

# ***GATEWAY CROSSINGS PROJECT AIR QUALITY ASSESSMENT***

***Santa Clara, California***

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**Prepared for:**

**Kristy Weis  
David J. Powers & Associates  
1871 The Alameda, Suite 200  
San Jose, California 95126**

**Prepared by: James Reyff**

***ILLINGWORTH & RODKIN, INC.***  
***/// Acoustics • Air Quality ///***  
1 Willowbrook Court, Suite 120  
Petaluma, CA 94954  
(707) 794-0400

**Project: 16-075**

## **Introduction**

The purpose of this report is to address air quality impacts associated with the proposed mixed-use residential development project. The approximately 24-acre Gateway Crossings project site is currently undeveloped and located at the southwest corner of Coleman Avenue and Brokaw Road in the City of Santa Clara. The project proposes to develop four, four- to eight-story podium residential buildings with semi-subterranean parking and one to two levels of above-ground parking, and up to 215,000 square feet (sf) of commercial uses, including a nine-story hotel building above a podium and parking. The proposed residential and hotel buildings would be situated around a publicly accessible, approximately 0.9-acre park. A total of approximately three acres of common open space would be provided in the residential buildings on top of the podium structures and may include rooftop outdoor amenity space.

Air pollutant emissions associated with construction and operation of the project were modeled. In addition, the potential construction health risk impacts to nearby sensitive receptors were evaluated along with the community risk impacts of existing toxic air contaminant (TAC) sources upon future project residences. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).

## **Setting**

The project is located in the 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<sub>10</sub>), and fine particulate matter (PM<sub>2.5</sub>).

## **Air Pollutants of Concern**

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM<sub>10</sub>) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM<sub>2.5</sub>). Elevated concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> 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

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

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent OEHHA risk assessment guidelines were published in February of 2015.<sup>1</sup> See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

## Regulatory Setting

### *Federal Regulations*

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the Federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of nitrogen oxides, or NO<sub>x</sub>, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and because the EPA has identified diesel particulate matter as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO<sub>x</sub> emissions from diesel engines up to 95 percent in

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<sup>1</sup> OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.<sup>2</sup>

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD) is currently required for use by all vehicles in the U.S.

All of the above Federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

### *State Regulations*

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles<sup>3</sup>. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and PM<sub>2.5</sub> emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road, or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO<sub>x</sub> emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers,

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<sup>2</sup> USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

<sup>3</sup> California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO<sub>x</sub> exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent Federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO<sub>x</sub>.

### *Bay Area Air Quality Management District (BAAQMD)*

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

The BAAQMD *CEQA Air Quality Guidelines*<sup>4</sup> were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of their *CEQA Guidelines*. In May 2011, the updated BAAQMD *CEQA Air Quality Guidelines* were amended to include a risk and hazards threshold for new receptors and modify procedures for assessing impacts related to risk and hazard impacts.

### *Local Regulations*

#### Santa Clara General Plan

The 2010-2035 General Plan includes goals to improve air quality in the region and reduce GHG emissions. To achieve these goals, the General Plan contains the following policies:

- 5.10.2-P1      Support alternative      transportation modes and efficient parking mechanisms to improve air quality.

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<sup>4</sup> Bay Area Air Quality Management District, 2011. *CEQA Air Quality Guidelines*. May. (Updated May 2017)

- 5.10.2-P2 Encourage development patterns that reduce vehicle miles traveled and air pollution.
- 5.10.2-P3 Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.
- 5.10.2-P4 Encourage measures to reduce greenhouse gas emissions to reach 30 percent below 1990 levels by 2020.
- 5.10.2-P5 Promote regional air pollution prevention plans for local industry and businesses.
- 5.10.2-P6 Require “Best Management Practices” for construction dust abatement.

In addition, the Safety Goals of the General Plan are supported by the following policies related to air quality:

- 5.10.5-P34 Implement minimum setbacks of 500 feet from roadways with average daily trips of 100,000 or more and 100 feet from railroad tracks for new residential or other uses with sensitive receptors, unless a project-specific study identifies measures, such as site design, tiered landscaping, air filtration systems, and window design, to reduce exposure, demonstrating that the potential risks can be reduced to acceptable levels.
- 5.10.5-P35 Establish minimum buffers between odor sources and new residential or other uses with sensitive receptors, consistent with BAAQMD guidelines, unless a project-specific study demonstrates that these risks can be reduced to acceptable levels.

The General Plan included Prerequisite Goals and Policies that relate to air quality. Some of these policies addressed significant impacts identified in the Draft Environmental Impact Report for the General Plan. The following policy related to air quality was included in the General Plan:

- 5.1.1-P24 Prior to the implementation of Phase III, the City will include a community Risk Reduction Plan (“CRRP”) for acceptable Toxic Air Contaminant (“TAC”) concentrations, consistent with the Bay Area Air Quality Management District (“BAAQMD”) CEQA Guidelines, including risk and exposure reduction targets, measures to reduce emissions, monitoring procedures, and a public participations process.

Note that the City has not yet developed a CRRP, so health risk assessments are performed for projects that contain sensitive receptors near sources of air pollution or TACs. These include modeling of health risks for individual projects located within the minimum setbacks for roadways and railroads. Mitigation measures such as (but not limited to); site redesign, tiered plantings of trees, air filtration systems, and location of air intakes and design windows to reduce exposure, shall be required to reduce these risks to acceptable levels.

## Santa Clara Climate Action Plan

The Santa Clara Climate Action Plan (CAP), adopted December 3, 2013. The CAP includes measures to reduce emissions by 23.4% below 2008 levels by 2020 and a series of measures to reduce emissions beyond. The following reduction strategies would apply to this project:

- Achieve City-adopted electricity efficiency targets to reduce community-wide electricity use by 5% through incentives, pilot projects, and rebate programs.
- Incentivize and facilitate the installation of 6 MW of customer-owned residential and nonresidential solar PV projects.
- Meet the water conservation goals presented in the 2010 Urban Water Management Plan to reduce per capita water use by 2020.
- Work with regional partners to increase solid waste diversion to 80% through increased recycling efforts, curbside food waste pickup, and construction and demolition waste programs.
- Support and facilitate a community-wide transition to electric outdoor lawn and garden equipment through outreach, coordination with BAAQMD, and outdoor electrical outlet requirements for new development.
- Require construction projects to comply with BAAQMD best management practices, including alternative-fueled vehicles and equipment.
- Require new development located in the city's transportation districts to implement a TDM program to reduce drive-alone trips.
- Revise parking standards for new multi-family residential and nonresidential development to allow that a minimum of one parking space, and a recommended level of 5% of all new parking spaces, be designated for electric vehicle charging.
- Create a tree-planting standard for new development and conduct a citywide tree inventory every five years to track progress of the requirements.
- Require new parking lots to be surfaced with low-albedo materials to reduce heat gain, provided it is consistent with the Building Code.

## Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. A review of the project site did not reveal any sensitive receptors within 1,000 feet of the project site. However, since project construction would be phased, future on-site residences would be considered sensitive receptors for later phases of construction since it is assumed that phases of the project would become operational once constructed.

## Significance Thresholds

In June 2010, BAAQMD adopted 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. The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 1. The BAAQMD's adoption of significance thresholds contained in the 2011 *CEQA Air Quality Guidelines* was called into question by an order issued March 5, 2012, in *California Building Industry Association (CBIA) v. BAAQMD* (Alameda Superior Court Case No. RGI0548693). The order requires the 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. In August 2013, the Appellate Court struck down the lower court's order to set aside the thresholds (Cal. Court of Appeal, First Appellate District, Case Nos. A135335 & A136212). CBIA sought review by the California Supreme Court on three issues, including the appellate court's decision to uphold the BAAQMD's adoption of the thresholds, and the Court granted review on just one: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users of a proposed project? In December 2015, the Supreme Court determined that an analysis of the impacts of the environment on a project – known as “CEQA-in-reverse” – is only required under two limited circumstances: (1) when a statute provides an express legislative directive to consider such impacts; and (2) when a proposed project risks exacerbating environmental hazards or conditions that already exist (Cal. Supreme Court Case No. S213478). The Supreme Court reversed the Court of Appeal's decision and remanded the matter back to the appellate court to reconsider the case in light of the Supreme Court's ruling. In response to the legal issues, BAAQMD revised their CEQA Guidelines in May 2017. The thresholds identified in Table 1 represent the most recent guidance provided by BAAQMD that are used by the City of Santa Clara. Though not necessarily a CEQA issue, the effect of existing TAC sources on future project receptors (residences) is analyzed to comply with the Clean Air Plan key goal of reducing population TAC exposure and protecting public health in the Bay Area.

**Table 1. Air Quality Significance Thresholds**

| Pollutant                                                                                                                                                                                                                                                                                                                             | Construction Thresholds                                                                                     | Operational Thresholds                                |                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------|
|                                                                                                                                                                                                                                                                                                                                       | Average Daily Emissions (lbs./day)                                                                          | Average Daily Emissions (lbs./day)                    | Annual Average Emissions (tons/year) |
| Criteria Air Pollutants                                                                                                                                                                                                                                                                                                               |                                                                                                             |                                                       |                                      |
| ROG                                                                                                                                                                                                                                                                                                                                   | 54                                                                                                          | 54                                                    | 10                                   |
| NO <sub>x</sub>                                                                                                                                                                                                                                                                                                                       | 54                                                                                                          | 54                                                    | 10                                   |
| PM <sub>10</sub>                                                                                                                                                                                                                                                                                                                      | 82 (Exhaust)                                                                                                | 82                                                    | 15                                   |
| PM <sub>2.5</sub>                                                                                                                                                                                                                                                                                                                     | 54 (Exhaust)                                                                                                | 54                                                    | 10                                   |
| CO                                                                                                                                                                                                                                                                                                                                    | Not Applicable                                                                                              | 9.0 ppm (8-hour average) or 20.0 ppm (1-hour average) |                                      |
| Fugitive Dust                                                                                                                                                                                                                                                                                                                         | Construction Dust Ordinance or other Best Management Practices                                              | Not Applicable                                        |                                      |
| Health Risks and Hazards for Single Sources                                                                                                                                                                                                                                                                                           |                                                                                                             |                                                       |                                      |
| Excess Cancer Risk                                                                                                                                                                                                                                                                                                                    | >10 per one million                                                                                         |                                                       |                                      |
| Hazard Index                                                                                                                                                                                                                                                                                                                          | >1.0                                                                                                        |                                                       |                                      |
| Incremental annual PM <sub>2.5</sub>                                                                                                                                                                                                                                                                                                  | >0.3 µg/m³                                                                                                  |                                                       |                                      |
| Health Risks and Hazards for Combined Sources (Cumulative from all sources within 1,000 foot zone of influence)                                                                                                                                                                                                                       |                                                                                                             |                                                       |                                      |
| Excess Cancer Risk                                                                                                                                                                                                                                                                                                                    | >100 per one million                                                                                        |                                                       |                                      |
| Hazard Index                                                                                                                                                                                                                                                                                                                          | >10.0                                                                                                       |                                                       |                                      |
| Annual Average PM <sub>2.5</sub>                                                                                                                                                                                                                                                                                                      | >0.8 µg/m³                                                                                                  |                                                       |                                      |
| Greenhouse Gas Emissions                                                                                                                                                                                                                                                                                                              |                                                                                                             |                                                       |                                      |
| GHG Annual Emissions                                                                                                                                                                                                                                                                                                                  | Compliance with a Qualified GHG Reduction Strategy<br>OR<br>1,100 metric tons or 4.6 metric tons per capita |                                                       |                                      |
| Note: ROG = reactive organic gases, NO <sub>x</sub> = nitrogen oxides, PM <sub>10</sub> = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM <sub>2.5</sub> = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less; and GHG = greenhouse gas. |                                                                                                             |                                                       |                                      |

## Impacts and Mitigation Measures

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

The Bay Area is considered a non-attainment area for ground-level ozone and PM<sub>2.5</sub> under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM<sub>10</sub> under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM<sub>10</sub>, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These

thresholds are for ozone precursor pollutants (ROG and NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub> and apply to both construction period and operational period impacts.

The California Emissions Estimator Model (CalEEMod) Version 2016.3.1 was used to predict emissions from construction and operation of the site assuming full build out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod.

#### Construction period emissions

CalEEMod provided annual emissions for construction. CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. A phase-specific construction build-out scenario, including equipment list and schedule, was developed based on information provided by the project applicant. Emissions from construction of each phase were modeled separately. The proposed project land uses for each phase were input into CalEEMod as follows.

##### Phase 1:

- 261 dwelling units were entered as “Apartments-Mid Rise”
- 485 spaces were entered as “Enclosed Parking with Elevator”
- 4 spaces as “Parking Lot,” and
- 5,300 sf as “Strip Mall”

In addition, 23,542 cubic yards (cy ) of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase of Phase 1.

##### Phase 2:

- 332 dwelling units were entered as “Apartments-Mid Rise”
- 625 spaces were entered as “Enclosed Parking with Elevator,” and
- 7 spaces as “Parking Lot”

In addition, 19,496 cy of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase and was entered into the model for Phase 2.

##### Phase 3:

- 432 dwelling units were entered as “Apartments-Mid Rise”
- 760 spaces were entered as “Enclosed Parking with elevator”
- 6 spaces as “Parking Lot,” and
- 4,900 sf as “Strip Mall”

In addition, 20,919 cubic yards of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase and was entered into the model for Phase 3.

Phase 4:

- 556 dwelling units were entered as “Apartments-Mid Rise”
- 905 spaces were entered as “Enclosed Parking with elevator,” and
- 4 spaces as “Parking Lot”

In addition, 18,459 cubic yards of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase and was entered into the model for Phase 4.

Phase 5:

- 225 rooms were entered as “Hotel”
- 339 spaces were entered as “Enclosed Parking with elevator,” and
- 5,200 sf as “Strip Mall”

In addition, 7,585 cubic yards (cy) of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase and was entered into the model for Phase 5. The project area was entered as 21.4 acres for each phase.

The project would be built out over a period of approximately 6 to 8 years beginning in October 2018, or an approximate 1,408 to 1,777 construction workdays (assuming an average 260 construction days per year). The construction schedule provided by the applicant makes the following assumptions:

- Phase 1 would be built over a period of 12 months beginning in October 2018.
- Phase 2 would be built over a period of 12 months beginning in July 2019.
- Phase 3 would be built over a period of 12 months beginning in April 2020.
- Phase 4 would be built over a period of 14 months beginning in March 2022.
- Phase 5 would be built over a period of 19 months beginning in January 2024.

Average daily emissions were computed for each phase by dividing the total construction emissions by the number of construction days. Table 2 shows average daily construction emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub> exhaust, and PM<sub>2.5</sub> exhaust during construction of the project. As indicated in Table 2, estimated the construction period emissions would not exceed the BAAQMD significance thresholds. *Attachment 2* includes the CalEEMod input and output worksheets.

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

**Table 2. Construction Period Emissions by Phase**

| <b>Scenario</b>                                     | <b>ROG</b>           | <b>NOx</b>           | <b>PM<sub>10</sub><br/>Exhaust</b> | <b>PM<sub>2.5</sub><br/>Exhaust</b> |
|-----------------------------------------------------|----------------------|----------------------|------------------------------------|-------------------------------------|
| Phase 1 (tons)                                      | 3.06                 | 7.14                 | 0.31                               | 0.29                                |
| Phase 2 (tons)                                      | 3.60                 | 6.17                 | 0.27                               | 0.25                                |
| Phase 3 (tons)                                      | 4.34                 | 5.70                 | 0.24                               | 0.22                                |
| Phase 4 (tons)                                      | 4.78                 | 6.97                 | 0.27                               | 0.25                                |
| Phase 5 (tons)                                      | 1.69                 | 6.06                 | 0.24                               | 0.22                                |
| Total construction emissions (tons)                 | 17.43 tons           | 32.0 tons            | 1.32 tons                          | 1.24 tons                           |
| <b>Average daily emissions (pounds)<sup>1</sup></b> | <b>24.8 lbs./day</b> | <b>45.5 lbs./day</b> | <b>1.9 lbs./day</b>                | <b>1.8 lbs./day</b>                 |
| <i>BAAQMD Thresholds (pounds per day)</i>           | 54 lbs./day          | 54 lbs./day          | 82 lbs./day                        | 54 lbs./day                         |
| <b>Exceed Threshold?</b>                            | <b>No</b>            | <b>No</b>            | <b>No</b>                          | <b>No</b>                           |
| Notes: <sup>1</sup> Assumes 1,408 workdays.         |                      |                      |                                    |                                     |

### Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future residents, employees and customers. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

#### *Land Uses*

The project land uses were input to CalEEMod, as described above.

#### *Model Year*

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest a component of the project could possibly be constructed and begin operating would be 2020. Emissions associated with build-out later than 2020 would be lower.

#### *Trip Generation Rates*

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table for net project trips. The default trip lengths and trip types specified by CalEEMod were used.

#### *Energy*

CalEEMod defaults for energy use were used, which are assumed to include 2013 Title 24 Building Standards.

### *Other Inputs*

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project.

### *Project Generator*

The only source of stationary air pollutants identified with build-out of the project is assumed to be an emergency back-up generator. The project proposes the inclusion of a 100 kW (approximately 135 HP) generator. It is assumed for this assessment that the generator would be driven by a diesel-fueled engine.

The emergency back-up generator would be used for backup power in emergency conditions. The generator would be operated for testing and maintenance purposes, with a maximum of 50 hours each per year of non-emergency operation under normal conditions allowed by BAAQMD. During testing periods the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

**Table 3. Operational Emissions**

| <b>Scenario</b>                                           | <b>ROG</b>        | <b>NO<sub>x</sub></b> | <b>PM<sub>10</sub></b> | <b>PM<sub>2.5</sub></b> |
|-----------------------------------------------------------|-------------------|-----------------------|------------------------|-------------------------|
| 2020 Phase1                                               | 1.82 tons         | 2.23 tons             | 1.45 tons              | 0.42 tons               |
| 2021 Phase1+Phase2                                        | 4.72 tons         | 4.86 tons             | 3.16 tons              | 0.91 tons               |
| 2022 Phase1+Phase2+Phase3                                 | 7.61 tons         | 6.87 tons             | 5.47 tons              | 1.57 tons               |
| 2024 Phase1+Phase2+Phase3+Phase4                          | 10.65 tons        | 8.67 tons             | 8.44 tons              | 2.42 tons               |
| 2026 Full Build Out<br>Phase1+Phase2+Phase3+Phase4+Phase5 | 11.78 tons        | 10.09 tons            | 9.92 tons              | 2.85 tons               |
| Previous Existing Industrial/Office Use                   | 1.56 tons         | 1.62 tons             | 1.62 tons              | 0.46 tons               |
| <b>Net Emissions</b>                                      | <b>10.22 tons</b> | <b>8.47 tons</b>      | <b>8.30 tons</b>       | <b>2.39 tons</b>        |
| <i>BAAQMD Thresholds (tons /year)</i>                     | <i>10 tons</i>    | <i>10 tons</i>        | <i>15 tons</i>         | <i>10 tons</i>          |
| <b>Exceed Threshold?</b>                                  | <b>Yes</b>        | <b>No</b>             | <b>No</b>              | <b>No</b>               |
| Net Project Operational Emissions ( <i>pounds/day</i> )   | 56.0 lbs          | 46.4 lbs              | 45.5 lbs               | 13.1 lbs                |
| <i>BAAQMD Thresholds (pounds/day)</i>                     | 54 lbs.           | 54 lbs.               | 82 lbs.                | 54 lbs.                 |
| <b>Exceed Threshold?</b>                                  | <b>Yes</b>        | <b>No</b>             | <b>No</b>              | <b>No</b>               |
| <sup>1</sup> Assumes 365-day operation.                   |                   |                       |                        |                         |

As shown in Table 3, operational emissions of ROG would exceed the BAAQMD significance thresholds. ROG emissions are mostly the result of consumer product use. *Mitigation Measure 2* would reduce mobile emissions from build-out of the project by 10 percent; however, total ROG emissions would still exceed the thresholds of 54 pounds per average day.

### ***Mitigation Measure 1: Include basic measures to control dust and exhaust during construction.***

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures

recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant level. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

The project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 92 percent reduction in PM<sub>10</sub> exhaust emissions or more. The plan should include, but it not limited to, one or more of the following:

9. All mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days continuously shall meet, at a minimum, U.S. EPA particulate matter emissions standards for Tier 4 engines or

equivalent and include the use of equipment that includes CARB-certified Level 3 Diesel Particulate Filters.<sup>5</sup>

10. Use of alternatively-fueled equipment (i.e., non-diesel), such as electric, biodiesel, or LPG for example, would meet this requirement.

11. Other measures may be the use of added exhaust devices, or a combination of measures, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to less than significant.

#### Effectiveness of Mitigation Measure 1

Implementation of Mitigation Measure 1 is considered to include all recommended basic control measures listed by BAAQMD and reduce exhaust emissions by 5 percent. This measure would considerably reduce on-site diesel exhaust emissions from off-road equipment operation.

#### **Mitigation Measure 2: Reduce VMT/vehicle trips by at least 20 percent.**

*The project shall develop a plan that would reduce VMT/vehicle trips by 20 percent, of which would include a Transportation Demand Management (TDM) that would be designed to reduce VMT/vehicle trips by at least 10 percent.*

#### **Mitigation Measure 3: Include low VOC coatings to reduce ROG emissions.**

*The project shall use low volatile organic compound or VOC (i.e., ROG) coatings, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 50 percent of all residential and nonresidential interior and exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project's operational lifetime. At least 50 percent of coatings applied must meet a "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall contain a stipulation for low VOC coatings to be used.*

#### Effectiveness of Mitigation Measure 2 and 3

Implementation of Mitigation Measure 2 is considered to only feasibly reduce the number of new traffic trips by about 8 percent, assuming weekend trips are not affected. Since 80 percent of the ROG emissions are associated with consumer product use and maintenance painting of individual units and the buildings, total ROG emissions would only be reduced by 2 percent from this mitigation measure. Mitigation Measure 2 would reduce ROG emissions by 0.19 tons per year.

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<sup>5</sup> See <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm> for more information.

Mitigation Measure 3 would reduce ROG emissions from architectural coatings by about 40 percent. Architectural coatings make up about 11.5 percent of the project ROG emissions, so this would equate to a reduction of 4.6 percent of ROG emissions. Mitigation Measure AQ-3 would reduce ROG emissions by 0.54 tons per year.

The combination of Mitigation Measure 2 and 3 would reduce ROG emissions by 0.73 tons per year. This would reduce the net project ROG emissions from 10.22 to 9.49 tons per year or from 56.0 to 52.0 pounds per day. ROG emissions would be reduced below the annual and average daily thresholds for operational emissions. The impact would be considered *Less than Significant with Mitigation*.

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

As discussed above, the project would have less than the significance thresholds adopted by BAAQMD for evaluating impacts related to NO<sub>x</sub> and particulate matter but significant emissions of ROG. Impacts related to ROG emissions, which could have a very minor effect on ozone levels, are addressed under the impact described above that addresses cumulatively considerable net increases of any criteria pollutant or precursor and were identified as *Significant*. At the local level, the project would not 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 carbon monoxide standard. The highest measured level over any 8-hour averaging period in the Bay Area during the last 3 years is less than 3.0 ppm, compared to the ambient air quality standard of 9.0 ppm. The project would generate a relatively small amount of new traffic. Based on the trip generation rates, the project would add approximately 9,831 daily trips (or about 1,000 peak hour trips) and would not affect high-volume intersections that have the potential to result in exceedances of an ambient air quality standard for carbon monoxide. BAAQMD screening guidance indicates that the project would have a less than significant impact with respect to carbon monoxide levels if project traffic projections indicate traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour.<sup>6</sup> Because cumulative traffic volumes at all intersections affected by the project would have less than 44,000 vehicles per hour, the project will have a *less-than significant* effect with respect to carbon monoxide.

**Impact:** Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new

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<sup>6</sup> For a land-use project type, the BAAQMD CEQA Air Quality Guidelines state that a proposed project would result in a less than significant impact to localized carbon monoxide concentrations if the project would not increase traffic at affected intersections to more than 44,000 vehicles per hour.

sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The project would introduce new sensitive receptors (residences) in the proximity of nearby TAC sources, such as El Camino Real (State Route 82), local roadways, stationary sources, and railroad traffic. Though not necessarily a CEQA issue, the effect of existing TAC sources on future project receptors (residences) is analyzed to comply with the Clean Air Plan goal of reducing population exposure and protecting public health in the Bay Area. The BAAQMD recommends using a 1,000-foot screening radius around a project site for purposes of identifying community health risk from siting a new sensitive receptor or a new source of TACs.

The project would not be a substantial source of localized TACs. However, temporary project construction activity would generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors.

### **Operational Community Risk Impacts (Planning Consideration)**

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site. These sources include freeways or highways, busy surface streets and stationary sources identified by BAAQMD. Traffic on high volume roadways is a source of TAC emissions that may adversely affect sensitive receptors in close proximity to the roadway. For local roadways, BAAQMD considers roadways with traffic volumes of over 10,000 vehicles per day to have a potentially significant impact on a proposed project. A review of the project area identified several sources of TAC emissions, such as SR-82/El Camino Real, local surface streets, multiple stationary sources, and nearby railroad traffic. Community risks from each source are discussed below.

#### El Camino Real (SR 82) and Local Roadways

BAAQMD provides a Highway Screening Analysis Google Earth Map tool to identify estimated risk and hazard impacts from highways throughout the Bay Area. Cumulative risk, hazard and PM<sub>2.5</sub> impacts at various distances from the highway are estimated for different segments of the highways. The tool uses the average annual daily traffic (AADT) count, fleet mix and other modeling parameters specific to that segment of the highway. Impacts from Link 319 (6ft elevation) SR-82, which is about 750 feet southwest of the project site, were identified using this tool. The cancer risk at the nearest project receptor was found to be 3.4 in a million. The PM<sub>2.5</sub> concentration was found to be 0.02 µg/m<sup>3</sup> and the HI was calculated as less than 0.01. The estimated cancer risk was adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools.<sup>7</sup>

For local roadways, BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways with traffic volumes of over 10,000 vehicles per day may have a potentially significant effect on a proposed project. Two adjustments were made to the cancer risk predictions

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<sup>7</sup> Correspondence with Alison Kirk, BAAQMD, November 23, 2015.

made by this calculator: (1) adjustment for latest vehicle emissions rates and (2) adjustment of cancer risk to reflect new OEHHA guidance (see *Attachment 1*).

The calculator uses EMFAC2011 emission rates for the year 2014. Overall, emission rates will decrease by the time the project is constructed and occupied. A new version of the emissions factor model, EMFAC2014 is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for year 2018.<sup>8</sup>

As described previously, the predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.<sup>9</sup>

The average daily traffic (ADT) on Coleman Avenue was estimated to be 48,370 by multiplying cumulative plus project p.m. peak traffic volumes from the project traffic report by ten. Using the BAAQMD *Roadway Screening Analysis Calculator* for Santa Clara County for north-south directional roadways and at a distance of approximately 50 feet east of the roadway, estimated cancer risk from Coleman Avenue at the nearest project site receptor would be 21.2 in one million and PM<sub>2.5</sub> concentration would be 0.7 µg/m<sup>3</sup>. Chronic or acute HI for the roadway would be below 0.03. Estimated cancer risk and PM<sub>2.5</sub> would exceed the BAAQMD risk thresholds. *Recommended Measure 3 would reduce this risk*, such that excess cancer risk is estimated to be 6.4 in one million and annual PM<sub>2.5</sub> concentration would be 0.2 µg/m<sup>3</sup>.

Brokaw Road is estimated to have an ADT of 4,780, which is below the BAAQMD roadway screening size of 10,000 and would not result in a substantial health risk to receptors at the project site.

### Railroad Traffic

The project site is located near Caltrain and other rail lines, and rail activity currently generates TAC and PM<sub>2.5</sub> emissions from locomotive exhaust. These rail lines are used for passenger (Caltrain, ACE, and Amtrak) and freight service by trains using diesel fueled locomotives. The project site is about 285 feet or greater from the nearest rail line and about 325 feet from the Santa Clara Caltrain Station Platform. The Peninsula Corridor Electrification Project is a key component of the Caltrain Modernization Program that would electrify the Caltrain Corridor from San Francisco to San Jose. Under this program, diesel-locomotive hauled trains would be converted to Electric Multiple Unit (EMU) trains after 2020.

Currently all of Caltrain's trains use diesel locomotives. As part of the program to modernize operation of the Caltrain rail corridor between San Jose and San Francisco, Caltrain is planning to

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<sup>8</sup> Though the project will likely be operational after 2018, this analysis year was used for the *Roadway Screening Analysis Calculator* as a conservative measure for estimating community risk.

<sup>9</sup> Correspondence with Alison Kirk, BAAQMD, November 23, 2015.

switch from diesel locomotives to use of electric trains in the near future.<sup>10</sup> Nearly all of the trains in the future are planned to be EMU trains, which are self-propelled electric rail vehicles that can accelerate and decelerate at faster rates than diesel power trains, even with longer trains. As a result, Caltrain would be able to increase the number of trains during peak periods to accommodate service demand. This plan was formally adopted on January 8, 2015 and electrified service is anticipated to begin in 2020 or 2021.<sup>11</sup>

Based on the current Caltrain schedule, there are 92 trains passing the project site during the weekdays, 32 trains during the weekend, and 4 additional trains that only run on Saturday. Electrification of Caltrain would eliminate DPM emissions from most of these trains and would increase the number of weekday trains from 92 to 114. Amtrak's Capitol Corridor and Coast Starlight passenger trains either stop at or pass by the Santa Clara Station. Based on current Amtrak schedules, the Amtrak Capitol Corridor, which provides service between Sacramento/Auburn and San Jose, has 8 weekday trains and 7 weekend trains that used these rail lines. The Amtrak Coast Starlight operates between Seattle and Los Angeles, with 2 daily trains. In addition to the Caltrain and Amtrak trains, there are about ten freight trains that also use this rail line on a daily basis.<sup>12</sup>

Caltrain plans for 2021 service between San Jose and San Francisco to use a mixed fleet of EMUs and diesel locomotives, with approximately 75 percent of the service being electric and 25 percent being diesel. In 2021, some peak service trains would be diesel on weekdays. All other service, including off-peak periods, would be EMU-based. Off-peak periods include early morning, midday, and after 7:00 p.m. After 2020, diesel locomotives would be replaced with EMUs over time as they reach the end of their service life. Caltrain's diesel-powered locomotives would continue to be used to provide service between the San Jose Diridon Station and Gilroy. It is expected that 100 percent of the San Jose to San Francisco fleet would be EMUs by 2026 to 2029.<sup>13</sup>

With Caltrain electrification, it was assumed that during 2020 all trains would continue to use diesel locomotives. There would be 92 daily weekday trips, and 32 daily weekend trips with 4 additional trips on Saturdays. On an annual average basis there would be a total of 75 daily trains using diesel locomotives. Fifty of these trains would stop at the Santa Clara Station and 25 would pass the station without stopping. Starting in 2021 there would be 24 daily weekday trips and 4 daily weekend trips with 4 additional trips on Saturdays using trains with diesel locomotives.<sup>14</sup> On an annual average basis there would be a total of 19 daily trains using diesel locomotives. One of these trains would stop at the Santa Clara Station and 18 would pass the station without stopping. From 2026 on it was conservatively assumed that there would be 4 daily weekday diesel trains that pass by the Santa Clara Station. All of Amtrak's Capitol Corridor trains stop at the Santa Clara Station and the Coast Starlight trains pass by the station. All trains used for freight service were assumed to use diesel powered locomotives and pass by the station.

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<sup>10</sup> Caltrain, 2014. *Peninsula Corridor Electrification Project. Final Environmental Impact Report*. December 2014.

<sup>11</sup> Caltrain, 2015. *Peninsula Corridor Electrification Fact Sheet*. May 2015.

<sup>12</sup> *Bay Area Regional Rail Plan, Technical Memorandum 4a, Conditions, Configuration & Traffic on Existing System*, Metropolitan Transportation Commission, November 15, 2006.

<sup>13</sup> Ibid

<sup>14</sup> Caltrain 2015. *Short Range Transit Plan: FY2015-2024*. October 1, 2015.

The schedule for Caltrain electrification has recently become an issue due to the reliance on federal funds that would contribute to the construction costs. These funds are under review, so the schedule could be delayed and the length of any delay would be unknown. To address this issue, a scenario that assumes Caltrain would use all diesel-powered locomotives in the future was also evaluated. In addition, the future increase in the number of trains was assumed and that increase was also assumed to be made up of diesel locomotives. This provides the worst-case analysis of health risks from the Caltrain railroad. The same modeling parameters described above apply, except all assumed electric trains would be diesel-powered.

DPM and PM<sub>2.5</sub> emissions from trains on the rail line were calculated using EPA emission factors for locomotives<sup>15</sup> and CARB adjustment factors to account for fuels used in California.<sup>16</sup> Caltrain's current locomotive fleet consists of twenty 3,200 horsepower (hp) locomotives of model year or overhaul date of 1999 or later, three 3,200 hp locomotives of model year 1998, and six 3,600 hp locomotives of model year 2003.<sup>17</sup> The current fleet average locomotive engine size is about 3,285 hp. In estimating diesel emissions for 2021 prior to electrification a fleet average locomotive engine size of 3,285 hp was used. When electrification occurs, Caltrain will retain the six 3,600 hp locomotives and the three model year 1998 3,200 hp locomotives.<sup>18</sup> In estimating diesel locomotive emissions for the case of electrification, average locomotive horsepower of 3,467 hp was used. Amtrak passenger trains were assumed to use 3,200 hp diesel locomotives and would continue to do so in the future. Emissions from the freight trains were calculated assuming they would use two diesel locomotives with 2,300 hp engines.

Passenger and freight trains that would not stop at the Santa Clara Station were assumed to be traveling at an average speed of 40 mph in the vicinity of the project site. Passenger trains stopping at the Santa Clara Station were assumed to be traveling at an average speed of 10 mph in the vicinity of the station. Since the exposure duration used in calculating cancer risks is 30 years (in this case the period from 2020 through 2049), the passenger and freight train average DPM emissions were calculated based on average EPA emission factors for 2020 and the periods 2021-2025, 2026-2049.

Dispersion modeling of locomotive emissions was conducted using the EPA's AERMOD dispersion model and five-year data set (2006-2010) of hourly meteorological data from the San Jose Airport prepared for use with the AERMOD model by the BAAQMD. Locomotive emissions from train travel within about 1,000 feet of the project site were modeled as four line sources comprised of a series of volume sources along the rail line. DPM concentrations were calculated at receptor locations placed within the proposed residential areas of the project (Buildings 1 through 4). Receptor heights of 1.5 meters (5 feet), 4.5 meters (15 feet), and 7.6 meters (25 feet), representative of breathing heights on the first, second, and third floor levels of the proposed

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<sup>15</sup> *Emission Factors for Locomotives*, USEPA 2009 (EPA-420-F-09-025)

<sup>16</sup> *Offroad Modeling, Change Technical Memo*, Changes to the Locomotive Inventory, CARB July 2006.

<sup>17</sup> *Caltrain Commute Fleets*. Available at: <http://www.caltrain.com/about/statsandreports.html>. Accessed March 4, 2016.

<sup>18</sup> Caltrain 2015. *Short Range Transit Plan: FY2015-2024*. October 1, 2015.

residential buildings, were used in the modeling. Figure 1 shows the railroad line segments used for the modeling and receptor locations at the project site where concentrations were calculated.

Maximum health risk impacts at the project site are reported in Table 4. The maximum modeled long-term DPM and PM<sub>2.5</sub> concentrations occurred at the first floor level in the southwestern portion of the residential area of Building 4. The location of maximum cancer risk is shown in Figure 1. Based on the modeling, the maximum annual PM<sub>2.5</sub> concentration from DPM emitted by trains was 0.03 µg/m<sup>3</sup>. Increased cancer and non-cancer health risks were calculated using model results and the methods recommended by the BAAQMD, as described in *Attachment 3*.

**Table 4. Maximum Health Risk Impacts from Caltrain Rail Line**

| Roadway/Setback                               | Cancer Risk<br>(per million) | PM <sub>2.5</sub><br>Concentration<br>(µg/m <sup>3</sup> ) | Hazard<br>Index<br>(HI) |
|-----------------------------------------------|------------------------------|------------------------------------------------------------|-------------------------|
| Trains (assuming Caltrain electrification)    | 9.2                          | 0.03                                                       | <0.01                   |
| Trains (assuming no Caltrain electrification) | <b>14.6</b>                  | 0.03                                                       | <0.01                   |
| <i>BAAQMD Thresholds</i>                      | <i>10.0</i>                  | <i>0.3</i>                                                 | <i>1.0</i>              |

Note: **Bold** denotes levels above single-source thresholds.

As shown in Table 4, the increased lifetime cancer risk assuming electrification would be below the BAAQMD significance thresholds for lifetime cancer risk, annual PM<sub>2.5</sub> concentrations and hazards based on the predicted Health Index. When assuming no future electrification and an increase in the number of Caltrain trains, the predicted cancer risk would exceed the threshold of 10.0 chances per million. *Recommended Measure 3 would reduce this risk*, such that excess cancer risk is estimated to be 4.4 in one million.

#### Norman Y. Mineta San Jose International Airport

Located northeast of the project is the San Jose International Airport, which contains multiple TAC sources (such as diesel tugs and trucks). No screening tools are available from BAAQMD for the airport sources as a whole and, as a conservative measure, *Recommended Measure 3* would reduce this risk.

#### Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identified the location of four stationary sources and their estimated risk and hazard impacts. The 2012 estimated risk values were adjusted using the 1.3744 factor. The risk values were then adjusted with the appropriate distance multiplier values provided by BAAQMD. The values reported below reflect the above adjustments. Several facilities identified using the tool have since closed, as indicated by correspondence with BAAQMD.<sup>19</sup>

<sup>19</sup> Correspondence with Alison Kirk, BAAQMD & I&R, May 10, 2017.

- Plant 19357, which is a facility operated by Atlantic – San Jose, located at 1250 Aviation Avenue, is about 400 feet northeast of the project site. At BAAQMD’s direction, risk and PM<sub>2.5</sub> concentrations from the facility were adjusted based on BAAQMD’s *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines*. According to the BAAQMD screening data (and adjusted for the 400 foot distance and 2015 OEHHA methodology), this facility would result in an adjusted lifetime risk of 3.7 per million and 0.0 µg/m<sup>3</sup> PM<sub>2.5</sub> concentration, and <0.01 Hazard Index (HI), which would all be below BAAQMD thresholds of significance.

**Figure 1. Project Site, On-site Residential Receptors, Rail Line Segments Evaluated, and Locations of Maximum Cancer Risk**



- Plant 15839, which is an emergency backup generator operated by Santa Clara Police Facility, located at 601 El Camino Real, is about 700 feet southwest of the project site. At BAAQMD’s direction, risk and PM<sub>2.5</sub> concentrations from the facility were adjusted based

on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines*. According to the BAAQMD screening data (and adjusted for the 700 foot distance and 2015 OEHHA methodology), this facility would result in an adjusted lifetime cancer risk of 9.1 per million and 0.0  $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub> concentration, and <0.01 Hazard Index (HI), which would all be below BAAQMD thresholds of significance.

- Plant G9614, which is a gas dispensing facility operated by Costco Wholesale #129 located at 1601 Coleman Avenue, is about 900 feet west of the project site. At BAAQMD's direction, risk and PM<sub>2.5</sub> concentrations from the facility were adjusted based on BAAQMD's *Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities*. According to the BAAQMD screening data (and adjusted for the 900 foot distance and 2015 OEHHA methodology), this facility would result in an adjusted lifetime cancer risk of 4.0 per million and 0.0  $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub> concentration, and <0.01 Hazard Index (HI), which would all be below BAAQMD thresholds of significance.
- Plant 10821, which is facility operated by Hewlett-Packard Aviation, located at 1210 Aviation Avenue, is about 850 feet northeast of the project site. At BAAQMD's direction, risk and PM<sub>2.5</sub> concentrations from the facility were adjusted based on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines*. According to the BAAQMD screening data (and adjusted for the 850 foot distance and 2015 OEHHA methodology), this facility would result in an adjusted lifetime cancer risk of 1.5 per million and 0.0  $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub> concentration, and <0.01 Hazard Index (HI), which would all be below BAAQMD thresholds of significance.

### ***Recommended Measure 3: Mechanical Ventilation with Filtration***

Maintained ventilation systems with high-efficiency air filtration of the fresh air supply would reduce overall concentrations of DPM and PM<sub>2.5</sub> concentrations, substantially lowering cancer risk and annual PM<sub>2.5</sub> concentrations. These systems should be installed on either an individual unit-by-unit basis, with individual air intake and exhaust ducts ventilating each unit separately, or through a centralized building ventilation system.

The U.S. EPA reports particle size removal efficiency for filters rated MERV13 of 90 percent for particles in the size range of 1 to 3  $\mu\text{m}$  and less than 75 percent for particles 0.3 to 1  $\mu\text{m}$ .<sup>20,21</sup> The BAAQMD's *Planning Healthy Places* guidance indicates that MERV13 air filtration devices installed on an HVAC air intake system can remove 80-90 percent of indoor particulate matter (greater than 0.3 microns in diameter).<sup>22</sup>

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<sup>20</sup> American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., 2007. *Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size*. ANSI/ASHRAE Addendum b to Standard 52.2-2007

<sup>21</sup> United States Environmental Protection Agency (U.S. EPA), 2009. *Residential Air Cleaners (Second Edition): A Summary of Available Information*. U.S. EPA 402-F-09-002. Revised August 2009.

<sup>22</sup> Bay Area Air Quality Management District (BAAQMD), 2016. *Planning Healthy Places A Guidebook for addressing local sources of air pollutants in community planning*. May.

1. Design the site to limit exposure from sources of TACs and fine particulate matter (PM<sub>2.5</sub>) emissions. The final site layout shall locate operable windows and air intakes as far as possible and feasible from TAC sources. Any modifications to the site design shall incorporate buffers between residences and nearby TAC sources.
2. Install air filtration at all residential units. Air filtration devices shall be rated MERV13 or higher. To ensure adequate health protection to sensitive receptors, a ventilation system shall meet the following minimal design standards:
  - a. A MERV13 or higher rating;
  - b. At least one air exchange(s) per hour of fresh outside filtered air; and
  - c. At least four air exchange(s) per hour recirculation.
 Alternately, at the approval of the City, equivalent control technology may be used if it is shown by a qualified air quality consultant or heating, ventilation, and air conditioning (HVAC) engineer that it would reduce risk below significance thresholds.
3. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required. Recognizing that emissions from air pollution sources are decreasing, the maintenance period shall last as long as significant excess cancer risk or annual PM<sub>2.5</sub> exposures are predicted. Subsequent studies could be conducted by an air quality expert approved by the City to identify the ongoing need for the filtered ventilation systems as future information becomes available.
4. Ensure that the lease agreement and other property documents (1) require cleaning, maintenance, and monitoring of the affected units for air flow leaks; (2) include assurance that new owners and tenants are provided information on the ventilation system; and (3) include provisions that fees associated with owning or leasing a unit(s) in the building include funds for cleaning, maintenance, monitoring, and replacements of the filters, as needed.
5. Require that, prior to building occupancy, an authorized air pollutant consultant or HVAC engineer verify the installation of all necessary measures to reduce toxic air contaminant (TAC) exposure.
6. To the greatest degree possible, plant vegetation along the project site boundaries and around outdoor use areas. This barrier would include trees and shrubs that provide a dense vegetative barrier.

### With the Implementation of Recommended Measure 3

A properly installed and operated ventilation system with MERV 13 air filters will reduce PM<sub>2.5</sub> concentrations, including from DPM, from mobile and stationary sources by 80 percent or greater indoors when compared to outdoors. The U.S. EPA reports that people, on average, spend 90 percent of their time indoors.<sup>23</sup> The overall effectiveness calculations take into effect time spent outdoors. Assuming two hours of outdoor exposure plus one hour of open windows (calculated as outdoor exposure) per day, the overall effectiveness of the MERV 13 filtration systems would be

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<sup>23</sup> Klepeis, N.E., Nelsen, W.C., Ott, W.R., Robinson, J.P., Tsang, A.M., Switzer, P., Behar, J.V., Hern, S.C., and Engelmann, W.H. 2001. *The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants*. J. Expo Anal Environ Epidemiol. 2001 May-Jun;11(3):231-52.

70 percent. Implementation of Recommended Measure 3 is estimated to reduce single-source cancer risk from Coleman Avenue to 6.4 in one million, and single-source cancer risk from railroad traffic to 4.4 in one million, both of which would be below the BAAQMD significance thresholds.

### **Project Construction Activity**

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

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose community risks for sensitive receptors such as nearby residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to PM<sub>2.5</sub>. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A community risk assessment of the project construction activities was conducted that evaluated potential health effects of sensitive receptors at these nearby residences from construction emissions of DPM and PM<sub>2.5</sub>.<sup>24</sup> A review of the project site did not reveal any sensitive receptors within 1,000 feet of the project site. However, since project construction would be phased, future on-site residences would be considered sensitive receptors for later phases of construction since it is assumed that phases of the project would become operational once constructed. Emissions and dispersion modeling was conducted to estimate the on-site DPM concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

### **On-Site Construction TAC Emissions**

Construction period emissions were computed using CalEEMod along with projected construction activity, as described above. The CalEEMod model provided total annual PM<sub>10</sub> exhaust emissions (assumed to be DPM) 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) of 0.5015 tons (1,003 pounds) over the entire construction period. A trip length of one mile was used to represent vehicle travel while at or near the construction site. For modeling purposes, it was assumed that these emissions from on-road vehicles would occur at the construction site. Fugitive dust PM<sub>2.5</sub> emissions were also computed and included in this analysis. The model predicts emissions of 0.3763 tons (753 pounds) of fugitive PM<sub>2.5</sub> over the construction period. *Attachment 2* includes the CalEEMod input and output worksheets and risk modeling calculations.

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<sup>24</sup> DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

## Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM<sub>2.5</sub> concentrations at all the sensitive receptors that would be introduced by the proposed project. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.<sup>25</sup> Building 1 is scheduled to be occupied by residents by 2020. Phase 2 and Phase 3 would be under construction during 2020. Hence, to estimate DPM and PM<sub>2.5</sub> concentrations during 2020, four area sources were used – two for DPM and two for fugitive dust. Phase 4 would be constructed between 2022 – 2023. Hence, to compute concentration and risks during 2023 and 2024, two area sources were used – one for DPM and one for fugitive dust. Phase 5 would be constructed between 2024 – 2025. Again, for computing concentrations during 2024 and 2025, two area sources were used – one for DPM and one for fugitive dust. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area source. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive PM<sub>2.5</sub> emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area source. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 4 p.m., when the majority of construction activity would occur.

The modeling used a 5-year meteorological data set (2006 – 2010) from the Mineta San Jose International Airport meteorological station prepared for use with the AERMOD model by the CARB. Annual DPM and PM<sub>2.5</sub> concentrations from construction activities during the 2020 – 2026 period were calculated using the model. DPM and PM<sub>2.5</sub> concentrations were calculated at the future sensitive receptors. Receptor height of 1.5 meters (4.9 feet) and 4.5 meters (14.7 feet) was used to represent the breathing height of the future residents at the first and second floor levels of the proposed residential buildings

### Cancer Risks (Planning Consideration)

Results of this assessment indicate that the maximum excess residential cancer risks would be 122.6 in one million for an infant exposure and 2 in one million for an adult exposure. The maximally exposed individual (MEI) would be located at the first floor level of Building 3 (see Figure 2). The maximum residential excess cancer risk at the MEI would be greater than the BAAQMD significance threshold of 10 in one million. *Implementation of Mitigation Measures 1 would reduce this risk to below the BAAQMD threshold of significance.*

### Predicted Annual PM<sub>2.5</sub> Concentration (Planning Consideration)

The maximum-modeled annual PM<sub>2.5</sub> concentration, which is based on combined exhaust and fugitive dust emissions, was 1.4 µg/m<sup>3</sup> and would occur at the cancer risk MEI. The maximum

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<sup>25</sup> Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

annual PM<sub>2.5</sub> concentration would exceed the BAAQMD significance threshold of 0.3 µg/m<sup>3</sup>. The implementation of mitigation measure 1 would reduce PM<sub>2.5</sub> concentrations to 0.24 µg/m<sup>3</sup>, which is below the BAAQMD significance threshold.

