064
Particulates (portion of t 1990 4.59E-02

17 Diesel Engine, Generac model 95A005365, emergency standby
C22AG098
Benzene 41 9.25E-05
Formaldehyde 124 7.65E-06
Organics (part not spec el 990 4.47E-03
Arsenic (all) 1030 8.06E-08
Beryllium (all) pollutant 1040 4.72E-08
Cadmium 1070 2.01E-07
Chromium (hexavalent) 1095 4.17E-09
Lead (all) pollutant 1140 1.71E-07
Manganese 1160 2.68E-07
Nickel pollutant 1180 3.26E-06
Mercury (all) pollutant 1190 5.70E-08
Diesel Engine Exhaust Part 1350 4.65E-03
PAH's (non-speciated) 1840 4.25E-07
Nitrous Oxide (N2O) 2030 2.48E-05
Nitrogen Oxides (part not 2990 6.51E-02
Sulfur Dioxide (SO2) 3990 3.02E-05
Carbon Monoxide (CO) pollu 4990 1.42E-02
Carbon Dioxide, non-biogen 6960 3.10E+00
Methane (CH4) 6970 1.24E-04

19 Lo-Pro Batching Silo
G4029123
Particulates (portion of t 1990 6.79E-03

PLANT TOTAL:
lbs/day Pollutant

8.06E-08 Arsenic (all) (1030)
9.25E-05 Benzene (41)
4.72E-08 Beryllium (all) pollutant (1040)
2.01E-07 Cadmium (1070)
3.10E+00 Carbon Dioxide, non-biogenic CO2 (6960)
1.42E-02 Carbon Monoxide (CO) pollutant (4990)
4.17E-09 Chromium (hexavalent) (1095)
4.65E-03 Diesel Engine Exhaust Particulate Matter (1350)
7.65E-06 Formaldehyde (124)
1.71E-07 Lead (all) pollutant (1140)
2.68E-07 Manganese (1160)
5.70E-08 Mercury (all) pollutant (1190)
1.24E-04 Methane (CH4) (6970)
3.26E-06 Nickel pollutant (1180)

11 Baghouse
Baghouse, Pulse Jet
train: ,S19,/

Plant #: 9910
Company name: Concrete ReadyMix, Inc
Location: 111 Hillsdale Avenue, San Jose, CA 95136

6.51E-02 Nitrogen Oxides (part not spec elsewhere) (2990)
2.48E-05 Nitrous Oxide (N2O) (2030)
4.47E-03 Organics (part not spec elsewhere) -- including Methane (990)
4.25E-07 PAH's (non-speciated) (1840)
2.06E+01 Particulates (portion of total not spec elsewhere) (1990)
3.02E-05 Sulfur Dioxide (SO2) (3990)

Application #: 4169
Project title: New Source/Generator
Engineer: Carla J Jo [1160]
Received: 02/05/02
Final disposition: Waived A/C, 03/14/02

Application #: 10526
Project title: Material Handling Equipment
Engineer: Donald P Van Buren [435]
Received: 08/05/04
Final disposition: Waived A/C, 11/30/04

Application #: 21563
Project title: Diversified Storage Systems Low-Pro Portable Silo
Engineer: Pamela J Leong [742]
Received: 01/29/10
Final disposition: Waived A/C, 03/29/10

covered under HRSA

Application #: 27380
Project title: Change of Condition
Engineer: Donald P Van Buren [435]
Received: 07/06/99
Final disposition: Waived A/C, 12/10/99

Application #: 14602
Project title: Cement Operation
Engineer: Terry D Carter [540]
Received: 01/18/95
Final disposition: Waived A/C, 05/17/95

Concrete ReadyMix, Inc (P# 9910)
Emission Calculations for Modeling PM2.5

Emission Source	Source Type (Point or Fugitive)	Daily (lb/day)	Annual (lb/year)	Hourly* (lb/hr)
1 Cement Silo (Tumbleweed-Johnson plant)	P	8.55	3120.75	0.35625
2 Conveyor & Weigh Hopper	F	9.63	3514.95	0.40125
6 Conveyor Stacker	F	0.907	331.055	0.03779
7 Material Stockpile	F	0.317	115.705	0.01321
8 Weigh Hopper Batch #2	F	0.259	94.535	0.01079
9 Cement Silo #1	P	0.052	18.98	0.00217
10 Cement Silo #2	P	0.0248	9.052	0.00103
11 Funnel Bin #1	F	0.0146	5.329	0.00061
12 Funnel Bin #2	F	0.0423	15.4395	0.00176
13 Grizzly #1	F	0.0292	10.658	0.00122
14 Grizzly #2	F	0.131	47.815	0.00546
15 Material Stockpiles (4)	F	0.619	225.935	0.02579
16 Cement Weigh Hopper	F	0.0459	16.7535	0.00191
17 Diesel Engine, emergency standby	P	0.00465	1.69725	0.00019
19 Lo-Pro Batching Silo	P	0.00679	2.47835	0.00028
	Total	20.633	7531.133	0.860
	Total Baghouse (lb/hr)			0.3597
	Total Other (lb/hr)			0.5000

* Based on 24 hour per day operation