#### Non-Cancer Hazards (Planning Consideration)

The maximum computed HI based on DPM concentration would be 0.12, which is lower than the BAAQMD significance threshold of 1.0

#### Project Emergency Generator testing and Maintenance

As previously described, the project would include one 100KW, diesel-fueled generator. The generator will be operated for testing and maintenance purposes, with a maximum of 50 hours per year of non-emergency operation under normal conditions. During testing periods the engine would typically be run for less than one hour under light engine loads. The engines would be required to meet U.S. EPA emission standards and consume commercially available California low sulfur diesel fuel.

The generator would require a permit from the BAAQMD, since it is equipped with an engine larger than 50 hp. As part of the BAAQMD permit requirements, an assessment that shows less-than-significant health risks from diesel particulate matter exposure would be required. The risk assessment, prepared by BAAQMD, would have to show that cancer risks are less than 10 per million and that the project includes Best Available Toxics Control Technology, which would set limits for diesel particulate matter emissions. Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality community risk impact.

Emissions from the testing and maintenance of the generators were calculated using CARB's OFFROAD emissions model for large compression-ignited engines above 25 horsepower. Results of generator modeling indicate average daily emissions of about 0.0004 pounds of DPM per day. Risk and PM<sub>2.5</sub> concentrations from a diesel generator of this size and average daily emissions were then calculated based on BAAQMD's *Risk and Hazards Emissions Screening Calculator (Beta Version)*. Results indicate that the project generator would result in an excess cancer risk of 2.4 per million,<sup>26</sup> PM<sub>2.5</sub> concentration of less than 0.01 µg/m<sup>3</sup> and HI of <0.01 at the nearest on-site receptor, all of which would be below BAAQMD thresholds of significance both on-site affecting project residences and at nearby sensitive receptors. *Attachment 3* includes emission factors and risk modeling calculations for the project emergency back-up generator.

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<sup>26</sup> Includes adjustment factor of 1.3744 to account for latest OEHHA methodology per correspondence with Alison Kirk, BAAQMD, November 23, 2015.

## Combined Construction Risk Assessment (Planning Consideration)

As discussed above, the project site is affected by multiple sources of TACs. In addition, two nearby construction projects were identified that could occur simultaneously with the proposed project: the Mission Town Center project<sup>27</sup> and the BART Silicon Valley Phase II extension project.<sup>28</sup> Table 5 shows the cancer risk associated with each source affecting the project site. The sum of impacts from combined sources (i.e., sources within 1,000 feet of the project) would exceed the cumulative threshold for cancer risk. However, with implementation of *Mitigation Measure 1 and Recommended Measure 3*, community risk at the project site would be reduced to below BAAQMD significance thresholds.

**Table 5. Cumulative Construction Risk Assessment at MEI**

| Source                                                                     | Maximum Cancer Risk (per million) | Maximum Annual PM <sub>2.5</sub> Concentration (µg/m <sup>3</sup> ) | Maximum Hazard Index |
|----------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------|----------------------|
| Project Construction                                                       | 122.6                             | 1.4                                                                 | 0.12                 |
| <i>Unmitigated</i>                                                         |                                   |                                                                     |                      |
| <i>Implementation of Mit. Measure 1 and Recmd. Measure 3</i>               | 6.1                               | <0.3                                                                | <0.01                |
| Mission Town Center Construction (Mitigated)                               | <2.7                              | <0.1                                                                | <0.01                |
| BART Silicon Valley Phase II Construction (Mitigated)                      | <1.6                              | <0.1                                                                | <0.02                |
| El Camino Real <sup>1</sup>                                                | --                                | --                                                                  | --                   |
| Coleman Avenue at 900 feet                                                 | 2.1                               | 0.1                                                                 | <0.03                |
| Railroad Traffic                                                           | <14.6                             | 0.0                                                                 | <0.01                |
| Plant 19357, Atlantic – San Jose <sup>1</sup><br>1250 Aviation Avenue      | --                                | --                                                                  | --                   |
| Plant 15839, Santa Clara Police Facility<br>601 El Camino Real             | <9.1                              | 0.0                                                                 | <0.01                |
| Plant G9614, Costco Wholesale #129<br>1601 Coleman Avenue <sup>1</sup>     | --                                | --                                                                  | --                   |
| Plant 10821, Hewlett-Packard Aviation<br>1210 Aviation Avenue <sup>1</sup> | --                                | --                                                                  | --                   |
| Project Generator                                                          | <0.4                              | <0.01                                                               | <0.01                |
| <b>Cumulative Total</b>                                                    |                                   |                                                                     |                      |
| <b>Unmitigated</b>                                                         | <153.1                            | 1.7                                                                 | <0.2                 |
| <b>Mitigated</b>                                                           | <36.2                             | <0.6                                                                | <0.09                |
| <b>BAAQMD Threshold – Cumulative Sources</b>                               | <b>&gt;100</b>                    | <b>&gt;0.8</b>                                                      | <b>&gt;10.0</b>      |
| <b>Exceeds Threshold After Mitigation?</b>                                 | <b>No</b>                         | <b>No</b>                                                           | <b>No</b>            |

Notes: <sup>1</sup>This source is located over 1,000 feet from the construction MEI.

<sup>27</sup> City of Santa Clara, 2015. *Mission Town Center Draft Environmental Impact Report*. November.

<sup>28</sup> Santa Clara Valley Transportation Authority, 2016. *VTA's BART Silicon Valley – Phase II Extension Project Air Quality Study*. November.

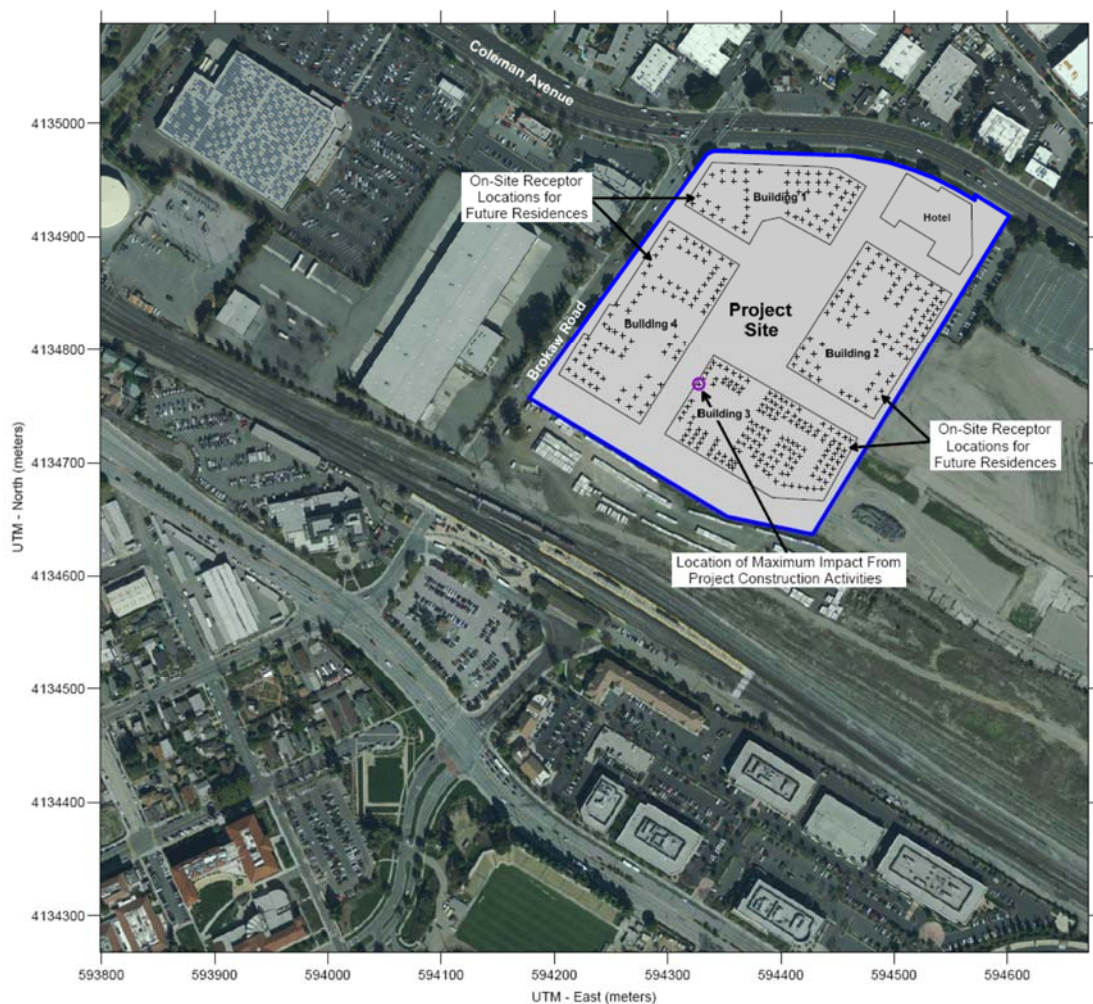
**Recommended Measure:** Selection of equipment during construction to minimize emissions. Such equipment selection would include the following.

See Mitigation Measure 1.

#### Effectiveness of Mitigation Measure 1

Implementation of Mitigation Measure 1 would reduce on-site diesel particulate matter exhaust emissions by approximately 95 percent. This would reduce the cancer risk proportionally, such that the maximum mitigated risk would be 6.1 in one million. Mitigation measure 1 and Recommended measure 3 would reduce PM<sub>2.5</sub> emissions by approximately 83 percent. This would proportionally reduce the maximum modeled PM<sub>2.5</sub> concentration to 0.24 µg/m<sup>3</sup>. After implementation of these measures, the project's community risk caused by construction activities and other cumulative sources would be below BAAQMD significance thresholds.

**Figure 2. Project Construction Site and Locations of On-Site Sensitive Receptors and Maximum TAC and PM<sub>2.5</sub> Impacts**



## **Supporting Documents**

Attachment 1: Health Risk Evaluation Methodology

Attachment 2: Construction Schedule, CalEEMod Output Files and Health Risk Calculations

Attachment 3: Rail Line Impacts Modeling

Attachment 4: Generator Risk Modeling

Attachment 5: Roadway Modeling

Attachment 6: Stationary Source

## Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.<sup>32</sup> These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.<sup>33</sup> This HRA used the recent 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.<sup>34</sup> Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

### Cancer Risk

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

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD, 95<sup>th</sup> percentile breathing rates are used for the third trimester and infant exposures, and 80<sup>th</sup> percentile breathing rates for child and adult exposures. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways).

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<sup>32</sup> OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

<sup>33</sup> CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

<sup>34</sup> BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. January 2016.

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

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

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

Where:

CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where:

C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

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

| Parameter                                           | Exposure Type → | Infant                    |          | Child    |          | Adult    |
|-----------------------------------------------------|-----------------|---------------------------|----------|----------|----------|----------|
|                                                     | Age Range →     | 3 <sup>rd</sup> Trimester | 0<2      | 2 < 9    | 2 < 16   | 16 - 30  |
| DPM Cancer Potency Factor (mg/kg-day) <sup>-1</sup> |                 | 1.10E+00                  | 1.10E+00 | 1.10E+00 | 1.10E+00 | 1.10E+00 |
| Daily Breathing Rate (L/kg-day)*                    |                 | 361                       | 1,090    | 631      | 572      | 261      |
| Inhalation Absorption Factor                        |                 | 1                         | 1        | 1        | 1        | 1        |
| Averaging Time (years)                              |                 | 70                        | 70       | 70       | 70       | 70       |
| Exposure Duration (years)                           |                 | 0.25                      | 2        | 14       | 14       | 14       |
| Exposure Frequency (days/year)                      |                 | 350                       | 350      | 350      | 350      | 350      |
| Age Sensitivity Factor                              |                 | 10                        | 10       | 3        | 3        | 1        |
| Fraction of Time at Home                            |                 | 0.85-1.0                  | 0.85-1.0 | 0.72-1.0 | 0.72-1.0 | 0.73     |

\* 95<sup>th</sup> percentile breathing rates for 3<sup>rd</sup> trimester and infants and 80<sup>th</sup> percentile for children and adults

## Attachment 2 : Construction Schedule, CalEEMod Output Files, Health Risk Calculations

|                                                                                                                                   |                               |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------|-------------------------------|-----------|-----------------|--------------------|----------------------------------------------------------------------------------------------------------|----|-------------|--|
| Project Name:                                                                                                                     |                               | Gateway Crossings (Coleman/Brokaw) Phase 1 |                               |           |                 |                    |                                                                                                          |    |             |  |
| Project Size                                                                                                                      | 261 Dwelling Units            | 21.4 ac (includes site)                    | total project acres disturbed |           |                 |                    |                                                                                                          |    |             |  |
|                                                                                                                                   | 238,671 s.f. residential      | 5,300 s.f. retail                          |                               |           |                 |                    |                                                                                                          |    |             |  |
|                                                                                                                                   | 324,000 s.f. conditioned area | n/a s.f. other, specify:                   |                               |           |                 |                    |                                                                                                          |    |             |  |
|                                                                                                                                   | 7,000 s.f. other, specify:    | Amenity                                    |                               |           |                 |                    |                                                                                                          |    |             |  |
|                                                                                                                                   | 256,900 s.f. parking garage   | 485 spaces                                 |                               |           |                 |                    |                                                                                                          |    |             |  |
|                                                                                                                                   | n/a s.f. parking lot          | 4 spaces                                   |                               |           |                 |                    |                                                                                                          |    |             |  |
| Construction Hours                                                                                                                | 7 am to                       | 4 pm                                       |                               |           |                 |                    |                                                                                                          |    |             |  |
| Complete ALL Portions in Yellow                                                                                                   |                               |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
| Qty                                                                                                                               | Description                   | HP                                         | Load Factor                   | Hours/day | Total Work Days | Avg. Hours per day | Comments                                                                                                 |    |             |  |
|                                                                                                                                   |                               |                                            |                               |           |                 |                    | Typical Equipment Type & Load Factors                                                                    |    |             |  |
|                                                                                                                                   |                               |                                            |                               |           |                 |                    | OFFROAD Equipment Type                                                                                   | HP | Load Factor |  |
| Demolition                                                                                                                        | Start Date: e.g., 9/1/2016    | Total phase:                               |                               |           |                 |                    | Overall Import/Export Volumes                                                                            |    |             |  |
|                                                                                                                                   | End Date:                     |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
| Concrete/Industrial Saws                                                                                                          | 81                            | 0.73                                       |                               |           |                 | #DIV/0!            | Demolition Volume                                                                                        |    |             |  |
| Excavators                                                                                                                        | 162                           | 0.38                                       |                               |           |                 | #DIV/0!            | Square footage of buildings to be demolished (or total tons to be hauled)                                |    |             |  |
| Rubber-Tired Dozers                                                                                                               | 255                           | 0.4                                        |                               |           |                 | #DIV/0!            | Concrete/Industrial Saws                                                                                 |    |             |  |
| Tractors/Loaders/Backhoes                                                                                                         | 97                            | 0.37                                       |                               |           |                 | #DIV/0!            | Cranes                                                                                                   |    |             |  |
|                                                                                                                                   |                               |                                            |                               |           |                 |                    | Crawler Tractors                                                                                         |    |             |  |
| Site Preparation                                                                                                                  | Start Date: 10/1/2018         | Total phase:                               |                               | 20        |                 |                    | Any pavement demolished and hauled? ? tons                                                               |    |             |  |
|                                                                                                                                   | End Date: 11/1/2018           |                                            |                               |           |                 |                    | Crushing/Proc. Equipment                                                                                 |    |             |  |
| 3 Scrapers                                                                                                                        | 361                           | 0.48                                       |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| 1 Skid Steer Loaders                                                                                                              | 64                            | 0.37                                       |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| 2 Graders                                                                                                                         | 174                           | 0.41                                       |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| 2 Rubber Tired Dozers                                                                                                             | 255                           | 0.4                                        |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| 1 Tractors/Loaders/Backhoes                                                                                                       | 97                            | 0.37                                       |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
|                                                                                                                                   |                               |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
| Grading / Excavation                                                                                                              | Start Date: 11/1/2018         | Total phase:                               |                               | 40        |                 |                    | Soil Hauling Volume                                                                                      |    |             |  |
|                                                                                                                                   | End Date: 1/1/2019            |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
| 3 Scrapers                                                                                                                        | 361                           | 0.48                                       |                               | 8         | 40              | 8                  | Export volume = 23,542 cubic yards?                                                                      |    |             |  |
| 2 Excavators                                                                                                                      | 162                           | 0.38                                       |                               | 8         | 40              | 8                  | Import volume = ? cubic yards?                                                                           |    |             |  |
| 2 Graders                                                                                                                         | 174                           | 0.41                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| 1 Rubber Tired Dozers                                                                                                             | 255                           | 0.4                                        |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| 1 Tractors/Loaders/Backhoes                                                                                                       | 97                            | 0.37                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| 2 Rollers                                                                                                                         | 80                            | 0.38                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| 1 Skid Steer Loaders                                                                                                              | 64                            | 0.37                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| 1 Sweepers                                                                                                                        | 64                            | 0.46                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| Trenching                                                                                                                         | Start Date: 12/1/2018         | Total phase:                               |                               | 20        |                 |                    |                                                                                                          |    |             |  |
|                                                                                                                                   | End Date: 1/1/2019            |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
| 1 Tractor/Loader/Backhoe                                                                                                          | 97                            | 0.37                                       |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| 2 Excavators                                                                                                                      | 162                           | 0.38                                       |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| 2 Loaders                                                                                                                         | 97                            | 0.37                                       |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| 1 Rough Terrain Forklifts                                                                                                         | 100                           | 0.4                                        |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| 1 Skid Steer Loaders                                                                                                              | 64                            | 0.37                                       |                               | 8         | 20              | 8                  |                                                                                                          |    |             |  |
| Building - Exterior                                                                                                               | Start Date: 1/1/2019          | Total phase:                               |                               | 100       |                 |                    | Cement Trucks? ? Total Round-Trips                                                                       |    |             |  |
|                                                                                                                                   | End Date: 6/1/2019            |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
| 1 Cranes                                                                                                                          | 226                           | 0.29                                       |                               | 8         | 100             | 8                  | Electric? (Y/N) Otherwise assumed diesel                                                                 |    |             |  |
| 4 Forklifts                                                                                                                       | 89                            | 0.2                                        |                               | 8         | 100             | 8                  | Liquid Propane (LPG)? (Y/N) Otherwise Assumed diesel                                                     |    |             |  |
| 1 Generator Sets                                                                                                                  | 84                            | 0.74                                       |                               | 8         | 100             | 8                  | Or temporary line power? (Y/N)                                                                           |    |             |  |
| 1 Tractors/Loaders/Backhoes                                                                                                       | 97                            | 0.37                                       |                               | 8         | 100             | 8                  | otherwise, assume diesel generator                                                                       |    |             |  |
| 4 Welders                                                                                                                         | 46                            | 0.45                                       |                               | 8         | 100             | 8                  |                                                                                                          |    |             |  |
| 3 Boom/Aerial Lifts                                                                                                               | 62                            | 0.31                                       |                               | 8         | 100             | 8                  |                                                                                                          |    |             |  |
| 3 Other Construction Equipment                                                                                                    | 171                           | 0.42                                       |                               | 8         | 100             | 8                  |                                                                                                          |    |             |  |
| Building - Interior/Architectural Coating                                                                                         | Start Date: 5/1/2019          | Total phase:                               |                               | 100       |                 |                    |                                                                                                          |    |             |  |
|                                                                                                                                   | End Date: 10/1/2019           |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
| 2 Air Compressors                                                                                                                 | 78                            | 0.48                                       |                               | 8         | 40              | 3.2                |                                                                                                          |    |             |  |
| 1 Aerial Lift                                                                                                                     | 62                            | 0.31                                       |                               | 8         | 100             | 8                  |                                                                                                          |    |             |  |
| 1 Cranes                                                                                                                          | 226                           | 0.29                                       |                               | 8         | 50              | 4                  |                                                                                                          |    |             |  |
| 1 Forklifts                                                                                                                       | 89                            | 0.2                                        |                               | 8         | 100             | 8                  |                                                                                                          |    |             |  |
| Paving                                                                                                                            | Start Date: 7/1/2019          | Total phase:                               |                               | 40        |                 |                    |                                                                                                          |    |             |  |
|                                                                                                                                   | Start Date: 9/1/2019          |                                            |                               |           |                 |                    |                                                                                                          |    |             |  |
| 1 Cement and Mortar Mixers                                                                                                        | 9                             | 0.56                                       |                               | 8         | 20              | 4                  | Asphalt? 800 cubic yards or ____ round trips?                                                            |    |             |  |
| 1 Pavers                                                                                                                          | 125                           | 0.42                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| 1 Paving Equipment                                                                                                                | 130                           | 0.36                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| 2 Rollers                                                                                                                         | 80                            | 0.38                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| 1 Tractors/Loaders/Backhoes                                                                                                       | 97                            | 0.37                                       |                               | 8         | 20              | 4                  |                                                                                                          |    |             |  |
| 1 Sweepers                                                                                                                        | 64                            | 0.46                                       |                               | 8         | 40              | 8                  |                                                                                                          |    |             |  |
| Equipment listed in this sheet is to provide an example of inputs<br>It is assumed that water trucks would be used during grading |                               |                                            |                               |           |                 |                    | Add or subtract phases and equipment, as appropriate<br>Modify horsepower or load factor, as appropriate |    |             |  |

|                                                                                                                                   |                               |                                            |                                 |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------|---------------------------------|--------------|-----------------|--------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------|-------------|------|
| Project Name:                                                                                                                     |                               | Gateway Crossings (Coleman/Brokaw) Phase 2 |                                 |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
| Project Size                                                                                                                      | 332 Dwelling Units            | n/a                                        | total project acres disturbed   |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
|                                                                                                                                   | 307,994 s.f. residential      | n/a                                        | s.f. retail                     |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
|                                                                                                                                   | 414,000 s.f. conditioned area | n/a                                        | s.f. other, specify:            |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
|                                                                                                                                   | 8,900 s.f. other, specify:    | Amenity                                    | Complete ALL Portions in Yellow |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
|                                                                                                                                   | 256,900 s.f. parking garage   | 625 spaces                                 |                                 |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
| n/a s.f. parking lot                                                                                                              | 7 spaces                      |                                            |                                 |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
| Construction Hours                                                                                                                | 7 am to                       | 4 pm                                       |                                 |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
| Qty                                                                                                                               | Description                   | HP                                         | Load Factor                     | Hours/day    | Total Work Days | Avg. Hours per day | Comments                                                                                                 |                                     |                                    |             |      |
|                                                                                                                                   |                               |                                            |                                 |              |                 |                    | Typical Equipment Type & Load Factors                                                                    |                                     |                                    |             |      |
| Demolition                                                                                                                        |                               | Start Date:                                | e.g., 9/1/2016                  | Total phase: |                 |                    | Overall Import/Export Volumes                                                                            | OFFROAD Equipment Type              | HP                                 | Load Factor |      |
|                                                                                                                                   |                               | End Date:                                  |                                 |              |                 |                    |                                                                                                          | Aerial Lifts                        | 62                                 | 0.31        |      |
| Concrete/Industrial Saws                                                                                                          |                               | 81                                         | 0.73                            |              |                 | #DIV/0!            | Demolition Volume                                                                                        | Air Compressors                     | 78                                 | 0.48        |      |
| Excavators                                                                                                                        |                               | 162                                        | 0.38                            |              |                 | #DIV/0!            | Square footage of buildings to be demolished (or total tons to be hauled)                                | Bore/Drill Rigs                     | 205                                | 0.5         |      |
| Rubber-Tired Dozers                                                                                                               |                               | 255                                        | 0.4                             |              |                 | #DIV/0!            | ? square feet or ? Hauling volume (tons)                                                                 | Cement and Mortar Mixers            | 9                                  | 0.56        |      |
| Tractors/Loaders/Backhoes                                                                                                         |                               | 97                                         | 0.37                            |              |                 | #DIV/0!            | Any pavement demolished and hauled? ? tons                                                               | Concrete/Industrial Saws            | 81                                 | 0.73        |      |
| Site Preparation                                                                                                                  |                               | Start Date:                                | 7/1/2019                        | Total phase: | 20              |                    |                                                                                                          | Cranes                              | 226                                | 0.29        |      |
|                                                                                                                                   |                               | End Date:                                  | 8/1/2019                        |              |                 |                    |                                                                                                          | Crawler Tractors                    | 208                                | 0.43        |      |
| 3                                                                                                                                 | Scrapers                      | 361                                        | 0.48                            | 8            | 20              | 8                  |                                                                                                          | Crushing/Proc. Equipment            | 85                                 | 0.78        |      |
| 1                                                                                                                                 | Skid Steer Loaders            | 64                                         | 0.37                            | 8            | 20              | 8                  |                                                                                                          |                                     |                                    |             |      |
| 2                                                                                                                                 | Graders                       | 174                                        | 0.41                            | 8            | 20              | 8                  |                                                                                                          | Dumpers/Tenders                     | 16                                 | 0.38        |      |
| 2                                                                                                                                 | Rubber Tired Dozers           | 255                                        | 0.4                             | 8            | 20              | 8                  |                                                                                                          | Excavators                          | 162                                | 0.38        |      |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes     | 97                                         | 0.37                            | 8            | 20              | 8                  |                                                                                                          | Forklifts                           | 89                                 | 0.2         |      |
| Grading / Excavation                                                                                                              |                               | Start Date:                                | 8/1/2019                        | Total phase: | 40              |                    |                                                                                                          | Generator Sets                      | 84                                 | 0.74        |      |
|                                                                                                                                   |                               | End Date:                                  | 10/1/2019                       |              |                 |                    |                                                                                                          | Graders                             | 174                                | 0.41        |      |
| 3                                                                                                                                 | Scrapers                      | 361                                        | 0.48                            | 8            | 40              | 8                  |                                                                                                          | Off-Highway Tractors                | 122                                | 0.44        |      |
| 2                                                                                                                                 | Excavators                    | 162                                        | 0.38                            | 8            | 40              | 8                  |                                                                                                          | Off-Highway Trucks                  | 400                                | 0.38        |      |
| 2                                                                                                                                 | Graders                       | 174                                        | 0.41                            | 8            | 40              | 8                  |                                                                                                          | Export volume = 19,496 cubic yards? | Other Construction Equipment       | 171         | 0.42 |
| 1                                                                                                                                 | Rubber Tired Dozers           | 255                                        | 0.4                             | 8            | 40              | 8                  |                                                                                                          | Import volume = 2 cubic yards?      | Other General Industrial Equipment | 150         | 0.34 |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes     | 97                                         | 0.37                            | 8            | 40              | 8                  |                                                                                                          | Other Material Handling Equipment   | 167                                | 0.4         |      |
| 2                                                                                                                                 | Rollers                       | 80                                         | 0.38                            | 8            | 40              | 8                  |                                                                                                          | Pavers                              | 125                                | 0.42        |      |
| 1                                                                                                                                 | Skid Steer Loaders            | 64                                         | 0.37                            | 8            | 40              | 8                  |                                                                                                          | Paving Equipment                    | 130                                | 0.36        |      |
| 1                                                                                                                                 | Sweepers                      | 64                                         | 0.46                            | 8            | 40              | 8                  |                                                                                                          |                                     |                                    |             |      |
| Trenching                                                                                                                         |                               | Start Date:                                | 9/1/2019                        | Total phase: | 20              |                    |                                                                                                          | Plate Compactors                    | 8                                  | 0.43        |      |
|                                                                                                                                   |                               | End Date:                                  | 10/1/2019                       |              |                 |                    |                                                                                                          | Pressure Washers                    | 13                                 | 0.2         |      |
| 1                                                                                                                                 | Tractor/Loader/Backhoe        | 97                                         | 0.37                            | 8            | 20              | 8                  |                                                                                                          | Pumps                               | 84                                 | 0.74        |      |
| 2                                                                                                                                 | Excavators                    | 162                                        | 0.38                            | 8            | 20              | 8                  |                                                                                                          | Rollers                             | 80                                 | 0.38        |      |
| 2                                                                                                                                 | Loaders                       | 97                                         | 0.37                            | 8            | 20              | 8                  |                                                                                                          | Rough Terrain Forklifts             | 100                                | 0.4         |      |
| 1                                                                                                                                 | Rough Terrain Forklifts       | 100                                        | 0.4                             | 8            | 20              | 8                  |                                                                                                          | Rubber Tired Dozers                 | 255                                | 0.4         |      |
| 1                                                                                                                                 | Skid Steer Loaders            | 64                                         | 0.37                            | 8            | 20              | 8                  |                                                                                                          |                                     |                                    |             |      |
| Building - Exterior                                                                                                               |                               | Start Date:                                | 10/1/2019                       | Total phase: | 100             |                    |                                                                                                          | Rubber Tired Loaders                | 199                                | 0.36        |      |
|                                                                                                                                   |                               | End Date:                                  | 3/1/2020                        |              |                 |                    |                                                                                                          | Scrapers                            | 361                                | 0.48        |      |
| 1                                                                                                                                 | Cranes                        | 226                                        | 0.29                            | 8            | 100             | 8                  |                                                                                                          | Signal Boards                       | 6                                  | 0.82        |      |
| 4                                                                                                                                 | Forklifts                     | 89                                         | 0.2                             | 8            | 100             | 8                  |                                                                                                          | Skid Steer Loaders                  | 64                                 | 0.37        |      |
| 1                                                                                                                                 | Generator Sets                | 84                                         | 0.74                            | 8            | 100             | 8                  |                                                                                                          | Surfacing Equipment                 | 253                                | 0.3         |      |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes     | 97                                         | 0.37                            | 8            | 100             | 8                  |                                                                                                          | Sweepers/Scrubbers                  | 64                                 | 0.46        |      |
| 4                                                                                                                                 | Welders                       | 46                                         | 0.45                            | 8            | 100             | 8                  |                                                                                                          | Tractors/Loaders/Backhoes           | 97                                 | 0.37        |      |
| 3                                                                                                                                 | Boom/Aerial Lifts             | 62                                         | 0.31                            | 8            | 100             | 8                  |                                                                                                          | Trenchers                           | 80                                 | 0.5         |      |
| 3                                                                                                                                 | Other Construction Equipment  | 171                                        | 0.42                            | 8            | 100             | 8                  |                                                                                                          | Welders                             | 46                                 | 0.45        |      |
| Building - Interior/Architectural Coating                                                                                         |                               | Start Date:                                | 2/1/2020                        | Total phase: | 100             |                    |                                                                                                          |                                     |                                    |             |      |
|                                                                                                                                   |                               | End Date:                                  | 7/1/2020                        |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
| 2                                                                                                                                 | Air Compressors               | 78                                         | 0.48                            | 8            | 40              | 3.2                |                                                                                                          |                                     |                                    |             |      |
| 1                                                                                                                                 | Aerial Lift                   | 62                                         | 0.31                            | 8            | 100             | 8                  |                                                                                                          |                                     |                                    |             |      |
| 1                                                                                                                                 | Cranes                        | 226                                        | 0.29                            | 8            | 50              | 4                  |                                                                                                          |                                     |                                    |             |      |
| 1                                                                                                                                 | Forklifts                     | 89                                         | 0.2                             | 8            | 100             | 8                  |                                                                                                          |                                     |                                    |             |      |
| Paving                                                                                                                            |                               | Start Date:                                | 4/1/2020                        | Total phase: | 40              |                    |                                                                                                          |                                     |                                    |             |      |
|                                                                                                                                   |                               | Start Date:                                | 6/1/2020                        |              |                 |                    |                                                                                                          |                                     |                                    |             |      |
| 1                                                                                                                                 | Cement and Mortar Mixers      | 9                                          | 0.56                            | 8            | 20              | 4                  |                                                                                                          |                                     |                                    |             |      |
| 1                                                                                                                                 | Pavers                        | 125                                        | 0.42                            | 8            | 40              | 8                  |                                                                                                          |                                     |                                    |             |      |
| 1                                                                                                                                 | Paving Equipment              | 130                                        | 0.36                            | 8            | 40              | 8                  |                                                                                                          |                                     |                                    |             |      |
| 2                                                                                                                                 | Rollers                       | 80                                         | 0.38                            | 8            | 40              | 8                  |                                                                                                          |                                     |                                    |             |      |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes     | 97                                         | 0.37                            | 8            | 20              | 4                  |                                                                                                          |                                     |                                    |             |      |
| 1                                                                                                                                 | Sweepers                      | 64                                         | 0.46                            | 8            | 40              | 8                  |                                                                                                          |                                     |                                    |             |      |
| Equipment listed in this sheet is to provide an example of inputs<br>It is assumed that water trucks would be used during grading |                               |                                            |                                 |              |                 |                    | Add or subtract phases and equipment, as appropriate<br>Modify horsepower or load factor, as appropriate |                                     |                                    |             |      |

|                                                                                                                                   |                                                  |                                                   |                       |                                                                                                          |                               |                           |                                                      |                                                  |           |                    |                                        |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------|------------------------------------------------------|--------------------------------------------------|-----------|--------------------|----------------------------------------|
| <b>Project Name:</b>                                                                                                              |                                                  | <b>Gateway Crossings (Coleman/Brokaw) Phase 3</b> |                       |                                                                                                          |                               |                           |                                                      |                                                  |           |                    |                                        |
|                                                                                                                                   | <b>Project Size</b>                              | 432                                               | Dwelling Units        | n/a                                                                                                      | total project acres disturbed |                           |                                                      |                                                  |           |                    |                                        |
|                                                                                                                                   |                                                  | 378,924                                           | s.f. residential      | 4,900                                                                                                    |                               |                           |                                                      |                                                  |           |                    | s.f. retail                            |
|                                                                                                                                   |                                                  | 522,000                                           | s.f. conditioned area | n/a                                                                                                      |                               |                           |                                                      |                                                  |           |                    | s.f. other, specify:                   |
|                                                                                                                                   |                                                  | 7,400                                             | s.f. other, specify:  | Amenity                                                                                                  |                               |                           |                                                      |                                                  |           |                    | <b>Complete ALL Portions in Yellow</b> |
|                                                                                                                                   |                                                  | 311,800                                           | s.f. parking garage   | 760                                                                                                      |                               |                           |                                                      |                                                  |           |                    |                                        |
| n/a                                                                                                                               | s.f. parking lot                                 | 6                                                 | spaces                |                                                                                                          |                               |                           |                                                      |                                                  |           |                    |                                        |
| <b>Construction Hours</b>                                                                                                         |                                                  | 7                                                 | am to                 | 4                                                                                                        | pm                            |                           |                                                      |                                                  |           |                    |                                        |
| <b>Qty</b>                                                                                                                        | <b>Description</b>                               | <b>HP</b>                                         | <b>Load Factor</b>    | <b>Hours/day</b>                                                                                         | <b>Total Work Days</b>        | <b>Avg. Hours per day</b> | <b>Comments</b>                                      |                                                  |           |                    |                                        |
|                                                                                                                                   |                                                  |                                                   |                       |                                                                                                          |                               |                           |                                                      | <b>Typical Equipment Type &amp; Load Factors</b> |           |                    |                                        |
|                                                                                                                                   | <b>Demolition</b>                                | <b>Start Date:</b>                                | e.g., 9/1/2016        | <b>Total phase:</b>                                                                                      |                               |                           | <b>Overall Import/Export Volumes</b>                 | <b>OFFROAD Equipment Type</b>                    | <b>HP</b> | <b>Load Factor</b> |                                        |
|                                                                                                                                   |                                                  | <b>End Date:</b>                                  |                       |                                                                                                          |                               |                           |                                                      | Aerial Lifts                                     | 62        | 0.31               |                                        |
|                                                                                                                                   | Concrete/Industrial Saws                         | 81                                                | 0.73                  |                                                                                                          |                               | #DIV/0!                   | <b>Demolition Volume</b>                             | Air Compressors                                  | 78        | 0.48               |                                        |
|                                                                                                                                   | Excavators                                       | 162                                               | 0.38                  |                                                                                                          |                               | #DIV/0!                   | Square footage of buildings to be demolished         | Bore/Drill Rigs                                  | 205       | 0.5                |                                        |
|                                                                                                                                   | Rubber-Tired Dozers                              | 255                                               | 0.4                   |                                                                                                          |                               | #DIV/0!                   | (or total tons to be hauled)                         | Cement and Mortar Mixers                         | 9         | 0.56               |                                        |
|                                                                                                                                   | Tractors/Loaders/Backhoes                        | 97                                                | 0.37                  |                                                                                                          |                               | #DIV/0!                   | ? square feet or                                     | Concrete/Industrial Saws                         | 81        | 0.73               |                                        |
|                                                                                                                                   |                                                  |                                                   |                       |                                                                                                          |                               |                           | ? Hauling volume (tons)                              | Cranes                                           | 226       | 0.29               |                                        |
|                                                                                                                                   | <b>Site Preparation</b>                          | <b>Start Date:</b>                                | 4/1/2020              | <b>Total phase:</b>                                                                                      | 20                            |                           | Any pavement demolished and hauled? ? tons           | Crawler Tractors                                 | 208       | 0.43               |                                        |
|                                                                                                                                   |                                                  | <b>End Date:</b>                                  | 5/1/2020              |                                                                                                          |                               |                           |                                                      | Crushing/Proc. Equipment                         | 85        | 0.78               |                                        |
| 3                                                                                                                                 | Scrapers                                         | 361                                               | 0.48                  | 8                                                                                                        | 20                            | 8                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Skid Steer Loaders                               | 64                                                | 0.37                  | 8                                                                                                        | 20                            | 8                         |                                                      |                                                  |           |                    |                                        |
| 2                                                                                                                                 | Graders                                          | 174                                               | 0.41                  | 8                                                                                                        | 20                            | 8                         |                                                      | Dumpers/Tenders                                  | 16        | 0.38               |                                        |
| 2                                                                                                                                 | Rubber Tired Dozers                              | 255                                               | 0.4                   | 8                                                                                                        | 20                            | 8                         |                                                      | Excavators                                       | 162       | 0.38               |                                        |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                        | 97                                                | 0.37                  | 8                                                                                                        | 20                            | 8                         |                                                      | Forklifts                                        | 89        | 0.2                |                                        |
|                                                                                                                                   |                                                  |                                                   |                       |                                                                                                          |                               |                           |                                                      | Generator Sets                                   | 84        | 0.74               |                                        |
|                                                                                                                                   | <b>Grading / Excavation</b>                      | <b>Start Date:</b>                                | 5/1/2020              | <b>Total phase:</b>                                                                                      | 40                            |                           |                                                      | Graders                                          | 174       | 0.41               |                                        |
|                                                                                                                                   |                                                  | <b>End Date:</b>                                  | 7/1/2020              |                                                                                                          |                               |                           | <b>Soil Hauling Volume</b>                           | Off-Highway Tractors                             | 122       | 0.44               |                                        |
| 3                                                                                                                                 | Scrapers                                         | 361                                               | 0.48                  | 8                                                                                                        | 40                            | 8                         |                                                      | Off-Highway Trucks                               | 400       | 0.38               |                                        |
| 2                                                                                                                                 | Excavators                                       | 162                                               | 0.38                  | 8                                                                                                        | 40                            | 8                         | Export volume = 20,919 cubic yards?                  | Other Construction Equipment                     | 171       | 0.42               |                                        |
| 2                                                                                                                                 | Graders                                          | 174                                               | 0.41                  | 8                                                                                                        | 40                            | 8                         | Import volume = ? cubic yards?                       | Other General Industrial Equipment               | 150       | 0.34               |                                        |
| 1                                                                                                                                 | Rubber Tired Dozers                              | 255                                               | 0.4                   | 8                                                                                                        | 40                            | 8                         |                                                      | Other Material Handling Equipment                | 167       | 0.4                |                                        |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                        | 97                                                | 0.37                  | 8                                                                                                        | 40                            | 8                         |                                                      | Pavers                                           | 125       | 0.42               |                                        |
| 2                                                                                                                                 | Rollers                                          | 80                                                | 0.38                  | 8                                                                                                        | 40                            | 8                         |                                                      | Paving Equipment                                 | 130       | 0.36               |                                        |
| 1                                                                                                                                 | Skid Steer Loaders                               | 64                                                | 0.37                  | 8                                                                                                        | 40                            | 8                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Sweepers                                         | 64                                                | 0.46                  | 8                                                                                                        | 40                            | 8                         |                                                      | Plate Compactors                                 | 8         | 0.43               |                                        |
|                                                                                                                                   | <b>Trenching</b>                                 | <b>Start Date:</b>                                | 6/1/2020              | <b>Total phase:</b>                                                                                      | 20                            |                           |                                                      | Pressure Washers                                 | 13        | 0.2                |                                        |
|                                                                                                                                   |                                                  | <b>End Date:</b>                                  | 7/1/2020              |                                                                                                          |                               |                           |                                                      | Pumps                                            | 84        | 0.74               |                                        |
| 1                                                                                                                                 | Tractor/Loader/Backhoe                           | 97                                                | 0.37                  | 8                                                                                                        | 20                            | 8                         |                                                      | Rollers                                          | 80        | 0.38               |                                        |
| 2                                                                                                                                 | Excavators                                       | 162                                               | 0.38                  | 8                                                                                                        | 20                            | 8                         |                                                      | Rough Terrain Forklifts                          | 100       | 0.4                |                                        |
| 2                                                                                                                                 | Loaders                                          | 97                                                | 0.37                  | 8                                                                                                        | 20                            | 8                         |                                                      | Rubber Tired Dozers                              | 255       | 0.4                |                                        |
| 1                                                                                                                                 | Rough Terrain Forklifts                          | 100                                               | 0.4                   | 8                                                                                                        | 20                            | 8                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Skid Steer Loaders                               | 64                                                | 0.37                  | 8                                                                                                        | 20                            | 8                         |                                                      | Rubber Tired Loaders                             | 199       | 0.36               |                                        |
|                                                                                                                                   | <b>Building - Exterior</b>                       | <b>Start Date:</b>                                | 7/1/2020              | <b>Total phase:</b>                                                                                      | 100                           |                           | <b>Cement Trucks? ? Total Round-Trips</b>            | Scrapers                                         | 361       | 0.48               |                                        |
|                                                                                                                                   |                                                  | <b>End Date:</b>                                  | 12/1/2020             |                                                                                                          |                               |                           | Electric? (Y/N) Otherwise assumed diesel             | Signal Boards                                    | 6         | 0.82               |                                        |
| 1                                                                                                                                 | Cranes                                           | 226                                               | 0.29                  | 8                                                                                                        | 100                           | 8                         | Liquid Propane (LPG)? (Y/N) Otherwise Assumed diesel | Skid Steer Loaders                               | 64        | 0.37               |                                        |
| 4                                                                                                                                 | Forklifts                                        | 89                                                | 0.2                   | 8                                                                                                        | 100                           | 8                         | Or temporary line power? (Y/N)                       | Surfacing Equipment                              | 253       | 0.3                |                                        |
| 1                                                                                                                                 | Generator Sets                                   | 84                                                | 0.74                  | 8                                                                                                        | 100                           | 8                         | otherwise, assume diesel generator                   | Sweepers/Scrubbers                               | 64        | 0.46               |                                        |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                        | 97                                                | 0.37                  | 8                                                                                                        | 100                           | 8                         |                                                      | Tractors/Loaders/Backhoes                        | 97        | 0.37               |                                        |
| 4                                                                                                                                 | Welders                                          | 46                                                | 0.45                  | 8                                                                                                        | 100                           | 8                         |                                                      | Trenchers                                        | 80        | 0.5                |                                        |
| 3                                                                                                                                 | Boom/Aerial Lifts                                | 62                                                | 0.31                  | 8                                                                                                        | 100                           | 8                         |                                                      | Welders                                          | 46        | 0.45               |                                        |
| 3                                                                                                                                 | Other Construction Equipment                     | 171                                               | 0.42                  | 8                                                                                                        | 100                           | 8                         |                                                      |                                                  |           |                    |                                        |
|                                                                                                                                   | <b>Building - Interior/Architectural Coating</b> | <b>Start Date:</b>                                | 11/1/2020             | <b>Total phase:</b>                                                                                      | 100                           |                           |                                                      |                                                  |           |                    |                                        |
|                                                                                                                                   |                                                  | <b>End Date:</b>                                  | 4/1/2021              |                                                                                                          |                               |                           |                                                      |                                                  |           |                    |                                        |
| 2                                                                                                                                 | Air Compressors                                  | 78                                                | 0.48                  | 8                                                                                                        | 40                            | 3.2                       |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Aerial Lift                                      | 62                                                | 0.31                  | 8                                                                                                        | 100                           | 8                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Cranes                                           | 226                                               | 0.29                  | 8                                                                                                        | 50                            | 4                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Forklifts                                        | 89                                                | 0.2                   | 8                                                                                                        | 100                           | 8                         |                                                      |                                                  |           |                    |                                        |
|                                                                                                                                   | <b>Paving</b>                                    | <b>Start Date:</b>                                | 1/1/2021              | <b>Total phase:</b>                                                                                      | 40                            |                           | <b>Asphalt? 800 cubic yards or ____ round trips?</b> |                                                  |           |                    |                                        |
|                                                                                                                                   |                                                  | <b>Start Date:</b>                                | 3/1/2021              |                                                                                                          |                               |                           |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Cement and Mortar Mixers                         | 9                                                 | 0.56                  | 8                                                                                                        | 20                            | 4                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Pavers                                           | 125                                               | 0.42                  | 8                                                                                                        | 40                            | 8                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Paving Equipment                                 | 130                                               | 0.36                  | 8                                                                                                        | 40                            | 8                         |                                                      |                                                  |           |                    |                                        |
| 2                                                                                                                                 | Rollers                                          | 80                                                | 0.38                  | 8                                                                                                        | 40                            | 8                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                        | 97                                                | 0.37                  | 8                                                                                                        | 20                            | 4                         |                                                      |                                                  |           |                    |                                        |
| 1                                                                                                                                 | Sweepers                                         | 64                                                | 0.46                  | 8                                                                                                        | 40                            | 8                         |                                                      |                                                  |           |                    |                                        |
| Equipment listed in this sheet is to provide an example of inputs<br>It is assumed that water trucks would be used during grading |                                                  |                                                   |                       | Add or subtract phases and equipment, as appropriate<br>Modify horsepower or load factor, as appropriate |                               |                           |                                                      |                                                  |           |                    |                                        |

|                                                                                                                                   |                                           |                                            |                               |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------|-----------------|--------------------|------------------------------------------------------|---------------------------------------|-----|-------------|--|
| Project Name:                                                                                                                     |                                           | Gateway Crossings (Coleman/Brokaw) Phase 2 |                               |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
| Project Size                                                                                                                      | 556 Dwelling Units                        | n/a                                        | total project acres disturbed |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
|                                                                                                                                   | 407,089 s.f. residential ( net rentable)  | n/a                                        | s.f. retail                   |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
|                                                                                                                                   | 556,885 s.f. conditioned area             | n/a                                        | s.f. other, specify:          |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
|                                                                                                                                   | 7,439 s.f. other, specify: amenity        |                                            |                               |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
|                                                                                                                                   | 357,109 s.f. parking garage               | 905                                        | spaces                        |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
|                                                                                                                                   | n/a s.f. parking lot                      | 4                                          | spaces parallel parking       |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
| Construction Hours                                                                                                                | 7 am to                                   | 6 pm                                       |                               |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
| Complete ALL Portions in Yellow                                                                                                   |                                           |                                            |                               |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
| Qty                                                                                                                               | Description                               | HP                                         | Load Factor                   | Hours/day                                                                                                | Total Work Days | Avg. Hours per day | Comments                                             |                                       |     |             |  |
|                                                                                                                                   | Demolition                                | Start Date: e.g., 9/1/2016                 |                               | Total phase:                                                                                             |                 |                    | Overall Import/Export Volumes                        | Typical Equipment Type & Load Factors |     |             |  |
|                                                                                                                                   |                                           | End Date:                                  |                               |                                                                                                          |                 |                    |                                                      | OFFROAD Equipment Type                | HP  | Load Factor |  |
|                                                                                                                                   | Concrete/Industrial Saws                  | 81                                         | 0.73                          |                                                                                                          |                 | #DIV/0!            | Demolition Volume                                    | Aerial Lifts                          | 62  | 0.31        |  |
|                                                                                                                                   | Excavators                                | 162                                        | 0.38                          |                                                                                                          |                 | #DIV/0!            | Square footage of buildings to be demolished         | Air Compressors                       | 78  | 0.48        |  |
|                                                                                                                                   | Rubber-Tired Dozers                       | 255                                        | 0.4                           |                                                                                                          |                 | #DIV/0!            | (or total tons to be hauled)                         | Bore/Drill Rigs                       | 205 | 0.5         |  |
|                                                                                                                                   | Tractors/Loaders/Backhoes                 | 97                                         | 0.37                          |                                                                                                          |                 | #DIV/0!            | 2 square feet or                                     | Cement and Mortar Mixers              | 9   | 0.56        |  |
|                                                                                                                                   |                                           |                                            |                               |                                                                                                          |                 |                    | 2 Hauling volume (tons)                              | Concrete/Industrial Saws              | 81  | 0.73        |  |
|                                                                                                                                   | Site Preparation                          | Start Date: 3/1/2022                       |                               | Total phase: 20                                                                                          |                 |                    | Any pavement demolished and hauled? 2 tons           | Cranes                                | 226 | 0.29        |  |
|                                                                                                                                   |                                           | End Date: 4/1/2022                         |                               |                                                                                                          |                 |                    |                                                      | Crawler Tractors                      | 208 | 0.43        |  |
| 3                                                                                                                                 | Scrapers                                  | 361                                        | 0.48                          | 8                                                                                                        | 20              | 8                  |                                                      | Crushing/Proc. Equipment              | 85  | 0.78        |  |
| 1                                                                                                                                 | Skid Steer Loaders                        | 64                                         | 0.37                          | 8                                                                                                        | 20              | 8                  |                                                      |                                       |     |             |  |
| 2                                                                                                                                 | Graders                                   | 174                                        | 0.41                          | 8                                                                                                        | 20              | 8                  |                                                      | Dumpers/Tenders                       | 16  | 0.38        |  |
| 2                                                                                                                                 | Rubber Tired Dozers                       | 255                                        | 0.4                           | 8                                                                                                        | 20              | 8                  |                                                      | Excavators                            | 162 | 0.38        |  |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                 | 97                                         | 0.37                          | 8                                                                                                        | 20              | 8                  |                                                      | Forklifts                             | 89  | 0.2         |  |
|                                                                                                                                   | Grading / Excavation                      | Start Date: 4/1/2022                       |                               | Total phase: 60                                                                                          |                 |                    |                                                      | Generator Sets                        | 84  | 0.74        |  |
|                                                                                                                                   |                                           | End Date: 7/1/2022                         |                               |                                                                                                          |                 |                    |                                                      | Graders                               | 174 | 0.41        |  |
| 3                                                                                                                                 | Scrapers                                  | 361                                        | 0.48                          | 8                                                                                                        | 60              | 8                  |                                                      | Off-Highway Tractors                  | 122 | 0.44        |  |
| 2                                                                                                                                 | Excavators                                | 162                                        | 0.38                          | 8                                                                                                        | 60              | 8                  | Export volume = 18,459 cubic yards?                  | Off-Highway Trucks                    | 400 | 0.38        |  |
| 2                                                                                                                                 | Graders                                   | 174                                        | 0.41                          | 8                                                                                                        | 60              | 8                  | Import volume = 2 cubic yards?                       | Other Construction Equipment          | 171 | 0.42        |  |
| 1                                                                                                                                 | Rubber Tired Dozers                       | 255                                        | 0.4                           | 8                                                                                                        | 60              | 8                  |                                                      | Other General Industrial Equipment    | 150 | 0.34        |  |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                 | 97                                         | 0.37                          | 8                                                                                                        | 60              | 8                  |                                                      | Other Material Handling Equipment     | 167 | 0.4         |  |
| 2                                                                                                                                 | Rollers                                   | 80                                         | 0.38                          | 8                                                                                                        | 60              | 8                  |                                                      | Pavers                                | 125 | 0.42        |  |
| 1                                                                                                                                 | Skid Steer Loaders                        | 64                                         | 0.37                          | 8                                                                                                        | 60              | 8                  |                                                      | Paving Equipment                      | 130 | 0.36        |  |
| 1                                                                                                                                 | Sweepers                                  | 64                                         | 0.46                          | 8                                                                                                        | 60              | 8                  |                                                      |                                       |     |             |  |
|                                                                                                                                   | Trenching                                 | Start Date: 5/1/2022                       |                               | Total phase: 40                                                                                          |                 |                    |                                                      | Plate Compactors                      | 8   | 0.43        |  |
|                                                                                                                                   |                                           | End Date: 7/1/2022                         |                               |                                                                                                          |                 |                    |                                                      | Pressure Washers                      | 13  | 0.2         |  |
| 1                                                                                                                                 | Tractor/Loader/Backhoe                    | 97                                         | 0.37                          | 8                                                                                                        | 40              | 8                  |                                                      | Pumps                                 | 84  | 0.74        |  |
| 2                                                                                                                                 | Excavators                                | 162                                        | 0.38                          | 8                                                                                                        | 40              | 8                  |                                                      | Rollers                               | 80  | 0.38        |  |
| 2                                                                                                                                 | Loaders                                   | 97                                         | 0.37                          | 8                                                                                                        | 40              | 8                  |                                                      | Rough Terrain Forklifts               | 100 | 0.4         |  |
| 1                                                                                                                                 | Rough Terrain Forklifts                   | 100                                        | 0.4                           | 8                                                                                                        | 40              | 8                  |                                                      | Rubber Tired Dozers                   | 255 | 0.4         |  |
| 1                                                                                                                                 | Skid Steer Loaders                        | 64                                         | 0.37                          | 8                                                                                                        | 40              | 8                  |                                                      |                                       |     |             |  |
|                                                                                                                                   | Building - Exterior                       | Start Date: 6/1/2022                       |                               | Total phase: 160                                                                                         |                 |                    |                                                      | Rubber Tired Loaders                  | 199 | 0.36        |  |
|                                                                                                                                   |                                           | End Date: 2/1/2023                         |                               |                                                                                                          |                 |                    |                                                      | Scrapers                              | 361 | 0.48        |  |
| 1                                                                                                                                 | Cranes                                    | 226                                        | 0.29                          | 8                                                                                                        | 120             | 6                  |                                                      | Signal Boards                         | 6   | 0.82        |  |
| 4                                                                                                                                 | Forklifts                                 | 89                                         | 0.2                           | 8                                                                                                        | 160             | 8                  | Electric? (Y/N) Otherwise assumed diesel             | Skid Steer Loaders                    | 64  | 0.37        |  |
| 1                                                                                                                                 | Generator Sets                            | 84                                         | 0.74                          | 8                                                                                                        | 160             | 8                  | Liquid Propane (LPG)? (Y/N) Otherwise Assumed diesel | Surfacing Equipment                   | 253 | 0.3         |  |
|                                                                                                                                   |                                           |                                            |                               |                                                                                                          |                 |                    | Or temporary line power? (Y/N)                       | Sweepers/Scrubbers                    | 64  | 0.46        |  |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                 | 97                                         | 0.37                          | 8                                                                                                        | 160             | 8                  |                                                      |                                       |     |             |  |
| 4                                                                                                                                 | Welders                                   | 46                                         | 0.45                          | 8                                                                                                        | 160             | 8                  | otherwise, assume diesel generator                   | Tractors/Loaders/Backhoes             | 97  | 0.37        |  |
| 3                                                                                                                                 | Boom/Aerial Lifts                         | 62                                         | 0.31                          | 8                                                                                                        | 160             | 8                  |                                                      | Trenchers                             | 80  | 0.5         |  |
| 3                                                                                                                                 | Other Construction Equipment              | 171                                        | 0.42                          | 8                                                                                                        | 160             | 8                  |                                                      | Welders                               | 46  | 0.45        |  |
|                                                                                                                                   | Building - Interior/Architectural Coating | Start Date: 10/1/2022                      |                               | Total phase: 140                                                                                         |                 |                    |                                                      |                                       |     |             |  |
|                                                                                                                                   |                                           | End Date: 5/1/2023                         |                               |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
| 2                                                                                                                                 | Air Compressors                           | 78                                         | 0.48                          | 8                                                                                                        | 60              | 3.4285714          |                                                      |                                       |     |             |  |
| 1                                                                                                                                 | Aerial Lift                               | 62                                         | 0.31                          | 8                                                                                                        | 140             | 8                  |                                                      |                                       |     |             |  |
| 1                                                                                                                                 | Cranes                                    | 226                                        | 0.29                          | 8                                                                                                        | 80              | 4.5714286          |                                                      |                                       |     |             |  |
| 1                                                                                                                                 | Forklifts                                 | 89                                         | 0.2                           | 8                                                                                                        | 140             | 8                  |                                                      |                                       |     |             |  |
|                                                                                                                                   | Paving                                    | Start Date: 2/1/2023                       |                               | Total phase: 60                                                                                          |                 |                    |                                                      |                                       |     |             |  |
|                                                                                                                                   |                                           | Start Date: 5/1/2023                       |                               |                                                                                                          |                 |                    |                                                      |                                       |     |             |  |
| 1                                                                                                                                 | Cement and Mortar Mixers                  | 9                                          | 0.56                          | 8                                                                                                        | 40              | 5.3333333          |                                                      |                                       |     |             |  |
| 1                                                                                                                                 | Pavers                                    | 125                                        | 0.42                          | 8                                                                                                        | 60              | 8                  | Asphalt? 800 cubic yards or ____ round trips?        |                                       |     |             |  |
| 1                                                                                                                                 | Paving Equipment                          | 130                                        | 0.36                          | 8                                                                                                        | 60              | 8                  |                                                      |                                       |     |             |  |
| 2                                                                                                                                 | Rollers                                   | 80                                         | 0.38                          | 8                                                                                                        | 60              | 8                  |                                                      |                                       |     |             |  |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                 | 97                                         | 0.37                          | 8                                                                                                        | 40              | 5.3333333          |                                                      |                                       |     |             |  |
| 1                                                                                                                                 | Sweepers                                  | 64                                         | 0.46                          | 8                                                                                                        | 60              | 8                  |                                                      |                                       |     |             |  |
| Equipment listed in this sheet is to provide an example of inputs<br>It is assumed that water trucks would be used during grading |                                           |                                            |                               | Add or subtract phases and equipment, as appropriate<br>Modify horsepower or load factor, as appropriate |                 |                    |                                                      |                                       |     |             |  |

|                                                                                                                                   |                                                        |                                            |                                                                                                          |           |                 |                    |                                                                           |                                             |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------|-----------------|--------------------|---------------------------------------------------------------------------|---------------------------------------------|--|
| Project Name:                                                                                                                     |                                                        | Gateway Crossings (Coleman/Brokaw) Phase 5 |                                                                                                          |           |                 |                    |                                                                           |                                             |  |
| Project Size                                                                                                                      | 225 Hotel Room                                         | n/a                                        | total project acres disturbed                                                                            |           |                 |                    |                                                                           |                                             |  |
|                                                                                                                                   | 108,622 s.f. Room Area                                 | 5,200                                      | s.f. retail ( food and beverage)                                                                         |           |                 |                    |                                                                           |                                             |  |
|                                                                                                                                   | 182,000 s.f. conditioned area                          | 4,400                                      | s.f. other, specify: fitness/spa, hotel bar                                                              |           |                 |                    |                                                                           |                                             |  |
|                                                                                                                                   | 8,300 s.f. other, specify: meeting rooms, pre-function |                                            | Complete ALL Portions in Yellow                                                                          |           |                 |                    |                                                                           |                                             |  |
|                                                                                                                                   | 142,500 s.f. parking garage                            | 339                                        | spaces                                                                                                   |           |                 |                    |                                                                           |                                             |  |
|                                                                                                                                   | n/a s.f. parking lot                                   | n/a                                        | spaces parallel parking                                                                                  |           |                 |                    |                                                                           |                                             |  |
| Construction Hours                                                                                                                | 7 am to                                                | 4 pm                                       |                                                                                                          |           |                 |                    |                                                                           |                                             |  |
| Qty                                                                                                                               | Description                                            | HP                                         | Load Factor                                                                                              | Hours/day | Total Work Days | Avg. Hours per day | Comments                                                                  |                                             |  |
|                                                                                                                                   | Demolition                                             | Start Date: e.g., 9/1/2016                 | Total phase:                                                                                             |           |                 |                    | Overall Import/Export Volumes                                             | Typical Equipment Type & Load Factors       |  |
|                                                                                                                                   |                                                        | End Date:                                  |                                                                                                          |           |                 |                    |                                                                           | OFFROAD Equipment Type HP Load Factor       |  |
|                                                                                                                                   | Concrete/Industrial Saws                               | 81                                         | 0.73                                                                                                     |           |                 | #DIV/0!            | Demolition Volume                                                         | Aerial Lifts 62 0.31                        |  |
|                                                                                                                                   | Excavators                                             | 162                                        | 0.38                                                                                                     |           |                 | #DIV/0!            | Square footage of buildings to be demolished (or total tons to be hauled) | Air Compressors 78 0.48                     |  |
|                                                                                                                                   | Rubber-Tired Dozers                                    | 255                                        | 0.4                                                                                                      |           |                 | #DIV/0!            | 2 square feet or 2 Hauling volume (tons)                                  | Bore/Drill Rigs 205 0.5                     |  |
|                                                                                                                                   | Tractors/Loaders/Backhoes                              | 97                                         | 0.37                                                                                                     |           |                 | #DIV/0!            | Any pavement demolished and hauled? 2 tons                                | Cement and Mortar Mixers 9 0.56             |  |
|                                                                                                                                   | Site Preparation                                       | Start Date: 1/1/2024                       | Total phase:                                                                                             | 20        |                 |                    |                                                                           | Concrete/Industrial Saws 81 0.73            |  |
|                                                                                                                                   |                                                        | End Date: 2/1/2024                         |                                                                                                          |           |                 |                    |                                                                           | Cranes 226 0.29                             |  |
| 3                                                                                                                                 | Scrapers                                               | 361                                        | 0.48                                                                                                     | 8         | 20              | 8                  |                                                                           | Crawler Tractors 208 0.43                   |  |
| 1                                                                                                                                 | Skid Steer Loaders                                     | 64                                         | 0.37                                                                                                     | 8         | 20              | 8                  |                                                                           | Crushing/Proc. Equipment 85 0.78            |  |
| 2                                                                                                                                 | Graders                                                | 174                                        | 0.41                                                                                                     | 8         | 20              | 8                  |                                                                           |                                             |  |
| 2                                                                                                                                 | Rubber Tired Dozers                                    | 255                                        | 0.4                                                                                                      | 8         | 20              | 8                  |                                                                           | Dumpers/Tenders 16 0.38                     |  |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                              | 97                                         | 0.37                                                                                                     | 8         | 20              | 8                  |                                                                           | Excavators 162 0.38                         |  |
|                                                                                                                                   | Grading / Excavation                                   | Start Date: 2/1/2024                       | Total phase:                                                                                             | 20        |                 |                    |                                                                           | Forklifts 89 0.2                            |  |
|                                                                                                                                   |                                                        | End Date: 3/1/2024                         |                                                                                                          |           |                 |                    |                                                                           | Generator Sets 84 0.74                      |  |
| 3                                                                                                                                 | Scrapers                                               | 361                                        | 0.48                                                                                                     | 8         | 20              | 8                  |                                                                           | Graders 174 0.41                            |  |
| 2                                                                                                                                 | Excavators                                             | 162                                        | 0.38                                                                                                     | 8         | 20              | 8                  |                                                                           | Off-Highway Tractors 122 0.44               |  |
| 2                                                                                                                                 | Graders                                                | 174                                        | 0.41                                                                                                     | 8         | 20              | 8                  |                                                                           | Off-Highway Trucks 400 0.38                 |  |
| 1                                                                                                                                 | Rubber Tired Dozers                                    | 255                                        | 0.4                                                                                                      | 8         | 20              | 8                  |                                                                           | Export volume = 7,585 cubic yards?          |  |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                              | 97                                         | 0.37                                                                                                     | 8         | 20              | 8                  |                                                                           | Import volume = 2 cubic yards?              |  |
| 2                                                                                                                                 | Rollers                                                | 80                                         | 0.38                                                                                                     | 8         | 20              | 8                  |                                                                           | Other Construction Equipment 171 0.42       |  |
| 1                                                                                                                                 | Skid Steer Loaders                                     | 64                                         | 0.37                                                                                                     | 8         | 20              | 8                  |                                                                           | Other General Industrial Equipment 150 0.34 |  |
| 1                                                                                                                                 | Sweepers                                               | 64                                         | 0.46                                                                                                     | 8         | 20              | 8                  |                                                                           | Other Material Handling Equipment 167 0.4   |  |
|                                                                                                                                   | Trenching                                              | Start Date: 2/1/2024                       | Total phase:                                                                                             | 20        |                 |                    |                                                                           | Pavers 125 0.42                             |  |
|                                                                                                                                   |                                                        | End Date: 3/1/2024                         |                                                                                                          |           |                 |                    |                                                                           | Paving Equipment 130 0.36                   |  |
| 1                                                                                                                                 | Tractor/Loader/Backhoe                                 | 97                                         | 0.37                                                                                                     | 8         | 20              | 8                  |                                                                           |                                             |  |
| 2                                                                                                                                 | Excavators                                             | 162                                        | 0.38                                                                                                     | 8         | 20              | 8                  |                                                                           | Plate Compactors 8 0.43                     |  |
| 2                                                                                                                                 | Loaders                                                | 97                                         | 0.37                                                                                                     | 8         | 20              | 8                  |                                                                           | Pressure Washers 13 0.2                     |  |
| 1                                                                                                                                 | Rough Terrain Forklifts                                | 100                                        | 0.4                                                                                                      | 8         | 20              | 8                  |                                                                           | Pumps 84 0.74                               |  |
| 1                                                                                                                                 | Skid Steer Loaders                                     | 64                                         | 0.37                                                                                                     | 8         | 20              | 8                  |                                                                           | Rollers 80 0.38                             |  |
|                                                                                                                                   | Building - Exterior                                    | Start Date: 3/1/2024                       | Total phase:                                                                                             | 300       |                 |                    |                                                                           | Rough Terrain Forklifts 100 0.4             |  |
|                                                                                                                                   |                                                        | End Date: 6/1/2025                         |                                                                                                          |           |                 |                    |                                                                           | Rubber Tired Dozers 255 0.4                 |  |
| 1                                                                                                                                 | Cranes                                                 | 226                                        | 0.29                                                                                                     | 8         | 160             | 4.2666667          |                                                                           | Rubber Tired Loaders 199 0.36               |  |
| 4                                                                                                                                 | Forklifts                                              | 89                                         | 0.2                                                                                                      | 8         | 300             | 8                  |                                                                           | Scrapers 361 0.48                           |  |
| 1                                                                                                                                 | Generator Sets                                         | 84                                         | 0.74                                                                                                     | 8         | 300             | 8                  |                                                                           | Signal Boards 6 0.82                        |  |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                              | 97                                         | 0.37                                                                                                     | 8         | 300             | 8                  |                                                                           | Skid Steer Loaders 64 0.37                  |  |
| 4                                                                                                                                 | Welders                                                | 46                                         | 0.45                                                                                                     | 8         | 300             | 8                  |                                                                           | Surfacing Equipment 253 0.3                 |  |
| 3                                                                                                                                 | Boom/Aerial Lifts                                      | 62                                         | 0.31                                                                                                     | 8         | 200             | 5.3333333          |                                                                           | Sweepers/Scrubbers 64 0.46                  |  |
| 3                                                                                                                                 | Other Construction Equipment                           | 171                                        | 0.42                                                                                                     | 8         | 300             | 8                  |                                                                           | Tractors/Loaders/Backhoes 97 0.37           |  |
|                                                                                                                                   | Building - Interior/Architectural Coating              | Start Date: 9/1/2024                       | Total phase:                                                                                             | 200       |                 |                    |                                                                           | Trenchers 80 0.5                            |  |
|                                                                                                                                   |                                                        | End Date: 7/1/2025                         |                                                                                                          |           |                 |                    |                                                                           | Welders 46 0.45                             |  |
| 2                                                                                                                                 | Air Compressors                                        | 78                                         | 0.48                                                                                                     | 8         | 60              | 2.4                |                                                                           |                                             |  |
| 1                                                                                                                                 | Aerial Lift                                            | 62                                         | 0.31                                                                                                     | 8         | 120             | 4.8                |                                                                           |                                             |  |
| 1                                                                                                                                 | Cranes                                                 | 226                                        | 0.29                                                                                                     | 8         | 60              | 2.4                |                                                                           |                                             |  |
| 1                                                                                                                                 | Forklifts                                              | 89                                         | 0.2                                                                                                      | 8         | 120             | 4.8                |                                                                           |                                             |  |
|                                                                                                                                   | Paving                                                 | Start Date: 5/1/2025                       | Total phase:                                                                                             | 60        |                 |                    |                                                                           |                                             |  |
|                                                                                                                                   |                                                        | Start Date: 8/1/2025                       |                                                                                                          |           |                 |                    |                                                                           |                                             |  |
| 1                                                                                                                                 | Cement and Mortar Mixers                               | 9                                          | 0.56                                                                                                     | 8         | 20              | 2.6666667          |                                                                           |                                             |  |
| 1                                                                                                                                 | Pavers                                                 | 125                                        | 0.42                                                                                                     | 8         | 60              | 8                  |                                                                           |                                             |  |
| 1                                                                                                                                 | Paving Equipment                                       | 130                                        | 0.36                                                                                                     | 8         | 60              | 8                  |                                                                           |                                             |  |
| 2                                                                                                                                 | Rollers                                                | 80                                         | 0.38                                                                                                     | 8         | 60              | 8                  |                                                                           |                                             |  |
| 1                                                                                                                                 | Tractors/Loaders/Backhoes                              | 97                                         | 0.37                                                                                                     | 8         | 20              | 2.6666667          |                                                                           |                                             |  |
| 1                                                                                                                                 | Sweepers                                               | 64                                         | 0.46                                                                                                     | 8         | 60              | 8                  |                                                                           |                                             |  |
| Equipment listed in this sheet is to provide an example of inputs<br>It is assumed that water trucks would be used during grading |                                                        |                                            | Add or subtract phases and equipment, as appropriate<br>Modify horsepower or load factor, as appropriate |           |                 |                    |                                                                           |                                             |  |

## Gateway Crossings, Phase 1 , Mitigated Criteria Emissions - Santa Clara County, Annual

## Gateway Crossings, Phase 1 , Mitigated Criteria Emissions

### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|---------------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 485.00 | Space         | 0.00        | 256,900.00         | 0          |
| Parking Lot                    | 4.00   | Space         | 0.04        | 1,600.00           | 0          |
| Apartments Mid Rise            | 261.00 | Dwelling Unit | 21.36       | 324,000.00         | 746        |
| Strip Mall                     | 5.30   | 1000sqft      | 0.00        | 5,300.00           | 0          |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 58    |
| <b>Climate Zone</b>             | 4                              |                                 |       | <b>Operational Year</b>          | 2020  |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 380                            | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Current CO2 Emission Intensity Rate for SVP from Climate Action Plan,2020

Land Use - From Construction information for Phase 1

Construction Phase - Assumed additional phase: demolition

Off-road Equipment -

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided information

Off-road Equipment - Defaults used

[illegible]

|                         |                            |           |         |
|-------------------------|----------------------------|-----------|---------|
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 2.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 2.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 7.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 5.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 3.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 5.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 6.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 3.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 2.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 7.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |
| tblConstEquipMitigation | Tier                       | No Change | Tier 3  |
| tblConstEquipMitigation | Tier                       | No Change | Tier 3  |
| tblConstEquipMitigation | Tier                       | No Change | Tier 3  |

|                           |                         |            |            |
|---------------------------|-------------------------|------------|------------|
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblFireplaces             | FireplaceWoodMass       | 228.80     | 0.00       |
| tblFireplaces             | NumberGas               | 39.15      | 261.00     |
| tblFireplaces             | NumberNoFireplace       | 10.44      | 0.00       |
| tblFireplaces             | NumberWood              | 44.37      | 0.00       |
| tblGrading                | MaterialExported        | 0.00       | 23,542.00  |
| tblLandUse                | BuildingSpaceSquareFeet | 194,000.00 | 256,900.00 |
| tblLandUse                | BuildingSpaceSquareFeet | 261,000.00 | 324,000.00 |
| tblLandUse                | LandUseSquareFeet       | 194,000.00 | 256,900.00 |
| tblLandUse                | LandUseSquareFeet       | 261,000.00 | 324,000.00 |
| tblLandUse                | LotAcreage              | 4.36       | 0.00       |
| tblLandUse                | LotAcreage              | 6.87       | 21.36      |
| tblLandUse                | LotAcreage              | 0.12       | 0.00       |
| tblProjectCharacteristics | CO2IntensityFactor      | 641.35     | 380        |

|                           |                    |        |        |
|---------------------------|--------------------|--------|--------|
| tblProjectCharacteristics | OperationalYear    | 2018   | 2020   |
| tblTripsAndVMT            | HaulingTripNumber  | 0.00   | 100.00 |
| tblVehicleTrips           | ST_TR              | 6.39   | 5.83   |
| tblVehicleTrips           | ST_TR              | 42.04  | 28.95  |
| tblVehicleTrips           | SU_TR              | 5.86   | 5.35   |
| tblVehicleTrips           | SU_TR              | 20.43  | 14.07  |
| tblVehicleTrips           | WD_TR              | 6.65   | 6.07   |
| tblVehicleTrips           | WD_TR              | 44.32  | 30.52  |
| tblWoodstoves             | NumberCatalytic    | 5.22   | 0.00   |
| tblWoodstoves             | NumberNoncatalytic | 5.22   | 0.00   |
| tblWoodstoves             | WoodstoveWoodMass  | 582.40 | 0.00   |

2.0 Emissions Summary

2.1 Overall Construction  
Unmitigated Construction

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2018    | 0.2983  | 3.8453 | 2.0089 | 5.0500e-003 | 0.5489        | 0.1457       | 0.6946     | 0.1790         | 0.1343        | 0.3134      | 0.0000   | 469.1549  | 469.1549  | 0.0993 | 0.0000 | 471.6376 |
| 2019    | 2.7635  | 3.3052 | 2.9597 | 6.0400e-003 | 0.1690        | 0.1613       | 0.3303     | 0.0455         | 0.1516        | 0.1971      | 0.0000   | 539.0598  | 539.0598  | 0.0915 | 0.0000 | 541.3475 |
| Maximum | 2.7635  | 3.8453 | 2.9597 | 6.0400e-003 | 0.5489        | 0.1613       | 0.6946     | 0.1790         | 0.1516        | 0.3134      | 0.0000   | 539.0598  | 539.0598  | 0.0993 | 0.0000 | 541.3475 |

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    |           |           |        |        |          |
| 2018    | 0.1047  | 2.2759 | 2.1200 | 5.0500e-003 | 0.2718        | 0.0136       | 0.2854     | 0.0498         | 0.0134        | 0.0633      | 0.0000   | 469.1545  | 469.1545  | 0.0993 | 0.0000 | 471.6373 |
| 2019    | 2.5416  | 2.4046 | 3.1120 | 6.0400e-003 | 0.1690        | 0.0209       | 0.1899     | 0.0455         | 0.0207        | 0.0662      | 0.0000   | 539.0594  | 539.0594  | 0.0915 | 0.0000 | 541.3471 |
| Maximum | 2.5416  | 2.4046 | 3.1120 | 6.0400e-003 | 0.2718        | 0.0209       | 0.2854     | 0.0498         | 0.0207        | 0.0662      | 0.0000   | 539.0594  | 539.0594  | 0.0993 | 0.0000 | 541.3471 |

|                   | ROG   | NOx   | CO    | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|-------|-------|-------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 13.57 | 34.54 | -5.30 | 0.00 | 38.59         | 88.77        | 53.62      | 57.54          | 88.06         | 74.64       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 10-1-2018  | 12-31-2018 | 3.9506                                       | 2.2756                                     |
| 2       | 1-1-2019   | 3-31-2019  | 1.9217                                       | 1.3595                                     |
| 3       | 4-1-2019   | 6-30-2019  | 2.2685                                       | 1.8914                                     |
| 4       | 7-1-2019   | 9-30-2019  | 1.8701                                       | 1.6905                                     |
|         |            | Highest    | 3.9506                                       | 2.2756                                     |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 10/1/2018  | 10/26/2018 | 5             | 20       |                   |
| 2            | Site Preparation      | Site Preparation      | 10/1/2018  | 10/26/2018 | 5             | 20       |                   |
| 3            | Grading               | Grading               | 10/29/2018 | 12/21/2018 | 5             | 40       |                   |
| 4            | Trenching             | Trenching             | 12/1/2018  | 12/28/2018 | 5             | 20       |                   |
| 5            | Building Construction | Building Construction | 1/1/2019   | 5/20/2019  | 5             | 100      |                   |
| 6            | Architectural Coating | Architectural Coating | 5/1/2019   | 9/17/2019  | 5             | 100      |                   |
| 7            | Paving                | Paving                | 7/1/2019   | 8/23/2019  | 5             | 40       |                   |

Acres of Grading (Site Preparation Phase): 80

**Acres of Grading (Grading Phase): 160**

**Acres of Paving: 0.04**

**Residential Indoor: 656,100; Residential Outdoor: 218,700; Non-Residential Indoor: 7,950; Non-Residential Outdoor: 2,650; Striped**

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Demolition            | Excavators                | 3      | 8.00        | 158         | 0.38        |
| Demolition            | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Site Preparation      | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Site Preparation      | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Site Preparation      | Scrapers                  | 3      | 8.00        | 367         | 0.48        |
| Site Preparation      | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Site Preparation      | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading               | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Grading               | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 3      | 8.00        | 367         | 0.48        |
| Grading               | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Grading               | Sweepers/Scrubbers        | 1      | 8.00        | 64          | 0.46        |
| Grading               | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Trenching             | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Trenching             | Rough Terrain Forklifts   | 1      | 8.00        | 100         | 0.40        |
| Trenching             | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Trenching             | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Trenching             | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Aerial Lifts              | 3      | 8.00        | 63          | 0.31        |
| Building Construction | Cranes                    | 1      | 8.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 4      | 8.00        | 89          | 0.20        |

|                       |                              |   |      |     |      |
|-----------------------|------------------------------|---|------|-----|------|
| Building Construction | Generator Sets               | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Other Construction Equipment | 3 | 8.00 | 172 | 0.42 |
| Building Construction | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                      | 4 | 8.00 | 46  | 0.45 |
| Architectural Coating | Aerial Lifts                 | 1 | 8.00 | 63  | 0.31 |
| Architectural Coating | Air Compressors              | 2 | 3.20 | 78  | 0.48 |
| Architectural Coating | Cranes                       | 1 | 4.00 | 231 | 0.29 |
| Architectural Coating | Forklifts                    | 1 | 8.00 | 89  | 0.20 |
| Paving                | Cement and Mortar Mixers     | 1 | 4.00 | 9   | 0.56 |
| Paving                | Pavers                       | 1 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment             | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                      | 2 | 8.00 | 80  | 0.38 |
| Paving                | Sweepers/Scrubbers           | 1 | 4.00 | 64  | 0.46 |
| Paving                | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition            | 6                       | 15.00              | 0.00               | 1,241.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 2,943.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 17                      | 298.00             | 71.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 60.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 100.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

### 3.2 Demolition - 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 |         |        |        |             | 0.1343        | 0.0000       | 0.1343     | 0.0203         | 0.0000        | 0.0203      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road      | 0.0372  | 0.3832 | 0.2230 | 3.9000e-004 |               | 0.0194       | 0.0194     |                | 0.0181        | 0.0181      | 0.0000   | 35.1241   | 35.1241   | 9.6800e-003 | 0.0000 | 35.3660 |
| Total         | 0.0372  | 0.3832 | 0.2230 | 3.9000e-004 | 0.1343        | 0.0194       | 0.1537     | 0.0203         | 0.0181        | 0.0384      | 0.0000   | 35.1241   | 35.1241   | 9.6800e-003 | 0.0000 | 35.3660 |

#### Unmitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Hauling  | 5.9400e-003 | 0.2034      | 0.0396      | 5.0000e-004 | 0.0105        | 8.1000e-004  | 0.0113      | 2.8900e-003    | 7.8000e-004   | 3.6700e-003 | 0.0000   | 48.2932   | 48.2932   | 2.2800e-003 | 0.0000 | 48.3502 |
| 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-004 | 4.6000e-004 | 4.7300e-003 | 1.0000e-005 | 1.1900e-003   | 1.0000e-005  | 1.2000e-003 | 3.2000e-004    | 1.0000e-005   | 3.2000e-004 | 0.0000   | 1.0854    | 1.0854    | 3.0000e-005 | 0.0000 | 1.0862  |
| Total    | 6.5400e-003 | 0.2039      | 0.0443      | 5.1000e-004 | 0.0117        | 8.2000e-004  | 0.0125      | 3.2100e-003    | 7.9000e-004   | 3.9900e-003 | 0.0000   | 49.3786   | 49.3786   | 2.3100e-003 | 0.0000 | 49.4364 |

### 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 |             |        |        |             | 0.0604        | 0.0000       | 0.0604      | 4.5700e-003    | 0.0000        | 4.5700e-003 | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road      | 9.2500e-003 | 0.1831 | 0.2467 | 3.9000e-004 |               | 1.2900e-003  | 1.2900e-003 |                | 1.2900e-003   | 1.2900e-003 | 0.0000   | 35.1240   | 35.1240   | 9.6800e-003 | 0.0000 | 35.3660 |
| Total         | 9.2500e-003 | 0.1831 | 0.2467 | 3.9000e-004 | 0.0604        | 1.2900e-003  | 0.0617      | 4.5700e-003    | 1.2900e-003   | 5.8600e-003 | 0.0000   | 35.1240   | 35.1240   | 9.6800e-003 | 0.0000 | 35.3660 |

### Mitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Hauling  | 5.9400e-003 | 0.2034      | 0.0396      | 5.0000e-004 | 0.0105        | 8.1000e-004  | 0.0113      | 2.8900e-003    | 7.8000e-004   | 3.6700e-003 | 0.0000   | 48.2932   | 48.2932   | 2.2800e-003 | 0.0000 | 48.3502 |
| 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-004 | 4.6000e-004 | 4.7300e-003 | 1.0000e-005 | 1.1900e-003   | 1.0000e-005  | 1.2000e-003 | 3.2000e-004    | 1.0000e-005   | 3.2000e-004 | 0.0000   | 1.0854    | 1.0854    | 3.0000e-005 | 0.0000 | 1.0862  |
| Total    | 6.5400e-003 | 0.2039      | 0.0443      | 5.1000e-004 | 0.0117        | 8.2000e-004  | 0.0125      | 3.2100e-003    | 7.9000e-004   | 3.9900e-003 | 0.0000   | 49.3786   | 49.3786   | 2.3100e-003 | 0.0000 | 49.4364 |

### 3.3 Site Preparation - 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 |         |        |        |             | 0.1629 | 0.0000 | 0.1629 | 0.0708 | 0.0000 | 0.0708 | 0.0000 | 0.0000  | 0.0000  | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0717  | 0.8579 | 0.4267 | 8.1000e-004 |        | 0.0361 | 0.0361 |        | 0.0332 | 0.0332 | 0.0000 | 73.9834 | 73.9834 | 0.0230 | 0.0000 | 74.5592 |
| Total         | 0.0717  | 0.8579 | 0.4267 | 8.1000e-004 | 0.1629 | 0.0361 | 0.1989 | 0.0708 | 0.0332 | 0.1040 | 0.0000 | 73.9834 | 73.9834 | 0.0230 | 0.0000 | 74.5592 |

**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 | 7.1000e-004 | 7.2500e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.6643    | 1.6643    | 5.0000e-005 | 0.0000 | 1.6655 |
| Total    | 9.3000e-004 | 7.1000e-004 | 7.2500e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.6643    | 1.6643    | 5.0000e-005 | 0.0000 | 1.6655 |

**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 |         |        |        |             | 0.0733        | 0.0000       | 0.0733      | 0.0159         | 0.0000        | 0.0159      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0199  | 0.3888 | 0.4424 | 8.1000e-004 |               | 2.3500e-003  | 2.3500e-003 |                | 2.3500e-003   | 2.3500e-003 | 0.0000   | 73.9833   | 73.9833   | 0.0230 | 0.0000 | 74.5591 |

|       |        |        |        |             |        |             |        |        |             |        |        |         |         |        |        |         |
|-------|--------|--------|--------|-------------|--------|-------------|--------|--------|-------------|--------|--------|---------|---------|--------|--------|---------|
| Total | 0.0199 | 0.3888 | 0.4424 | 8.1000e-004 | 0.0733 | 2.3500e-003 | 0.0756 | 0.0159 | 2.3500e-003 | 0.0183 | 0.0000 | 73.9833 | 73.9833 | 0.0230 | 0.0000 | 74.5591 |
|-------|--------|--------|--------|-------------|--------|-------------|--------|--------|-------------|--------|--------|---------|---------|--------|--------|---------|

### 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 | 7.1000e-004 | 7.2500e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.6643    | 1.6643    | 5.0000e-005 | 0.0000 | 1.6655 |
| Total    | 9.3000e-004 | 7.1000e-004 | 7.2500e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.6643    | 1.6643    | 5.0000e-005 | 0.0000 | 1.6655 |

### 3.4 Grading - 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 |         |        |        |             | 0.2066        | 0.0000       | 0.2066     | 0.0756         | 0.0000        | 0.0756      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.1482  | 1.7416 | 1.0147 | 1.8100e-003 |               | 0.0773       | 0.0773     |                | 0.0711        | 0.0711      | 0.0000   | 165.4312  | 165.4312  | 0.0515 | 0.0000 | 166.7187 |
| Total         | 0.1482  | 1.7416 | 1.0147 | 1.8100e-003 | 0.2066        | 0.0773       | 0.2839     | 0.0756         | 0.0711        | 0.1467      | 0.0000   | 165.4312  | 165.4312  | 0.0515 | 0.0000 | 166.7187 |

#### 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  | 0.0141      | 0.4824      | 0.0938 | 1.1900e-003 | 0.0249        | 1.9300e-003  | 0.0269      | 6.8600e-003    | 1.8400e-003   | 8.7000e-003 | 0.0000   | 114.5260  | 114.5260  | 5.4100e-003 | 0.0000 | 114.6612 |
| 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   | 2.6600e-003 | 2.0400e-003 | 0.0208 | 5.0000e-005 | 5.2300e-003   | 4.0000e-005  | 5.2700e-003 | 1.3900e-003    | 3.0000e-005   | 1.4200e-003 | 0.0000   | 4.7757    | 4.7757    | 1.4000e-004 | 0.0000 | 4.7793   |
| Total    | 0.0168      | 0.4844      | 0.1146 | 1.2400e-003 | 0.0302        | 1.9700e-003  | 0.0321      | 8.2500e-003    | 1.8700e-003   | 0.0101      | 0.0000   | 119.3018  | 119.3018  | 5.5500e-003 | 0.0000 | 119.4405 |

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 |         |        |        |             | 0.0930        | 0.0000       | 0.0930      | 0.0170         | 0.0000        | 0.0170      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.0445  | 0.8822 | 1.0687 | 1.8100e-003 |               | 5.8700e-003  | 5.8700e-003 |                | 5.8700e-003   | 5.8700e-003 | 0.0000   | 165.4310  | 165.4310  | 0.0515 | 0.0000 | 166.7185 |
| Total         | 0.0445  | 0.8822 | 1.0687 | 1.8100e-003 | 0.0930        | 5.8700e-003  | 0.0989      | 0.0170         | 5.8700e-003   | 0.0229      | 0.0000   | 165.4310  | 165.4310  | 0.0515 | 0.0000 | 166.7185 |

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      | 0.0141        | 0.4824        | 0.0938        | 1.1900e-003        | 0.0249        | 1.9300e-003        | 0.0269        | 6.8600e-003        | 1.8400e-003        | 8.7000e-003   | 0.0000        | 114.5260        | 114.5260        | 5.4100e-003        | 0.0000        | 114.6612        |
| 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       | 2.6600e-003   | 2.0400e-003   | 0.0208        | 5.0000e-005        | 5.2300e-003   | 4.0000e-005        | 5.2700e-003   | 1.3900e-003        | 3.0000e-005        | 1.4200e-003   | 0.0000        | 4.7757          | 4.7757          | 1.4000e-004        | 0.0000        | 4.7793          |
| <b>Total</b> | <b>0.0168</b> | <b>0.4844</b> | <b>0.1146</b> | <b>1.2400e-003</b> | <b>0.0302</b> | <b>1.9700e-003</b> | <b>0.0321</b> | <b>8.2500e-003</b> | <b>1.8700e-003</b> | <b>0.0101</b> | <b>0.0000</b> | <b>119.3018</b> | <b>119.3018</b> | <b>5.5500e-003</b> | <b>0.0000</b> | <b>119.4405</b> |

### 3.5 Trenching - 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     | 0.0163        | 0.1730        | 0.1726        | 2.5000e-004        |               | 0.0101        | 0.0101        |                | 9.3300e-003        | 9.3300e-003        | 0.0000        | 22.9692        | 22.9692        | 7.1500e-003        | 0.0000        | 23.1480        |
| <b>Total</b> | <b>0.0163</b> | <b>0.1730</b> | <b>0.1726</b> | <b>2.5000e-004</b> |               | <b>0.0101</b> | <b>0.0101</b> |                | <b>9.3300e-003</b> | <b>9.3300e-003</b> | <b>0.0000</b> | <b>22.9692</b> | <b>22.9692</b> | <b>7.1500e-003</b> | <b>0.0000</b> | <b>23.1480</b> |

#### 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        | 5.6000e-004        | 5.6800e-003        | 1.0000e-005        | 1.4300e-003        | 1.0000e-005        | 1.4400e-003        | 3.8000e-004        | 1.0000e-005        | 3.9000e-004        | 0.0000        | 1.3025        | 1.3025        | 4.0000e-005        | 0.0000        | 1.3035        |
| <b>Total</b> | <b>7.2000e-004</b> | <b>5.6000e-004</b> | <b>5.6800e-003</b> | <b>1.0000e-005</b> | <b>1.4300e-003</b> | <b>1.0000e-005</b> | <b>1.4400e-003</b> | <b>3.8000e-004</b> | <b>1.0000e-005</b> | <b>3.9000e-004</b> | <b>0.0000</b> | <b>1.3025</b> | <b>1.3025</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.3035</b> |

### 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 | 6.1800e-003 | 0.1321 | 0.1904 | 2.5000e-004 |               | 1.2300e-003  | 1.2300e-003 |                | 1.2300e-003   | 1.2300e-003 | 0.0000   | 22.9692   | 22.9692   | 7.1500e-003 | 0.0000 | 23.1479 |
| Total    | 6.1800e-003 | 0.1321 | 0.1904 | 2.5000e-004 |               | 1.2300e-003  | 1.2300e-003 |                | 1.2300e-003   | 1.2300e-003 | 0.0000   | 22.9692   | 22.9692   | 7.1500e-003 | 0.0000 | 23.1479 |

### 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 | 5.6000e-004 | 5.6800e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.3025    | 1.3025    | 4.0000e-005 | 0.0000 | 1.3035 |
| Total    | 7.2000e-004 | 5.6000e-004 | 5.6800e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.3025    | 1.3025    | 4.0000e-005 | 0.0000 | 1.3035 |

## 3.6 Building Construction - 2019

### Unmitigated Construction On-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.2529        | 2.1660        | 1.8024        | 2.7700e-003        |               | 0.1210        | 0.1210        |                | 0.1138        | 0.1138        | 0.0000        | 239.1387        | 239.1387        | 0.0629        | 0.0000        | 240.7110        |
| <b>Total</b> | <b>0.2529</b> | <b>2.1660</b> | <b>1.8024</b> | <b>2.7700e-003</b> |               | <b>0.1210</b> | <b>0.1210</b> |                | <b>0.1138</b> | <b>0.1138</b> | <b>0.0000</b> | <b>239.1387</b> | <b>239.1387</b> | <b>0.0629</b> | <b>0.0000</b> | <b>240.7110</b> |

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       | 0.0174        | 0.4483        | 0.1203        | 9.7000e-004        | 0.0234        | 3.2200e-003        | 0.0266        | 6.7500e-003    | 3.0800e-003        | 9.8300e-003   | 0.0000        | 93.3834         | 93.3834         | 4.6300e-003        | 0.0000        | 93.4992         |
| Worker       | 0.0541        | 0.0403        | 0.4162        | 1.1600e-003        | 0.1182        | 7.8000e-004        | 0.1190        | 0.0314         | 7.2000e-004        | 0.0322        | 0.0000        | 104.6104        | 104.6104        | 2.8500e-003        | 0.0000        | 104.6816        |
| <b>Total</b> | <b>0.0715</b> | <b>0.4886</b> | <b>0.5366</b> | <b>2.1300e-003</b> | <b>0.1415</b> | <b>4.0000e-003</b> | <b>0.1455</b> | <b>0.0382</b>  | <b>3.8000e-003</b> | <b>0.0420</b> | <b>0.0000</b> | <b>197.9938</b> | <b>197.9938</b> | <b>7.4800e-003</b> | <b>0.0000</b> | <b>198.1808</b> |

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 | 0.0753  | 1.4690 | 1.9035 | 2.7700e-003 |               | 0.0128       | 0.0128     |                | 0.0128        | 0.0128      | 0.0000   | 239.1384  | 239.1384  | 0.0629 | 0.0000 | 240.7107 |

|       |        |        |        |             |  |        |        |  |        |        |        |          |          |        |        |          |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|
| Total | 0.0753 | 1.4690 | 1.9035 | 2.7700e-003 |  | 0.0128 | 0.0128 |  | 0.0128 | 0.0128 | 0.0000 | 239.1384 | 239.1384 | 0.0629 | 0.0000 | 240.7107 |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|

### 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   | 0.0174  | 0.4483 | 0.1203 | 9.7000e-004 | 0.0234        | 3.2200e-003  | 0.0266     | 6.7500e-003    | 3.0800e-003   | 9.8300e-003 | 0.0000   | 93.3834   | 93.3834   | 4.6300e-003 | 0.0000 | 93.4992  |
| Worker   | 0.0541  | 0.0403 | 0.4162 | 1.1600e-003 | 0.1182        | 7.8000e-004  | 0.1190     | 0.0314         | 7.2000e-004   | 0.0322      | 0.0000   | 104.6104  | 104.6104  | 2.8500e-003 | 0.0000 | 104.6816 |
| Total    | 0.0715  | 0.4886 | 0.5366 | 2.1300e-003 | 0.1415        | 4.0000e-003  | 0.1455     | 0.0382         | 3.8000e-003   | 0.0420      | 0.0000   | 197.9938  | 197.9938  | 7.4800e-003 | 0.0000 | 198.1808 |

### 3.7 Architectural Coating - 2019

#### Unmitigated Construction On-Site

|                 | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 2.3623  |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0368  | 0.3535 | 0.2699 | 4.6000e-004 |               | 0.0196       | 0.0196     |                | 0.0186        | 0.0186      | 0.0000   | 40.9762   | 40.9762   | 9.8100e-003 | 0.0000 | 41.2214 |
| Total           | 2.3992  | 0.3535 | 0.2699 | 4.6000e-004 |               | 0.0196       | 0.0196     |                | 0.0186        | 0.0186      | 0.0000   | 40.9762   | 40.9762   | 9.8100e-003 | 0.0000 | 41.2214 |

#### 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   | 0.0109  | 8.1100e-003 | 0.0838 | 2.3000e-004 | 0.0238        | 1.6000e-004  | 0.0240     | 6.3300e-003    | 1.4000e-004   | 6.4700e-003 | 0.0000   | 21.0625   | 21.0625   | 5.7000e-004 | 0.0000 | 21.0768 |
| Total    | 0.0109  | 8.1100e-003 | 0.0838 | 2.3000e-004 | 0.0238        | 1.6000e-004  | 0.0240     | 6.3300e-003    | 1.4000e-004   | 6.4700e-003 | 0.0000   | 21.0625   | 21.0625   | 5.7000e-004 | 0.0000 | 21.0768 |

Mitigated Construction On-Site

|                 | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|---------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 2.3623  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0107  | 0.2311 | 0.2963 | 4.6000e-004 |               | 2.1000e-003  | 2.1000e-003 |                | 2.1000e-003   | 2.1000e-003 | 0.0000   | 40.9762   | 40.9762   | 9.8100e-003 | 0.0000 | 41.2213 |
| Total           | 2.3730  | 0.2311 | 0.2963 | 4.6000e-004 |               | 2.1000e-003  | 2.1000e-003 |                | 2.1000e-003   | 2.1000e-003 | 0.0000   | 40.9762   | 40.9762   | 9.8100e-003 | 0.0000 | 41.2213 |

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       | 0.0109        | 8.1100e-003        | 0.0838        | 2.3000e-004        | 0.0238        | 1.6000e-004        | 0.0240        | 6.3300e-003        | 1.4000e-004        | 6.4700e-003        | 0.0000        | 21.0625        | 21.0625        | 5.7000e-004        | 0.0000        | 21.0768        |
| <b>Total</b> | <b>0.0109</b> | <b>8.1100e-003</b> | <b>0.0838</b> | <b>2.3000e-004</b> | <b>0.0238</b> | <b>1.6000e-004</b> | <b>0.0240</b> | <b>6.3300e-003</b> | <b>1.4000e-004</b> | <b>6.4700e-003</b> | <b>0.0000</b> | <b>21.0625</b> | <b>21.0625</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>21.0768</b> |

### 3.8 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         |                |                |               |               |                |
| Off-Road     | 0.0272        | 0.2725        | 0.2539        | 3.8000e-004        |               | 0.0165        | 0.0165        |                | 0.0152        | 0.0152        | 0.0000        | 33.5079        | 33.5079        | 0.0105        | 0.0000        | 33.7705        |
| Paving       | 5.0000e-005   |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0272</b> | <b>0.2725</b> | <b>0.2539</b> | <b>3.8000e-004</b> |               | <b>0.0165</b> | <b>0.0165</b> |                | <b>0.0152</b> | <b>0.0152</b> | <b>0.0000</b> | <b>33.5079</b> | <b>33.5079</b> | <b>0.0105</b> | <b>0.0000</b> | <b>33.7705</b> |

#### 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      | 4.5000e-004        | 0.0156        | 3.0700e-003   | 4.0000e-005        | 8.5000e-004        | 6.0000e-005        | 9.1000e-004        | 2.3000e-004        | 6.0000e-005        | 2.9000e-004        | 0.0000        | 3.8532        | 3.8532        | 1.8000e-004        | 0.0000        | 3.8577        |
| Vendor       | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.3100e-003        | 9.7000e-004   | 0.0101        | 3.0000e-005        | 2.8600e-003        | 2.0000e-005        | 2.8700e-003        | 7.6000e-004        | 2.0000e-005        | 7.8000e-004        | 0.0000        | 2.5275        | 2.5275        | 7.0000e-005        | 0.0000        | 2.5292        |
| <b>Total</b> | <b>1.7600e-003</b> | <b>0.0165</b> | <b>0.0131</b> | <b>7.0000e-005</b> | <b>3.7100e-003</b> | <b>8.0000e-005</b> | <b>3.7800e-003</b> | <b>9.9000e-004</b> | <b>8.0000e-005</b> | <b>1.0700e-003</b> | <b>0.0000</b> | <b>6.3807</b> | <b>6.3807</b> | <b>2.5000e-004</b> | <b>0.0000</b> | <b>6.3870</b> |

Mitigated Construction On-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 9.0400e-003 | 0.1913 | 0.2787 | 3.8000e-004 |               | 1.7400e-003  | 1.7400e-003 |                | 1.7400e-003   | 1.7400e-003 | 0.0000   | 33.5079   | 33.5079   | 0.0105 | 0.0000 | 33.7705 |
| Paving   | 5.0000e-005 |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 9.0900e-003 | 0.1913 | 0.2787 | 3.8000e-004 |               | 1.7400e-003  | 1.7400e-003 |                | 1.7400e-003   | 1.7400e-003 | 0.0000   | 33.5079   | 33.5079   | 0.0105 | 0.0000 | 33.7705 |

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  | 4.5000e-004 | 0.0156      | 3.0700e-003 | 4.0000e-005 | 8.5000e-004   | 6.0000e-005  | 9.1000e-004 | 2.3000e-004    | 6.0000e-005   | 2.9000e-004 | 0.0000   | 3.8532    | 3.8532    | 1.8000e-004 | 0.0000 | 3.8577 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 1.3100e-003 | 9.7000e-004 | 0.0101      | 3.0000e-005 | 2.8600e-003   | 2.0000e-005  | 2.8700e-003 | 7.6000e-004    | 2.0000e-005   | 7.8000e-004 | 0.0000   | 2.5275    | 2.5275    | 7.0000e-005 | 0.0000 | 2.5292 |
| Total    | 1.7600e-003 | 0.0165      | 0.0131      | 7.0000e-005 | 3.7100e-003   | 8.0000e-005  | 3.7800e-003 | 9.9000e-004    | 8.0000e-005   | 1.0700e-003 | 0.0000   | 6.3807    | 6.3807    | 2.5000e-004 | 0.0000 | 6.3870 |

## Gateway Crossings Phase 2, Criteria and Operational - Santa Clara County, Annual

## Gateway Crossings Phase 2, Criteria and Operational Santa Clara County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

| Land Uses                      | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|---------------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 625.00 | Space         | 0.00        | 256,900.00         | 0          |
| Parking Lot                    | 7.00   | Space         | 0.06        | 2,800.00           | 0          |
| Apartments Mid Rise            | 332.00 | Dwelling Unit | 21.34       | 414,000.00         | 950        |

#### 1.2 Other Project Characteristics

|                             |                                |                             |       |                             |       |
|-----------------------------|--------------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Urban                          | Wind Speed (m/s)            | 2.2   | Precipitation Freq (Days)   | 58    |
| Climate Zone                | 4                              |                             |       | Operational Year            | 2021  |
| Utility Company             | Pacific Gas & Electric Company |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 380                            | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility company is silicon valley power-CO2 factor from climate action plan 2020

Land Use - Applicant provided land use sizes

Construction Phase - Applicant provided construction schedule

Off-road Equipment - Applicant provided construction information

Off-road Equipment - Applicant provided construction information

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided construction information

[illegible]



|                         |                            |                                |                                |
|-------------------------|----------------------------|--------------------------------|--------------------------------|
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstEquipMitigation | Tier                       | No Change                      | Tier 3                         |
| tblConstructionPhase    | NumDays                    | 20.00                          | 100.00                         |
| tblConstructionPhase    | NumDays                    | 370.00                         | 100.00                         |
| tblConstructionPhase    | NumDays                    | 35.00                          | 40.00                          |
| tblConstructionPhase    | NumDays                    | 20.00                          | 40.00                          |
| tblConstructionPhase    | NumDays                    | 10.00                          | 20.00                          |
| tblFireplaces           | FireplaceWoodMass          | 228.80                         | 0.00                           |
| tblFireplaces           | NumberGas                  | 49.80                          | 332.00                         |
| tblFireplaces           | NumberNoFireplace          | 13.28                          | 0.00                           |
| tblFireplaces           | NumberWood                 | 56.44                          | 0.00                           |
| tblFleetMix             | FleetMixLandUseSubType     | Enclosed Parking with Elevator | Apartments Mid Rise            |
| tblFleetMix             | FleetMixLandUseSubType     | Parking Lot                    | Enclosed Parking with Elevator |
| tblFleetMix             | FleetMixLandUseSubType     | Apartments Mid Rise            | Parking Lot                    |
| tblGrading              | MaterialExported           | 0.00                           | 19,496.00                      |
| tblLandUse              | BuildingSpaceSquareFeet    | 250,000.00                     | 256,900.00                     |
| tblLandUse              | BuildingSpaceSquareFeet    | 332,000.00                     | 414,000.00                     |
| tblLandUse              | LandUseSquareFeet          | 250,000.00                     | 256,900.00                     |
| tblLandUse              | LandUseSquareFeet          | 332,000.00                     | 414,000.00                     |
| tblLandUse              | LotAcreage                 | 5.63                           | 0.00                           |
| tblLandUse              | LotAcreage                 | 8.74                           | 21.34                          |
| tblOffRoadEquipment     | OffRoadEquipmentUnitAmount | 1.00                           | 2.00                           |

|                           |                            |        |        |
|---------------------------|----------------------------|--------|--------|
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 3.00   | 4.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00   | 2.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00   | 1.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00   | 1.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 3.00   | 2.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00   | 3.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 3.00   | 1.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00   | 1.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 4.00   | 1.00   |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00   | 4.00   |
| tblOffRoadEquipment       | UsageHours                 | 6.00   | 3.20   |
| tblOffRoadEquipment       | UsageHours                 | 7.00   | 8.00   |
| tblOffRoadEquipment       | UsageHours                 | 7.00   | 8.00   |
| tblProjectCharacteristics | CO2IntensityFactor         | 641.35 | 380    |
| tblProjectCharacteristics | OperationalYear            | 2018   | 2021   |
| tblTripsAndVMT            | HaulingTripNumber          | 0.00   | 100.00 |
| tblVehicleTrips           | ST_TR                      | 6.39   | 5.83   |
| tblVehicleTrips           | SU_TR                      | 5.86   | 5.35   |
| tblVehicleTrips           | WD_TR                      | 6.65   | 6.07   |
| tblWoodstoves             | NumberCatalytic            | 6.64   | 0.00   |
| tblWoodstoves             | NumberNoncatalytic         | 6.64   | 0.00   |
| tblWoodstoves             | WoodstoveWoodMass          | 582.40 | 0.00   |

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

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

| Year    | tons/yr |        |        |             |        |        |        |        |        |        | MT/yr  |          |          |        |        |          |
|---------|---------|--------|--------|-------------|--------|--------|--------|--------|--------|--------|--------|----------|----------|--------|--------|----------|
| 2019    | 0.4760  | 4.8742 | 3.3837 | 7.6600e-003 | 0.5162 | 0.2035 | 0.7198 | 0.1860 | 0.1892 | 0.3752 | 0.0000 | 693.4137 | 693.4137 | 0.1376 | 0.0000 | 696.8531 |
| 2020    | 3.1261  | 1.2963 | 1.2665 | 2.6000e-003 | 0.0773 | 0.0637 | 0.1410 | 0.0207 | 0.0598 | 0.0805 | 0.0000 | 230.3285 | 230.3285 | 0.0403 | 0.0000 | 231.3370 |
| Maximum | 3.1261  | 4.8742 | 3.3837 | 7.6600e-003 | 0.5162 | 0.2035 | 0.7198 | 0.1860 | 0.1892 | 0.3752 | 0.0000 | 693.4137 | 693.4137 | 0.1376 | 0.0000 | 696.8531 |

### 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    | 0.1990  | 3.2316 | 3.6220 | 7.6600e-003 | 0.3131        | 0.0234       | 0.3366     | 0.0726         | 0.0232        | 0.0958      | 0.0000   | 693.4132  | 693.4132  | 0.1376 | 0.0000 | 696.8526 |
| 2020    | 3.0430  | 0.9903 | 1.3584 | 2.6000e-003 | 0.0773        | 8.5100e-003  | 0.0858     | 0.0207         | 8.4500e-003   | 0.0292      | 0.0000   | 230.3283  | 230.3283  | 0.0403 | 0.0000 | 231.3369 |
| Maximum | 3.0430  | 3.2316 | 3.6220 | 7.6600e-003 | 0.3131        | 0.0234       | 0.3366     | 0.0726         | 0.0232        | 0.0958      | 0.0000   | 693.4132  | 693.4132  | 0.1376 | 0.0000 | 696.8526 |

|                   | ROG   | NOx   | CO    | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|-------|-------|-------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 10.00 | 31.58 | -7.10 | 0.00 | 34.22         | 88.05        | 50.93      | 54.85          | 87.29         | 72.57       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 7-1-2019   | 9-30-2019  | 3.1765                                       | 1.9000                                     |
| 2       | 10-1-2019  | 12-31-2019 | 2.0061                                       | 1.4314                                     |
| 3       | 1-1-2020   | 3-31-2020  | 2.1473                                       | 1.9128                                     |
| 4       | 4-1-2020   | 6-30-2020  | 2.2065                                       | 2.0594                                     |
|         |            | Highest    | 3.1765                                       | 2.0594                                     |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 7/1/2019   | 7/26/2019 | 5             | 20       |                   |
| 2            | Grading               | Grading               | 7/29/2019  | 9/20/2019 | 5             | 40       |                   |
| 3            | Trenching             | Trenching             | 9/2/2019   | 9/27/2019 | 5             | 20       |                   |
| 4            | Building Construction | Building Construction | 9/23/2019  | 2/7/2020  | 5             | 100      |                   |
| 5            | Architectural Coating | Architectural Coating | 2/3/2020   | 6/19/2020 | 5             | 100      |                   |
| 6            | Paving                | Paving                | 4/1/2020   | 5/26/2020 | 5             | 40       |                   |

**Acres of Grading (Site Preparation Phase): 80****Acres of Grading (Grading Phase): 160****Acres of Paving: 0.06****Residential Indoor: 838,350; Residential Outdoor: 279,450; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:****OffRoad Equipment**

| Phase Name       | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Site Preparation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Site Preparation | Scrapers                  | 3      | 8.00        | 367         | 0.48        |
| Site Preparation | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Site Preparation | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Grading          | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading          | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Grading          | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Grading          | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading          | Scrapers                  | 3      | 8.00        | 367         | 0.48        |
| Grading          | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Grading          | Sweepers/Scrubbers        | 1      | 8.00        | 64          | 0.46        |
| Grading          | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Trenching        | Excavators                | 2      | 8.00        | 158         | 0.38        |

|                       |                              |   |      |     |      |
|-----------------------|------------------------------|---|------|-----|------|
| Trenching             | Rough Terrain Forklifts      | 1 | 8.00 | 100 | 0.40 |
| Trenching             | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Aerial Lifts                 | 3 | 8.00 | 63  | 0.31 |
| Building Construction | Cranes                       | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts                    | 4 | 8.00 | 89  | 0.20 |
| Building Construction | Generator Sets               | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Other Construction Equipment | 3 | 8.00 | 172 | 0.42 |
| Building Construction | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                      | 4 | 8.00 | 46  | 0.45 |
| Architectural Coating | Aerial Lifts                 | 1 | 8.00 | 63  | 0.31 |
| Architectural Coating | Air Compressors              | 2 | 3.20 | 78  | 0.48 |
| Architectural Coating | Cranes                       | 1 | 4.00 | 231 | 0.29 |
| Architectural Coating | Forklifts                    | 1 | 8.00 | 89  | 0.20 |
| Paving                | Cement and Mortar Mixers     | 1 | 4.00 | 9   | 0.56 |
| Paving                | Pavers                       | 1 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment             | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                      | 2 | 8.00 | 80  | 0.38 |
| Paving                | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |
| Paving                | Tractors/Loaders/Backhoes    | 1 | 4.00 | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 2,437.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 17                      | 348.00             | 78.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 70.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

|        |   |       |      |        |       |      |       |        |         |      |
|--------|---|-------|------|--------|-------|------|-------|--------|---------|------|
| Paving | 7 | 18.00 | 0.00 | 100.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
|--------|---|-------|------|--------|-------|------|-------|--------|---------|------|

### 3.1 Mitigation Measures Construction

## Use Cleaner Engines for Construction Equipment

## Use DPF for Construction Equipment

## Replace Ground Cover

### Water Exposed Area

## Reduce Vehicle Speed on Unpaved Roads

## Clean Paved Roads

### 3.2 Site Preparation - 2019

### Unmitigated Construction On-Site

|               | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|---------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category      | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Fugitive Dust |         |        |        |             | 0.1629        | 0.0000       | 0.1629     | 0.0708         | 0.0000        | 0.0708      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0676  | 0.7951 | 0.4012 | 8.1000e-004 |               | 0.0333       | 0.0333     |                | 0.0306        | 0.0306      | 0.0000   | 72.7354   | 72.7354   | 0.0230 | 0.0000 | 73.3108 |
| Total         | 0.0676  | 0.7951 | 0.4012 | 8.1000e-004 | 0.1629        | 0.0333       | 0.1961     | 0.0708         | 0.0306        | 0.1014      | 0.0000   | 72.7354   | 72.7354   | 0.0230 | 0.0000 | 73.3108 |

### Unmitigated Construction Off-Site

[illegible]

|        |             |             |             |             |             |             |             |             |             |             |        |        |        |             |        |        |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|
| Vendor | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000 | 0.0000 | 0.0000      | 0.0000 | 0.0000 |
| Worker | 8.4000e-004 | 6.2000e-004 | 6.4300e-003 | 2.0000e-005 | 1.8200e-003 | 1.0000e-005 | 1.8400e-003 | 4.9000e-004 | 1.0000e-005 | 5.0000e-004 | 0.0000 | 1.6148 | 1.6148 | 4.0000e-005 | 0.0000 | 1.6159 |
| Total  | 8.4000e-004 | 6.2000e-004 | 6.4300e-003 | 2.0000e-005 | 1.8200e-003 | 1.0000e-005 | 1.8400e-003 | 4.9000e-004 | 1.0000e-005 | 5.0000e-004 | 0.0000 | 1.6148 | 1.6148 | 4.0000e-005 | 0.0000 | 1.6159 |

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 |         |        |        |             | 0.0733        | 0.0000       | 0.0733      | 0.0159         | 0.0000        | 0.0159      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0199  | 0.3888 | 0.4424 | 8.1000e-004 |               | 2.3500e-003  | 2.3500e-003 |                | 2.3500e-003   | 2.3500e-003 | 0.0000   | 72.7354   | 72.7354   | 0.0230 | 0.0000 | 73.3107 |
| Total         | 0.0199  | 0.3888 | 0.4424 | 8.1000e-004 | 0.0733        | 2.3500e-003  | 0.0756      | 0.0159         | 2.3500e-003   | 0.0183      | 0.0000   | 72.7354   | 72.7354   | 0.0230 | 0.0000 | 73.3107 |

Mitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 8.4000e-004 | 6.2000e-004 | 6.4300e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.6148    | 1.6148    | 4.0000e-005 | 0.0000 | 1.6159 |
| Total    | 8.4000e-004 | 6.2000e-004 | 6.4300e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.6148    | 1.6148    | 4.0000e-005 | 0.0000 | 1.6159 |

### 3.3 Grading - 2019

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Fugitive Dust |               |               |               |                    | 0.2064        | 0.0000        | 0.2064        | 0.0755         | 0.0000        | 0.0755        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Off-Road      | 0.1376        | 1.5953        | 0.9635        | 1.8100e-003        |               | 0.0698        | 0.0698        |                | 0.0642        | 0.0642        | 0.0000        | 162.6681        | 162.6681        | 0.0515        | 0.0000        | 163.9548        |
| <b>Total</b>  | <b>0.1376</b> | <b>1.5953</b> | <b>0.9635</b> | <b>1.8100e-003</b> | <b>0.2064</b> | <b>0.0698</b> | <b>0.2762</b> | <b>0.0755</b>  | <b>0.0642</b> | <b>0.1398</b> | <b>0.0000</b> | <b>162.6681</b> | <b>162.6681</b> | <b>0.0515</b> | <b>0.0000</b> | <b>163.9548</b> |

#### 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      | 0.0111        | 0.3794        | 0.0749        | 9.7000e-004        | 0.0207        | 1.4600e-003        | 0.0221        | 5.6800e-003        | 1.3900e-003        | 7.0700e-003        | 0.0000        | 93.9031        | 93.9031        | 4.4000e-003        | 0.0000        | 94.0131        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Worker       | 2.4000e-003   | 1.7800e-003   | 0.0184        | 5.0000e-005        | 5.2300e-003   | 3.0000e-005        | 5.2700e-003   | 1.3900e-003        | 3.0000e-005        | 1.4200e-003        | 0.0000        | 4.6338         | 4.6338         | 1.3000e-004        | 0.0000        | 4.6369         |
| <b>Total</b> | <b>0.0135</b> | <b>0.3812</b> | <b>0.0934</b> | <b>1.0200e-003</b> | <b>0.0259</b> | <b>1.4900e-003</b> | <b>0.0274</b> | <b>7.0700e-003</b> | <b>1.4200e-003</b> | <b>8.4900e-003</b> | <b>0.0000</b> | <b>98.5368</b> | <b>98.5368</b> | <b>4.5300e-003</b> | <b>0.0000</b> | <b>98.6500</b> |

#### 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 |               |               |               |                    | 0.0929        | 0.0000             | 0.0929        | 0.0170        | 0.0000             | 0.0170        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Off-Road      | 0.0445        | 0.8822        | 1.0687        | 1.8100e-003        |               | 5.8700e-003        | 5.8700e-003   |               | 5.8700e-003        | 5.8700e-003   | 0.0000        | 162.6680        | 162.6680        | 0.0515        | 0.0000        | 163.9546        |
| <b>Total</b>  | <b>0.0445</b> | <b>0.8822</b> | <b>1.0687</b> | <b>1.8100e-003</b> | <b>0.0929</b> | <b>5.8700e-003</b> | <b>0.0987</b> | <b>0.0170</b> | <b>5.8700e-003</b> | <b>0.0229</b> | <b>0.0000</b> | <b>162.6680</b> | <b>162.6680</b> | <b>0.0515</b> | <b>0.0000</b> | <b>163.9546</b> |

### 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      | 0.0111        | 0.3794        | 0.0749        | 9.7000e-004        | 0.0207        | 1.4600e-003        | 0.0221        | 5.6800e-003        | 1.3900e-003        | 7.0700e-003        | 0.0000        | 93.9031        | 93.9031        | 4.4000e-003        | 0.0000        | 94.0131        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Worker       | 2.4000e-003   | 1.7800e-003   | 0.0184        | 5.0000e-005        | 5.2300e-003   | 3.0000e-005        | 5.2700e-003   | 1.3900e-003        | 3.0000e-005        | 1.4200e-003        | 0.0000        | 4.6338         | 4.6338         | 1.3000e-004        | 0.0000        | 4.6369         |
| <b>Total</b> | <b>0.0135</b> | <b>0.3812</b> | <b>0.0934</b> | <b>1.0200e-003</b> | <b>0.0259</b> | <b>1.4900e-003</b> | <b>0.0274</b> | <b>7.0700e-003</b> | <b>1.4200e-003</b> | <b>8.4900e-003</b> | <b>0.0000</b> | <b>98.5368</b> | <b>98.5368</b> | <b>4.5300e-003</b> | <b>0.0000</b> | <b>98.6500</b> |

### 3.4 Trenching - 2019

#### Unmitigated Construction On-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 0.0145        | 0.1535        | 0.1712        | 2.5000e-004        |               | 8.6100e-003        | 8.6100e-003        |                | 7.9200e-003        | 7.9200e-003        | 0.0000        | 22.5930        | 22.5930        | 7.1500e-003        | 0.0000        | 22.7717        |
| <b>Total</b> | <b>0.0145</b> | <b>0.1535</b> | <b>0.1712</b> | <b>2.5000e-004</b> |               | <b>8.6100e-003</b> | <b>8.6100e-003</b> |                | <b>7.9200e-003</b> | <b>7.9200e-003</b> | <b>0.0000</b> | <b>22.5930</b> | <b>22.5930</b> | <b>7.1500e-003</b> | <b>0.0000</b> | <b>22.7717</b> |

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-004 | 4.9000e-004 | 5.0300e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.2638    | 1.2638    | 3.0000e-005 | 0.0000 | 1.2646 |
| Total    | 6.5000e-004 | 4.9000e-004 | 5.0300e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.2638    | 1.2638    | 3.0000e-005 | 0.0000 | 1.2646 |

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 | 6.1800e-003 | 0.1321 | 0.1904 | 2.5000e-004 |               | 1.2300e-003  | 1.2300e-003 |                | 1.2300e-003   | 1.2300e-003 | 0.0000   | 22.5930   | 22.5930   | 7.1500e-003 | 0.0000 | 22.7717 |
| Total    | 6.1800e-003 | 0.1321 | 0.1904 | 2.5000e-004 |               | 1.2300e-003  | 1.2300e-003 |                | 1.2300e-003   | 1.2300e-003 | 0.0000   | 22.5930   | 22.5930   | 7.1500e-003 | 0.0000 | 22.7717 |

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-004        | 4.9000e-004        | 5.0300e-003        | 1.0000e-005        | 1.4300e-003        | 1.0000e-005        | 1.4400e-003        | 3.8000e-004        | 1.0000e-005        | 3.9000e-004        | 0.0000        | 1.2638        | 1.2638        | 3.0000e-005        | 0.0000        | 1.2646        |
| <b>Total</b> | <b>6.5000e-004</b> | <b>4.9000e-004</b> | <b>5.0300e-003</b> | <b>1.0000e-005</b> | <b>1.4300e-003</b> | <b>1.0000e-005</b> | <b>1.4400e-003</b> | <b>3.8000e-004</b> | <b>1.0000e-005</b> | <b>3.9000e-004</b> | <b>0.0000</b> | <b>1.2638</b> | <b>1.2638</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>1.2646</b> |

### 3.5 Building Construction - 2019

#### Unmitigated Construction On-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.1821        | 1.5595        | 1.2978        | 1.9900e-003        |               | 0.0871        | 0.0871        |                | 0.0820        | 0.0820        | 0.0000        | 172.1798        | 172.1798        | 0.0453        | 0.0000        | 173.3119        |
| <b>Total</b> | <b>0.1821</b> | <b>1.5595</b> | <b>1.2978</b> | <b>1.9900e-003</b> |               | <b>0.0871</b> | <b>0.0871</b> |                | <b>0.0820</b> | <b>0.0820</b> | <b>0.0000</b> | <b>172.1798</b> | <b>172.1798</b> | <b>0.0453</b> | <b>0.0000</b> | <b>173.3119</b> |

#### 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  | 0.0138 | 0.3546 | 0.0952 | 7.7000e-004 | 0.0185 | 2.5500e-003 | 0.0210 | 5.3400e-003 | 2.4400e-003 | 7.7800e-003 | 0.0000 | 73.8650  | 73.8650  | 3.6600e-003 | 0.0000 | 73.9566  |
| Worker  | 0.0455 | 0.0339 | 0.3500 | 9.7000e-004 | 0.0994 | 6.6000e-004 | 0.1000 | 0.0264      | 6.0000e-004 | 0.0270      | 0.0000 | 87.9570  | 87.9570  | 2.3900e-003 | 0.0000 | 88.0169  |
| Total   | 0.0593 | 0.3885 | 0.4452 | 1.7400e-003 | 0.1178 | 3.2100e-003 | 0.1210 | 0.0318      | 3.0400e-003 | 0.0348      | 0.0000 | 161.8220 | 161.8220 | 6.0500e-003 | 0.0000 | 161.9734 |

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 | 0.0542  | 1.0577 | 1.3705 | 1.9900e-003 |               | 9.2500e-003  | 9.2500e-003 |                | 9.2500e-003   | 9.2500e-003 | 0.0000   | 172.1796  | 172.1796  | 0.0453 | 0.0000 | 173.3117 |
| Total    | 0.0542  | 1.0577 | 1.3705 | 1.9900e-003 |               | 9.2500e-003  | 9.2500e-003 |                | 9.2500e-003   | 9.2500e-003 | 0.0000   | 172.1796  | 172.1796  | 0.0453 | 0.0000 | 173.3117 |

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   | 0.0138  | 0.3546 | 0.0952 | 7.7000e-004 | 0.0185        | 2.5500e-003  | 0.0210     | 5.3400e-003    | 2.4400e-003   | 7.7800e-003 | 0.0000   | 73.8650   | 73.8650   | 3.6600e-003 | 0.0000 | 73.9566  |
| Worker   | 0.0455  | 0.0339 | 0.3500 | 9.7000e-004 | 0.0994        | 6.6000e-004  | 0.1000     | 0.0264         | 6.0000e-004   | 0.0270      | 0.0000   | 87.9570   | 87.9570   | 2.3900e-003 | 0.0000 | 88.0169  |
| Total    | 0.0593  | 0.3885 | 0.4452 | 1.7400e-003 | 0.1178        | 3.2100e-003  | 0.1210     | 0.0318         | 3.0400e-003   | 0.0348      | 0.0000   | 161.8220  | 161.8220  | 6.0500e-003 | 0.0000 | 161.9734 |

### 3.5 Building Construction - 2020

#### Unmitigated Construction On-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |               |               |                |
| Off-Road     | 0.0645        | 0.5614        | 0.4975        | 7.8000e-004        |               | 0.0302        | 0.0302        |                | 0.0284        | 0.0284        | 0.0000        | 65.9021        | 65.9021        | 0.0174        | 0.0000        | 66.3358        |
| <b>Total</b> | <b>0.0645</b> | <b>0.5614</b> | <b>0.4975</b> | <b>7.8000e-004</b> |               | <b>0.0302</b> | <b>0.0302</b> |                | <b>0.0284</b> | <b>0.0284</b> | <b>0.0000</b> | <b>65.9021</b> | <b>65.9021</b> | <b>0.0174</b> | <b>0.0000</b> | <b>66.3358</b> |

#### 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       | 4.3300e-003   | 0.1243        | 0.0331        | 3.0000e-004        | 7.1800e-003   | 6.2000e-004        | 7.8000e-003   | 2.0800e-003    | 5.9000e-004        | 2.6700e-003   | 0.0000        | 28.5496        | 28.5496        | 1.3100e-003        | 0.0000        | 28.5823        |
| Worker       | 0.0162        | 0.0116        | 0.1219        | 3.7000e-004        | 0.0386        | 2.5000e-004        | 0.0389        | 0.0103         | 2.3000e-004        | 0.0105        | 0.0000        | 33.1369        | 33.1369        | 8.1000e-004        | 0.0000        | 33.1572        |
| <b>Total</b> | <b>0.0205</b> | <b>0.1360</b> | <b>0.1551</b> | <b>6.7000e-004</b> | <b>0.0458</b> | <b>8.7000e-004</b> | <b>0.0467</b> | <b>0.0124</b>  | <b>8.2000e-004</b> | <b>0.0132</b> | <b>0.0000</b> | <b>61.6864</b> | <b>61.6864</b> | <b>2.1200e-003</b> | <b>0.0000</b> | <b>61.7395</b> |

#### Mitigated Construction On-Site



|              |               |               |               |                    |  |               |               |  |               |               |               |                |                |                    |               |                |
|--------------|---------------|---------------|---------------|--------------------|--|---------------|---------------|--|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Off-Road     | 0.0334        | 0.3217        | 0.2643        | 4.6000e-004        |  | 0.0170        | 0.0170        |  | 0.0161        | 0.0161        | 0.0000        | 40.3814        | 40.3814        | 9.7100e-003        | 0.0000        | 40.6241        |
| <b>Total</b> | <b>3.0019</b> | <b>0.3217</b> | <b>0.2643</b> | <b>4.6000e-004</b> |  | <b>0.0170</b> | <b>0.0170</b> |  | <b>0.0161</b> | <b>0.0161</b> | <b>0.0000</b> | <b>40.3814</b> | <b>40.3814</b> | <b>9.7100e-003</b> | <b>0.0000</b> | <b>40.6241</b> |

**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       | 0.0116        | 8.3500e-003        | 0.0876        | 2.6000e-004        | 0.0278        | 1.8000e-004        | 0.0279        | 7.3800e-003        | 1.7000e-004        | 7.5500e-003        | 0.0000        | 23.8052        | 23.8052        | 5.8000e-004        | 0.0000        | 23.8198        |
| <b>Total</b> | <b>0.0116</b> | <b>8.3500e-003</b> | <b>0.0876</b> | <b>2.6000e-004</b> | <b>0.0278</b> | <b>1.8000e-004</b> | <b>0.0279</b> | <b>7.3800e-003</b> | <b>1.7000e-004</b> | <b>7.5500e-003</b> | <b>0.0000</b> | <b>23.8052</b> | <b>23.8052</b> | <b>5.8000e-004</b> | <b>0.0000</b> | <b>23.8198</b> |

**Mitigated Construction On-Site**

|                 | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|-----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category        | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Archit. Coating | 2.9685        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road        | 0.0107        | 0.2311        | 0.2963        | 4.6000e-004        |               | 2.1000e-003        | 2.1000e-003        |                | 2.1000e-003        | 2.1000e-003        | 0.0000        | 40.3813        | 40.3813        | 9.7100e-003        | 0.0000        | 40.6241        |
| <b>Total</b>    | <b>2.9791</b> | <b>0.2311</b> | <b>0.2963</b> | <b>4.6000e-004</b> |               | <b>2.1000e-003</b> | <b>2.1000e-003</b> |                | <b>2.1000e-003</b> | <b>2.1000e-003</b> | <b>0.0000</b> | <b>40.3813</b> | <b>40.3813</b> | <b>9.7100e-003</b> | <b>0.0000</b> | <b>40.6241</b> |

**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   | 0.0116  | 8.3500e-003 | 0.0876 | 2.6000e-004 | 0.0278        | 1.8000e-004  | 0.0279     | 7.3800e-003    | 1.7000e-004   | 7.5500e-003 | 0.0000   | 23.8052   | 23.8052   | 5.8000e-004 | 0.0000 | 23.8198 |
| Total    | 0.0116  | 8.3500e-003 | 0.0876 | 2.6000e-004 | 0.0278        | 1.8000e-004  | 0.0279     | 7.3800e-003    | 1.7000e-004   | 7.5500e-003 | 0.0000   | 23.8052   | 23.8052   | 5.8000e-004 | 0.0000 | 23.8198 |

3.7 Paving - 2020

Unmitigated Construction On-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 0.0258      | 0.2536 | 0.2500 | 3.7000e-004 |               | 0.0154       | 0.0154     |                | 0.0142        | 0.0142      | 0.0000   | 32.2913   | 32.2913   | 0.0103 | 0.0000 | 32.5499 |
| Paving   | 8.0000e-005 |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 0.0259      | 0.2536 | 0.2500 | 3.7000e-004 |               | 0.0154       | 0.0154     |                | 0.0142        | 0.0142      | 0.0000   | 32.2913   | 32.2913   | 0.0103 | 0.0000 | 32.5499 |

Unmitigated Construction Off-Site

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

|         |             |             |             |             |             |             |             |             |             |             |        |        |        |             |        |        |
|---------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|
| Hauling | 4.2000e-004 | 0.0145      | 2.9700e-003 | 4.0000e-005 | 8.5000e-004 | 5.0000e-005 | 8.9000e-004 | 2.3000e-004 | 5.0000e-005 | 2.8000e-004 | 0.0000 | 3.8135 | 3.8135 | 1.7000e-004 | 0.0000 | 3.8179 |
| Vendor  | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000 | 0.0000 | 0.0000      | 0.0000 | 0.0000 |
| Worker  | 1.2000e-003 | 8.6000e-004 | 9.0100e-003 | 3.0000e-005 | 2.8600e-003 | 2.0000e-005 | 2.8700e-003 | 7.6000e-004 | 2.0000e-005 | 7.8000e-004 | 0.0000 | 2.4485 | 2.4485 | 6.0000e-005 | 0.0000 | 2.4500 |
| Total   | 1.6200e-003 | 0.0154      | 0.0120      | 7.0000e-005 | 3.7100e-003 | 7.0000e-005 | 3.7600e-003 | 9.9000e-004 | 7.0000e-005 | 1.0600e-003 | 0.0000 | 6.2621 | 6.2621 | 2.3000e-004 | 0.0000 | 6.2679 |

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 | 8.9000e-003 | 0.1881 | 0.2745 | 3.7000e-004 |               | 1.7000e-003  | 1.7000e-003 |                | 1.7000e-003   | 1.7000e-003 | 0.0000   | 32.2912   | 32.2912   | 0.0103 | 0.0000 | 32.5498 |
| Paving   | 8.0000e-005 |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 8.9800e-003 | 0.1881 | 0.2745 | 3.7000e-004 |               | 1.7000e-003  | 1.7000e-003 |                | 1.7000e-003   | 1.7000e-003 | 0.0000   | 32.2912   | 32.2912   | 0.0103 | 0.0000 | 32.5498 |

Mitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 4.2000e-004 | 0.0145      | 2.9700e-003 | 4.0000e-005 | 8.5000e-004   | 5.0000e-005  | 8.9000e-004 | 2.3000e-004    | 5.0000e-005   | 2.8000e-004 | 0.0000   | 3.8135    | 3.8135    | 1.7000e-004 | 0.0000 | 3.8179 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 1.2000e-003 | 8.6000e-004 | 9.0100e-003 | 3.0000e-005 | 2.8600e-003   | 2.0000e-005  | 2.8700e-003 | 7.6000e-004    | 2.0000e-005   | 7.8000e-004 | 0.0000   | 2.4485    | 2.4485    | 6.0000e-005 | 0.0000 | 2.4500 |
| Total    | 1.6200e-003 | 0.0154      | 0.0120      | 7.0000e-005 | 3.7100e-003   | 7.0000e-005  | 3.7600e-003 | 9.9000e-004    | 7.0000e-005   | 1.0600e-003 | 0.0000   | 6.2621    | 6.2621    | 2.3000e-004 | 0.0000 | 6.2679 |

## Phase 3, Mitigated Criteria Emissions - Santa Clara County, Annual

### Phase 3, Mitigated Criteria Emissions

#### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|---------------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 760.00 | Space         | 0.00        | 311,800.00         | 0          |
| Parking Lot                    | 6.00   | Space         | 0.05        | 2,400.00           | 0          |
| Apartments Mid Rise            | 432.00 | Dwelling Unit | 21.35       | 522,000.00         | 1236       |
| Strip Mall                     | 4.90   | 1000sqft      | 0.00        | 4,900.00           | 0          |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 58    |
| <b>Climate Zone</b>             | 4                              | <b>Operational Year</b>         | 2022  |                                  |       |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 380                            | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E used to represent SVP. Current CO2 emission factor from Santa Clara Climate Action Plan 2020

Land Use - Applicant provided information on construction spreadsheet

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided information

[illegible]



|                           |                         |            |            |
|---------------------------|-------------------------|------------|------------|
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblFireplaces             | FireplaceWoodMass       | 228.80     | 0.00       |
| tblFireplaces             | NumberGas               | 64.80      | 432.00     |
| tblFireplaces             | NumberNoFireplace       | 17.28      | 0.00       |
| tblFireplaces             | NumberWood              | 73.44      | 0.00       |
| tblGrading                | MaterialExported        | 0.00       | 20,919.00  |
| tblLandUse                | BuildingSpaceSquareFeet | 304,000.00 | 311,800.00 |
| tblLandUse                | BuildingSpaceSquareFeet | 432,000.00 | 522,000.00 |
| tblLandUse                | LandUseSquareFeet       | 304,000.00 | 311,800.00 |
| tblLandUse                | LandUseSquareFeet       | 432,000.00 | 522,000.00 |
| tblLandUse                | LotAcreage              | 6.84       | 0.00       |
| tblLandUse                | LotAcreage              | 11.37      | 21.35      |
| tblLandUse                | LotAcreage              | 0.11       | 0.00       |
| tblProjectCharacteristics | CO2IntensityFactor      | 641.35     | 380        |
| tblProjectCharacteristics | OperationalYear         | 2018       | 2022       |
| tblTripsAndVMT            | HaulingTripNumber       | 0.00       | 100.00     |
| tblVehicleTrips           | ST_TR                   | 6.39       | 5.83       |
| tblVehicleTrips           | ST_TR                   | 42.04      | 28.95      |
| tblVehicleTrips           | SU_TR                   | 5.86       | 5.35       |
| tblVehicleTrips           | SU_TR                   | 20.43      | 14.07      |

|                 |                    |        |       |
|-----------------|--------------------|--------|-------|
| tblVehicleTrips | WD_TR              | 6.65   | 6.07  |
| tblVehicleTrips | WD_TR              | 44.32  | 30.52 |
| tblWoodstoves   | NumberCatalytic    | 8.64   | 0.00  |
| tblWoodstoves   | NumberNoncatalytic | 8.64   | 0.00  |
| tblWoodstoves   | WoodstoveWoodMass  | 582.40 | 0.00  |

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2020    | 2.1787  | 5.2608 | 3.9988 | 9.6800e-003 | 0.6242        | 0.2163       | 0.8405     | 0.2151         | 0.2005        | 0.4156      | 0.0000   | 873.0970  | 873.0970  | 0.1571 | 0.0000 | 877.0236 |
| 2021    | 2.1621  | 0.4300 | 0.4940 | 8.6000e-004 | 0.0235        | 0.0249       | 0.0484     | 6.2500e-003    | 0.0231        | 0.0294      | 0.0000   | 76.5182   | 76.5182   | 0.0160 | 0.0000 | 76.9189  |
| Maximum | 2.1787  | 5.2608 | 3.9988 | 9.6800e-003 | 0.6242        | 0.2163       | 0.8405     | 0.2151         | 0.2005        | 0.4156      | 0.0000   | 873.0970  | 873.0970  | 0.1571 | 0.0000 | 877.0236 |

Mitigated Construction

|      | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2020 | 1.9048  | 3.7053 | 4.3666 | 9.6800e-003 | 0.4211        | 0.0264       | 0.4475     | 0.1017         | 0.0261        | 0.1278      | 0.0000   | 873.0964  | 873.0964  | 0.1571 | 0.0000 | 877.0231 |
| 2021 | 2.1327  | 0.3386 | 0.5196 | 8.6000e-004 | 0.0235        | 3.2700e-003  | 0.0267     | 6.2500e-003    | 3.2500e-003   | 9.5000e-003 | 0.0000   | 76.5181   | 76.5181   | 0.0160 | 0.0000 | 76.9188  |

|         |        |        |        |             |        |        |        |        |        |        |        |          |          |        |        |          |
|---------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|--------|--------|----------|----------|--------|--------|----------|
| Maximum | 2.1327 | 3.7053 | 4.3666 | 9.6800e-003 | 0.4211 | 0.0264 | 0.4475 | 0.1017 | 0.0261 | 0.1278 | 0.0000 | 873.0964 | 873.0964 | 0.1571 | 0.0000 | 877.0231 |
|---------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|--------|--------|----------|----------|--------|--------|----------|

|                   | ROG  | NOx   | 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 | 6.99 | 28.94 | -8.76 | 0.00 | 31.36         | 87.71        | 46.65      | 51.24          | 86.88         | 69.15       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 4-1-2020   | 6-30-2020  | 2.9642                                       | 1.8655                                     |
| 2       | 7-1-2020   | 9-30-2020  | 1.7370                                       | 1.2944                                     |
| 3       | 10-1-2020  | 12-31-2020 | 2.6328                                       | 2.3568                                     |
| 4       | 1-1-2021   | 3-31-2021  | 2.5819                                       | 2.4614                                     |
|         |            | Highest    | 2.9642                                       | 2.4614                                     |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 4/1/2020   | 4/28/2020  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 4/29/2020  | 6/23/2020  | 5             | 40       |                   |
| 3            | Trenching             | Trenching             | 6/1/2020   | 6/26/2020  | 5             | 20       |                   |
| 4            | Building Construction | Building Construction | 6/29/2020  | 11/13/2020 | 5             | 100      |                   |
| 5            | Architectural Coating | Architectural Coating | 11/2/2020  | 3/19/2021  | 5             | 100      |                   |
| 6            | Paving                | Paving                | 1/1/2021   | 2/25/2021  | 5             | 40       |                   |

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 160

Acres of Paving: 0.05

Residential Indoor: 1,057,050; Residential Outdoor: 352,350; Non-Residential Indoor: 7,350; Non-Residential Outdoor: 2,450; Striped

#### OffRoad Equipment

| Phase Name            | Offroad Equipment Type       | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|------------------------------|--------|-------------|-------------|-------------|
| Site Preparation      | Graders                      | 2      | 8.00        | 97          | 0.37        |
| Site Preparation      | Rubber Tired Dozers          | 2      | 8.00        | 247         | 0.40        |
| Site Preparation      | Scrapers                     | 3      | 8.00        | 367         | 0.48        |
| Site Preparation      | Skid Steer Loaders           | 1      | 8.00        | 65          | 0.37        |
| Site Preparation      | Tractors/Loaders/Backhoes    | 1      | 8.00        | 187         | 0.41        |
| Grading               | Excavators                   | 2      | 8.00        | 158         | 0.38        |
| Grading               | Graders                      | 2      | 8.00        | 187         | 0.41        |
| Grading               | Rollers                      | 2      | 8.00        | 80          | 0.38        |
| Grading               | Rubber Tired Dozers          | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                     | 3      | 8.00        | 367         | 0.48        |
| Grading               | Skid Steer Loaders           | 1      | 8.00        | 65          | 0.37        |
| Grading               | Sweepers/Scrubbers           | 1      | 8.00        | 64          | 0.46        |
| Grading               | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Trenching             | Excavators                   | 2      | 8.00        | 158         | 0.38        |
| Trenching             | Rough Terrain Forklifts      | 1      | 8.00        | 100         | 0.40        |
| Trenching             | Skid Steer Loaders           | 1      | 8.00        | 65          | 0.37        |
| Trenching             | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Trenching             | Tractors/Loaders/Backhoes    | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Aerial Lifts                 | 3      | 8.00        | 63          | 0.31        |
| Building Construction | Cranes                       | 1      | 8.00        | 231         | 0.29        |
| Building Construction | Forklifts                    | 4      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets               | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Other Construction Equipment | 3      | 8.00        | 172         | 0.42        |
| Building Construction | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                      | 1      | 8.00        | 46          | 0.45        |
| Architectural Coating | Aerial Lifts                 | 1      | 8.00        | 63          | 0.31        |
| Architectural Coating | Air Compressors              | 2      | 3.20        | 78          | 0.48        |
| Architectural Coating | Cranes                       | 1      | 4.00        | 81          | 0.73        |
| Architectural Coating | Forklifts                    | 1      | 8.00        | 89          | 0.20        |
| Paving                | Cement and Mortar Mixers     | 1      | 4.00        | 9           | 0.56        |

|        |                           |   |      |     |      |
|--------|---------------------------|---|------|-----|------|
| Paving | Pavers                    | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Paving | Sweepers/Scrubbers        | 1 | 8.00 | 64  | 0.46 |
| Paving | Tractors/Loaders/Backhoes | 1 | 4.00 | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 2,615.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 14                      | 445.00             | 98.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 89.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 100.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

**3.2 Site Preparation - 2020**

**Unmitigated Construction On-Site**

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

| Category      | tons/yr |        |        |             |        |        |        |        |        |        | MT/yr  |         |         |        |        |         |
|---------------|---------|--------|--------|-------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|---------|
| Fugitive Dust |         |        |        |             | 0.1629 | 0.0000 | 0.1629 | 0.0708 | 0.0000 | 0.0708 | 0.0000 | 0.0000  | 0.0000  | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0676  | 0.7247 | 0.3942 | 7.7000e-004 |        | 0.0344 | 0.0344 |        | 0.0317 | 0.0317 | 0.0000 | 67.9145 | 67.9145 | 0.0220 | 0.0000 | 68.4636 |
| Total         | 0.0676  | 0.7247 | 0.3942 | 7.7000e-004 | 0.1629 | 0.0344 | 0.1973 | 0.0708 | 0.0317 | 0.1024 | 0.0000 | 67.9145 | 67.9145 | 0.0220 | 0.0000 | 68.4636 |

**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   | 7.6000e-004 | 5.5000e-004 | 5.7600e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.5643    | 1.5643    | 4.0000e-005 | 0.0000 | 1.5653 |
| Total    | 7.6000e-004 | 5.5000e-004 | 5.7600e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.5643    | 1.5643    | 4.0000e-005 | 0.0000 | 1.5653 |

**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 |         |        |        |             | 0.0733        | 0.0000       | 0.0733      | 0.0159         | 0.0000        | 0.0159      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0190  | 0.3748 | 0.4307 | 7.7000e-004 |               | 2.3600e-003  | 2.3600e-003 |                | 2.3600e-003   | 2.3600e-003 | 0.0000   | 67.9144   | 67.9144   | 0.0220 | 0.0000 | 68.4636 |

|       |        |        |        |             |        |             |        |        |             |        |        |         |         |        |        |         |
|-------|--------|--------|--------|-------------|--------|-------------|--------|--------|-------------|--------|--------|---------|---------|--------|--------|---------|
| Total | 0.0190 | 0.3748 | 0.4307 | 7.7000e-004 | 0.0733 | 2.3600e-003 | 0.0757 | 0.0159 | 2.3600e-003 | 0.0183 | 0.0000 | 67.9144 | 67.9144 | 0.0220 | 0.0000 | 68.4636 |
|-------|--------|--------|--------|-------------|--------|-------------|--------|--------|-------------|--------|--------|---------|---------|--------|--------|---------|

### 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   | 7.6000e-004 | 5.5000e-004 | 5.7600e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.5643    | 1.5643    | 4.0000e-005 | 0.0000 | 1.5653 |
| Total    | 7.6000e-004 | 5.5000e-004 | 5.7600e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.5643    | 1.5643    | 4.0000e-005 | 0.0000 | 1.5653 |

### 3.3 Grading - 2020

#### Unmitigated Construction On-Site

|               | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category      | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| Fugitive Dust |         |        |        |             | 0.2065        | 0.0000       | 0.2065     | 0.0755         | 0.0000        | 0.0755      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.1295  | 1.4744 | 0.9223 | 1.8100e-003 |               | 0.0640       | 0.0640     |                | 0.0589        | 0.0589      | 0.0000   | 159.1077  | 159.1077  | 0.0515 | 0.0000 | 160.3941 |
| Total         | 0.1295  | 1.4744 | 0.9223 | 1.8100e-003 | 0.2065        | 0.0640       | 0.2705     | 0.0755         | 0.0589        | 0.1344      | 0.0000   | 159.1077  | 159.1077  | 0.0515 | 0.0000 | 160.3941 |

#### 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  | 0.0109      | 0.3794      | 0.0777 | 1.0300e-003 | 0.0222        | 1.2300e-003  | 0.0234      | 6.0900e-003    | 1.1800e-003   | 7.2700e-003 | 0.0000   | 99.7241   | 99.7241   | 4.5600e-003 | 0.0000 | 99.8381  |
| Vendor   | 0.0000      | 0.0000      | 0.0000 | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000   |
| Worker   | 2.1900e-003 | 1.5800e-003 | 0.0165 | 5.0000e-005 | 5.2300e-003   | 3.0000e-005  | 5.2700e-003 | 1.3900e-003    | 3.0000e-005   | 1.4200e-003 | 0.0000   | 4.4890    | 4.4890    | 1.1000e-004 | 0.0000 | 4.4917   |
| Total    | 0.0131      | 0.3810      | 0.0942 | 1.0800e-003 | 0.0274        | 1.2600e-003  | 0.0287      | 7.4800e-003    | 1.2100e-003   | 8.6900e-003 | 0.0000   | 104.2131  | 104.2131  | 4.6700e-003 | 0.0000 | 104.3299 |

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 |         |        |        |             | 0.0929        | 0.0000       | 0.0929      | 0.0170         | 0.0000        | 0.0170      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.0445  | 0.8822 | 1.0687 | 1.8100e-003 |               | 5.8700e-003  | 5.8700e-003 |                | 5.8700e-003   | 5.8700e-003 | 0.0000   | 159.1075  | 159.1075  | 0.0515 | 0.0000 | 160.3939 |
| Total         | 0.0445  | 0.8822 | 1.0687 | 1.8100e-003 | 0.0929        | 5.8700e-003  | 0.0988      | 0.0170         | 5.8700e-003   | 0.0229      | 0.0000   | 159.1075  | 159.1075  | 0.0515 | 0.0000 | 160.3939 |

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      | 0.0109        | 0.3794        | 0.0777        | 1.0300e-003        | 0.0222        | 1.2300e-003        | 0.0234        | 6.0900e-003        | 1.1800e-003        | 7.2700e-003        | 0.0000        | 99.7241         | 99.7241         | 4.5600e-003        | 0.0000        | 99.8381         |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Worker       | 2.1900e-003   | 1.5800e-003   | 0.0165        | 5.0000e-005        | 5.2300e-003   | 3.0000e-005        | 5.2700e-003   | 1.3900e-003        | 3.0000e-005        | 1.4200e-003        | 0.0000        | 4.4890          | 4.4890          | 1.1000e-004        | 0.0000        | 4.4917          |
| <b>Total</b> | <b>0.0131</b> | <b>0.3810</b> | <b>0.0942</b> | <b>1.0800e-003</b> | <b>0.0274</b> | <b>1.2600e-003</b> | <b>0.0287</b> | <b>7.4800e-003</b> | <b>1.2100e-003</b> | <b>8.6900e-003</b> | <b>0.0000</b> | <b>104.2131</b> | <b>104.2131</b> | <b>4.6700e-003</b> | <b>0.0000</b> | <b>104.3299</b> |

### 3.4 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     | 0.0133        | 0.1393        | 0.1706        | 2.5000e-004        |               | 7.5100e-003        | 7.5100e-003        |                | 6.9100e-003        | 6.9100e-003        | 0.0000        | 22.1026        | 22.1026        | 7.1500e-003        | 0.0000        | 22.2813        |
| <b>Total</b> | <b>0.0133</b> | <b>0.1393</b> | <b>0.1706</b> | <b>2.5000e-004</b> |               | <b>7.5100e-003</b> | <b>7.5100e-003</b> |                | <b>6.9100e-003</b> | <b>6.9100e-003</b> | <b>0.0000</b> | <b>22.1026</b> | <b>22.1026</b> | <b>7.1500e-003</b> | <b>0.0000</b> | <b>22.2813</b> |

#### 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-004        | 4.3000e-004        | 4.5000e-003        | 1.0000e-005        | 1.4300e-003        | 1.0000e-005        | 1.4400e-003        | 3.8000e-004        | 1.0000e-005        | 3.9000e-004        | 0.0000        | 1.2243        | 1.2243        | 3.0000e-005        | 0.0000        | 1.2250        |
| <b>Total</b> | <b>6.0000e-004</b> | <b>4.3000e-004</b> | <b>4.5000e-003</b> | <b>1.0000e-005</b> | <b>1.4300e-003</b> | <b>1.0000e-005</b> | <b>1.4400e-003</b> | <b>3.8000e-004</b> | <b>1.0000e-005</b> | <b>3.9000e-004</b> | <b>0.0000</b> | <b>1.2243</b> | <b>1.2243</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>1.2250</b> |

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 | 6.1800e-003 | 0.1321 | 0.1904 | 2.5000e-004 |               | 1.2300e-003  | 1.2300e-003 |                | 1.2300e-003   | 1.2300e-003 | 0.0000   | 22.1026   | 22.1026   | 7.1500e-003 | 0.0000 | 22.2813 |
| Total    | 6.1800e-003 | 0.1321 | 0.1904 | 2.5000e-004 |               | 1.2300e-003  | 1.2300e-003 |                | 1.2300e-003   | 1.2300e-003 | 0.0000   | 22.1026   | 22.1026   | 7.1500e-003 | 0.0000 | 22.2813 |

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-004 | 4.3000e-004 | 4.5000e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.2243    | 1.2243    | 3.0000e-005 | 0.0000 | 1.2250 |
| Total    | 6.0000e-004 | 4.3000e-004 | 4.5000e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.2243    | 1.2243    | 3.0000e-005 | 0.0000 | 1.2250 |

3.5 Building Construction - 2020

Unmitigated Construction On-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.1791        | 1.7692        | 1.5119        | 2.3800e-003        |               | 0.0949        | 0.0949        |                | 0.0884        | 0.0884        | 0.0000        | 207.1314        | 207.1314        | 0.0578        | 0.0000        | 208.5761        |
| <b>Total</b> | <b>0.1791</b> | <b>1.7692</b> | <b>1.5119</b> | <b>2.3800e-003</b> |               | <b>0.0949</b> | <b>0.0949</b> |                | <b>0.0884</b> | <b>0.0884</b> | <b>0.0000</b> | <b>207.1314</b> | <b>207.1314</b> | <b>0.0578</b> | <b>0.0000</b> | <b>208.5761</b> |

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       | 0.0194        | 0.5579        | 0.1486        | 1.3400e-003        | 0.0322        | 2.7600e-003        | 0.0350        | 9.3200e-003    | 2.6400e-003        | 0.0120        | 0.0000        | 128.1070        | 128.1070        | 5.8700e-003        | 0.0000        | 128.2538        |
| Worker       | 0.0739        | 0.0531        | 0.5568        | 1.6700e-003        | 0.1765        | 1.1400e-003        | 0.1776        | 0.0469         | 1.0500e-003        | 0.0480        | 0.0000        | 151.3333        | 151.3333        | 3.7100e-003        | 0.0000        | 151.4261        |
| <b>Total</b> | <b>0.0933</b> | <b>0.6110</b> | <b>0.7054</b> | <b>3.0100e-003</b> | <b>0.2087</b> | <b>3.9000e-003</b> | <b>0.2126</b> | <b>0.0563</b>  | <b>3.6900e-003</b> | <b>0.0599</b> | <b>0.0000</b> | <b>279.4402</b> | <b>279.4402</b> | <b>9.5800e-003</b> | <b>0.0000</b> | <b>279.6799</b> |

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 | 0.0594  | 1.2155 | 1.6790 | 2.3800e-003 |               | 0.0105       | 0.0105     |                | 0.0105        | 0.0105      | 0.0000   | 207.1312  | 207.1312  | 0.0578 | 0.0000 | 208.5759 |

|       |        |        |        |             |  |        |        |  |        |        |        |          |          |        |        |          |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|
| Total | 0.0594 | 1.2155 | 1.6790 | 2.3800e-003 |  | 0.0105 | 0.0105 |  | 0.0105 | 0.0105 | 0.0000 | 207.1312 | 207.1312 | 0.0578 | 0.0000 | 208.5759 |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|

### 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   | 0.0194  | 0.5579 | 0.1486 | 1.3400e-003 | 0.0322        | 2.7600e-003  | 0.0350     | 9.3200e-003    | 2.6400e-003   | 0.0120      | 0.0000   | 128.1070  | 128.1070  | 5.8700e-003 | 0.0000 | 128.2538 |
| Worker   | 0.0739  | 0.0531 | 0.5568 | 1.6700e-003 | 0.1765        | 1.1400e-003  | 0.1776     | 0.0469         | 1.0500e-003   | 0.0480      | 0.0000   | 151.3333  | 151.3333  | 3.7100e-003 | 0.0000 | 151.4261 |
| Total    | 0.0933  | 0.6110 | 0.7054 | 3.0100e-003 | 0.2087        | 3.9000e-003  | 0.2126     | 0.0563         | 3.6900e-003   | 0.0599      | 0.0000   | 279.4402  | 279.4402  | 9.5800e-003 | 0.0000 | 279.6799 |

### 3.6 Architectural Coating - 2020

#### Unmitigated Construction On-Site

|                 | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 1.6569  |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0181  | 0.1554 | 0.1409 | 2.0000e-004 |               | 0.0102       | 0.0102     |                | 9.6300e-003   | 9.6300e-003 | 0.0000   | 17.0816   | 17.0816   | 4.0500e-003 | 0.0000 | 17.1829 |
| Total           | 1.6750  | 0.1554 | 0.1409 | 2.0000e-004 |               | 0.0102       | 0.0102     |                | 9.6300e-003   | 9.6300e-003 | 0.0000   | 17.0816   | 17.0816   | 4.0500e-003 | 0.0000 | 17.1829 |

#### 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 | 4.6700e-003 | 0.0490 | 1.5000e-004 | 0.0155        | 1.0000e-004  | 0.0156     | 4.1300e-003    | 9.0000e-005   | 4.2200e-003 | 0.0000   | 13.3173   | 13.3173   | 3.3000e-004 | 0.0000 | 13.3255 |
| Total    | 6.5000e-003 | 4.6700e-003 | 0.0490 | 1.5000e-004 | 0.0155        | 1.0000e-004  | 0.0156     | 4.1300e-003    | 9.0000e-005   | 4.2200e-003 | 0.0000   | 13.3173   | 13.3173   | 3.3000e-004 | 0.0000 | 13.3255 |

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 | 1.6569      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 4.5100e-003 | 0.1030 | 0.1390 | 2.0000e-004 |               | 1.0800e-003  | 1.0800e-003 |                | 1.0800e-003   | 1.0800e-003 | 0.0000   | 17.0816   | 17.0816   | 4.0500e-003 | 0.0000 | 17.1829 |
| Total           | 1.6614      | 0.1030 | 0.1390 | 2.0000e-004 |               | 1.0800e-003  | 1.0800e-003 |                | 1.0800e-003   | 1.0800e-003 | 0.0000   | 17.0816   | 17.0816   | 4.0500e-003 | 0.0000 | 17.1829 |

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        | 4.6700e-003        | 0.0490        | 1.5000e-004        | 0.0155        | 1.0000e-004        | 0.0156        | 4.1300e-003        | 9.0000e-005        | 4.2200e-003        | 0.0000        | 13.3173        | 13.3173        | 3.3000e-004        | 0.0000        | 13.3255        |
| <b>Total</b> | <b>6.5000e-003</b> | <b>4.6700e-003</b> | <b>0.0490</b> | <b>1.5000e-004</b> | <b>0.0155</b> | <b>1.0000e-004</b> | <b>0.0156</b> | <b>4.1300e-003</b> | <b>9.0000e-005</b> | <b>4.2200e-003</b> | <b>0.0000</b> | <b>13.3173</b> | <b>13.3173</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>13.3255</b> |

### 3.6 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 | 2.1088        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road        | 0.0207        | 0.1791        | 0.1770        | 2.5000e-004        |               | 0.0113        | 0.0113        |                | 0.0106        | 0.0106        | 0.0000        | 21.7403        | 21.7403        | 5.0900e-003        | 0.0000        | 21.8675        |
| <b>Total</b>    | <b>2.1295</b> | <b>0.1791</b> | <b>0.1770</b> | <b>2.5000e-004</b> |               | <b>0.0113</b> | <b>0.0113</b> |                | <b>0.0106</b> | <b>0.0106</b> | <b>0.0000</b> | <b>21.7403</b> | <b>21.7403</b> | <b>5.0900e-003</b> | <b>0.0000</b> | <b>21.8675</b> |

#### 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       | 7.6800e-003        | 5.3200e-003        | 0.0570        | 1.8000e-004        | 0.0198        | 1.2000e-004        | 0.0199        | 5.2600e-003        | 1.1000e-004        | 5.3700e-003        | 0.0000        | 16.3610        | 16.3610        | 3.7000e-004        | 0.0000        | 16.3703        |
| <b>Total</b> | <b>7.6800e-003</b> | <b>5.3200e-003</b> | <b>0.0570</b> | <b>1.8000e-004</b> | <b>0.0198</b> | <b>1.2000e-004</b> | <b>0.0199</b> | <b>5.2600e-003</b> | <b>1.1000e-004</b> | <b>5.3700e-003</b> | <b>0.0000</b> | <b>16.3610</b> | <b>16.3610</b> | <b>3.7000e-004</b> | <b>0.0000</b> | <b>16.3703</b> |

### Mitigated Construction On-Site

|                 | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 2.1088      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 5.7400e-003 | 0.1310 | 0.1770 | 2.5000e-004 |               | 1.3800e-003  | 1.3800e-003 |                | 1.3800e-003   | 1.3800e-003 | 0.0000   | 21.7403   | 21.7403   | 5.0900e-003 | 0.0000 | 21.8675 |
| Total           | 2.1145      | 0.1310 | 0.1770 | 2.5000e-004 |               | 1.3800e-003  | 1.3800e-003 |                | 1.3800e-003   | 1.3800e-003 | 0.0000   | 21.7403   | 21.7403   | 5.0900e-003 | 0.0000 | 21.8675 |

### 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   | 7.6800e-003 | 5.3200e-003 | 0.0570 | 1.8000e-004 | 0.0198        | 1.2000e-004  | 0.0199     | 5.2600e-003    | 1.1000e-004   | 5.3700e-003 | 0.0000   | 16.3610   | 16.3610   | 3.7000e-004 | 0.0000 | 16.3703 |
| Total    | 7.6800e-003 | 5.3200e-003 | 0.0570 | 1.8000e-004 | 0.0198        | 1.2000e-004  | 0.0199     | 5.2600e-003    | 1.1000e-004   | 5.3700e-003 | 0.0000   | 16.3610   | 16.3610   | 3.7000e-004 | 0.0000 | 16.3703 |

## 3.7 Paving - 2021

### Unmitigated Construction On-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 0.0234      | 0.2315 | 0.2489 | 3.7000e-004 |               | 0.0134       | 0.0134     |                | 0.0124        | 0.0124      | 0.0000   | 32.2881   | 32.2881   | 0.0103 | 0.0000 | 32.5467 |
| Paving   | 7.0000e-005 |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 0.0235      | 0.2315 | 0.2489 | 3.7000e-004 |               | 0.0134       | 0.0134     |                | 0.0124        | 0.0124      | 0.0000   | 32.2881   | 32.2881   | 0.0103 | 0.0000 | 32.5467 |

**Unmitigated Construction Off-Site**

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 3.9000e-004 | 0.0134      | 2.9100e-003 | 4.0000e-005 | 8.5000e-004   | 4.0000e-005  | 8.9000e-004 | 2.3000e-004    | 4.0000e-005   | 2.7000e-004 | 0.0000   | 3.7652    | 3.7652    | 1.7000e-004 | 0.0000 | 3.7694 |
| 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   | 1.1100e-003 | 7.7000e-004 | 8.2400e-003 | 3.0000e-005 | 2.8600e-003   | 2.0000e-005  | 2.8700e-003 | 7.6000e-004    | 2.0000e-005   | 7.8000e-004 | 0.0000   | 2.3636    | 2.3636    | 5.0000e-005 | 0.0000 | 2.3649 |
| Total    | 1.5000e-003 | 0.0141      | 0.0112      | 7.0000e-005 | 3.7100e-003   | 6.0000e-005  | 3.7600e-003 | 9.9000e-004    | 6.0000e-005   | 1.0500e-003 | 0.0000   | 6.1287    | 6.1287    | 2.2000e-004 | 0.0000 | 6.1343 |

**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 | 8.9000e-003 | 0.1881 | 0.2745 | 3.7000e-004 |               | 1.7000e-003  | 1.7000e-003 |                | 1.7000e-003   | 1.7000e-003 | 0.0000   | 32.2881   | 32.2881   | 0.0103 | 0.0000 | 32.5467 |

|        |             |        |        |             |  |             |             |  |             |             |        |         |         |        |        |         |
|--------|-------------|--------|--------|-------------|--|-------------|-------------|--|-------------|-------------|--------|---------|---------|--------|--------|---------|
| Paving | 7.0000e-005 |        |        |             |  | 0.0000      | 0.0000      |  | 0.0000      | 0.0000      | 0.0000 | 0.0000  | 0.0000  | 0.0000 | 0.0000 | 0.0000  |
| Total  | 8.9700e-003 | 0.1881 | 0.2745 | 3.7000e-004 |  | 1.7000e-003 | 1.7000e-003 |  | 1.7000e-003 | 1.7000e-003 | 0.0000 | 32.2881 | 32.2881 | 0.0103 | 0.0000 | 32.5467 |

Mitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 3.9000e-004 | 0.0134      | 2.9100e-003 | 4.0000e-005 | 8.5000e-004   | 4.0000e-005  | 8.9000e-004 | 2.3000e-004    | 4.0000e-005   | 2.7000e-004 | 0.0000   | 3.7652    | 3.7652    | 1.7000e-004 | 0.0000 | 3.7694 |
| 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   | 1.1100e-003 | 7.7000e-004 | 8.2400e-003 | 3.0000e-005 | 2.8600e-003   | 2.0000e-005  | 2.8700e-003 | 7.6000e-004    | 2.0000e-005   | 7.8000e-004 | 0.0000   | 2.3636    | 2.3636    | 5.0000e-005 | 0.0000 | 2.3649 |
| Total    | 1.5000e-003 | 0.0141      | 0.0112      | 7.0000e-005 | 3.7100e-003   | 6.0000e-005  | 3.7600e-003 | 9.9000e-004    | 6.0000e-005   | 1.0500e-003 | 0.0000   | 6.1287    | 6.1287    | 2.2000e-004 | 0.0000 | 6.1343 |

## Gateway Crossings, Phase 4 Criteria and Operational Emissions - Santa Clara County, Annual

## Gateway Crossings, Phase 4 Criteria and Operational Emissions

### Santa Clara County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

| Land Uses                      | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|---------------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 905.00 | Space         | 0.00        | 362,000.00         | 0          |
| Parking Lot                    | 4.00   | Space         | 0.04        | 1,600.00           | 0          |
| Apartments Mid Rise            | 556.00 | Dwelling Unit | 21.36       | 556,885.00         | 1590       |

#### 1.2 Other Project Characteristics

|                             |                                |                             |       |                             |       |
|-----------------------------|--------------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Urban                          | Wind Speed (m/s)            | 2.2   | Precipitation Freq (Days)   | 58    |
| Climate Zone                | 4                              |                             |       | Operational Year            | 2024  |
| Utility Company             | Pacific Gas & Electric Company |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 380                            | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E used to represent SVP (Silicon Valley Power. Current CO2 emission factor from City of Santa Clara 2020 Climate Action Plan

Land Use - Applicant provided project description

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Energy Mitigation - Title 24, 2016 came into effect on 1st January, 2017

[illegible]



|                           |                         |            |            |
|---------------------------|-------------------------|------------|------------|
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblFireplaces             | FireplaceWoodMass       | 228.80     | 0.00       |
| tblFireplaces             | NumberGas               | 83.40      | 556.00     |
| tblFireplaces             | NumberNoFireplace       | 22.24      | 0.00       |
| tblFireplaces             | NumberWood              | 94.52      | 0.00       |
| tblGrading                | MaterialExported        | 0.00       | 18,459.00  |
| tblLandUse                | BuildingSpaceSquareFeet | 556,000.00 | 556,885.00 |
| tblLandUse                | LandUseSquareFeet       | 556,000.00 | 556,885.00 |
| tblLandUse                | LotAcreage              | 8.14       | 0.00       |
| tblLandUse                | LotAcreage              | 14.63      | 21.36      |
| tblProjectCharacteristics | CO2IntensityFactor      | 641.35     | 380        |
| tblProjectCharacteristics | OperationalYear         | 2018       | 2024       |
| tblTripsAndVMT            | HaulingTripNumber       | 0.00       | 100.00     |
| tblVehicleTrips           | ST_TR                   | 6.39       | 5.83       |
| tblVehicleTrips           | SU_TR                   | 5.86       | 5.35       |
| tblVehicleTrips           | WD_TR                   | 6.65       | 6.07       |
| tblWoodstoves             | NumberCatalytic         | 11.12      | 0.00       |
| tblWoodstoves             | NumberNoncatalytic      | 11.12      | 0.00       |
| tblWoodstoves             | WoodstoveWoodMass       | 582.40     | 0.00       |

## 2.0 Emissions Summary

### 2.1 Overall Construction

Unmitigated Construction

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| 2022    | 2.5532  | 6.3312 | 6.0124 | 0.0151      | 0.9280        | 0.2374       | 1.1654     | 0.3069         | 0.2213        | 0.5281      | 0.0000   | 1,352.6811 | 1,352.6811 | 0.2309 | 0.0000 | 1,358.4539 |
| 2023    | 2.2222  | 0.6355 | 0.8442 | 1.7300e-003 | 0.0562        | 0.0296       | 0.0858     | 0.0150         | 0.0276        | 0.0426      | 0.0000   | 153.0591   | 153.0591   | 0.0290 | 0.0000 | 153.7839   |
| Maximum | 2.5532  | 6.3312 | 6.0124 | 0.0151      | 0.9280        | 0.2374       | 1.1654     | 0.3069         | 0.2213        | 0.5281      | 0.0000   | 1,352.6811 | 1,352.6811 | 0.2309 | 0.0000 | 1,358.4539 |

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    | 2.2470  | 5.5914 | 6.7850 | 0.0151      | 0.6684        | 0.0394       | 0.7078     | 0.1643         | 0.0391        | 0.2033      | 0.0000   | 1,352.6802 | 1,352.6802 | 0.2309 | 0.0000 | 1,358.4530 |
| 2023    | 2.1873  | 0.6274 | 0.9321 | 1.7300e-003 | 0.0562        | 5.5700e-003  | 0.0618     | 0.0150         | 5.5400e-003   | 0.0206      | 0.0000   | 153.0590   | 153.0590   | 0.0290 | 0.0000 | 153.7838   |
| Maximum | 2.2470  | 5.5914 | 6.7850 | 0.0151      | 0.6684        | 0.0394       | 0.7078     | 0.1643         | 0.0391        | 0.2033      | 0.0000   | 1,352.6802 | 1,352.6802 | 0.2309 | 0.0000 | 1,358.4530 |

|                   | ROG  | NOx   | CO     | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|-------|--------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 7.14 | 10.74 | -12.55 | 0.00 | 26.37         | 83.17        | 38.49      | 44.30          | 82.07         | 60.77       | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 3-1-2022   | 5-31-2022  | 2.4172                                       | 1.8402                                     |
| 2       | 6-1-2022   | 8-31-2022  | 2.2296                                       | 1.9840                                     |
| 3       | 9-1-2022   | 11-30-2022 | 2.9465                                       | 2.7827                                     |

|   |           |           |        |        |
|---|-----------|-----------|--------|--------|
| 4 | 12-1-2022 | 2-28-2023 | 2.8561 | 2.7727 |
| 5 | 3-1-2023  | 5-31-2023 | 1.2391 | 1.2195 |
|   |           | Highest   | 2.9465 | 2.7827 |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 3/1/2022   | 3/28/2022 | 5             | 20       |                   |
| 2            | Grading               | Grading               | 3/29/2022  | 6/20/2022 | 5             | 60       |                   |
| 3            | Trenching             | Trenching             | 5/2/2022   | 6/24/2022 | 5             | 40       |                   |
| 4            | Building Construction | Building Construction | 6/1/2022   | 1/10/2023 | 5             | 160      |                   |
| 5            | Architectural Coating | Architectural Coating | 10/3/2022  | 4/14/2023 | 5             | 140      |                   |
| 6            | Paving                | Paving                | 2/1/2023   | 4/25/2023 | 5             | 60       |                   |

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 240

Acres of Paving: 0.04

Residential Indoor: 1,127,692; Residential Outdoor: 375,897; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

#### OffRoad Equipment

| Phase Name       | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Site Preparation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Site Preparation | Scrapers                  | 3      | 8.00        | 367         | 0.48        |
| Site Preparation | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Site Preparation | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Grading          | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading          | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Grading          | Rollers                   | 2      | 8.00        | 80          | 0.38        |

|                       |                              |   |      |     |      |
|-----------------------|------------------------------|---|------|-----|------|
| Grading               | Rubber Tired Dozers          | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                     | 3 | 8.00 | 367 | 0.48 |
| Grading               | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Grading               | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |
| Grading               | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Excavators                   | 2 | 8.00 | 158 | 0.38 |
| Trenching             | Rough Terrain Forklifts      | 1 | 8.00 | 100 | 0.40 |
| Trenching             | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Aerial Lifts                 | 3 | 8.00 | 63  | 0.31 |
| Building Construction | Cranes                       | 1 | 6.00 | 231 | 0.29 |
| Building Construction | Forklifts                    | 4 | 8.00 | 89  | 0.20 |
| Building Construction | Generator Sets               | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Other Construction Equipment | 3 | 8.00 | 172 | 0.42 |
| Building Construction | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                      | 4 | 8.00 | 46  | 0.45 |
| Architectural Coating | Aerial Lifts                 | 1 | 8.00 | 63  | 0.31 |
| Architectural Coating | Air Compressors              | 2 | 3.50 | 78  | 0.48 |
| Architectural Coating | Cranes                       | 1 | 4.60 | 231 | 0.29 |
| Architectural Coating | Forklifts                    | 1 | 8.00 | 89  | 0.20 |
| Paving                | Cement and Mortar Mixers     | 1 | 5.30 | 9   | 0.56 |
| Paving                | Pavers                       | 1 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment             | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                      | 2 | 8.00 | 80  | 0.38 |
| Paving                | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |
| Paving                | Tractors/Loaders/Backhoes    | 1 | 5.30 | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 2,307.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 17                      | 553.00             | 119.00             | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 111.00             | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 100.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

### 3.2 Site Preparation - 2022

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |               |               |                |
| Fugitive Dust |               |               |               |                    | 0.1629        | 0.0000        | 0.1629        | 0.0708         | 0.0000        | 0.0708        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 0.0520        | 0.5754        | 0.3336        | 8.1000e-004        |               | 0.0234        | 0.0234        |                | 0.0215        | 0.0215        | 0.0000        | 71.2062        | 71.2062        | 0.0230        | 0.0000        | 71.7819        |
| <b>Total</b>  | <b>0.0520</b> | <b>0.5754</b> | <b>0.3336</b> | <b>8.1000e-004</b> | <b>0.1629</b> | <b>0.0234</b> | <b>0.1863</b> | <b>0.0708</b>  | <b>0.0215</b> | <b>0.0923</b> | <b>0.0000</b> | <b>71.2062</b> | <b>71.2062</b> | <b>0.0230</b> | <b>0.0000</b> | <b>71.7819</b> |

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   | 6.6000e-004 | 4.4000e-004 | 4.8400e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.4552    | 1.4552    | 3.0000e-005 | 0.0000 | 1.4560 |
| Total    | 6.6000e-004 | 4.4000e-004 | 4.8400e-003 | 2.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8400e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.4552    | 1.4552    | 3.0000e-005 | 0.0000 | 1.4560 |

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 |         |        |        |             | 0.0733        | 0.0000       | 0.0733      | 0.0159         | 0.0000        | 0.0159      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0199  | 0.3888 | 0.4424 | 8.1000e-004 |               | 2.3500e-003  | 2.3500e-003 |                | 2.3500e-003   | 2.3500e-003 | 0.0000   | 71.2061   | 71.2061   | 0.0230 | 0.0000 | 71.7819 |
| Total         | 0.0199  | 0.3888 | 0.4424 | 8.1000e-004 | 0.0733        | 2.3500e-003  | 0.0756      | 0.0159         | 2.3500e-003   | 0.0183      | 0.0000   | 71.2061   | 71.2061   | 0.0230 | 0.0000 | 71.7819 |

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   | 6.6000e-004 | 4.4000e-004 | 4.8400e-003 | 2.0000e-005 | 1.8200e-003 | 1.0000e-005 | 1.8400e-003 | 4.9000e-004 | 1.0000e-005 | 5.0000e-004 | 0.0000 | 1.4552 | 1.4552 | 3.0000e-005 | 0.0000 | 1.4560 |
| Total    | 6.6000e-004 | 4.4000e-004 | 4.8400e-003 | 2.0000e-005 | 1.8200e-003 | 1.0000e-005 | 1.8400e-003 | 4.9000e-004 | 1.0000e-005 | 5.0000e-004 | 0.0000 | 1.4552 | 1.4552 | 3.0000e-005 | 0.0000 | 1.4560 |

3.3 Grading - 2022

Unmitigated Construction On-Site

|               | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category      | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| Fugitive Dust |         |        |        |             | 0.3090        | 0.0000       | 0.3090     | 0.1132         | 0.0000        | 0.1132      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.1587  | 1.7266 | 1.2578 | 2.7200e-003 |               | 0.0725       | 0.0725     |                | 0.0667        | 0.0667      | 0.0000   | 238.8577  | 238.8577  | 0.0773 | 0.0000 | 240.7890 |
| Total         | 0.1587  | 1.7266 | 1.2578 | 2.7200e-003 | 0.3090        | 0.0725       | 0.3814     | 0.1132         | 0.0667        | 0.1799      | 0.0000   | 238.8577  | 238.8577  | 0.0773 | 0.0000 | 240.7890 |

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  | 8.5200e-003 | 0.2833      | 0.0661 | 8.8000e-004 | 0.0196        | 8.2000e-004  | 0.0204      | 5.3800e-003    | 7.9000e-004   | 6.1700e-003 | 0.0000   | 85.6913   | 85.6913   | 3.8500e-003 | 0.0000 | 85.7876 |
| 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   | 2.8500e-003 | 1.8900e-003 | 0.0208 | 7.0000e-005 | 7.8500e-003   | 5.0000e-005  | 7.9000e-003 | 2.0900e-003    | 4.0000e-005   | 2.1300e-003 | 0.0000   | 6.2637    | 6.2637    | 1.3000e-004 | 0.0000 | 6.2670  |

|       |        |        |        |             |        |             |        |             |             |             |        |         |         |             |        |         |
|-------|--------|--------|--------|-------------|--------|-------------|--------|-------------|-------------|-------------|--------|---------|---------|-------------|--------|---------|
| Total | 0.0114 | 0.2852 | 0.0869 | 9.5000e-004 | 0.0274 | 8.7000e-004 | 0.0283 | 7.4700e-003 | 8.3000e-004 | 8.3000e-003 | 0.0000 | 91.9550 | 91.9550 | 3.9800e-003 | 0.0000 | 92.0546 |
|-------|--------|--------|--------|-------------|--------|-------------|--------|-------------|-------------|-------------|--------|---------|---------|-------------|--------|---------|

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 |         |        |        |             | 0.1390        | 0.0000       | 0.1390      | 0.0255         | 0.0000        | 0.0255      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.0667  | 1.3234 | 1.6030 | 2.7200e-003 |               | 8.8100e-003  | 8.8100e-003 |                | 8.8100e-003   | 8.8100e-003 | 0.0000   | 238.8575  | 238.8575  | 0.0773 | 0.0000 | 240.7887 |
| Total         | 0.0667  | 1.3234 | 1.6030 | 2.7200e-003 | 0.1390        | 8.8100e-003  | 0.1478      | 0.0255         | 8.8100e-003   | 0.0343      | 0.0000   | 238.8575  | 238.8575  | 0.0773 | 0.0000 | 240.7887 |

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  | 8.5200e-003 | 0.2833      | 0.0661 | 8.8000e-004 | 0.0196        | 8.2000e-004  | 0.0204      | 5.3800e-003    | 7.9000e-004   | 6.1700e-003 | 0.0000   | 85.6913   | 85.6913   | 3.8500e-003 | 0.0000 | 85.7876 |
| 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   | 2.8500e-003 | 1.8900e-003 | 0.0208 | 7.0000e-005 | 7.8500e-003   | 5.0000e-005  | 7.9000e-003 | 2.0900e-003    | 4.0000e-005   | 2.1300e-003 | 0.0000   | 6.2637    | 6.2637    | 1.3000e-004 | 0.0000 | 6.2670  |
| Total    | 0.0114      | 0.2852      | 0.0869 | 9.5000e-004 | 0.0274        | 8.7000e-004  | 0.0283      | 7.4700e-003    | 8.3000e-004   | 8.3000e-003 | 0.0000   | 91.9550   | 91.9550   | 3.9800e-003 | 0.0000 | 92.0546 |

3.4 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 | 0.0216  | 0.2198 | 0.3380 | 5.0000e-004 |               | 0.0106       | 0.0106     |                | 9.7200e-003   | 9.7200e-003 | 0.0000   | 44.2324   | 44.2324   | 0.0143 | 0.0000 | 44.5900 |
| Total    | 0.0216  | 0.2198 | 0.3380 | 5.0000e-004 |               | 0.0106       | 0.0106     |                | 9.7200e-003   | 9.7200e-003 | 0.0000   | 44.2324   | 44.2324   | 0.0143 | 0.0000 | 44.5900 |

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   | 1.0400e-003 | 6.9000e-004 | 7.5700e-003 | 3.0000e-005 | 2.8600e-003   | 2.0000e-005  | 2.8700e-003 | 7.6000e-004    | 2.0000e-005   | 7.8000e-004 | 0.0000   | 2.2777    | 2.2777    | 5.0000e-005 | 0.0000 | 2.2789 |
| Total    | 1.0400e-003 | 6.9000e-004 | 7.5700e-003 | 3.0000e-005 | 2.8600e-003   | 2.0000e-005  | 2.8700e-003 | 7.6000e-004    | 2.0000e-005   | 7.8000e-004 | 0.0000   | 2.2777    | 2.2777    | 5.0000e-005 | 0.0000 | 2.2789 |

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     | 0.0124        | 0.2642        | 0.3808        | 5.0000e-004        |  | 2.4600e-003        | 2.4600e-003        |  | 2.4600e-003        | 2.4600e-003        | 0.0000        | 44.2323        | 44.2323        | 0.0143        | 0.0000        | 44.5900        |
| <b>Total</b> | <b>0.0124</b> | <b>0.2642</b> | <b>0.3808</b> | <b>5.0000e-004</b> |  | <b>2.4600e-003</b> | <b>2.4600e-003</b> |  | <b>2.4600e-003</b> | <b>2.4600e-003</b> | <b>0.0000</b> | <b>44.2323</b> | <b>44.2323</b> | <b>0.0143</b> | <b>0.0000</b> | <b>44.5900</b> |

**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       | 1.0400e-003        | 6.9000e-004        | 7.5700e-003        | 3.0000e-005        | 2.8600e-003        | 2.0000e-005        | 2.8700e-003        | 7.6000e-004        | 2.0000e-005        | 7.8000e-004        | 0.0000        | 2.2777        | 2.2777        | 5.0000e-005        | 0.0000        | 2.2789        |
| <b>Total</b> | <b>1.0400e-003</b> | <b>6.9000e-004</b> | <b>7.5700e-003</b> | <b>3.0000e-005</b> | <b>2.8600e-003</b> | <b>2.0000e-005</b> | <b>2.8700e-003</b> | <b>7.6000e-004</b> | <b>2.0000e-005</b> | <b>7.8000e-004</b> | <b>0.0000</b> | <b>2.2777</b> | <b>2.2777</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>2.2789</b> |

**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     | 0.2733        | 2.3669        | 2.6067        | 4.1300e-003        |               | 0.1171        | 0.1171        |                | 0.1102        | 0.1102        | 0.0000        | 350.3490        | 350.3490        | 0.0896        | 0.0000        | 352.5902        |
| <b>Total</b> | <b>0.2733</b> | <b>2.3669</b> | <b>2.6067</b> | <b>4.1300e-003</b> |               | <b>0.1171</b> | <b>0.1171</b> |                | <b>0.1102</b> | <b>0.1102</b> | <b>0.0000</b> | <b>350.3490</b> | <b>350.3490</b> | <b>0.0896</b> | <b>0.0000</b> | <b>352.5902</b> |

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   | 0.0277  | 0.8843 | 0.2345 | 2.4300e-003 | 0.0599        | 1.8000e-003  | 0.0617     | 0.0173         | 1.7200e-003   | 0.0190      | 0.0000   | 233.5515  | 233.5515  | 9.8100e-003 | 0.0000 | 233.7968 |
| Worker   | 0.1216  | 0.0810 | 0.8895 | 2.9600e-003 | 0.3355        | 2.0600e-003  | 0.3376     | 0.0892         | 1.9000e-003   | 0.0911      | 0.0000   | 267.6579  | 267.6579  | 5.6700e-003 | 0.0000 | 267.7996 |
| Total    | 0.1493  | 0.9652 | 1.1240 | 5.3900e-003 | 0.3954        | 3.8600e-003  | 0.3993     | 0.1066         | 3.6200e-003   | 0.1102      | 0.0000   | 501.2094  | 501.2094  | 0.0155      | 0.0000 | 501.5963 |

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 | 0.1125  | 2.1952 | 2.8536 | 4.1300e-003 |               | 0.0194       | 0.0194     |                | 0.0194        | 0.0194      | 0.0000   | 350.3486  | 350.3486  | 0.0896 | 0.0000 | 352.5897 |
| Total    | 0.1125  | 2.1952 | 2.8536 | 4.1300e-003 |               | 0.0194       | 0.0194     |                | 0.0194        | 0.0194      | 0.0000   | 350.3486  | 350.3486  | 0.0896 | 0.0000 | 352.5897 |

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   | 0.0277  | 0.8843 | 0.2345 | 2.4300e-003 | 0.0599 | 1.8000e-003 | 0.0617 | 0.0173 | 1.7200e-003 | 0.0190 | 0.0000 | 233.5515 | 233.5515 | 9.8100e-003 | 0.0000 | 233.7968 |
| Worker   | 0.1216  | 0.0810 | 0.8895 | 2.9600e-003 | 0.3355 | 2.0600e-003 | 0.3376 | 0.0892 | 1.9000e-003 | 0.0911 | 0.0000 | 267.6579 | 267.6579 | 5.6700e-003 | 0.0000 | 267.7996 |
| Total    | 0.1493  | 0.9652 | 1.1240 | 5.3900e-003 | 0.3954 | 3.8600e-003 | 0.3993 | 0.1066 | 3.6200e-003 | 0.1102 | 0.0000 | 501.2094 | 501.2094 | 0.0155      | 0.0000 | 501.5963 |

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 | 0.0115  | 0.0999 | 0.1185 | 1.9000e-004 |               | 4.7100e-003  | 4.7100e-003 |                | 4.4300e-003   | 4.4300e-003 | 0.0000   | 16.0294   | 16.0294   | 4.0700e-003 | 0.0000 | 16.1311 |
| Total    | 0.0115  | 0.0999 | 0.1185 | 1.9000e-004 |               | 4.7100e-003  | 4.7100e-003 |                | 4.4300e-003   | 4.4300e-003 | 0.0000   | 16.0294   | 16.0294   | 4.0700e-003 | 0.0000 | 16.1311 |

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   | 9.6000e-004 | 0.0307      | 9.6400e-003 | 1.1000e-004 | 2.7400e-003   | 4.0000e-005  | 2.7800e-003 | 7.9000e-004    | 3.0000e-005   | 8.3000e-004 | 0.0000   | 10.3816   | 10.3816   | 3.8000e-004 | 0.0000 | 10.3911 |
| Worker   | 5.2100e-003 | 3.3300e-003 | 0.0374      | 1.3000e-004 | 0.0154        | 9.0000e-005  | 0.0154      | 4.0800e-003    | 9.0000e-005   | 4.1700e-003 | 0.0000   | 11.7806   | 11.7806   | 2.3000e-004 | 0.0000 | 11.7864 |

|       |             |        |        |             |        |             |        |             |             |             |        |         |         |             |        |         |
|-------|-------------|--------|--------|-------------|--------|-------------|--------|-------------|-------------|-------------|--------|---------|---------|-------------|--------|---------|
| Total | 6.1700e-003 | 0.0340 | 0.0471 | 2.4000e-004 | 0.0181 | 1.3000e-004 | 0.0182 | 4.8700e-003 | 1.2000e-004 | 5.0000e-003 | 0.0000 | 22.1622 | 22.1622 | 6.1000e-004 | 0.0000 | 22.1776 |
|-------|-------------|--------|--------|-------------|--------|-------------|--------|-------------|-------------|-------------|--------|---------|---------|-------------|--------|---------|

Mitigated Construction On-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Off-Road | 5.1500e-003 | 0.1004 | 0.1306 | 1.9000e-004 |               | 8.9000e-004  | 8.9000e-004 |                | 8.9000e-004   | 8.9000e-004 | 0.0000   | 16.0294   | 16.0294   | 4.0700e-003 | 0.0000 | 16.1311 |
| Total    | 5.1500e-003 | 0.1004 | 0.1306 | 1.9000e-004 |               | 8.9000e-004  | 8.9000e-004 |                | 8.9000e-004   | 8.9000e-004 | 0.0000   | 16.0294   | 16.0294   | 4.0700e-003 | 0.0000 | 16.1311 |

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   | 9.6000e-004 | 0.0307      | 9.6400e-003 | 1.1000e-004 | 2.7400e-003   | 4.0000e-005  | 2.7800e-003 | 7.9000e-004    | 3.0000e-005   | 8.3000e-004 | 0.0000   | 10.3816   | 10.3816   | 3.8000e-004 | 0.0000 | 10.3911 |
| Worker   | 5.2100e-003 | 3.3300e-003 | 0.0374      | 1.3000e-004 | 0.0154        | 9.0000e-005  | 0.0154      | 4.0800e-003    | 9.0000e-005   | 4.1700e-003 | 0.0000   | 11.7806   | 11.7806   | 2.3000e-004 | 0.0000 | 11.7864 |
| Total    | 6.1700e-003 | 0.0340      | 0.0471      | 2.4000e-004 | 0.0181        | 1.3000e-004  | 0.0182      | 4.8700e-003    | 1.2000e-004   | 5.0000e-003 | 0.0000   | 22.1622   | 22.1622   | 6.1000e-004 | 0.0000 | 22.1776 |

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

|                 | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|---------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 1.8553  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0196  | 0.1841 | 0.1772 | 3.2000e-004 |               | 8.9500e-003  | 8.9500e-003 |                | 8.4900e-003   | 8.4900e-003 | 0.0000   | 28.3140   | 28.3140   | 6.6600e-003 | 0.0000 | 28.4804 |
| Total           | 1.8749  | 0.1841 | 0.1772 | 3.2000e-004 |               | 8.9500e-003  | 8.9500e-003 |                | 8.4900e-003   | 8.4900e-003 | 0.0000   | 28.3140   | 28.3140   | 6.6600e-003 | 0.0000 | 28.4804 |

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   | 0.0104  | 6.9000e-003 | 0.0759 | 2.5000e-004 | 0.0286        | 1.8000e-004  | 0.0288     | 7.6100e-003    | 1.6000e-004   | 7.7700e-003 | 0.0000   | 22.8244   | 22.8244   | 4.8000e-004 | 0.0000 | 22.8365 |
| Total    | 0.0104  | 6.9000e-003 | 0.0759 | 2.5000e-004 | 0.0286        | 1.8000e-004  | 0.0288     | 7.6100e-003    | 1.6000e-004   | 7.7700e-003 | 0.0000   | 22.8244   | 22.8244   | 4.8000e-004 | 0.0000 | 22.8365 |

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 | 1.8553      |        |        |             |  | 0.0000      | 0.0000      |  | 0.0000      | 0.0000      | 0.0000 | 0.0000  | 0.0000  | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 7.4700e-003 | 0.1613 | 0.2061 | 3.2000e-004 |  | 1.4500e-003 | 1.4500e-003 |  | 1.4500e-003 | 1.4500e-003 | 0.0000 | 28.3140 | 28.3140 | 6.6600e-003 | 0.0000 | 28.4804 |
| Total           | 1.8627      | 0.1613 | 0.2061 | 3.2000e-004 |  | 1.4500e-003 | 1.4500e-003 |  | 1.4500e-003 | 1.4500e-003 | 0.0000 | 28.3140 | 28.3140 | 6.6600e-003 | 0.0000 | 28.4804 |

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   | 0.0104  | 6.9000e-003 | 0.0759 | 2.5000e-004 | 0.0286        | 1.8000e-004  | 0.0288     | 7.6100e-003    | 1.6000e-004   | 7.7700e-003 | 0.0000   | 22.8244   | 22.8244   | 4.8000e-004 | 0.0000 | 22.8365 |
| Total    | 0.0104  | 6.9000e-003 | 0.0759 | 2.5000e-004 | 0.0286        | 1.8000e-004  | 0.0288     | 7.6100e-003    | 1.6000e-004   | 7.7700e-003 | 0.0000   | 22.8244   | 22.8244   | 4.8000e-004 | 0.0000 | 22.8365 |

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 | 2.1407  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0211  | 0.1953 | 0.2027 | 3.7000e-004 |               | 9.1000e-003  | 9.1000e-003 |                | 8.6200e-003   | 8.6200e-003 | 0.0000   | 32.6698   | 32.6698   | 7.6200e-003 | 0.0000 | 32.8603 |
| Total           | 2.1618  | 0.1953 | 0.2027 | 3.7000e-004 |               | 9.1000e-003  | 9.1000e-003 |                | 8.6200e-003   | 8.6200e-003 | 0.0000   | 32.6698   | 32.6698   | 7.6200e-003 | 0.0000 | 32.8603 |

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   | 0.0112  | 7.1600e-003 | 0.0805 | 2.8000e-004 | 0.0330        | 2.0000e-004  | 0.0332     | 8.7800e-003    | 1.8000e-004   | 8.9600e-003 | 0.0000   | 25.3355   | 25.3355   | 5.0000e-004 | 0.0000 | 25.3480 |
| Total    | 0.0112  | 7.1600e-003 | 0.0805 | 2.8000e-004 | 0.0330        | 2.0000e-004  | 0.0332     | 8.7800e-003    | 1.8000e-004   | 8.9600e-003 | 0.0000   | 25.3355   | 25.3355   | 5.0000e-004 | 0.0000 | 25.3480 |

Mitigated Construction On-Site

|                 | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 2.1407      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 8.6200e-003 | 0.1861 | 0.2378 | 3.7000e-004 |               | 1.6700e-003  | 1.6700e-003 |                | 1.6700e-003   | 1.6700e-003 | 0.0000   | 32.6698   | 32.6698   | 7.6200e-003 | 0.0000 | 32.8603 |
| Total           | 2.1493      | 0.1861 | 0.2378 | 3.7000e-004 |               | 1.6700e-003  | 1.6700e-003 |                | 1.6700e-003   | 1.6700e-003 | 0.0000   | 32.6698   | 32.6698   | 7.6200e-003 | 0.0000 | 32.8603 |

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   | 0.0112  | 7.1600e-003 | 0.0805 | 2.8000e-004 | 0.0330 | 2.0000e-004 | 0.0332 | 8.7800e-003 | 1.8000e-004 | 8.9600e-003 | 0.0000 | 25.3355 | 25.3355 | 5.0000e-004 | 0.0000 | 25.3480 |
| Total    | 0.0112  | 7.1600e-003 | 0.0805 | 2.8000e-004 | 0.0330 | 2.0000e-004 | 0.0332 | 8.7800e-003 | 1.8000e-004 | 8.9600e-003 | 0.0000 | 25.3355 | 25.3355 | 5.0000e-004 | 0.0000 | 25.3480 |

3.7 Paving - 2023

Unmitigated Construction On-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 0.0297      | 0.2902 | 0.3824 | 5.7000e-004 |               | 0.0154       | 0.0154     |                | 0.0142        | 0.0142      | 0.0000   | 50.0041   | 50.0041   | 0.0160 | 0.0000 | 50.4035 |
| Paving   | 5.0000e-005 |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 0.0298      | 0.2902 | 0.3824 | 5.7000e-004 |               | 0.0154       | 0.0154     |                | 0.0142        | 0.0142      | 0.0000   | 50.0041   | 50.0041   | 0.0160 | 0.0000 | 50.4035 |

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  | 2.5000e-004 | 8.0800e-003 | 2.6000e-003 | 4.0000e-005 | 8.5000e-004   | 1.0000e-005  | 8.6000e-004 | 2.3000e-004    | 1.0000e-005   | 2.5000e-004 | 0.0000   | 3.5713    | 3.5713    | 1.5000e-004 | 0.0000 | 3.5751 |
| 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   | 1.4500e-003 | 9.3000e-004 | 0.0105      | 4.0000e-005 | 4.2800e-003   | 3.0000e-005  | 4.3100e-003 | 1.1400e-003    | 2.0000e-005   | 1.1600e-003 | 0.0000   | 3.2868    | 3.2868    | 6.0000e-005 | 0.0000 | 3.2884 |

|       |             |             |        |             |             |             |             |             |             |             |        |        |        |             |        |        |
|-------|-------------|-------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|
| Total | 1.7000e-003 | 9.0100e-003 | 0.0131 | 8.0000e-005 | 5.1300e-003 | 4.0000e-005 | 5.1700e-003 | 1.3700e-003 | 3.0000e-005 | 1.4100e-003 | 0.0000 | 6.8581 | 6.8581 | 2.1000e-004 | 0.0000 | 6.8635 |
|-------|-------------|-------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|

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 | 0.0137      | 0.2907 | 0.4231 | 5.7000e-004 |               | 2.6500e-003  | 2.6500e-003 |                | 2.6500e-003   | 2.6500e-003 | 0.0000   | 50.0041   | 50.0041   | 0.0160 | 0.0000 | 50.4034 |
| Paving   | 5.0000e-005 |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 0.0138      | 0.2907 | 0.4231 | 5.7000e-004 |               | 2.6500e-003  | 2.6500e-003 |                | 2.6500e-003   | 2.6500e-003 | 0.0000   | 50.0041   | 50.0041   | 0.0160 | 0.0000 | 50.4034 |

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  | 2.5000e-004 | 8.0800e-003 | 2.6000e-003 | 4.0000e-005 | 8.5000e-004   | 1.0000e-005  | 8.6000e-004 | 2.3000e-004    | 1.0000e-005   | 2.5000e-004 | 0.0000   | 3.5713    | 3.5713    | 1.5000e-004 | 0.0000 | 3.5751 |
| 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   | 1.4500e-003 | 9.3000e-004 | 0.0105      | 4.0000e-005 | 4.2800e-003   | 3.0000e-005  | 4.3100e-003 | 1.1400e-003    | 2.0000e-005   | 1.1600e-003 | 0.0000   | 3.2868    | 3.2868    | 6.0000e-005 | 0.0000 | 3.2884 |
| Total    | 1.7000e-003 | 9.0100e-003 | 0.0131      | 8.0000e-005 | 5.1300e-003   | 4.0000e-005  | 5.1700e-003 | 1.3700e-003    | 3.0000e-005   | 1.4100e-003 | 0.0000   | 6.8581    | 6.8581    | 2.1000e-004 | 0.0000 | 6.8635 |

## Gateway Crossings, Phase 5,Mitigated Criteria Emissions - Santa Clara County, Annual

## Gateway Crossings, Phase 5,Mitigated Criteria Emissions

### Santa Clara County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

| Land Uses                      | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|----------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 339.00 | Space    | 0.00        | 142,500.00         | 0          |
| Hotel                          | 225.00 | Room     | 21.40       | 182,000.00         | 0          |
| Strip Mall                     | 5.20   | 1000sqft | 0.00        | 5,200.00           | 0          |

#### 1.2 Other Project Characteristics

|                             |                                |                             |       |                             |       |
|-----------------------------|--------------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Urban                          | Wind Speed (m/s)            | 2.2   | Precipitation Freq (Days)   | 58    |
| Climate Zone                | 4                              |                             |       | Operational Year            | 2026  |
| Utility Company             | Pacific Gas & Electric Company |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 380                            | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E used to represent SVP (Silicon Valley Power).CO2 emission factor from City of Santa Clara 2020 Climate Action Plan

Land Use - Land Use Sizes from construction information provided by project applicant

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided information

Off-road Equipment - applicant provided information

Off-road Equipment - Applicant provided equipment information

[illegible]

|                         |                            |           |         |
|-------------------------|----------------------------|-----------|---------|
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | DPF                        | No Change | Level 3 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 2.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 2.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 5.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 3.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 3.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 6.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 3.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 2.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 7.00    |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00    |

|                           |                         |            |            |
|---------------------------|-------------------------|------------|------------|
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblConstEquipMitigation   | Tier                    | No Change  | Tier 3     |
| tblGrading                | MaterialExported        | 0.00       | 7,585.00   |
| tblLandUse                | BuildingSpaceSquareFeet | 135,600.00 | 142,500.00 |
| tblLandUse                | BuildingSpaceSquareFeet | 326,700.00 | 182,000.00 |
| tblLandUse                | LandUseSquareFeet       | 135,600.00 | 142,500.00 |
| tblLandUse                | LandUseSquareFeet       | 326,700.00 | 182,000.00 |
| tblLandUse                | LotAcreage              | 3.05       | 0.00       |
| tblLandUse                | LotAcreage              | 7.50       | 21.40      |
| tblLandUse                | LotAcreage              | 0.12       | 0.00       |
| tblProjectCharacteristics | CO2IntensityFactor      | 641.35     | 380        |
| tblProjectCharacteristics | OperationalYear         | 2018       | 2026       |
| tblTripsAndVMT            | HaulingTripNumber       | 0.00       | 100.00     |

|                 |       |       |       |
|-----------------|-------|-------|-------|
| tblVehicleTrips | ST_TR | 8.19  | 8.82  |
| tblVehicleTrips | ST_TR | 42.04 | 28.95 |
| tblVehicleTrips | SU_TR | 5.95  | 6.40  |
| tblVehicleTrips | SU_TR | 20.43 | 14.83 |
| tblVehicleTrips | WD_TR | 8.17  | 8.79  |
| tblVehicleTrips | WD_TR | 44.32 | 30.52 |

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    |           |           |        |        |          |
| 2024    | 0.9457  | 4.5606 | 5.0768 | 0.0109      | 0.4504        | 0.1795       | 0.6299     | 0.1586         | 0.1680        | 0.3266      | 0.0000   | 958.6107  | 958.6107  | 0.1886 | 0.0000 | 963.3245 |
| 2025    | 0.7441  | 1.4996 | 2.0198 | 3.9800e-003 | 0.0742        | 0.0592       | 0.1334     | 0.0201         | 0.0555        | 0.0756      | 0.0000   | 348.9968  | 348.9968  | 0.0677 | 0.0000 | 350.6887 |
| Maximum | 0.9457  | 4.5606 | 5.0768 | 0.0109      | 0.4504        | 0.1795       | 0.6299     | 0.1586         | 0.1680        | 0.3266      | 0.0000   | 958.6107  | 958.6107  | 0.1886 | 0.0000 | 963.3245 |

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    |           |           |        |        |          |
| 2024 | 0.7065  | 4.6441 | 5.7280 | 0.0109      | 0.3042        | 0.0358       | 0.3399     | 0.0745         | 0.0357        | 0.1102      | 0.0000   | 958.6099  | 958.6099  | 0.1886 | 0.0000 | 963.3236 |
| 2025 | 0.6679  | 1.7057 | 2.2165 | 3.9800e-003 | 0.0742        | 0.0143       | 0.0885     | 0.0201         | 0.0142        | 0.0343      | 0.0000   | 348.9965  | 348.9965  | 0.0677 | 0.0000 | 350.6884 |

|         |        |        |        |        |        |        |        |        |        |        |        |          |          |        |        |          |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|----------|--------|--------|----------|
| Maximum | 0.7065 | 4.6441 | 5.7280 | 0.0109 | 0.3042 | 0.0358 | 0.3399 | 0.0745 | 0.0357 | 0.1102 | 0.0000 | 958.6099 | 958.6099 | 0.1886 | 0.0000 | 963.3236 |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|----------|--------|--------|----------|

|                   | ROG   | NOx   | 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 | 18.66 | -4.78 | -11.95 | 0.00 | 27.88         | 79.04        | 43.88      | 47.08          | 77.67         | 64.08       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 1-1-2024   | 3-31-2024  | 1.6168                                       | 1.4771                                     |
| 2       | 4-1-2024   | 6-30-2024  | 1.0781                                       | 1.0765                                     |
| 3       | 7-1-2024   | 9-30-2024  | 1.2284                                       | 1.2261                                     |
| 4       | 10-1-2024  | 12-31-2024 | 1.5327                                       | 1.5290                                     |
| 5       | 1-1-2025   | 3-31-2025  | 1.4101                                       | 1.4923                                     |
| 6       | 4-1-2025   | 6-30-2025  | 0.7438                                       | 0.7838                                     |
| 7       | 7-1-2025   | 9-30-2025  | 0.0654                                       | 0.0713                                     |
|         |            | Highest    | 1.6168                                       | 1.5290                                     |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 1/1/2024   | 1/26/2024 | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/27/2024  | 2/23/2024 | 5             | 20       |                   |
| 3            | Trenching             | Trenching             | 1/27/2024  | 2/23/2024 | 5             | 20       |                   |
| 4            | Building Construction | Building Construction | 2/26/2024  | 4/18/2025 | 5             | 300      |                   |
| 5            | Architectural Coating | Architectural Coating | 9/2/2024   | 6/6/2025  | 5             | 200      |                   |
| 6            | Paving                | Paving                | 4/28/2025  | 7/18/2025 | 5             | 60       |                   |

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 80

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 280,800; Non-Residential Outdoor: 93,600; Striped Parking Area:

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type       | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|------------------------------|--------|-------------|-------------|-------------|
| Site Preparation      | Graders                      | 2      | 8.00        | 187         | 0.41        |
| Site Preparation      | Rubber Tired Dozers          | 2      | 8.00        | 247         | 0.40        |
| Site Preparation      | Scrapers                     | 3      | 8.00        | 367         | 0.48        |
| Site Preparation      | Skid Steer Loaders           | 1      | 8.00        | 65          | 0.37        |
| Site Preparation      | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Grading               | Excavators                   | 2      | 8.00        | 158         | 0.38        |
| Grading               | Graders                      | 2      | 8.00        | 187         | 0.41        |
| Grading               | Rollers                      | 2      | 8.00        | 80          | 0.38        |
| Grading               | Rubber Tired Dozers          | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                     | 3      | 8.00        | 367         | 0.48        |
| Grading               | Skid Steer Loaders           | 1      | 8.00        | 65          | 0.37        |
| Grading               | Sweepers/Scrubbers           | 1      | 8.00        | 64          | 0.46        |
| Grading               | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Trenching             | Excavators                   | 2      | 8.00        | 158         | 0.38        |
| Trenching             | Rough Terrain Forklifts      | 1      | 8.00        | 100         | 0.40        |
| Trenching             | Skid Steer Loaders           | 1      | 8.00        | 65          | 0.37        |
| Trenching             | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Trenching             | Tractors/Loaders/Backhoes    | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Aerial Lifts                 | 3      | 5.30        | 63          | 0.31        |
| Building Construction | Cranes                       | 1      | 4.30        | 231         | 0.29        |
| Building Construction | Forklifts                    | 4      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets               | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Other Construction Equipment | 3      | 8.00        | 172         | 0.42        |
| Building Construction | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                      | 4      | 8.00        | 46          | 0.45        |
| Architectural Coating | Aerial Lifts                 | 1      | 4.80        | 63          | 0.31        |
| Architectural Coating | Air Compressors              | 2      | 2.40        | 78          | 0.48        |
| Architectural Coating | Cranes                       | 1      | 2.40        | 231         | 0.29        |

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Architectural Coating | Forklifts                 | 1 | 4.80 | 89  | 0.20 |
| Paving                | Cement and Mortar Mixers  | 1 | 8.00 | 9   | 0.56 |
| Paving                | Pavers                    | 1 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Paving                | Sweepers/Scrubbers        | 1 | 8.00 | 64  | 0.46 |
| Paving                | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 948.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 17                      | 138.00             | 54.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 28.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 100.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

- Use Cleaner Engines for Construction Equipment
- Use DPF for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

**3.2 Site Preparation - 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 |         |        |        |             | 0.1629        | 0.0000       | 0.1629     | 0.0708         | 0.0000        | 0.0708      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0459  | 0.4793 | 0.3110 | 8.1000e-004 |               | 0.0192       | 0.0192     |                | 0.0176        | 0.0176      | 0.0000   | 71.1651   | 71.1651   | 0.0230 | 0.0000 | 71.7405 |
| Total         | 0.0459  | 0.4793 | 0.3110 | 8.1000e-004 | 0.1629        | 0.0192       | 0.1820     | 0.0708         | 0.0176        | 0.0884      | 0.0000   | 71.1651   | 71.1651   | 0.0230 | 0.0000 | 71.7405 |

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   | 5.8000e-004 | 3.6000e-004 | 4.1300e-003 | 1.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8300e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.3449    | 1.3449    | 2.0000e-005 | 0.0000 | 1.3456 |
| Total    | 5.8000e-004 | 3.6000e-004 | 4.1300e-003 | 1.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8300e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.3449    | 1.3449    | 2.0000e-005 | 0.0000 | 1.3456 |

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 |         |     |    |     | 0.0733        | 0.0000       | 0.0733     | 0.0159         | 0.0000        | 0.0159      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

|              |               |               |               |                    |               |                    |               |               |                    |               |               |                |                |               |               |                |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|---------------|--------------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Off-Road     | 0.0199        | 0.3888        | 0.4424        | 8.1000e-004        |               | 2.3500e-003        | 2.3500e-003   |               | 2.3500e-003        | 2.3500e-003   | 0.0000        | 71.1650        | 71.1650        | 0.0230        | 0.0000        | 71.7404        |
| <b>Total</b> | <b>0.0199</b> | <b>0.3888</b> | <b>0.4424</b> | <b>8.1000e-004</b> | <b>0.0733</b> | <b>2.3500e-003</b> | <b>0.0756</b> | <b>0.0159</b> | <b>2.3500e-003</b> | <b>0.0183</b> | <b>0.0000</b> | <b>71.1650</b> | <b>71.1650</b> | <b>0.0230</b> | <b>0.0000</b> | <b>71.7404</b> |

**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       | 5.8000e-004        | 3.6000e-004        | 4.1300e-003        | 1.0000e-005        | 1.8200e-003        | 1.0000e-005        | 1.8300e-003        | 4.9000e-004        | 1.0000e-005        | 5.0000e-004        | 0.0000        | 1.3449        | 1.3449        | 2.0000e-005        | 0.0000        | 1.3456        |
| <b>Total</b> | <b>5.8000e-004</b> | <b>3.6000e-004</b> | <b>4.1300e-003</b> | <b>1.0000e-005</b> | <b>1.8200e-003</b> | <b>1.0000e-005</b> | <b>1.8300e-003</b> | <b>4.9000e-004</b> | <b>1.0000e-005</b> | <b>5.0000e-004</b> | <b>0.0000</b> | <b>1.3449</b> | <b>1.3449</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>1.3456</b> |

**3.3 Grading - 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 |               |               |               |                    | 0.1031        | 0.0000        | 0.1031        | 0.0378         | 0.0000        | 0.0378        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 0.0472        | 0.4826        | 0.4011        | 9.1000e-004        |               | 0.0199        | 0.0199        |                | 0.0183        | 0.0183        | 0.0000        | 79.5839        | 79.5839        | 0.0257        | 0.0000        | 80.2274        |
| <b>Total</b>  | <b>0.0472</b> | <b>0.4826</b> | <b>0.4011</b> | <b>9.1000e-004</b> | <b>0.1031</b> | <b>0.0199</b> | <b>0.1230</b> | <b>0.0378</b>  | <b>0.0183</b> | <b>0.0561</b> | <b>0.0000</b> | <b>79.5839</b> | <b>79.5839</b> | <b>0.0257</b> | <b>0.0000</b> | <b>80.2274</b> |

**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  | 2.3700e-003 | 0.0749      | 0.0248      | 3.5000e-004 | 8.0400e-003   | 1.4000e-004  | 8.1800e-003 | 2.2100e-003    | 1.3000e-004   | 2.3400e-003 | 0.0000   | 33.6040   | 33.6040   | 1.4200e-003 | 0.0000 | 33.6395 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Worker   | 8.4000e-004 | 5.1000e-004 | 5.9200e-003 | 2.0000e-005 | 2.6200e-003   | 2.0000e-005  | 2.6300e-003 | 7.0000e-004    | 1.0000e-005   | 7.1000e-004 | 0.0000   | 1.9297    | 1.9297    | 4.0000e-005 | 0.0000 | 1.9306  |
| Total    | 3.2100e-003 | 0.0755      | 0.0307      | 3.7000e-004 | 0.0107        | 1.6000e-004  | 0.0108      | 2.9100e-003    | 1.4000e-004   | 3.0500e-003 | 0.0000   | 35.5337   | 35.5337   | 1.4600e-003 | 0.0000 | 35.5701 |

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 |         |        |        |             | 0.0464        | 0.0000       | 0.0464      | 8.4900e-003    | 0.0000        | 8.4900e-003 | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0222  | 0.4411 | 0.5343 | 9.1000e-004 |               | 2.9400e-003  | 2.9400e-003 |                | 2.9400e-003   | 2.9400e-003 | 0.0000   | 79.5838   | 79.5838   | 0.0257 | 0.0000 | 80.2273 |
| Total         | 0.0222  | 0.4411 | 0.5343 | 9.1000e-004 | 0.0464        | 2.9400e-003  | 0.0493      | 8.4900e-003    | 2.9400e-003   | 0.0114      | 0.0000   | 79.5838   | 79.5838   | 0.0257 | 0.0000 | 80.2273 |

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 | 2.3700e-003 | 0.0749      | 0.0248      | 3.5000e-004 | 8.0400e-003 | 1.4000e-004 | 8.1800e-003 | 2.2100e-003 | 1.3000e-004 | 2.3400e-003 | 0.0000 | 33.6040 | 33.6040 | 1.4200e-003 | 0.0000 | 33.6395 |
| Vendor  | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000  | 0.0000  | 0.0000      | 0.0000 | 0.0000  |
| Worker  | 8.4000e-004 | 5.1000e-004 | 5.9200e-003 | 2.0000e-005 | 2.6200e-003 | 2.0000e-005 | 2.6300e-003 | 7.0000e-004 | 1.0000e-005 | 7.1000e-004 | 0.0000 | 1.9297  | 1.9297  | 4.0000e-005 | 0.0000 | 1.9306  |
| Total   | 3.2100e-003 | 0.0755      | 0.0307      | 3.7000e-004 | 0.0107      | 1.6000e-004 | 0.0108      | 2.9100e-003 | 1.4000e-004 | 3.0500e-003 | 0.0000 | 35.5337 | 35.5337 | 1.4600e-003 | 0.0000 | 35.5701 |

3.4 Trenching - 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 | 9.5700e-003 | 0.0933 | 0.1691 | 2.5000e-004 |               | 4.0500e-003  | 4.0500e-003 |                | 3.7300e-003   | 3.7300e-003 | 0.0000   | 22.1365   | 22.1365   | 7.1600e-003 | 0.0000 | 22.3155 |
| Total    | 9.5700e-003 | 0.0933 | 0.1691 | 2.5000e-004 |               | 4.0500e-003  | 4.0500e-003 |                | 3.7300e-003   | 3.7300e-003 | 0.0000   | 22.1365   | 22.1365   | 7.1600e-003 | 0.0000 | 22.3155 |

Unmitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 4.6000e-004 | 2.8000e-004 | 3.2300e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.0526    | 1.0526    | 2.0000e-005 | 0.0000 | 1.0530 |
| Total    | 4.6000e-004 | 2.8000e-004 | 3.2300e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.0526    | 1.0526    | 2.0000e-005 | 0.0000 | 1.0530 |

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 | 6.1800e-003 | 0.1321 | 0.1904 | 2.5000e-004 |               | 1.2300e-003  | 1.2300e-003 |                | 1.2300e-003   | 1.2300e-003 | 0.0000   | 22.1365   | 22.1365   | 7.1600e-003 | 0.0000 | 22.3155 |
| Total    | 6.1800e-003 | 0.1321 | 0.1904 | 2.5000e-004 |               | 1.2300e-003  | 1.2300e-003 |                | 1.2300e-003   | 1.2300e-003 | 0.0000   | 22.1365   | 22.1365   | 7.1600e-003 | 0.0000 | 22.3155 |

Mitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 4.6000e-004 | 2.8000e-004 | 3.2300e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.0526    | 1.0526    | 2.0000e-005 | 0.0000 | 1.0530 |
| Total    | 4.6000e-004 | 2.8000e-004 | 3.2300e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.0526    | 1.0526    | 2.0000e-005 | 0.0000 | 1.0530 |

3.5 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     | 0.3321        | 2.8430        | 3.5826        | 5.6600e-003        |               | 0.1293        | 0.1293        |                | 0.1216        | 0.1216        | 0.0000        | 479.8372        | 479.8372        | 0.1189        | 0.0000        | 482.8107        |
| <b>Total</b> | <b>0.3321</b> | <b>2.8430</b> | <b>3.5826</b> | <b>5.6600e-003</b> |               | <b>0.1293</b> | <b>0.1293</b> |                | <b>0.1216</b> | <b>0.1216</b> | <b>0.0000</b> | <b>479.8372</b> | <b>479.8372</b> | <b>0.1189</b> | <b>0.0000</b> | <b>482.8107</b> |

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       | 0.0133        | 0.4357        | 0.1339        | 1.5400e-003        | 0.0394        | 5.1000e-004        | 0.0400        | 0.0114         | 4.9000e-004        | 0.0119        | 0.0000        | 148.4057        | 148.4057        | 5.3900e-003        | 0.0000        | 148.5404        |
| Worker       | 0.0388        | 0.0238        | 0.2748        | 9.9000e-004        | 0.1215        | 7.2000e-004        | 0.1222        | 0.0323         | 6.6000e-004        | 0.0330        | 0.0000        | 89.5725         | 89.5725         | 1.6600e-003        | 0.0000        | 89.6139         |
| <b>Total</b> | <b>0.0521</b> | <b>0.4595</b> | <b>0.4087</b> | <b>2.5300e-003</b> | <b>0.1609</b> | <b>1.2300e-003</b> | <b>0.1622</b> | <b>0.0437</b>  | <b>1.1500e-003</b> | <b>0.0449</b> | <b>0.0000</b> | <b>237.9782</b> | <b>237.9782</b> | <b>7.0500e-003</b> | <b>0.0000</b> | <b>238.1543</b> |

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 | 0.1553  | 3.0145 | 3.9248 | 5.6600e-003 |               | 0.0266       | 0.0266     |                | 0.0266        | 0.0266      | 0.0000   | 479.8367  | 479.8367  | 0.1189 | 0.0000 | 482.8101 |

|       |        |        |        |             |  |        |        |  |        |        |        |          |          |        |        |          |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|
| Total | 0.1553 | 3.0145 | 3.9248 | 5.6600e-003 |  | 0.0266 | 0.0266 |  | 0.0266 | 0.0266 | 0.0000 | 479.8367 | 479.8367 | 0.1189 | 0.0000 | 482.8101 |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|

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   | 0.0133  | 0.4357 | 0.1339 | 1.5400e-003 | 0.0394        | 5.1000e-004  | 0.0400     | 0.0114         | 4.9000e-004   | 0.0119      | 0.0000   | 148.4057  | 148.4057  | 5.3900e-003 | 0.0000 | 148.5404 |
| Worker   | 0.0388  | 0.0238 | 0.2748 | 9.9000e-004 | 0.1215        | 7.2000e-004  | 0.1222     | 0.0323         | 6.6000e-004   | 0.0330      | 0.0000   | 89.5725   | 89.5725   | 1.6600e-003 | 0.0000 | 89.6139  |
| Total    | 0.0521  | 0.4595 | 0.4087 | 2.5300e-003 | 0.1609        | 1.2300e-003  | 0.1622     | 0.0437         | 1.1500e-003   | 0.0449      | 0.0000   | 237.9782  | 237.9782  | 7.0500e-003 | 0.0000 | 238.1543 |

3.5 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 | 0.1076  | 0.9124 | 1.2527 | 1.9900e-003 |               | 0.0393       | 0.0393     |                | 0.0369        | 0.0369      | 0.0000   | 168.6424  | 168.6424  | 0.0415 | 0.0000 | 169.6805 |
| Total    | 0.1076  | 0.9124 | 1.2527 | 1.9900e-003 |               | 0.0393       | 0.0393     |                | 0.0369        | 0.0369      | 0.0000   | 168.6424  | 168.6424  | 0.0415 | 0.0000 | 169.6805 |

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   | 4.5500e-003 | 0.1510      | 0.0458 | 5.4000e-004 | 0.0139        | 1.8000e-004  | 0.0140     | 4.0100e-003    | 1.7000e-004   | 4.1700e-003 | 0.0000   | 51.8043   | 51.8043   | 1.8600e-003 | 0.0000 | 51.8507 |
| Worker   | 0.0129      | 7.6100e-003 | 0.0895 | 3.3000e-004 | 0.0427        | 2.5000e-004  | 0.0429     | 0.0114         | 2.3000e-004   | 0.0116      | 0.0000   | 30.1987   | 30.1987   | 5.3000e-004 | 0.0000 | 30.2118 |
| Total    | 0.0175      | 0.1587      | 0.1353 | 8.7000e-004 | 0.0566        | 4.3000e-004  | 0.0570     | 0.0154         | 4.0000e-004   | 0.0158      | 0.0000   | 82.0029   | 82.0029   | 2.3900e-003 | 0.0000 | 82.0625 |

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 | 0.0546  | 1.0591 | 1.3790 | 1.9900e-003 |               | 9.3500e-003  | 9.3500e-003 |                | 9.3500e-003   | 9.3500e-003 | 0.0000   | 168.6422  | 168.6422  | 0.0415 | 0.0000 | 169.6803 |
| Total    | 0.0546  | 1.0591 | 1.3790 | 1.9900e-003 |               | 9.3500e-003  | 9.3500e-003 |                | 9.3500e-003   | 9.3500e-003 | 0.0000   | 168.6422  | 168.6422  | 0.0415 | 0.0000 | 169.6803 |

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  | 4.5500e-003 | 0.1510      | 0.0458 | 5.4000e-004 | 0.0139 | 1.8000e-004 | 0.0140 | 4.0100e-003 | 1.7000e-004 | 4.1700e-003 | 0.0000 | 51.8043 | 51.8043 | 1.8600e-003 | 0.0000 | 51.8507 |
| Worker  | 0.0129      | 7.6100e-003 | 0.0895 | 3.3000e-004 | 0.0427 | 2.5000e-004 | 0.0429 | 0.0114      | 2.3000e-004 | 0.0116      | 0.0000 | 30.1987 | 30.1987 | 5.3000e-004 | 0.0000 | 30.2118 |
| Total   | 0.0175      | 0.1587      | 0.1353 | 8.7000e-004 | 0.0566 | 4.3000e-004 | 0.0570 | 0.0154      | 4.0000e-004 | 0.0158      | 0.0000 | 82.0029 | 82.0029 | 2.3900e-003 | 0.0000 | 82.0625 |

### 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 | 0.4376  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0140  | 0.1249 | 0.1444 | 2.6000e-004 |               | 5.5900e-003  | 5.5900e-003 |                | 5.3100e-003   | 5.3100e-003 | 0.0000   | 22.8564   | 22.8564   | 5.0200e-003 | 0.0000 | 22.9818 |
| Total           | 0.4515  | 0.1249 | 0.1444 | 2.6000e-004 |               | 5.5900e-003  | 5.5900e-003 |                | 5.3100e-003   | 5.3100e-003 | 0.0000   | 22.8564   | 22.8564   | 5.0200e-003 | 0.0000 | 22.9818 |

#### 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   | 3.0900e-003 | 1.8900e-003 | 0.0219 | 8.0000e-005 | 9.6600e-003   | 6.0000e-005  | 9.7200e-003 | 2.5700e-003    | 5.0000e-005   | 2.6200e-003 | 0.0000   | 7.1223    | 7.1223    | 1.3000e-004 | 0.0000 | 7.1256 |
| Total    | 3.0900e-003 | 1.8900e-003 | 0.0219 | 8.0000e-005 | 9.6600e-003   | 6.0000e-005  | 9.7200e-003 | 2.5700e-003    | 5.0000e-005   | 2.6200e-003 | 0.0000   | 7.1223    | 7.1223    | 1.3000e-004 | 0.0000 | 7.1256 |

Mitigated Construction On-Site

|                 | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 0.4376      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 5.9800e-003 | 0.1301 | 0.1674 | 2.6000e-004 |               | 1.1900e-003  | 1.1900e-003 |                | 1.1900e-003   | 1.1900e-003 | 0.0000   | 22.8563   | 22.8563   | 5.0200e-003 | 0.0000 | 22.9818 |
| Total           | 0.4435      | 0.1301 | 0.1674 | 2.6000e-004 |               | 1.1900e-003  | 1.1900e-003 |                | 1.1900e-003   | 1.1900e-003 | 0.0000   | 22.8563   | 22.8563   | 5.0200e-003 | 0.0000 | 22.9818 |

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   | 3.0900e-003 | 1.8900e-003 | 0.0219 | 8.0000e-005 | 9.6600e-003   | 6.0000e-005  | 9.7200e-003 | 2.5700e-003    | 5.0000e-005   | 2.6200e-003 | 0.0000   | 7.1223    | 7.1223    | 1.3000e-004 | 0.0000 | 7.1256 |
| Total    | 3.0900e-003 | 1.8900e-003 | 0.0219 | 8.0000e-005 | 9.6600e-003   | 6.0000e-005  | 9.7200e-003 | 2.5700e-003    | 5.0000e-005   | 2.6200e-003 | 0.0000   | 7.1223    | 7.1223    | 1.3000e-004 | 0.0000 | 7.1256 |

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site



|              |               |               |               |                    |  |                    |                    |  |                    |                    |               |                |                |                    |               |                |
|--------------|---------------|---------------|---------------|--------------------|--|--------------------|--------------------|--|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Off-Road     | 7.7700e-003   | 0.1690        | 0.2175        | 3.4000e-004        |  | 1.5500e-003        | 1.5500e-003        |  | 1.5500e-003        | 1.5500e-003        | 0.0000        | 29.6872        | 29.6872        | 6.5000e-003        | 0.0000        | 29.8497        |
| <b>Total</b> | <b>0.5761</b> | <b>0.1690</b> | <b>0.2175</b> | <b>3.4000e-004</b> |  | <b>1.5500e-003</b> | <b>1.5500e-003</b> |  | <b>1.5500e-003</b> | <b>1.5500e-003</b> | <b>0.0000</b> | <b>29.6872</b> | <b>29.6872</b> | <b>6.5000e-003</b> | <b>0.0000</b> | <b>29.8497</b> |

**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       | 3.7900e-003        | 2.2400e-003        | 0.0263        | 1.0000e-004        | 0.0126        | 7.0000e-005        | 0.0126        | 3.3400e-003        | 7.0000e-005        | 3.4000e-003        | 0.0000        | 8.8767        | 8.8767        | 1.5000e-004        | 0.0000        | 8.8806        |
| <b>Total</b> | <b>3.7900e-003</b> | <b>2.2400e-003</b> | <b>0.0263</b> | <b>1.0000e-004</b> | <b>0.0126</b> | <b>7.0000e-005</b> | <b>0.0126</b> | <b>3.3400e-003</b> | <b>7.0000e-005</b> | <b>3.4000e-003</b> | <b>0.0000</b> | <b>8.8767</b> | <b>8.8767</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>8.8806</b> |

**3.7 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         |                |                |               |               |                |
| Off-Road     | 0.0283        | 0.2670        | 0.4073        | 6.1000e-004        |               | 0.0130        | 0.0130        |                | 0.0120        | 0.0120        | 0.0000        | 53.2386        | 53.2386        | 0.0169        | 0.0000        | 53.6615        |
| Paving       | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0283</b> | <b>0.2670</b> | <b>0.4073</b> | <b>6.1000e-004</b> |               | <b>0.0130</b> | <b>0.0130</b> |                | <b>0.0120</b> | <b>0.0120</b> | <b>0.0000</b> | <b>53.2386</b> | <b>53.2386</b> | <b>0.0169</b> | <b>0.0000</b> | <b>53.6615</b> |

**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  | 2.5000e-004 | 7.7300e-003 | 2.6300e-003 | 4.0000e-005 | 8.5000e-004   | 1.0000e-005  | 8.6000e-004 | 2.3000e-004    | 1.0000e-005   | 2.5000e-004 | 0.0000   | 3.5189    | 3.5189    | 1.5000e-004 | 0.0000 | 3.5227 |
| 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   | 1.2900e-003 | 7.6000e-004 | 8.9800e-003 | 3.0000e-005 | 4.2800e-003   | 3.0000e-005  | 4.3100e-003 | 1.1400e-003    | 2.0000e-005   | 1.1600e-003 | 0.0000   | 3.0300    | 3.0300    | 5.0000e-005 | 0.0000 | 3.0313 |
| Total    | 1.5400e-003 | 8.4900e-003 | 0.0116      | 7.0000e-005 | 5.1300e-003   | 4.0000e-005  | 5.1700e-003 | 1.3700e-003    | 3.0000e-005   | 1.4100e-003 | 0.0000   | 6.5489    | 6.5489    | 2.0000e-004 | 0.0000 | 6.5540 |

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 | 0.0145  | 0.3082 | 0.4469 | 6.1000e-004 |               | 2.8300e-003  | 2.8300e-003 |                | 2.8300e-003   | 2.8300e-003 | 0.0000   | 53.2385   | 53.2385   | 0.0169 | 0.0000 | 53.6614 |
| Paving   | 0.0000  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 0.0145  | 0.3082 | 0.4469 | 6.1000e-004 |               | 2.8300e-003  | 2.8300e-003 |                | 2.8300e-003   | 2.8300e-003 | 0.0000   | 53.2385   | 53.2385   | 0.0169 | 0.0000 | 53.6614 |

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 | 2.5000e-004 | 7.7300e-003 | 2.6300e-003 | 4.0000e-005 | 8.5000e-004 | 1.0000e-005 | 8.6000e-004 | 2.3000e-004 | 1.0000e-005 | 2.5000e-004 | 0.0000 | 3.5189 | 3.5189 | 1.5000e-004 | 0.0000 | 3.5227 |
| 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  | 1.2900e-003 | 7.6000e-004 | 8.9800e-003 | 3.0000e-005 | 4.2800e-003 | 3.0000e-005 | 4.3100e-003 | 1.1400e-003 | 2.0000e-005 | 1.1600e-003 | 0.0000 | 3.0300 | 3.0300 | 5.0000e-005 | 0.0000 | 3.0313 |
| Total   | 1.5400e-003 | 8.4900e-003 | 0.0116      | 7.0000e-005 | 5.1300e-003 | 4.0000e-005 | 5.1700e-003 | 1.3700e-003 | 3.0000e-005 | 1.4100e-003 | 0.0000 | 6.5489 | 6.5489 | 2.0000e-004 | 0.0000 | 6.5540 |

## Gateway Crossings, Phase 1, Criteria and Operational - Santa Clara County, Annual

## Gateway Crossings, Phase 1, Criteria and Operational

### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|---------------|-------------|--------------------|------------|
| Apartments Mid Rise            | 261.00 | Dwelling Unit | 21.36       | 261,000.00         | 746        |
| Strip Mall                     | 5.30   | 1000sqft      | 0.00        | 5,300.00           | 0          |
| Enclosed Parking with Elevator | 485.00 | Space         | 0.00        | 194,000.00         | 0          |
| Parking Lot                    | 4.00   | Space         | 0.04        | 1,600.00           | 0          |

### 1.2 Other Project Characteristics

|                                     |                                |                                     |       |                                     |       |
|-------------------------------------|--------------------------------|-------------------------------------|-------|-------------------------------------|-------|
| <b>Urbanization</b>                 | Urban                          | <b>Wind Speed (m/s)</b>             | 2.2   | <b>Precipitation Freq (Days)</b>    | 58    |
| <b>Climate Zone</b>                 | 4                              |                                     |       | <b>Operational Year</b>             | 2019  |
| <b>Utility Company</b>              | Pacific Gas & Electric Company |                                     |       |                                     |       |
| <b>CO2 Intensity<br/>(lb/MW hr)</b> | 380                            | <b>CH4 Intensity<br/>(lb/MW hr)</b> | 0.029 | <b>N2O Intensity<br/>(lb/MW hr)</b> | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E rates used to represent SVP CO2 emission factor

Land Use - From applicant provided construction information

Construction Phase - Applicant provided construction schedule

Grading - 23542 cy soil off haul

Demolition - 272840 sf of building demolished

Trips and VMT - 800 cy of paving

Architectural Coating -

Vehicle Trips - trip rates from TIA

Woodstoves - no wood stoves or wood based fireplaces

Area Coating -

Energy Use - title 24, 2013 values used

Energy Mitigation - title 24 2016 values came into effect on 1st January 2017

| Table Name           | Column Name                | Default Value | New Value |
|----------------------|----------------------------|---------------|-----------|
| tblConstructionPhase | NumDays                    | 20.00         | 100.00    |
| tblConstructionPhase | NumDays                    | 370.00        | 100.00    |
| tblConstructionPhase | NumDays                    | 35.00         | 40.00     |
| tblConstructionPhase | NumDays                    | 20.00         | 40.00     |
| tblConstructionPhase | NumDays                    | 10.00         | 20.00     |
| tblFireplaces        | FireplaceWoodMass          | 228.80        | 0.00      |
| tblFireplaces        | NumberGas                  | 39.15         | 261.00    |
| tblFireplaces        | NumberNoFireplace          | 10.44         | 0.00      |
| tblFireplaces        | NumberWood                 | 44.37         | 0.00      |
| tblGrading           | MaterialExported           | 0.00          | 23,542.00 |
| tblLandUse           | LotAcreage                 | 6.87          | 21.36     |
| tblLandUse           | LotAcreage                 | 0.12          | 0.00      |
| tblLandUse           | LotAcreage                 | 4.36          | 0.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 1.00          | 2.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 3.00          | 4.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 1.00          | 2.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 2.00          | 1.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 2.00          | 1.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 3.00          | 2.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 2.00          | 3.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 3.00          | 1.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 2.00          | 1.00      |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 4.00          | 1.00      |

|                           |                            |        |        |
|---------------------------|----------------------------|--------|--------|
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00   | 4.00   |
| tblOffRoadEquipment       | UsageHours                 | 6.00   | 3.20   |
| tblOffRoadEquipment       | UsageHours                 | 7.00   | 8.00   |
| tblOffRoadEquipment       | UsageHours                 | 7.00   | 8.00   |
| tblProjectCharacteristics | CO2IntensityFactor         | 641.35 | 380    |
| tblProjectCharacteristics | OperationalYear            | 2018   | 2019   |
| tblTripsAndVMT            | HaulingTripNumber          | 0.00   | 100.00 |
| tblVehicleTrips           | ST_TR                      | 6.39   | 5.75   |
| tblVehicleTrips           | ST_TR                      | 42.04  | 30.42  |
| tblVehicleTrips           | SU_TR                      | 5.86   | 5.27   |
| tblVehicleTrips           | SU_TR                      | 20.43  | 14.71  |
| tblVehicleTrips           | WD_TR                      | 6.65   | 6.00   |
| tblVehicleTrips           | WD_TR                      | 44.32  | 32.07  |
| tblWoodstoves             | NumberCatalytic            | 5.22   | 0.00   |
| tblWoodstoves             | WoodstoveWoodMass          | 582.40 | 0.00   |

2.0 Emissions Summary

2.2 Overall Operational  
Unmitigated Operational

|          | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4         | N2O         | CO2e       |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|-------------|-------------|------------|
| Category | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |            |            |             |             |            |
| Area     | 1.3066  | 0.0507 | 1.9641 | 2.8000e-004 |               | 0.0130       | 0.0130     |                | 0.0130        | 0.0130      | 0.0000   | 35.7575    | 35.7575    | 3.7600e-003 | 6.0000e-004 | 36.0294    |
| Energy   | 0.0157  | 0.1337 | 0.0572 | 8.5000e-004 |               | 0.0108       | 0.0108     |                | 0.0108        | 0.0108      | 0.0000   | 588.9038   | 588.9038   | 0.0361      | 9.6900e-003 | 592.6945   |
| Mobile   | 0.4985  | 2.0411 | 5.7415 | 0.0166      | 1.4029        | 0.0191       | 1.4220     | 0.3756         | 0.0179        | 0.3935      | 0.0000   | 1,520.4083 | 1,520.4083 | 0.0587      | 0.0000      | 1,521.8762 |

|              |               |               |               |               |               |               |               |               |               |               |                |                   |                   |               |               |                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-------------------|-------------------|---------------|---------------|-------------------|
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 25.5018        | 0.0000            | 25.5018           | 1.5071        | 0.0000        | 63.1795           |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 5.5195         | 22.8391           | 28.3586           | 0.5687        | 0.0138        | 46.6713           |
| <b>Total</b> | <b>1.8207</b> | <b>2.2256</b> | <b>7.7628</b> | <b>0.0178</b> | <b>1.4029</b> | <b>0.0428</b> | <b>1.4457</b> | <b>0.3756</b> | <b>0.0417</b> | <b>0.4173</b> | <b>31.0213</b> | <b>2,167.9087</b> | <b>2,198.9300</b> | <b>2.1743</b> | <b>0.0240</b> | <b>2,260.4509</b> |

Mitigated Operational

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2       | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr          |                   |                   |               |               |                   |
| Area         | 1.3066        | 0.0507        | 1.9641        | 2.8000e-004   |               | 0.0130        | 0.0130        |                | 0.0130        | 0.0130        | 0.0000         | 35.7575           | 35.7575           | 3.7600e-003   | 6.0000e-004   | 36.0294           |
| Energy       | 0.0125        | 0.1069        | 0.0457        | 6.8000e-004   |               | 8.6400e-003   | 8.6400e-003   |                | 8.6400e-003   | 8.6400e-003   | 0.0000         | 515.4664          | 515.4664          | 0.0323        | 8.4500e-003   | 518.7923          |
| Mobile       | 0.4985        | 2.0411        | 5.7415        | 0.0166        | 1.4029        | 0.0191        | 1.4220        | 0.3756         | 0.0179        | 0.3935        | 0.0000         | 1,520.4083        | 1,520.4083        | 0.0587        | 0.0000        | 1,521.8762        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 25.5018        | 0.0000            | 25.5018           | 1.5071        | 0.0000        | 63.1795           |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 5.5195         | 22.8391           | 28.3586           | 0.5687        | 0.0138        | 46.6713           |
| <b>Total</b> | <b>1.8176</b> | <b>2.1987</b> | <b>7.7513</b> | <b>0.0176</b> | <b>1.4029</b> | <b>0.0407</b> | <b>1.4436</b> | <b>0.3756</b>  | <b>0.0395</b> | <b>0.4151</b> | <b>31.0213</b> | <b>2,094.4713</b> | <b>2,125.4926</b> | <b>2.1705</b> | <b>0.0228</b> | <b>2,186.5487</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.17 | 1.21 | 0.15 | 0.96 | 0.00          | 5.07         | 0.15       | 0.00           | 5.20          | 0.52        | 0.00     | 3.39     | 3.34      | 0.18 | 5.16 | 3.27 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

|             | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Mitigated   | 0.4985  | 2.0411 | 5.7415 | 0.0166 | 1.4029        | 0.0191       | 1.4220     | 0.3756         | 0.0179        | 0.3935      | 0.0000   | 1,520.4083 | 1,520.4083 | 0.0587 | 0.0000 | 1,521.8762 |
| Unmitigated | 0.4985  | 2.0411 | 5.7415 | 0.0166 | 1.4029        | 0.0191       | 1.4220     | 0.3756         | 0.0179        | 0.3935      | 0.0000   | 1,520.4083 | 1,520.4083 | 0.0587 | 0.0000 | 1,521.8762 |

#### 4.2 Trip Summary Information

| Land Use                       | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|--------------------------------|-------------------------|----------|----------|-------------|------------|
|                                | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Mid Rise            | 1,566.00                | 1,500.75 | 1375.47  | 3,532,452   | 3,532,452  |
| Enclosed Parking with Elevator | 0.00                    | 0.00     | 0.00     |             |            |
| Parking Lot                    | 0.00                    | 0.00     | 0.00     |             |            |
| Strip Mall                     | 169.97                  | 161.23   | 77.96    | 239,595     | 239,595    |
| Total                          | 1,735.97                | 1,661.98 | 1,453.43 | 3,772,047   | 3,772,047  |

#### 4.3 Trip Type Information

| Land Use                       | Miles      |            |             | Trip %    |            |             | Trip Purpose % |          |         |
|--------------------------------|------------|------------|-------------|-----------|------------|-------------|----------------|----------|---------|
|                                | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise            | 10.80      | 4.80       | 5.70        | 31.00     | 15.00      | 54.00       | 86             | 11       | 3       |
| Enclosed Parking with Elevator | 9.50       | 7.30       | 7.30        | 0.00      | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot                    | 9.50       | 7.30       | 7.30        | 0.00      | 0.00       | 0.00        | 0              | 0        | 0       |
| Strip Mall                     | 9.50       | 7.30       | 7.30        | 16.60     | 64.40      | 19.00       | 45             | 40       | 15      |

#### 4.4 Fleet Mix

| Land Use            | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Mid Rise | 0.601004 | 0.039123 | 0.186461 | 0.109772 | 0.016124 | 0.004965 | 0.012251 | 0.019838 | 0.002045 | 0.001602 | 0.005388 | 0.000616 | 0.000812 |
| Strip Mall          | 0.601004 | 0.039123 | 0.186461 | 0.109772 | 0.016124 | 0.004965 | 0.012251 | 0.019838 | 0.002045 | 0.001602 | 0.005388 | 0.000616 | 0.000812 |

|                                |          |          |          |          |          |          |          |          |          |          |          |          |          |
|--------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Enclosed Parking with Elevator | 0.601004 | 0.039123 | 0.186461 | 0.109772 | 0.016124 | 0.004965 | 0.012251 | 0.019838 | 0.002045 | 0.001602 | 0.005388 | 0.000616 | 0.000812 |
| Parking Lot                    | 0.601004 | 0.039123 | 0.186461 | 0.109772 | 0.016124 | 0.004965 | 0.012251 | 0.019838 | 0.002045 | 0.001602 | 0.005388 | 0.000616 | 0.000812 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

|                         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|-------------------------|---------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Category                | tons/yr |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |          |
| Electricity Mitigated   |         |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 391.6758  | 391.6758  | 0.0299      | 6.1800e-003 | 394.2660 |
| Electricity Unmitigated |         |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 434.0612  | 434.0612  | 0.0331      | 6.8500e-003 | 436.9317 |
| NaturalGas Mitigated    | 0.0125  | 0.1069 | 0.0457 | 6.8000e-004 |               | 8.6400e-003  | 8.6400e-003 |                | 8.6400e-003   | 8.6400e-003 | 0.0000   | 123.7907  | 123.7907  | 2.3700e-003 | 2.2700e-003 | 124.5263 |
| NaturalGas Unmitigated  | 0.0157  | 0.1337 | 0.0572 | 8.5000e-004 |               | 0.0108       | 0.0108      |                | 0.0108        | 0.0108      | 0.0000   | 154.8426  | 154.8426  | 2.9700e-003 | 2.8400e-003 | 155.7628 |

5.2 Energy by Land Use - NaturalGas

Unmitigated

|                     | NaturalGas Use | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|---------------------|----------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Land Use            | kBTU/yr        | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Apartments Mid Rise | 2.88903e+006   | 0.0156  | 0.1331 | 0.0567 | 8.5000e-004 |               | 0.0108       | 0.0108     |                | 0.0108        | 0.0108      | 0.0000   | 154.1695  | 154.1695  | 2.9500e-003 | 2.8300e-003 | 155.0857 |

|                                |       |               |               |               |                    |  |               |               |  |               |               |               |                 |                 |                    |                    |                 |
|--------------------------------|-------|---------------|---------------|---------------|--------------------|--|---------------|---------------|--|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Enclosed Parking with Elevator | 0     | 0.0000        | 0.0000        | 0.0000        | 0.0000             |  | 0.0000        | 0.0000        |  | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Parking Lot                    | 0     | 0.0000        | 0.0000        | 0.0000        | 0.0000             |  | 0.0000        | 0.0000        |  | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Strip Mall                     | 12614 | 7.0000e-005   | 6.2000e-004   | 5.2000e-004   | 0.0000             |  | 5.0000e-005   | 5.0000e-005   |  | 5.0000e-005   | 5.0000e-005   | 0.0000        | 0.6731          | 0.6731          | 1.0000e-005        | 1.0000e-005        | 0.6771          |
| <b>Total</b>                   |       | <b>0.0157</b> | <b>0.1337</b> | <b>0.0572</b> | <b>8.5000e-004</b> |  | <b>0.0108</b> | <b>0.0108</b> |  | <b>0.0108</b> | <b>0.0108</b> | <b>0.0000</b> | <b>154.8426</b> | <b>154.8426</b> | <b>2.9600e-003</b> | <b>2.8400e-003</b> | <b>155.7628</b> |

Mitigated

|                                | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use                       | kBTU/yr        | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                 |                 |                    |                    |                 |
| Apartments Mid Rise            | 2.31067e+006   | 0.0125        | 0.1065        | 0.0453        | 6.8000e-004        |               | 8.6100e-003        | 8.6100e-003        |                | 8.6100e-003        | 8.6100e-003        | 0.0000        | 123.3060        | 123.3060        | 2.3600e-003        | 2.2600e-003        | 124.0387        |
| Enclosed Parking with Elevator | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Parking Lot                    | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Strip Mall                     | 9082.08        | 5.0000e-005   | 4.5000e-004   | 3.7000e-004   | 0.0000             |               | 3.0000e-005        | 3.0000e-005        |                | 3.0000e-005        | 3.0000e-005        | 0.0000        | 0.4847          | 0.4847          | 1.0000e-005        | 1.0000e-005        | 0.4875          |
| <b>Total</b>                   |                | <b>0.0125</b> | <b>0.1069</b> | <b>0.0457</b> | <b>6.8000e-004</b> |               | <b>8.6400e-003</b> | <b>8.6400e-003</b> |                | <b>8.6400e-003</b> | <b>8.6400e-003</b> | <b>0.0000</b> | <b>123.7906</b> | <b>123.7906</b> | <b>2.3700e-003</b> | <b>2.2700e-003</b> | <b>124.5263</b> |

5.3 Energy by Land Use - Electricity

Unmitigated

|                                | Electricity Use | Total CO2 | CH4    | N2O         | CO2e     |
|--------------------------------|-----------------|-----------|--------|-------------|----------|
| Land Use                       | kWh/yr          | MT/yr     |        |             |          |
| Apartments Mid Rise            | 1.15126e+006    | 198.4376  | 0.0151 | 3.1300e-003 | 199.7499 |
| Enclosed Parking with Elevator | 1.30756e+006    | 225.3777  | 0.0172 | 3.5600e-003 | 226.8682 |

|             |       |          |             |             |          |
|-------------|-------|----------|-------------|-------------|----------|
| Parking Lot | 1408  | 0.2427   | 2.0000e-005 | 0.0000      | 0.2443   |
| Strip Mall  | 58035 | 10.0032  | 7.6000e-004 | 1.6000e-004 | 10.0694  |
| Total       |       | 434.0612 | 0.0331      | 6.8500e-003 | 436.9317 |

Mitigated

|                                | Electricity Use | Total CO2 | CH4         | N2O         | CO2e     |
|--------------------------------|-----------------|-----------|-------------|-------------|----------|
| Land Use                       | kWh/yr          | MT/yr     |             |             |          |
| Apartments Mid Rise            | 1.12258e+006    | 193.4939  | 0.0148      | 3.0600e-003 | 194.7735 |
| Enclosed Parking with Elevator | 1.09463e+006    | 188.6753  | 0.0144      | 2.9800e-003 | 189.9230 |
| Parking Lot                    | 1408            | 0.2427    | 2.0000e-005 | 0.0000      | 0.2443   |
| Strip Mall                     | 53746.2         | 9.2640    | 7.1000e-004 | 1.5000e-004 | 9.3252   |
| Total                          |                 | 391.6758  | 0.0299      | 6.1900e-003 | 394.2660 |

6.0 Area Detail

6.1 Mitigation Measures Area

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

|             |        |        |        |             |  |        |        |  |        |        |        |         |         |             |             |         |
|-------------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|---------|---------|-------------|-------------|---------|
| Mitigated   | 1.3066 | 0.0507 | 1.9641 | 2.8000e-004 |  | 0.0130 | 0.0130 |  | 0.0130 | 0.0130 | 0.0000 | 35.7575 | 35.7575 | 3.7600e-003 | 6.0000e-004 | 36.0294 |
| Unmitigated | 1.3066 | 0.0507 | 1.9641 | 2.8000e-004 |  | 0.0130 | 0.0130 |  | 0.0130 | 0.0130 | 0.0000 | 35.7575 | 35.7575 | 3.7600e-003 | 6.0000e-004 | 36.0294 |

6.2 Area by SubCategory

Unmitigated

|                       | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-----------------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| SubCategory           | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |         |
| Architectural Coating | 0.1906      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Consumer Products     | 1.0527      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Hearth                | 3.2900e-003 | 0.0281 | 0.0120 | 1.8000e-004 |               | 2.2700e-003  | 2.2700e-003 |                | 2.2700e-003   | 2.2700e-003 | 0.0000   | 32.5831   | 32.5831   | 6.2000e-004 | 6.0000e-004 | 32.7767 |
| Landscaping           | 0.0601      | 0.0226 | 1.9521 | 1.0000e-004 |               | 0.0107       | 0.0107      |                | 0.0107        | 0.0107      | 0.0000   | 3.1745    | 3.1745    | 3.1300e-003 | 0.0000      | 3.2527  |
| Total                 | 1.3066      | 0.0507 | 1.9641 | 2.8000e-004 |               | 0.0130       | 0.0130      |                | 0.0130        | 0.0130      | 0.0000   | 35.7575   | 35.7575   | 3.7500e-003 | 6.0000e-004 | 36.0294 |

Mitigated

|                       | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-----------------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| SubCategory           | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |         |
| Architectural Coating | 0.1906      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Consumer Products     | 1.0527      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Hearth                | 3.2900e-003 | 0.0281 | 0.0120 | 1.8000e-004 |               | 2.2700e-003  | 2.2700e-003 |                | 2.2700e-003   | 2.2700e-003 | 0.0000   | 32.5831   | 32.5831   | 6.2000e-004 | 6.0000e-004 | 32.7767 |

|              |               |               |               |                    |  |               |               |  |               |               |               |                |                |                    |                    |                |
|--------------|---------------|---------------|---------------|--------------------|--|---------------|---------------|--|---------------|---------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Landscaping  | 0.0601        | 0.0226        | 1.9521        | 1.0000e-004        |  | 0.0107        | 0.0107        |  | 0.0107        | 0.0107        | 0.0000        | 3.1745         | 3.1745         | 3.1300e-003        | 0.0000             | 3.2527         |
| <b>Total</b> | <b>1.3066</b> | <b>0.0507</b> | <b>1.9641</b> | <b>2.8000e-004</b> |  | <b>0.0130</b> | <b>0.0130</b> |  | <b>0.0130</b> | <b>0.0130</b> | <b>0.0000</b> | <b>35.7575</b> | <b>35.7575</b> | <b>3.7500e-003</b> | <b>6.0000e-004</b> | <b>36.0294</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|-----------|--------|--------|---------|
| Category    | MT/yr     |        |        |         |
| Mitigated   | 28.3586   | 0.5687 | 0.0138 | 46.6713 |
| Unmitigated | 28.3586   | 0.5687 | 0.0138 | 46.6713 |

### 7.2 Water by Land Use

#### Unmitigated

|                                | Indoor/Outdoor Use  | Total CO2 | CH4    | N2O         | CO2e    |
|--------------------------------|---------------------|-----------|--------|-------------|---------|
| Land Use                       | Mgal                | MT/yr     |        |             |         |
| Apartments Mid Rise            | 17.0052 / 10.7207   | 27.7227   | 0.5558 | 0.0134      | 45.6222 |
| Enclosed Parking with Elevator | 0 / 0               | 0.0000    | 0.0000 | 0.0000      | 0.0000  |
| Parking Lot                    | 0 / 0               | 0.0000    | 0.0000 | 0.0000      | 0.0000  |
| Strip Mall                     | 0.392584 / 0.240616 | 0.6359    | 0.0128 | 3.1000e-004 | 1.0491  |

|       |  |         |        |        |         |
|-------|--|---------|--------|--------|---------|
| Total |  | 28.3586 | 0.5687 | 0.0138 | 46.6713 |
|-------|--|---------|--------|--------|---------|

Mitigated

|                                | Indoor/Outdoor Use  | Total CO2 | CH4    | N2O         | CO2e    |
|--------------------------------|---------------------|-----------|--------|-------------|---------|
| Land Use                       | Mgal                | MT/yr     |        |             |         |
| Apartments Mid Rise            | 17.0052 / 10.7207   | 27.7227   | 0.5558 | 0.0134      | 45.6222 |
| Enclosed Parking with Elevator | 0 / 0               | 0.0000    | 0.0000 | 0.0000      | 0.0000  |
| Parking Lot                    | 0 / 0               | 0.0000    | 0.0000 | 0.0000      | 0.0000  |
| Strip Mall                     | 0.392584 / 0.240616 | 0.6359    | 0.0128 | 3.1000e-004 | 1.0491  |
| Total                          |                     | 28.3586   | 0.5687 | 0.0138      | 46.6713 |

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

|             | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|-----------|--------|--------|---------|
|             | MT/yr     |        |        |         |
| Mitigated   | 25.5018   | 1.5071 | 0.0000 | 63.1795 |
| Unmitigated | 25.5018   | 1.5071 | 0.0000 | 63.1795 |

8.2 Waste by Land Use

Unmitigated

|                                   | Waste<br>Disposed | Total CO2 | CH4    | N2O    | CO2e    |
|-----------------------------------|-------------------|-----------|--------|--------|---------|
| Land Use                          | tons              | MT/yr     |        |        |         |
| Apartments Mid<br>Rise            | 120.06            | 24.3711   | 1.4403 | 0.0000 | 60.3784 |
| Enclosed Parking<br>with Elevator | 0                 | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Parking Lot                       | 0                 | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Strip Mall                        | 5.57              | 1.1307    | 0.0668 | 0.0000 | 2.8012  |
| Total                             |                   | 25.5018   | 1.5071 | 0.0000 | 63.1795 |

Mitigated

|                                   | Waste<br>Disposed | Total CO2 | CH4    | N2O    | CO2e    |
|-----------------------------------|-------------------|-----------|--------|--------|---------|
| Land Use                          | tons              | MT/yr     |        |        |         |
| Apartments Mid<br>Rise            | 120.06            | 24.3711   | 1.4403 | 0.0000 | 60.3784 |
| Enclosed Parking<br>with Elevator | 0                 | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Parking Lot                       | 0                 | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Strip Mall                        | 5.57              | 1.1307    | 0.0668 | 0.0000 | 2.8012  |
| Total                             |                   | 25.5018   | 1.5071 | 0.0000 | 63.1795 |

## Gateway Crossings, Phase1 +Phase 2 Operational - Santa Clara County, Annual

## Gateway Crossings, Phase1 +Phase 2 Operational

### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|----------|---------------|-------------|--------------------|------------|
| Apartments Mid Rise            | 593.00   | Dwelling Unit | 21.30       | 738,000.00         | 1696       |
| Strip Mall                     | 5.30     | 1000sqft      | 0.00        | 5,300.00           | 0          |
| Parking Lot                    | 11.00    | Space         | 0.10        | 4,400.00           | 0          |
| Enclosed Parking with Elevator | 1,110.00 | Space         | 0.00        | 513,800.00         | 0          |

### 1.2 Other Project Characteristics

|                     |       |                         |     |                                  |      |
|---------------------|-------|-------------------------|-----|----------------------------------|------|
| <b>Urbanization</b> | Urban | <b>Wind Speed (m/s)</b> | 2.2 | <b>Precipitation Freq (Days)</b> | 58   |
| <b>Climate Zone</b> | 4     |                         |     | <b>Operational Year</b>          | 2021 |

**Utility Company** Pacific Gas & Electric Company

|                                     |     |                                     |       |                                     |       |
|-------------------------------------|-----|-------------------------------------|-------|-------------------------------------|-------|
| <b>CO2 Intensity<br/>(lb/MW hr)</b> | 380 | <b>CH4 Intensity<br/>(lb/MW hr)</b> | 0.029 | <b>N2O Intensity<br/>(lb/MW hr)</b> | 0.006 |
|-------------------------------------|-----|-------------------------------------|-------|-------------------------------------|-------|

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E used to represent SVP emission rates

Land Use - Applicant provided project information

Construction Phase - only operational emissions modeled

Off-road Equipment - only operational emissions modeled

Grading -

Demolition -

Trips and VMT -

Architectural Coating -

Vehicle Trips - project trip rates from TIA

Woodstoves - no wood based fireplaces or stoves

Energy Use - title 24 2013 values

Energy Mitigation - title 24 2016 came into effect on 1st January 2017

| Table Name                | Column Name             | Default Value | New Value                 |
|---------------------------|-------------------------|---------------|---------------------------|
| tblConstructionPhase      | NumDays                 | 20.00         | 1.00                      |
| tblConstructionPhase      | PhaseEndDate            | 6/9/2017      | 5/15/2017                 |
| tblFireplaces             | FireplaceWoodMass       | 228.80        | 0.00                      |
| tblFireplaces             | NumberGas               | 88.95         | 593.00                    |
| tblFireplaces             | NumberNoFireplace       | 23.72         | 0.00                      |
| tblFireplaces             | NumberWood              | 100.81        | 0.00                      |
| tblLandUse                | BuildingSpaceSquareFeet | 593,000.00    | 738,000.00                |
| tblLandUse                | BuildingSpaceSquareFeet | 444,000.00    | 513,800.00                |
| tblLandUse                | LandUseSquareFeet       | 593,000.00    | 738,000.00                |
| tblLandUse                | LandUseSquareFeet       | 444,000.00    | 513,800.00                |
| tblLandUse                | LotAcreage              | 15.61         | 21.30                     |
| tblLandUse                | LotAcreage              | 0.12          | 0.00                      |
| tblLandUse                | LotAcreage              | 9.99          | 0.00                      |
| tblOffRoadEquipment       | OffRoadEquipmentType    |               | Tractors/Loaders/Backhoes |
| tblProjectCharacteristics | CO2IntensityFactor      | 641.35        | 380                       |
| tblProjectCharacteristics | OperationalYear         | 2018          | 2021                      |
| tblVehicleTrips           | ST_TR                   | 6.39          | 5.75                      |
| tblVehicleTrips           | ST_TR                   | 42.04         | 30.42                     |
| tblVehicleTrips           | SU_TR                   | 5.86          | 5.27                      |
| tblVehicleTrips           | SU_TR                   | 20.43         | 14.71                     |
| tblVehicleTrips           | WD_TR                   | 6.65          | 6.00                      |
| tblVehicleTrips           | WD_TR                   | 44.32         | 32.07                     |
| tblWoodstoves             | NumberCatalytic         | 11.86         | 0.00                      |

|               |                    |        |      |
|---------------|--------------------|--------|------|
| tblWoodstoves | NumberNoncatalytic | 11.86  | 0.00 |
| tblWoodstoves | WoodstoveWoodMass  | 582.40 | 0.00 |

2.0 Emissions Summary

2.2 Overall Operational  
Unmitigated Operational

|          | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4         | N2O         | CO2e       |
|----------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|-------------|-------------|------------|
| Category | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |            |            |             |             |            |
| Area     | 3.6117  | 0.1150 | 4.4503  | 6.4000e-004 |               | 0.0295       | 0.0295     |                | 0.0295        | 0.0295      | 0.0000   | 81.2422    | 81.2422    | 8.4400e-003 | 1.3600e-003 | 81.8577    |
| Energy   | 0.0355  | 0.3031 | 0.1292  | 1.9300e-003 |               | 0.0245       | 0.0245     |                | 0.0245        | 0.0245      | 0.0000   | 1,409.3803 | 1,409.3803 | 0.0875      | 0.0232      | 1,418.4654 |
| Mobile   | 1.0737  | 4.5075 | 12.4524 | 0.0365      | 3.0739        | 0.0418       | 3.1157     | 0.8229         | 0.0393        | 0.8622      | 0.0000   | 3,331.3167 | 3,331.3167 | 0.1282      | 0.0000      | 3,334.5212 |
| Waste    |         |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 56.5025  | 0.0000     | 56.5025    | 3.3392      | 0.0000      | 139.9826   |
| Water    |         |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 12.3821  | 51.2406    | 63.6227    | 1.2757      | 0.0308      | 104.7041   |
| Total    | 4.7209  | 4.9255 | 17.0319 | 0.0390      | 3.0739        | 0.0958       | 3.1697     | 0.8229         | 0.0933        | 0.9162      | 68.8846  | 4,873.1798 | 4,942.0644 | 4.8390      | 0.0554      | 5,079.5311 |

Mitigated Operational

|          | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Area     | 3.6117  | 0.1150 | 4.4503 | 6.4000e-004 |               | 0.0295       | 0.0295     |                | 0.0295        | 0.0295      | 0.0000   | 81.2422   | 81.2422   | 8.4400e-003 | 1.3600e-003 | 81.8577 |

|              |               |               |                |               |               |               |               |               |               |               |                |                   |                   |               |               |                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-------------------|-------------------|---------------|---------------|-------------------|
| Energy       | 0.0284        | 0.2424        | 0.1033         | 1.5500e-003   |               | 0.0196        | 0.0196        |               | 0.0196        | 0.0196        | 0.0000         | 1,229.8927        | 1,229.8927        | 0.0778        | 0.0201        | 1,237.8379        |
| Mobile       | 1.0737        | 4.5075        | 12.4524        | 0.0365        | 3.0739        | 0.0418        | 3.1157        | 0.8229        | 0.0393        | 0.8622        | 0.0000         | 3,331.3167        | 3,331.3167        | 0.1282        | 0.0000        | 3,334.5212        |
| Waste        |               |               |                |               |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 56.5025        | 0.0000            | 56.5025           | 3.3392        | 0.0000        | 139.9826          |
| Water        |               |               |                |               |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 12.3821        | 51.2406           | 63.6227           | 1.2757        | 0.0308        | 104.7041          |
| <b>Total</b> | <b>4.7138</b> | <b>4.8648</b> | <b>17.0060</b> | <b>0.0387</b> | <b>3.0739</b> | <b>0.0909</b> | <b>3.1648</b> | <b>0.8229</b> | <b>0.0884</b> | <b>0.9113</b> | <b>68.8846</b> | <b>4,693.6922</b> | <b>4,762.5768</b> | <b>4.8293</b> | <b>0.0523</b> | <b>4,898.9036</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.15 | 1.23 | 0.15 | 0.97 | 0.00          | 5.13         | 0.15       | 0.00           | 5.26          | 0.54        | 0.00     | 3.68     | 3.63      | 0.20 | 5.46 | 3.56 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

|             | ROG     | NOx    | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|---------|--------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | tons/yr |        |         |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Mitigated   | 1.0737  | 4.5075 | 12.4524 | 0.0365 | 3.0739        | 0.0418       | 3.1157     | 0.8229         | 0.0393        | 0.8622      | 0.0000   | 3,331.3167 | 3,331.3167 | 0.1282 | 0.0000 | 3,334.5212 |
| Unmitigated | 1.0737  | 4.5075 | 12.4524 | 0.0365 | 3.0739        | 0.0418       | 3.1157     | 0.8229         | 0.0393        | 0.8622      | 0.0000   | 3,331.3167 | 3,331.3167 | 0.1282 | 0.0000 | 3,334.5212 |

4.2 Trip Summary Information

|                                | Average Daily Trip Rate |          |         | Unmitigated | Mitigated  |
|--------------------------------|-------------------------|----------|---------|-------------|------------|
| Land Use                       | Weekday                 | Saturday | Sunday  | Annual VMT  | Annual VMT |
| Apartments Mid Rise            | 3,558.00                | 3,409.75 | 3125.11 | 8,025,839   | 8,025,839  |
| Enclosed Parking with Elevator | 0.00                    | 0.00     | 0.00    |             |            |

|             |          |          |          |           |           |
|-------------|----------|----------|----------|-----------|-----------|
| Parking Lot | 0.00     | 0.00     | 0.00     |           |           |
| Strip Mall  | 169.97   | 161.23   | 77.96    | 239,595   | 239,595   |
| Total       | 3,727.97 | 3,570.98 | 3,203.07 | 8,265,434 | 8,265,434 |

4.3 Trip Type Information

|                                | Miles      |            |             | Trip %    |            |             | Trip Purpose % |          |         |
|--------------------------------|------------|------------|-------------|-----------|------------|-------------|----------------|----------|---------|
| Land Use                       | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise            | 10.80      | 4.80       | 5.70        | 31.00     | 15.00      | 54.00       | 86             | 11       | 3       |
| Enclosed Parking with Elevator | 9.50       | 7.30       | 7.30        | 0.00      | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot                    | 9.50       | 7.30       | 7.30        | 0.00      | 0.00       | 0.00        | 0              | 0        | 0       |
| Strip Mall                     | 9.50       | 7.30       | 7.30        | 16.60     | 64.40      | 19.00       | 45             | 40       | 15      |

4.4 Fleet Mix

| Land Use                       | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|--------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Mid Rise            | 0.607897 | 0.037434 | 0.184004 | 0.107261 | 0.014919 | 0.004991 | 0.012447 | 0.020659 | 0.002115 | 0.001554 | 0.005334 | 0.000623 | 0.000761 |
| Strip Mall                     | 0.607897 | 0.037434 | 0.184004 | 0.107261 | 0.014919 | 0.004991 | 0.012447 | 0.020659 | 0.002115 | 0.001554 | 0.005334 | 0.000623 | 0.000761 |
| Parking Lot                    | 0.607897 | 0.037434 | 0.184004 | 0.107261 | 0.014919 | 0.004991 | 0.012447 | 0.020659 | 0.002115 | 0.001554 | 0.005334 | 0.000623 | 0.000761 |
| Enclosed Parking with Elevator | 0.607897 | 0.037434 | 0.184004 | 0.107261 | 0.014919 | 0.004991 | 0.012447 | 0.020659 | 0.002115 | 0.001554 | 0.005334 | 0.000623 | 0.000761 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

|                       | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|-----------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category              | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| Electricity Mitigated |         |     |    |     |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 949.2530  | 949.2530  | 0.0724 | 0.0150 | 955.5306 |

|                            |        |        |        |                 |        |        |  |        |        |        |                |            |                 |                 |                |
|----------------------------|--------|--------|--------|-----------------|--------|--------|--|--------|--------|--------|----------------|------------|-----------------|-----------------|----------------|
| Electricity<br>Unmitigated |        |        |        |                 | 0.0000 | 0.0000 |  | 0.0000 | 0.0000 | 0.0000 | 1,058.429<br>3 | 1,058.4293 | 0.0808          | 0.0167          | 1,065.428<br>9 |
| NaturalGas<br>Mitigated    | 0.0284 | 0.2424 | 0.1033 | 1.5500e-<br>003 | 0.0196 | 0.0196 |  | 0.0196 | 0.0196 | 0.0000 | 280.6397       | 280.6397   | 5.3800e-<br>003 | 5.1500e-<br>003 | 282.3074       |
| NaturalGas<br>Unmitigated  | 0.0355 | 0.3031 | 0.1292 | 1.9300e-<br>003 | 0.0245 | 0.0245 |  | 0.0245 | 0.0245 | 0.0000 | 350.9510       | 350.9510   | 6.7300e-<br>003 | 6.4300e-<br>003 | 353.0365       |

## 5.2 Energy by Land Use - NaturalGas

## Unmitigated

|                                | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use                       | kBTU/yr        | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |                    |                    |                 |
| Apartments Mid Rise            | 6.56396e+006   | 0.0354        | 0.3025        | 0.1287        | 1.9300e-003        |               | 0.0245        | 0.0245        |                | 0.0245        | 0.0245        | 0.0000        | 350.2778        | 350.2778        | 6.7100e-003        | 6.4200e-003        | 352.3594        |
| Enclosed Parking with Elevator | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Parking Lot                    | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Strip Mall                     | 12614          | 7.0000e-005   | 6.2000e-004   | 5.2000e-004   | 0.0000             |               | 5.0000e-005   | 5.0000e-005   |                | 5.0000e-005   | 5.0000e-005   | 0.0000        | 0.6731          | 0.6731          | 1.0000e-005        | 1.0000e-005        | 0.6771          |
| <b>Total</b>                   |                | <b>0.0355</b> | <b>0.3031</b> | <b>0.1292</b> | <b>1.9300e-003</b> |               | <b>0.0245</b> | <b>0.0245</b> |                | <b>0.0245</b> | <b>0.0245</b> | <b>0.0000</b> | <b>350.9510</b> | <b>350.9510</b> | <b>6.7200e-003</b> | <b>6.4300e-003</b> | <b>353.0365</b> |

**Mitigated**

[illegible]

|            |         |             |             |             |             |  |             |             |  |             |             |        |          |          |             |             |          |
|------------|---------|-------------|-------------|-------------|-------------|--|-------------|-------------|--|-------------|-------------|--------|----------|----------|-------------|-------------|----------|
| Strip Mall | 9082.08 | 5.0000e-005 | 4.5000e-004 | 3.7000e-004 | 0.0000      |  | 3.0000e-005 | 3.0000e-005 |  | 3.0000e-005 | 3.0000e-005 | 0.0000 | 0.4847   | 0.4847   | 1.0000e-005 | 1.0000e-005 | 0.4875   |
| Total      |         | 0.0284      | 0.2424      | 0.1033      | 1.5400e-003 |  | 0.0196      | 0.0196      |  | 0.0196      | 0.0196      | 0.0000 | 280.6396 | 280.6396 | 5.3800e-003 | 5.1500e-003 | 282.3074 |

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

|                                | Electricity Use | Total CO2  | CH4         | N2O         | CO2e       |
|--------------------------------|-----------------|------------|-------------|-------------|------------|
| Land Use                       | kWh/yr          | MT/yr      |             |             |            |
| Apartments Mid Rise            | 2.61571e+006    | 450.8563   | 0.0344      | 7.1200e-003 | 453.8379   |
| Enclosed Parking with Elevator | 3.46301e+006    | 596.9024   | 0.0456      | 9.4200e-003 | 600.8498   |
| Parking Lot                    | 3872            | 0.6674     | 5.0000e-005 | 1.0000e-005 | 0.6718     |
| Strip Mall                     | 58035           | 10.0032    | 7.6000e-004 | 1.6000e-004 | 10.0694    |
| Total                          |                 | 1,058.4293 | 0.0808      | 0.0167      | 1,065.4289 |

#### Mitigated

|                                | Electricity Use | Total CO2 | CH4         | N2O         | CO2e     |
|--------------------------------|-----------------|-----------|-------------|-------------|----------|
| Land Use                       | kWh/yr          | MT/yr     |             |             |          |
| Apartments Mid Rise            | 2.55054e+006    | 439.6240  | 0.0336      | 6.9400e-003 | 442.5313 |
| Enclosed Parking with Elevator | 2.89907e+006    | 499.6977  | 0.0381      | 7.8900e-003 | 503.0022 |
| Parking Lot                    | 3872            | 0.6674    | 5.0000e-005 | 1.0000e-005 | 0.6718   |
| Strip Mall                     | 53746.2         | 9.2640    | 7.1000e-004 | 1.5000e-004 | 9.3252   |

|       |  |          |        |        |          |
|-------|--|----------|--------|--------|----------|
| Total |  | 949.2530 | 0.0724 | 0.0150 | 955.5306 |
|-------|--|----------|--------|--------|----------|

6.0 Area Detail

6.1 Mitigation Measures Area

|             | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |             |         |
| Mitigated   | 3.6117  | 0.1150 | 4.4503 | 6.4000e-004 |               | 0.0295       | 0.0295     |                | 0.0295        | 0.0295      | 0.0000   | 81.2422   | 81.2422   | 8.4400e-003 | 1.3600e-003 | 81.8577 |
| Unmitigated | 3.6117  | 0.1150 | 4.4503 | 6.4000e-004 |               | 0.0295       | 0.0295     |                | 0.0295        | 0.0295      | 0.0000   | 81.2422   | 81.2422   | 8.4400e-003 | 1.3600e-003 | 81.8577 |

6.2 Area by SubCategory

Unmitigated

|                       | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-----------------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| SubCategory           | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |         |
| Architectural Coating | 0.5331      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Consumer Products     | 2.9365      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Hearth                | 7.4800e-003 | 0.0639 | 0.0272 | 4.1000e-004 |               | 5.1700e-003  | 5.1700e-003 |                | 5.1700e-003   | 5.1700e-003 | 0.0000   | 74.0297   | 74.0297   | 1.4200e-003 | 1.3600e-003 | 74.4696 |
| Landscaping           | 0.1347      | 0.0510 | 4.4231 | 2.3000e-004 |               | 0.0244       | 0.0244      |                | 0.0244        | 0.0244      | 0.0000   | 7.2125    | 7.2125    | 7.0200e-003 | 0.0000      | 7.3881  |

|       |        |        |        |             |  |        |        |  |        |        |        |         |         |             |             |         |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|---------|---------|-------------|-------------|---------|
| Total | 3.6117 | 0.1150 | 4.4503 | 6.4000e-004 |  | 0.0295 | 0.0295 |  | 0.0295 | 0.0295 | 0.0000 | 81.2422 | 81.2422 | 8.4400e-003 | 1.3600e-003 | 81.8577 |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|---------|---------|-------------|-------------|---------|

Mitigated

|                       | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-----------------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| SubCategory           | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |         |
| Architectural Coating | 0.5331      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Consumer Products     | 2.9365      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Hearth                | 7.4800e-003 | 0.0639 | 0.0272 | 4.1000e-004 |               | 5.1700e-003  | 5.1700e-003 |                | 5.1700e-003   | 5.1700e-003 | 0.0000   | 74.0297   | 74.0297   | 1.4200e-003 | 1.3600e-003 | 74.4696 |
| Landscaping           | 0.1347      | 0.0510 | 4.4231 | 2.3000e-004 |               | 0.0244       | 0.0244      |                | 0.0244        | 0.0244      | 0.0000   | 7.2125    | 7.2125    | 7.0200e-003 | 0.0000      | 7.3881  |
| Total                 | 3.6117      | 0.1150 | 4.4503 | 6.4000e-004 |               | 0.0295       | 0.0295      |                | 0.0295        | 0.0295      | 0.0000   | 81.2422   | 81.2422   | 8.4400e-003 | 1.3600e-003 | 81.8577 |

7.0 Water Detail

7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 63.6227   | 1.2757 | 0.0308 | 104.7041 |
| Unmitigated | 63.6227   | 1.2757 | 0.0308 | 104.7041 |

7.2 Water by Land Use

Unmitigated

|                                | Indoor/Outdoor Use  | Total CO2 | CH4    | N2O         | CO2e     |
|--------------------------------|---------------------|-----------|--------|-------------|----------|
| Land Use                       | Mgal                | MT/yr     |        |             |          |
| Apartments Mid Rise            | 38.6363 / 24.3577   | 62.9868   | 1.2628 | 0.0305      | 103.6551 |
| Enclosed Parking with Elevator | 0 / 0               | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Parking Lot                    | 0 / 0               | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Strip Mall                     | 0.392584 / 0.240616 | 0.6359    | 0.0128 | 3.1000e-004 | 1.0491   |
| Total                          |                     | 63.6227   | 1.2757 | 0.0308      | 104.7041 |

Mitigated

|                                | Indoor/Outdoor Use  | Total CO2 | CH4    | N2O         | CO2e     |
|--------------------------------|---------------------|-----------|--------|-------------|----------|
| Land Use                       | Mgal                | MT/yr     |        |             |          |
| Apartments Mid Rise            | 38.6363 / 24.3577   | 62.9868   | 1.2628 | 0.0305      | 103.6551 |
| Enclosed Parking with Elevator | 0 / 0               | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Parking Lot                    | 0 / 0               | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Strip Mall                     | 0.392584 / 0.240616 | 0.6359    | 0.0128 | 3.1000e-004 | 1.0491   |
| Total                          |                     | 63.6227   | 1.2757 | 0.0308      | 104.7041 |

8.0 Waste Detail

## 8.1 Mitigation Measures Waste

### Category/Year

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
|             | MT/yr     |        |        |          |
| Mitigated   | 56.5025   | 3.3392 | 0.0000 | 139.9826 |
| Unmitigated | 56.5025   | 3.3392 | 0.0000 | 139.9826 |

## 8.2 Waste by Land Use

### Unmitigated

|                                | Waste Disposed | Total CO2 | CH4    | N2O    | CO2e     |
|--------------------------------|----------------|-----------|--------|--------|----------|
| Land Use                       | tons           | MT/yr     |        |        |          |
| Apartments Mid Rise            | 272.78         | 55.3719   | 3.2724 | 0.0000 | 137.1815 |
| Enclosed Parking with Elevator | 0              | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Parking Lot                    | 0              | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Strip Mall                     | 5.57           | 1.1307    | 0.0668 | 0.0000 | 2.8012   |
| Total                          |                | 56.5025   | 3.3392 | 0.0000 | 139.9826 |

### Mitigated

|                                   | Waste<br>Disposed | Total CO2 | CH4    | N2O    | CO2e     |
|-----------------------------------|-------------------|-----------|--------|--------|----------|
| Land Use                          | tons              | MT/yr     |        |        |          |
| Apartments Mid<br>Rise            | 272.78            | 55.3719   | 3.2724 | 0.0000 | 137.1815 |
| Enclosed Parking<br>with Elevator | 0                 | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Parking Lot                       | 0                 | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Strip Mall                        | 5.57              | 1.1307    | 0.0668 | 0.0000 | 2.8012   |
| Total                             |                   | 56.5025   | 3.3392 | 0.0000 | 139.9826 |

phase1 +phase2+phase3, operational - Santa Clara County, Annual

**phase1 +phase2+phase3, operational**  
**Santa Clara County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|----------|---------------|-------------|--------------------|------------|
| Apartments Mid Rise            | 1,025.00 | Dwelling Unit | 23.94       | 1,250,000.00       | 2932       |
| Strip Mall                     | 10.20    | 1000sqft      | 0.00        | 10,200.00          | 0          |
| Parking Lot                    | 18.00    | Space         | 0.16        | 7,200.00           | 0          |
| Enclosed Parking with Elevator | 1,870.00 | Space         | 0.00        | 825,600.00         | 0          |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 58    |
| <b>Climate Zone</b>             | 4                              |                                 |       | <b>Operational Year</b>          | 2022  |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 380                            | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&amp;E used to represent SVP emission rates

Land Use - Applicant provided project description

Construction Phase - only operational emissions modeled

Off-road Equipment - only operational emissions modeled

Vehicle Trips - trip rates from project TIA

Woodstoves - no wood burning

Energy Use - title 24 2013 values

Solid Waste -

Energy Mitigation - title 24 2016 values

| Table Name                | Column Name                               | Default Value | New Value                 |
|---------------------------|-------------------------------------------|---------------|---------------------------|
| tblAreaCoating            | Area_EF_Parking                           | 150           | 0                         |
| tblAreaMitigation         | UseLowVOCPaintNonresidentialExteriorValue | 150           | 0                         |
| tblAreaMitigation         | UseLowVOCPaintNonresidentialInteriorValue | 100           | 0                         |
| tblAreaMitigation         | UseLowVOCPaintResidentialExteriorValue    | 150           | 0                         |
| tblAreaMitigation         | UseLowVOCPaintResidentialInteriorValue    | 100           | 0                         |
| tblConstructionPhase      | NumDays                                   | 20.00         | 1.00                      |
| tblConstructionPhase      | PhaseEndDate                              | 6/9/2017      | 5/15/2017                 |
| tblFireplaces             | FireplaceWoodMass                         | 228.80        | 0.00                      |
| tblFireplaces             | NumberGas                                 | 153.75        | 1,025.00                  |
| tblFireplaces             | NumberNoFireplace                         | 41.00         | 0.00                      |
| tblFireplaces             | NumberWood                                | 174.25        | 0.00                      |
| tblLandUse                | BuildingSpaceSquareFeet                   | 1,025,000.00  | 1,250,000.00              |
| tblLandUse                | BuildingSpaceSquareFeet                   | 748,000.00    | 825,600.00                |
| tblLandUse                | LandUseSquareFeet                         | 1,025,000.00  | 1,250,000.00              |
| tblLandUse                | LandUseSquareFeet                         | 748,000.00    | 825,600.00                |
| tblLandUse                | LotAcreage                                | 26.97         | 23.94                     |
| tblLandUse                | LotAcreage                                | 0.23          | 0.00                      |
| tblLandUse                | LotAcreage                                | 16.83         | 0.00                      |
| tblOffRoadEquipment       | OffRoadEquipmentType                      |               | Tractors/Loaders/Backhoes |
| tblProjectCharacteristics | CO2IntensityFactor                        | 641.35        | 380                       |
| tblProjectCharacteristics | OperationalYear                           | 2018          | 2022                      |
| tblVehicleTrips           | ST_TR                                     | 6.39          | 5.75                      |
| tblVehicleTrips           | ST_TR                                     | 42.04         | 30.42                     |
| tblVehicleTrips           | SU_TR                                     | 5.86          | 5.27                      |
| tblVehicleTrips           | SU_TR                                     | 20.43         | 14.71                     |
| tblVehicleTrips           | WD_TR                                     | 6.65          | 6.00                      |
| tblVehicleTrips           | WD_TR                                     | 44.32         | 32.07                     |

|               |                    |        |      |
|---------------|--------------------|--------|------|
| tblWoodstoves | NumberCatalytic    | 20.50  | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 20.50  | 0.00 |
| tblWoodstoves | WoodstoveWoodMass  | 582.40 | 0.00 |

2.0 Emissions Summary

2.2 Overall Operational  
Unmitigated Operational

|          | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O         | CO2e       |
|----------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|-------------|------------|
| Category | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |            |            |        |             |            |
| Area     | 6.1055  | 0.1985 | 7.6834  | 1.1100e-003 |               | 0.0511       | 0.0511     |                | 0.0511        | 0.0511      | 0.0000   | 140.4262   | 140.4262   | 0.0145 | 2.3500e-003 | 141.4887   |
| Energy   | 0.0613  | 0.5240 | 0.2235  | 3.3400e-003 |               | 0.0424       | 0.0424     |                | 0.0424        | 0.0424      | 0.0000   | 2,365.5319 | 2,365.5319 | 0.1459 | 0.0389      | 2,380.7686 |
| Mobile   | 1.4547  | 6.1444 | 16.7950 | 0.0579      | 5.3301        | 0.0492       | 5.3793     | 1.4268         | 0.0460        | 1.4727      | 0.0000   | 5,298.5649 | 5,298.5649 | 0.1796 | 0.0000      | 5,303.0557 |
| Waste    |         |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 97.8843  | 0.0000     | 97.8843    | 5.7848 | 0.0000      | 242.5041   |
| Water    |         |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 21.4268  | 88.6696    | 110.0964   | 2.2075 | 0.0534      | 181.1867   |
| Total    | 7.6215  | 6.8669 | 24.7019 | 0.0623      | 5.3301        | 0.1426       | 5.4728     | 1.4268         | 0.1394        | 1.5662      | 119.3111 | 7,893.1926 | 8,012.5037 | 8.3323 | 0.0946      | 8,249.0037 |

Mitigated Operational

|          | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e     |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|----------|
| Category | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |          |
| Area     | 6.1055  | 0.1985 | 7.6834 | 1.1100e-003 |               | 0.0511       | 0.0511     |                | 0.0511        | 0.0511      | 0.0000   | 140.4262  | 140.4262  | 0.0145 | 2.3500e-003 | 141.4887 |

|        |        |        |         |             |        |        |        |        |        |        |          |            |            |        |        |            |
|--------|--------|--------|---------|-------------|--------|--------|--------|--------|--------|--------|----------|------------|------------|--------|--------|------------|
| Energy | 0.0490 | 0.4190 | 0.1787  | 2.6700e-003 |        | 0.0339 | 0.0339 |        | 0.0339 | 0.0339 | 0.0000   | 2,066.9306 | 2,066.9306 | 0.1300 | 0.0339 | 2,080.2742 |
| Mobile | 1.4547 | 6.1444 | 16.7950 | 0.0579      | 5.3301 | 0.0492 | 5.3793 | 1.4268 | 0.0460 | 1.4727 | 0.0000   | 5,298.5649 | 5,298.5649 | 0.1796 | 0.0000 | 5,303.0557 |
| Waste  |        |        |         |             |        | 0.0000 | 0.0000 |        | 0.0000 | 0.0000 | 97.8843  | 0.0000     | 97.8843    | 5.7848 | 0.0000 | 242.5041   |
| Water  |        |        |         |             |        | 0.0000 | 0.0000 |        | 0.0000 | 0.0000 | 21.4268  | 88.6696    | 110.0964   | 2.2075 | 0.0534 | 181.1867   |
| Total  | 7.6092 | 6.7619 | 24.6571 | 0.0616      | 5.3301 | 0.1342 | 5.4643 | 1.4268 | 0.1309 | 1.5577 | 119.3111 | 7,594.5913 | 7,713.9024 | 8.3165 | 0.0896 | 7,948.5093 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.16 | 1.53 | 0.18 | 1.08 | 0.00          | 5.95         | 0.16       | 0.00           | 6.09          | 0.54        | 0.00     | 3.78     | 3.73      | 0.19 | 5.31 | 3.64 |

#### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx    | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|---------|--------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | tons/yr |        |         |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Mitigated   | 1.4547  | 6.1444 | 16.7950 | 0.0579 | 5.3301        | 0.0492       | 5.3793     | 1.4268         | 0.0460        | 1.4727      | 0.0000   | 5,298.5649 | 5,298.5649 | 0.1796 | 0.0000 | 5,303.0557 |
| Unmitigated | 1.4547  | 6.1444 | 16.7950 | 0.0579 | 5.3301        | 0.0492       | 5.3793     | 1.4268         | 0.0460        | 1.4727      | 0.0000   | 5,298.5649 | 5,298.5649 | 0.1796 | 0.0000 | 5,303.0557 |

#### 4.2 Trip Summary Information

|          | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------|-------------------------|----------|--------|-------------|------------|
| Land Use | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |

|                                |          |          |          |            |            |
|--------------------------------|----------|----------|----------|------------|------------|
| Apartments Mid Rise            | 6,150.00 | 5,893.75 | 5401.75  | 13,872,656 | 13,872,656 |
| Enclosed Parking with Elevator | 0.00     | 0.00     | 0.00     |            |            |
| Parking Lot                    | 0.00     | 0.00     | 0.00     |            |            |
| Strip Mall                     | 327.11   | 310.28   | 150.04   | 461,107    | 461,107    |
| Total                          | 6,477.11 | 6,204.03 | 5,551.79 | 14,333,763 | 14,333,763 |

4.3 Trip Type Information

|                                | Miles      |            |             | Trip %    |            |             | Trip Purpose % |          |         |
|--------------------------------|------------|------------|-------------|-----------|------------|-------------|----------------|----------|---------|
| Land Use                       | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise            | 10.80      | 4.80       | 5.70        | 31.00     | 15.00      | 54.00       | 86             | 11       | 3       |
| Enclosed Parking with Elevator | 9.50       | 7.30       | 7.30        | 0.00      | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot                    | 9.50       | 7.30       | 7.30        | 0.00      | 0.00       | 0.00        | 0              | 0        | 0       |
| Strip Mall                     | 9.50       | 7.30       | 7.30        | 16.60     | 64.40      | 19.00       | 45             | 40       | 15      |

4.4 Fleet Mix

| Land Use                       | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|--------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Mid Rise            | 0.610498 | 0.036775 | 0.183084 | 0.106123 | 0.014413 | 0.005007 | 0.012610 | 0.021118 | 0.002144 | 0.001548 | 0.005312 | 0.000627 | 0.000740 |
| Strip Mall                     | 0.610498 | 0.036775 | 0.183084 | 0.106123 | 0.014413 | 0.005007 | 0.012610 | 0.021118 | 0.002144 | 0.001548 | 0.005312 | 0.000627 | 0.000740 |
| Parking Lot                    | 0.610498 | 0.036775 | 0.183084 | 0.106123 | 0.014413 | 0.005007 | 0.012610 | 0.021118 | 0.002144 | 0.001548 | 0.005312 | 0.000627 | 0.000740 |
| Enclosed Parking with Elevator | 0.610498 | 0.036775 | 0.183084 | 0.106123 | 0.014413 | 0.005007 | 0.012610 | 0.021118 | 0.002144 | 0.001548 | 0.005312 | 0.000627 | 0.000740 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

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

| Category                | tons/yr |        |        |             |        |        |  |        | MT/yr  |        |            |            |             |             |            |
|-------------------------|---------|--------|--------|-------------|--------|--------|--|--------|--------|--------|------------|------------|-------------|-------------|------------|
| Electricity Mitigated   |         |        |        |             | 0.0000 | 0.0000 |  | 0.0000 | 0.0000 | 0.0000 | 1,581.7502 | 1,581.7502 | 0.1207      | 0.0250      | 1,592.2106 |
| Electricity Unmitigated |         |        |        |             | 0.0000 | 0.0000 |  | 0.0000 | 0.0000 | 0.0000 | 1,758.7815 | 1,758.7815 | 0.1342      | 0.0278      | 1,770.4126 |
| NaturalGas Mitigated    | 0.0490  | 0.4190 | 0.1787 | 2.6700e-003 | 0.0339 | 0.0339 |  | 0.0339 | 0.0339 | 0.0000 | 485.1804   | 485.1804   | 9.3000e-003 | 8.8900e-003 | 488.0636   |
| NaturalGas Unmitigated  | 0.0613  | 0.5240 | 0.2235 | 3.3400e-003 | 0.0424 | 0.0424 |  | 0.0424 | 0.0424 | 0.0000 | 606.7504   | 606.7504   | 0.0116      | 0.0111      | 610.3560   |

5.2 Energy by Land Use - NaturalGas

Unmitigated

|                                | NaturalGas Use | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|--------------------------------|----------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Land Use                       | kBTU/yr        | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |          |
| Apartments Mid Rise            | 1.13458e+007   | 0.0612      | 0.5228      | 0.2225      | 3.3400e-003 |               | 0.0423       | 0.0423      |                | 0.0423        | 0.0423      | 0.0000   | 605.4549  | 605.4549  | 0.0116      | 0.0111      | 609.0528 |
| Enclosed Parking with Elevator | 0              | 0.0000      | 0.0000      | 0.0000      | 0.0000      |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Parking Lot                    | 0              | 0.0000      | 0.0000      | 0.0000      | 0.0000      |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Strip Mall                     | 24276          | 1.3000e-004 | 1.1900e-003 | 1.0000e-003 | 1.0000e-005 |               | 9.0000e-005  | 9.0000e-005 |                | 9.0000e-005   | 9.0000e-005 | 0.0000   | 1.2955    | 1.2955    | 2.0000e-005 | 2.0000e-005 | 1.3032   |
| Total                          |                | 0.0613      | 0.5240      | 0.2235      | 3.3500e-003 |               | 0.0424       | 0.0424      |                | 0.0424        | 0.0424      | 0.0000   | 606.7504  | 606.7504  | 0.0116      | 0.0111      | 610.3560 |

Mitigated

|                     | NaturalGas Use | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|---------------------|----------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Land Use            | kBTU/yr        | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Apartments Mid Rise | 9.07446e+006   | 0.0489  | 0.4181 | 0.1779 | 2.6700e-003 |               | 0.0338       | 0.0338     |                | 0.0338        | 0.0338      | 0.0000   | 484.2477  | 484.2477  | 9.2800e-003 | 8.8800e-003 | 487.1253 |

|                                |         |               |               |               |                    |  |               |               |  |               |               |               |                 |                 |                    |                    |                 |
|--------------------------------|---------|---------------|---------------|---------------|--------------------|--|---------------|---------------|--|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Enclosed Parking with Elevator | 0       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |  | 0.0000        | 0.0000        |  | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Parking Lot                    | 0       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |  | 0.0000        | 0.0000        |  | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Strip Mall                     | 17478.7 | 9.0000e-005   | 8.6000e-004   | 7.2000e-004   | 1.0000e-005        |  | 7.0000e-005   | 7.0000e-005   |  | 7.0000e-005   | 7.0000e-005   | 0.0000        | 0.9327          | 0.9327          | 2.0000e-005        | 2.0000e-005        | 0.9383          |
| <b>Total</b>                   |         | <b>0.0490</b> | <b>0.4190</b> | <b>0.1787</b> | <b>2.6800e-003</b> |  | <b>0.0339</b> | <b>0.0339</b> |  | <b>0.0339</b> | <b>0.0339</b> | <b>0.0000</b> | <b>485.1804</b> | <b>485.1804</b> | <b>9.3000e-003</b> | <b>8.9000e-003</b> | <b>488.0636</b> |

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

|                                | Electricity Use | Total CO2         | CH4           | N2O           | CO2e              |
|--------------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use                       | kWh/yr          | MT/yr             |               |               |                   |
| Apartments Mid Rise            | 4.52124e+006    | 779.3047          | 0.0595        | 0.0123        | 784.4584          |
| Enclosed Parking with Elevator | 5.56454e+006    | 959.1332          | 0.0732        | 0.0151        | 965.4761          |
| Parking Lot                    | 6336            | 1.0921            | 8.0000e-005   | 2.0000e-005   | 1.0993            |
| Strip Mall                     | 111690          | 19.2515           | 1.4700e-003   | 3.0000e-004   | 19.3788           |
| <b>Total</b>                   |                 | <b>1,758.7815</b> | <b>0.1342</b> | <b>0.0278</b> | <b>1,770.4126</b> |

#### Mitigated

|                                | Electricity Use | Total CO2 | CH4    | N2O    | CO2e     |
|--------------------------------|-----------------|-----------|--------|--------|----------|
| Land Use                       | kWh/yr          | MT/yr     |        |        |          |
| Apartments Mid Rise            | 4.40861e+006    | 759.8897  | 0.0580 | 0.0120 | 764.9150 |
| Enclosed Parking with Elevator | 4.65837e+006    | 802.9396  | 0.0613 | 0.0127 | 808.2496 |

|              |        |                   |               |               |                   |
|--------------|--------|-------------------|---------------|---------------|-------------------|
| Parking Lot  | 6336   | 1.0921            | 8.0000e-005   | 2.0000e-005   | 1.0993            |
| Strip Mall   | 103436 | 17.8288           | 1.3600e-003   | 2.8000e-004   | 17.9467           |
| <b>Total</b> |        | <b>1,581.7502</b> | <b>0.1207</b> | <b>0.0250</b> | <b>1,592.2106</b> |

## 6.0 Area Detail

## 6.1 Mitigation Measures Area

|             | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e     |
|-------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|----------|
| Category    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |          |
| Mitigated   | 6.1055  | 0.1985 | 7.6834 | 1.1100e-003 |               | 0.0511       | 0.0511     |                | 0.0511        | 0.0511      | 0.0000   | 140.4262  | 140.4262  | 0.0145 | 2.3500e-003 | 141.4887 |
| Unmitigated | 6.1055  | 0.1985 | 7.6834 | 1.1100e-003 |               | 0.0511       | 0.0511     |                | 0.0511        | 0.0511      | 0.0000   | 140.4262  | 140.4262  | 0.0145 | 2.3500e-003 | 141.4887 |

## 6.2 Area by SubCategory

**Unmitigated**

[illegible]

|             |        |        |        |             |  |             |             |  |             |             |        |          |          |             |             |          |
|-------------|--------|--------|--------|-------------|--|-------------|-------------|--|-------------|-------------|--------|----------|----------|-------------|-------------|----------|
| Hearth      | 0.0129 | 0.1105 | 0.0470 | 7.1000e-004 |  | 8.9300e-003 | 8.9300e-003 |  | 8.9300e-003 | 8.9300e-003 | 0.0000 | 127.9603 | 127.9603 | 2.4500e-003 | 2.3500e-003 | 128.7207 |
| Landscaping | 0.2318 | 0.0880 | 7.6364 | 4.0000e-004 |  | 0.0422      | 0.0422      |  | 0.0422      | 0.0422      | 0.0000 | 12.4659  | 12.4659  | 0.0121      | 0.0000      | 12.7680  |
| Total       | 6.1055 | 0.1985 | 7.6834 | 1.1100e-003 |  | 0.0511      | 0.0511      |  | 0.0511      | 0.0511      | 0.0000 | 140.4262 | 140.4262 | 0.0145      | 2.3500e-003 | 141.4887 |

Mitigated

|                       | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|-----------------------|---------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| SubCategory           | tons/yr |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |          |
| Architectural Coating | 0.8852  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Consumer Products     | 4.9755  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Hearth                | 0.0129  | 0.1105 | 0.0470 | 7.1000e-004 |               | 8.9300e-003  | 8.9300e-003 |                | 8.9300e-003   | 8.9300e-003 | 0.0000   | 127.9603  | 127.9603  | 2.4500e-003 | 2.3500e-003 | 128.7207 |
| Landscaping           | 0.2318  | 0.0880 | 7.6364 | 4.0000e-004 |               | 0.0422       | 0.0422      |                | 0.0422        | 0.0422      | 0.0000   | 12.4659   | 12.4659   | 0.0121      | 0.0000      | 12.7680  |
| Total                 | 6.1055  | 0.1985 | 7.6834 | 1.1100e-003 |               | 0.0511       | 0.0511      |                | 0.0511        | 0.0511      | 0.0000   | 140.4262  | 140.4262  | 0.0145      | 2.3500e-003 | 141.4887 |

7.0 Water Detail

7.1 Mitigation Measures Water

|           | Total CO2 | CH4    | N2O    | CO2e     |
|-----------|-----------|--------|--------|----------|
| Category  | MT/yr     |        |        |          |
| Mitigated | 110.0964  | 2.2075 | 0.0534 | 181.1867 |

|             |          |        |        |          |
|-------------|----------|--------|--------|----------|
| Unmitigated | 110.0964 | 2.2075 | 0.0534 | 181.1867 |
|-------------|----------|--------|--------|----------|

## 7.2 Water by Land Use

### Unmitigated

|                                | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                       | Mgal               | MT/yr           |               |               |                 |
| Apartments Mid Rise            | 66.7829 / 42.1022  | 108.8727        | 2.1828        | 0.0528        | 179.1677        |
| Enclosed Parking with Elevator | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Parking Lot                    | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Strip Mall                     | 0.75554 / 0.463073 | 1.2237          | 0.0247        | 6.0000e-004   | 2.0190          |
| <b>Total</b>                   |                    | <b>110.0964</b> | <b>2.2075</b> | <b>0.0534</b> | <b>181.1867</b> |

### Mitigated

|                                | Indoor/Outdoor Use | Total CO2 | CH4    | N2O         | CO2e     |
|--------------------------------|--------------------|-----------|--------|-------------|----------|
| Land Use                       | Mgal               | MT/yr     |        |             |          |
| Apartments Mid Rise            | 66.7829 / 42.1022  | 108.8727  | 2.1828 | 0.0528      | 179.1677 |
| Enclosed Parking with Elevator | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Parking Lot                    | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Strip Mall                     | 0.75554 / 0.463073 | 1.2237    | 0.0247 | 6.0000e-004 | 2.0190   |

|       |  |          |        |        |          |
|-------|--|----------|--------|--------|----------|
| Total |  | 110.0964 | 2.2075 | 0.0534 | 181.1867 |
|-------|--|----------|--------|--------|----------|

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

#### Category/Year

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
|             | MT/yr     |        |        |          |
| Mitigated   | 97.8843   | 5.7848 | 0.0000 | 242.5041 |
| Unmitigated | 97.8843   | 5.7848 | 0.0000 | 242.5041 |

### 8.2 Waste by Land Use

#### Unmitigated

|                                | Waste Disposed | Total CO2 | CH4    | N2O    | CO2e     |
|--------------------------------|----------------|-----------|--------|--------|----------|
| Land Use                       | tons           | MT/yr     |        |        |          |
| Apartments Mid Rise            | 471.5          | 95.7102   | 5.6563 | 0.0000 | 237.1181 |
| Enclosed Parking with Elevator | 0              | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Parking Lot                    | 0              | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Strip Mall                     | 10.71          | 2.1740    | 0.1285 | 0.0000 | 5.3861   |

|       |  |         |        |        |          |
|-------|--|---------|--------|--------|----------|
| Total |  | 97.8843 | 5.7848 | 0.0000 | 242.5042 |
|-------|--|---------|--------|--------|----------|

Mitigated

|                                | Waste Disposed | Total CO2 | CH4    | N2O    | CO2e     |
|--------------------------------|----------------|-----------|--------|--------|----------|
| Land Use                       | tons           | MT/yr     |        |        |          |
| Apartments Mid Rise            | 471.5          | 95.7102   | 5.6563 | 0.0000 | 237.1181 |
| Enclosed Parking with Elevator | 0              | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Parking Lot                    | 0              | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Strip Mall                     | 10.71          | 2.1740    | 0.1285 | 0.0000 | 5.3861   |
| Total                          |                | 97.8843   | 5.7848 | 0.0000 | 242.5042 |

phase1+Phase2+Phase3+Phase4 operational emissions - Santa Clara County, Annual

**phase1+Phase2+Phase3+Phase4 operational emissions**  
**Santa Clara County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|----------|---------------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 2,775.00 | Space         | 0.00        | 1,182,709.00       | 0          |
| Parking Lot                    | 22.00    | Space         | 0.20        | 8,800.00           | 0          |
| Apartments Mid Rise            | 1,600.00 | Dwelling Unit | 21.20       | 1,754,209.00       | 4576       |
| Strip Mall                     | 10.20    | 1000sqft      | 0.00        | 10,200.00          | 0          |

### 1.2 Other Project Characteristics

|                                |                                |                                |       |                                  |       |
|--------------------------------|--------------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                          | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 58    |
| <b>Climate Zone</b>            | 4                              | <b>Operational Year</b>        | 2024  |                                  |       |
| <b>Utility Company</b>         | Pacific Gas & Electric Company |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 380                            | <b>CH4 Intensity (lb/MWhr)</b> | 0.029 | <b>N2O Intensity (lb/MWhr)</b>   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E used to represent SVP

Land Use - Summation of applicant provided number of unit gives 1585. Hence, conservative analysis

Construction Phase - only operational emissions modeled

Off-road Equipment - only operational emissions modeled

Vehicle Trips - trip rates provided by TIA

Woodstoves - No wood burning

Energy Use - Title 24, 2013 values

Energy Mitigation - title 24, 2016 values cam into effect on 1st January 2017

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

| Table Name                | Column Name             | Default Value | New Value    |
|---------------------------|-------------------------|---------------|--------------|
| tblConstructionPhase      | NumDays                 | 10.00         | 1.00         |
| tblFireplaces             | FireplaceWoodMass       | 228.80        | 0.00         |
| tblFireplaces             | NumberGas               | 240.00        | 2,775.00     |
| tblFireplaces             | NumberNoFireplace       | 64.00         | 0.00         |
| tblFireplaces             | NumberWood              | 272.00        | 0.00         |
| tblLandUse                | BuildingSpaceSquareFeet | 1,110,000.00  | 1,182,709.00 |
| tblLandUse                | BuildingSpaceSquareFeet | 1,600,000.00  | 1,754,209.00 |
| tblLandUse                | LandUseSquareFeet       | 1,110,000.00  | 1,182,709.00 |
| tblLandUse                | LandUseSquareFeet       | 1,600,000.00  | 1,754,209.00 |
| tblLandUse                | LotAcreage              | 24.97         | 0.00         |
| tblLandUse                | LotAcreage              | 42.11         | 21.20        |
| tblLandUse                | LotAcreage              | 0.23          | 0.00         |
| tblProjectCharacteristics | CO2IntensityFactor      | 641.35        | 380          |
| tblProjectCharacteristics | OperationalYear         | 2018          | 2024         |
| tblVehicleTrips           | ST_TR                   | 6.39          | 5.75         |
| tblVehicleTrips           | ST_TR                   | 42.04         | 30.42        |
| tblVehicleTrips           | SU_TR                   | 5.86          | 5.27         |
| tblVehicleTrips           | SU_TR                   | 20.43         | 14.71        |
| tblVehicleTrips           | WD_TR                   | 6.65          | 6.00         |
| tblVehicleTrips           | WD_TR                   | 44.32         | 32.07        |
| tblWoodstoves             | NumberCatalytic         | 32.00         | 0.00         |
| tblWoodstoves             | NumberNoncatalytic      | 32.00         | 0.00         |
| tblWoodstoves             | WoodstoveWoodMass       | 582.40        | 0.00         |

## 2.0 Emissions Summary

### 2.2 Overall Operational

#### Unmitigated Operational

|          | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4     | N2O         | CO2e        |
|----------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|---------|-------------|-------------|
| Category | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |             |             |         |             |             |
| Area     | 8.6274  | 0.4362 | 12.0282 | 2.5400e-003 |               | 0.0901       | 0.0901     |                | 0.0901        | 0.0901      | 0.0000   | 365.8853    | 365.8853    | 0.0254  | 6.3500e-003 | 368.4127    |
| Energy   | 0.0956  | 0.8173 | 0.3483  | 5.2200e-003 |               | 0.0661       | 0.0661     |                | 0.0661        | 0.0661      | 0.0000   | 3,557.4590  | 3,557.4590  | 0.2174  | 0.0586      | 3,580.3503  |
| Mobile   | 1.9253  | 7.4161 | 22.4523 | 0.0833      | 8.2232        | 0.0650       | 8.2883     | 2.2010         | 0.0605        | 2.2616      | 0.0000   | 7,638.4564  | 7,638.4564  | 0.2376  | 0.0000      | 7,644.3961  |
| Waste    |         |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 151.5754 | 0.0000      | 151.5754    | 8.9579  | 0.0000      | 375.5216    |
| Water    |         |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 33.3123  | 137.8591    | 171.1714    | 3.4320  | 0.0830      | 281.6954    |
| Total    | 10.6483 | 8.6695 | 34.8288 | 0.0911      | 8.2232        | 0.2212       | 8.4444     | 2.2010         | 0.2167        | 2.4177      | 184.8877 | 11,699.6597 | 11,884.5474 | 12.8702 | 0.1479      | 12,250.3762 |

#### Mitigated Operational

|          | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O         | CO2e       |
|----------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|-------------|------------|
| Category | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |            |            |        |             |            |
| Area     | 8.6274  | 0.4362 | 12.0282 | 2.5400e-003 |               | 0.0901       | 0.0901     |                | 0.0901        | 0.0901      | 0.0000   | 365.8853   | 365.8853   | 0.0254 | 6.3500e-003 | 368.4127   |
| Energy   | 0.0765  | 0.6536 | 0.2785  | 4.1700e-003 |               | 0.0528       | 0.0528     |                | 0.0528        | 0.0528      | 0.0000   | 3,112.4114 | 3,112.4114 | 0.1943 | 0.0511      | 3,132.4867 |
| Mobile   | 1.9253  | 7.4161 | 22.4523 | 0.0833      | 8.2232        | 0.0650       | 8.2883     | 2.2010         | 0.0605        | 2.2616      | 0.0000   | 7,638.4564 | 7,638.4564 | 0.2376 | 0.0000      | 7,644.3961 |

|              |                |               |                |               |               |               |               |               |               |               |                 |                    |                    |                |               |                    |
|--------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|--------------------|--------------------|----------------|---------------|--------------------|
| Waste        |                |               |                |               |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 151.5754        | 0.0000             | 151.5754           | 8.9579         | 0.0000        | 375.5216           |
| Water        |                |               |                |               |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 33.3123         | 137.8591           | 171.1714           | 3.4320         | 0.0830        | 281.6954           |
| <b>Total</b> | <b>10.6291</b> | <b>8.5058</b> | <b>34.7590</b> | <b>0.0900</b> | <b>8.2232</b> | <b>0.2080</b> | <b>8.4312</b> | <b>2.2010</b> | <b>0.2035</b> | <b>2.4045</b> | <b>184.8877</b> | <b>11,254.6121</b> | <b>11,439.4998</b> | <b>12.8471</b> | <b>0.1404</b> | <b>11,802.5125</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.18 | 1.89 | 0.20 | 1.15 | 0.00          | 5.98         | 0.16       | 0.00           | 6.11          | 0.55        | 0.00     | 3.80     | 3.74      | 0.18 | 5.08 | 3.66 |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx    | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|---------|--------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | tons/yr |        |         |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Mitigated   | 1.9253  | 7.4161 | 22.4523 | 0.0833 | 8.2232        | 0.0650       | 8.2883     | 2.2010         | 0.0605        | 2.2616      | 0.0000   | 7,638.4564 | 7,638.4564 | 0.2376 | 0.0000 | 7,644.3961 |
| Unmitigated | 1.9253  | 7.4161 | 22.4523 | 0.0833 | 8.2232        | 0.0650       | 8.2883     | 2.2010         | 0.0605        | 2.2616      | 0.0000   | 7,638.4564 | 7,638.4564 | 0.2376 | 0.0000 | 7,644.3961 |

### 4.2 Trip Summary Information

| Land Use                       | Average Daily Trip Rate |                 |                 | Unmitigated       | Mitigated         |
|--------------------------------|-------------------------|-----------------|-----------------|-------------------|-------------------|
|                                | Weekday                 | Saturday        | Sunday          | Annual VMT        | Annual VMT        |
| Apartments Mid Rise            | 9,600.00                | 9,200.00        | 8432.00         | 21,654,878        | 21,654,878        |
| Enclosed Parking with Elevator | 0.00                    | 0.00            | 0.00            |                   |                   |
| Parking Lot                    | 0.00                    | 0.00            | 0.00            |                   |                   |
| Strip Mall                     | 327.11                  | 310.28          | 150.04          | 461,107           | 461,107           |
| <b>Total</b>                   | <b>9,927.11</b>         | <b>9,510.28</b> | <b>8,582.04</b> | <b>22,115,985</b> | <b>22,115,985</b> |

4.3 Trip Type Information

|                                | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| Land Use                       | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise            | 10.80      | 4.80       | 5.70        | 31.00      | 15.00      | 54.00       | 86             | 11       | 3       |
| Enclosed Parking with Elevator | 9.50       | 7.30       | 7.30        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot                    | 9.50       | 7.30       | 7.30        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Strip Mall                     | 9.50       | 7.30       | 7.30        | 16.60      | 64.40      | 19.00       | 45             | 40       | 15      |

4.4 Fleet Mix

| Land Use                       | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|--------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Enclosed Parking with Elevator | 0.614951 | 0.035734 | 0.181842 | 0.104158 | 0.013506 | 0.005015 | 0.012793 | 0.021727 | 0.002177 | 0.001514 | 0.005249 | 0.000632 | 0.000704 |
| Parking Lot                    | 0.614951 | 0.035734 | 0.181842 | 0.104158 | 0.013506 | 0.005015 | 0.012793 | 0.021727 | 0.002177 | 0.001514 | 0.005249 | 0.000632 | 0.000704 |
| Apartments Mid Rise            | 0.614951 | 0.035734 | 0.181842 | 0.104158 | 0.013506 | 0.005015 | 0.012793 | 0.021727 | 0.002177 | 0.001514 | 0.005249 | 0.000632 | 0.000704 |
| Strip Mall                     | 0.614951 | 0.035734 | 0.181842 | 0.104158 | 0.013506 | 0.005015 | 0.012793 | 0.021727 | 0.002177 | 0.001514 | 0.005249 | 0.000632 | 0.000704 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

|                         | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category                | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Electricity Mitigated   |         |     |    |     |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 2,355.5799 | 2,355.5799 | 0.1798 | 0.0372 | 2,371.1577 |
| Electricity Unmitigated |         |     |    |     |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 2,611.0632 | 2,611.0632 | 0.1993 | 0.0412 | 2,628.3306 |

|                        |        |        |        |             |  |        |        |  |        |        |        |          |          |        |        |          |
|------------------------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|
| NaturalGas Mitigated   | 0.0765 | 0.6536 | 0.2785 | 4.1700e-003 |  | 0.0528 | 0.0528 |  | 0.0528 | 0.0528 | 0.0000 | 756.8315 | 756.8315 | 0.0145 | 0.0139 | 761.3290 |
| NaturalGas Unmitigated | 0.0956 | 0.8173 | 0.3483 | 5.2200e-003 |  | 0.0661 | 0.0661 |  | 0.0661 | 0.0661 | 0.0000 | 946.3958 | 946.3958 | 0.0181 | 0.0174 | 952.0198 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                                | NaturalGas Use | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|--------------------------------|----------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Land Use                       | kBTU/yr        | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |          |
| Apartments Mid Rise            | 1.77105e+007   | 0.0955      | 0.8161      | 0.3473      | 5.2100e-003 |               | 0.0660       | 0.0660      |                | 0.0660        | 0.0660      | 0.0000   | 945.1004  | 945.1004  | 0.0181      | 0.0173      | 950.7166 |
| Enclosed Parking with Elevator | 0              | 0.0000      | 0.0000      | 0.0000      | 0.0000      |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Parking Lot                    | 0              | 0.0000      | 0.0000      | 0.0000      | 0.0000      |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Strip Mall                     | 24276          | 1.3000e-004 | 1.1900e-003 | 1.0000e-003 | 1.0000e-005 |               | 9.0000e-005  | 9.0000e-005 |                | 9.0000e-005   | 9.0000e-005 | 0.0000   | 1.2955    | 1.2955    | 2.0000e-005 | 2.0000e-005 | 1.3032   |
| Total                          |                | 0.0956      | 0.8173      | 0.3483      | 5.2200e-003 |               | 0.0661       | 0.0661      |                | 0.0661        | 0.0661      | 0.0000   | 946.3958  | 946.3958  | 0.0181      | 0.0174      | 952.0198 |

### Mitigated

|                                | NaturalGas Use | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|--------------------------------|----------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Land Use                       | kBTU/yr        | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |          |
| Apartments Mid Rise            | 1.4165e+007    | 0.0764      | 0.6527      | 0.2778      | 4.1700e-003 |               | 0.0528       | 0.0528      |                | 0.0528        | 0.0528      | 0.0000   | 755.8988  | 755.8988  | 0.0145      | 0.0139      | 760.3907 |
| Enclosed Parking with Elevator | 0              | 0.0000      | 0.0000      | 0.0000      | 0.0000      |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Parking Lot                    | 0              | 0.0000      | 0.0000      | 0.0000      | 0.0000      |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Strip Mall                     | 17478.7        | 9.0000e-005 | 8.6000e-004 | 7.2000e-004 | 1.0000e-005 |               | 7.0000e-005  | 7.0000e-005 |                | 7.0000e-005   | 7.0000e-005 | 0.0000   | 0.9327    | 0.9327    | 2.0000e-005 | 2.0000e-005 | 0.9383   |

|       |  |        |        |        |             |  |        |        |  |        |        |        |          |          |        |        |          |
|-------|--|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|
| Total |  | 0.0765 | 0.6536 | 0.2785 | 4.1800e-003 |  | 0.0528 | 0.0528 |  | 0.0528 | 0.0528 | 0.0000 | 756.8315 | 756.8315 | 0.0145 | 0.0139 | 761.3290 |
|-------|--|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|

5.3 Energy by Land Use - Electricity

Unmitigated

|                                | Electricity Use | Total CO2  | CH4         | N2O         | CO2e       |
|--------------------------------|-----------------|------------|-------------|-------------|------------|
| Land Use                       | kWh/yr          | MT/yr      |             |             |            |
| Apartments Mid Rise            | 7.05755e+006    | 1,216.4757 | 0.0928      | 0.0192      | 1,224.5204 |
| Enclosed Parking with Elevator | 7.97146e+006    | 1,374.0013 | 0.1049      | 0.0217      | 1,383.0878 |
| Parking Lot                    | 7744            | 1.3348     | 1.0000e-004 | 2.0000e-005 | 1.3436     |
| Strip Mall                     | 111690          | 19.2515    | 1.4700e-003 | 3.0000e-004 | 19.3788    |
| Total                          |                 | 2,611.0632 | 0.1993      | 0.0412      | 2,628.3306 |

Mitigated

|                                | Electricity Use | Total CO2  | CH4         | N2O         | CO2e       |
|--------------------------------|-----------------|------------|-------------|-------------|------------|
| Land Use                       | kWh/yr          | MT/yr      |             |             |            |
| Apartments Mid Rise            | 6.88173e+006    | 1,186.1693 | 0.0905      | 0.0187      | 1,194.0136 |
| Enclosed Parking with Elevator | 6.67332e+006    | 1,150.2470 | 0.0878      | 0.0182      | 1,157.8538 |
| Parking Lot                    | 7744            | 1.3348     | 1.0000e-004 | 2.0000e-005 | 1.3436     |
| Strip Mall                     | 103436          | 17.8288    | 1.3600e-003 | 2.8000e-004 | 17.9467    |
| Total                          |                 | 2,355.5799 | 0.1798      | 0.0372      | 2,371.1577 |

6.0 Area Detail

6.1 Mitigation Measures Area

|             | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e     |
|-------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|----------|
| Category    | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |          |
| Mitigated   | 8.6274  | 0.4362 | 12.0282 | 2.5400e-003 |               | 0.0901       | 0.0901     |                | 0.0901        | 0.0901      | 0.0000   | 365.8853  | 365.8853  | 0.0254 | 6.3500e-003 | 368.4127 |
| Unmitigated | 8.6274  | 0.4362 | 12.0282 | 2.5400e-003 |               | 0.0901       | 0.0901     |                | 0.0901        | 0.0901      | 0.0000   | 365.8853  | 365.8853  | 0.0254 | 6.3500e-003 | 368.4127 |

6.2 Area by SubCategory

Unmitigated

|                       | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|-----------------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| SubCategory           | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Architectural Coating | 1.2650  |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Consumer Products     | 6.9679  |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Hearth                | 0.0350  | 0.2991 | 0.1273  | 1.9100e-003 |               | 0.0242       | 0.0242     |                | 0.0242        | 0.0242      | 0.0000   | 346.4290  | 346.4290  | 6.6400e-003 | 6.3500e-003 | 348.4877 |
| Landscaping           | 0.3594  | 0.1371 | 11.9009 | 6.3000e-004 |               | 0.0659       | 0.0659     |                | 0.0659        | 0.0659      | 0.0000   | 19.4562   | 19.4562   | 0.0188      | 0.0000      | 19.9250  |
| Total                 | 8.6274  | 0.4362 | 12.0282 | 2.5400e-003 |               | 0.0901       | 0.0901     |                | 0.0901        | 0.0901      | 0.0000   | 365.8853  | 365.8853  | 0.0254      | 6.3500e-003 | 368.4127 |

Mitigated

|                       | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|-----------------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| SubCategory           | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Architectural Coating | 1.2650  |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Consumer Products     | 6.9679  |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000   |
| Hearth                | 0.0350  | 0.2991 | 0.1273  | 1.9100e-003 |               | 0.0242       | 0.0242     |                | 0.0242        | 0.0242      | 0.0000   | 346.4290  | 346.4290  | 6.6400e-003 | 6.3500e-003 | 348.4877 |
| Landscaping           | 0.3594  | 0.1371 | 11.9009 | 6.3000e-004 |               | 0.0659       | 0.0659     |                | 0.0659        | 0.0659      | 0.0000   | 19.4562   | 19.4562   | 0.0188      | 0.0000      | 19.9250  |
| Total                 | 8.6274  | 0.4362 | 12.0282 | 2.5400e-003 |               | 0.0901       | 0.0901     |                | 0.0901        | 0.0901      | 0.0000   | 365.8853  | 365.8853  | 0.0254      | 6.3500e-003 | 368.4127 |

7.0 Water Detail

7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 171.1714  | 3.4320 | 0.0830 | 281.6954 |
| Unmitigated | 171.1714  | 3.4320 | 0.0830 | 281.6954 |

7.2 Water by Land Use

Unmitigated

|                                | Indoor/Outdoor Use | Total CO2 | CH4    | N2O         | CO2e     |
|--------------------------------|--------------------|-----------|--------|-------------|----------|
| Land Use                       | Mgal               | MT/yr     |        |             |          |
| Apartments Mid Rise            | 104.246 / 65.7206  | 169.9476  | 3.4073 | 0.0824      | 279.6764 |
| Enclosed Parking with Elevator | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Parking Lot                    | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Strip Mall                     | 0.75554 / 0.463073 | 1.2237    | 0.0247 | 6.0000e-004 | 2.0190   |
| Total                          |                    | 171.1714  | 3.4320 | 0.0830      | 281.6954 |

Mitigated

|                                | Indoor/Outdoor Use | Total CO2 | CH4    | N2O         | CO2e     |
|--------------------------------|--------------------|-----------|--------|-------------|----------|
| Land Use                       | Mgal               | MT/yr     |        |             |          |
| Apartments Mid Rise            | 104.246 / 65.7206  | 169.9476  | 3.4073 | 0.0824      | 279.6764 |
| Enclosed Parking with Elevator | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Parking Lot                    | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Strip Mall                     | 0.75554 / 0.463073 | 1.2237    | 0.0247 | 6.0000e-004 | 2.0190   |
| Total                          |                    | 171.1714  | 3.4320 | 0.0830      | 281.6954 |

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
|             | MT/yr     |        |        |          |
| Mitigated   | 151.5754  | 8.9579 | 0.0000 | 375.5216 |
| Unmitigated | 151.5754  | 8.9579 | 0.0000 | 375.5216 |

8.2 Waste by Land Use

Unmitigated

|                                | Waste Disposed | Total CO2 | CH4    | N2O    | CO2e     |
|--------------------------------|----------------|-----------|--------|--------|----------|
| Land Use                       | tons           | MT/yr     |        |        |          |
| Apartments Mid Rise            | 736            | 149.4014  | 8.8294 | 0.0000 | 370.1355 |
| Enclosed Parking with Elevator | 0              | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Parking Lot                    | 0              | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Strip Mall                     | 10.71          | 2.1740    | 0.1285 | 0.0000 | 5.3861   |
| Total                          |                | 151.5754  | 8.9579 | 0.0000 | 375.5216 |

Mitigated

|                                   | Waste<br>Disposed | Total CO2 | CH4    | N2O    | CO2e     |
|-----------------------------------|-------------------|-----------|--------|--------|----------|
| Land Use                          | tons              | MT/yr     |        |        |          |
| Apartments Mid<br>Rise            | 736               | 149.4014  | 8.8294 | 0.0000 | 370.1355 |
| Enclosed Parking<br>with Elevator | 0                 | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Parking Lot                       | 0                 | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Strip Mall                        | 10.71             | 2.1740    | 0.1285 | 0.0000 | 5.3861   |
| Total                             |                   | 151.5754  | 8.9579 | 0.0000 | 375.5216 |

## Coleman Browkaw Gateway Crossings Full Build Out - Santa Clara County, Annual

## Coleman Browkaw Gateway Crossings Full Build Out

### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                  | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|----------------------------|----------|---------------|-------------|--------------------|------------|
| Enclosed Parking Structure | 3,114.00 | Space         | 0.00        | 1,245,600.00       | 0          |
| Parking Lot                | 21.00    | Space         | 0.00        | 8,400.00           | 0          |
| Hotel                      | 250.00   | Room          | 0.00        | 363,000.00         | 0          |
| Apartments Mid Rise        | 1,600.00 | Dwelling Unit | 24.00       | 1,600,000.00       | 4576       |
| Strip Mall                 | 15.00    | 1000sqft      | 0.00        | 15,000.00          | 0          |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 58    |
| <b>Climate Zone</b>             | 4                              | <b>Operational Year</b>         | 2026  |                                  |       |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 380                            | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Using future SVP Rate

Land Use - Summed up number of parking spaces

Construction Phase - Operation Run Only

Off-road Equipment -

Grading -

Vehicle Trips - Apts = 6.00/5.75/5.27, Hotel = 7.93/7.95/5.77, Retail = 32.07/30.42/14.71

Woodstoves - No wood -> 512 nat gas

Off-road Equipment -

Energy Use - Titlw 24, 2013 values

Stationary Sources - Emergency Generators and Fire Pumps - operared for emergency purposes only

Energy Mitigation - title 24, 2016 values came into effect on January 1st, 2017

| Table Name                      | Column Name        | Default Value | New Value |
|---------------------------------|--------------------|---------------|-----------|
| tblConstructionPhase            | NumDays            | 10.00         | 1.00      |
| tblFireplaces                   | FireplaceWoodMass  | 228.80        | 0.00      |
| tblFireplaces                   | NumberGas          | 240.00        | 512.00    |
| tblFireplaces                   | NumberWood         | 272.00        | 0.00      |
| tblLandUse                      | LotAcreage         | 28.03         | 0.00      |
| tblLandUse                      | LotAcreage         | 0.19          | 0.00      |
| tblLandUse                      | LotAcreage         | 8.33          | 0.00      |
| tblLandUse                      | LotAcreage         | 42.11         | 24.00     |
| tblLandUse                      | LotAcreage         | 0.34          | 0.00      |
| tblProjectCharacteristics       | CO2IntensityFactor | 641.35        | 380       |
| tblProjectCharacteristics       | OperationalYear    | 2018          | 2026      |
| tblStationaryGeneratorsPumpsUse | HorsePowerValue    | 0.00          | 135.00    |
| tblStationaryGeneratorsPumpsUse | HoursPerYear       | 0.00          | 50.00     |
| tblStationaryGeneratorsPumpsUse | NumberOfEquipment  | 0.00          | 1.00      |
| tblVehicleTrips                 | ST_TR              | 6.39          | 5.75      |
| tblVehicleTrips                 | ST_TR              | 8.19          | 7.95      |
| tblVehicleTrips                 | ST_TR              | 42.04         | 30.42     |
| tblVehicleTrips                 | SU_TR              | 5.86          | 5.27      |
| tblVehicleTrips                 | SU_TR              | 5.95          | 5.77      |
| tblVehicleTrips                 | SU_TR              | 20.43         | 14.71     |
| tblVehicleTrips                 | WD_TR              | 6.65          | 6.00      |
| tblVehicleTrips                 | WD_TR              | 8.17          | 7.93      |
| tblVehicleTrips                 | WD_TR              | 44.32         | 32.07     |

|               |                   |        |      |
|---------------|-------------------|--------|------|
| tblWoodstoves | WoodstoveWoodMass | 582.40 | 0.00 |
|---------------|-------------------|--------|------|

## 2.0 Emissions Summary

### 2.2 Overall Operational Unmitigated Operational

|            | ROG         | NOx     | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|------------|-------------|---------|---------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-------------|-------------|-------------|-------------|-------------|
| Category   | tons/yr     |         |         |             |               |              |             |                |               |             | MT/yr    |             |             |             |             |             |
| Area       | 9.5214      | 0.1922  | 11.9236 | 9.8000e-004 |               | 0.0704       | 0.0704      |                | 0.0704        | 0.0704      | 0.0000   | 83.3845     | 83.3845     | 0.0200      | 1.1700e-003 | 84.2329     |
| Energy     | 0.1828      | 1.6098  | 1.0140  | 9.9700e-003 |               | 0.1263       | 0.1263      |                | 0.1263        | 0.1263      | 0.0000   | 4,948.3271  | 4,948.3271  | 0.2742      | 0.0827      | 4,979.8378  |
| Mobile     | 2.0762      | 8.2728  | 23.6092 | 0.0919      | 9.6498        | 0.0721       | 9.7219      | 2.5827         | 0.0671        | 2.6497      | 0.0000   | 8,442.1764  | 8,442.1764  | 0.2566      | 0.0000      | 8,448.5921  |
| Stationary | 5.5400e-003 | 0.0155  | 0.0201  | 3.0000e-005 |               | 8.1000e-004  | 8.1000e-004 |                | 8.1000e-004   | 8.1000e-004 | 0.0000   | 2.5704      | 2.5704      | 3.6000e-004 | 0.0000      | 2.5794      |
| Waste      |             |         |         |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 180.3839 | 0.0000      | 180.3839    | 10.6604     | 0.0000      | 446.8934    |
| Water      |             |         |         |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 35.4370  | 144.6619    | 180.0989    | 3.6508      | 0.0882      | 297.6593    |
| Total      | 11.7859     | 10.0904 | 36.5669 | 0.1029      | 9.6498        | 0.2697       | 9.9194      | 2.5827         | 0.2646        | 2.8473      | 215.8209 | 13,621.1203 | 13,836.9411 | 14.8623     | 0.1721      | 14,259.7948 |

### Mitigated Operational

|          | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e    |
|----------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|---------|
| Category | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |         |
| Area     | 9.5214  | 0.1922 | 11.9236 | 9.8000e-004 |               | 0.0704       | 0.0704     |                | 0.0704        | 0.0704      | 0.0000   | 83.3845   | 83.3845   | 0.0200 | 1.1700e-003 | 84.2329 |

|            |             |        |         |             |        |             |             |        |             |             |          |             |             |             |        |             |
|------------|-------------|--------|---------|-------------|--------|-------------|-------------|--------|-------------|-------------|----------|-------------|-------------|-------------|--------|-------------|
| Energy     | 0.1419      | 1.2479 | 0.7777  | 7.7400e-003 |        | 0.0980      | 0.0980      |        | 0.0980      | 0.0980      | 0.0000   | 4,237.2206  | 4,237.2206  | 0.2431      | 0.0705 | 4,264.3006  |
| Mobile     | 2.0762      | 8.2728 | 23.6092 | 0.0919      | 9.6498 | 0.0721      | 9.7219      | 2.5827 | 0.0671      | 2.6497      | 0.0000   | 8,442.1764  | 8,442.1764  | 0.2566      | 0.0000 | 8,448.5921  |
| Stationary | 5.5400e-003 | 0.0155 | 0.0201  | 3.0000e-005 |        | 8.1000e-004 | 8.1000e-004 |        | 8.1000e-004 | 8.1000e-004 | 0.0000   | 2.5704      | 2.5704      | 3.6000e-004 | 0.0000 | 2.5794      |
| Waste      |             |        |         |             |        | 0.0000      | 0.0000      |        | 0.0000      | 0.0000      | 180.3839 | 0.0000      | 180.3839    | 10.6604     | 0.0000 | 446.8934    |
| Water      |             |        |         |             |        | 0.0000      | 0.0000      |        | 0.0000      | 0.0000      | 35.4370  | 144.6619    | 180.0989    | 3.6508      | 0.0882 | 297.6593    |
| Total      | 11.7450     | 9.7284 | 36.3306 | 0.1007      | 9.6498 | 0.2414      | 9.8911      | 2.5827 | 0.2363      | 2.8190      | 215.8209 | 12,910.0138 | 13,125.8347 | 14.8312     | 0.1599 | 13,544.2576 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.35 | 3.59 | 0.65 | 2.17 | 0.00          | 10.49        | 0.29       | 0.00           | 10.69         | 0.99        | 0.00     | 5.22     | 5.14      | 0.21 | 7.12 | 5.02 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

|             | ROG     | NOx    | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|---------|--------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | tons/yr |        |         |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Mitigated   | 2.0762  | 8.2728 | 23.6092 | 0.0919 | 9.6498        | 0.0721       | 9.7219     | 2.5827         | 0.0671        | 2.6497      | 0.0000   | 8,442.1764 | 8,442.1764 | 0.2566 | 0.0000 | 8,448.5921 |
| Unmitigated | 2.0762  | 8.2728 | 23.6092 | 0.0919 | 9.6498        | 0.0721       | 9.7219     | 2.5827         | 0.0671        | 2.6497      | 0.0000   | 8,442.1764 | 8,442.1764 | 0.2566 | 0.0000 | 8,448.5921 |

4.2 Trip Summary Information

|          | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------|-------------------------|----------|--------|-------------|------------|
| Land Use | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |

|                            |           |           |           |            |            |
|----------------------------|-----------|-----------|-----------|------------|------------|
| Apartments Mid Rise        | 9,600.00  | 9,200.00  | 8432.00   | 21,654,878 | 21,654,878 |
| Enclosed Parking Structure | 0.00      | 0.00      | 0.00      |            |            |
| Hotel                      | 1,982.50  | 1,987.50  | 1442.50   | 3,621,404  | 3,621,404  |
| Parking Lot                | 0.00      | 0.00      | 0.00      |            |            |
| Strip Mall                 | 481.05    | 456.30    | 220.65    | 678,099    | 678,099    |
| Total                      | 12,063.55 | 11,643.80 | 10,095.15 | 25,954,380 | 25,954,380 |

4.3 Trip Type Information

|                            | Miles      |            |             | Trip %    |            |             | Trip Purpose % |          |         |
|----------------------------|------------|------------|-------------|-----------|------------|-------------|----------------|----------|---------|
| Land Use                   | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise        | 10.80      | 4.80       | 5.70        | 31.00     | 15.00      | 54.00       | 86             | 11       | 3       |
| Enclosed Parking Structure | 9.50       | 7.30       | 7.30        | 0.00      | 0.00       | 0.00        | 0              | 0        | 0       |
| Hotel                      | 9.50       | 7.30       | 7.30        | 19.40     | 61.60      | 19.00       | 58             | 38       | 4       |
| Parking Lot                | 9.50       | 7.30       | 7.30        | 0.00      | 0.00       | 0.00        | 0              | 0        | 0       |
| Strip Mall                 | 9.50       | 7.30       | 7.30        | 16.60     | 64.40      | 19.00       | 45             | 40       | 15      |

4.4 Fleet Mix

| Land Use                   | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Enclosed Parking Structure | 0.618126 | 0.034987 | 0.181060 | 0.102744 | 0.012808 | 0.005030 | 0.012887 | 0.022139 | 0.002195 | 0.001502 | 0.005204 | 0.000638 | 0.000681 |
| Parking Lot                | 0.618126 | 0.034987 | 0.181060 | 0.102744 | 0.012808 | 0.005030 | 0.012887 | 0.022139 | 0.002195 | 0.001502 | 0.005204 | 0.000638 | 0.000681 |
| Hotel                      | 0.618126 | 0.034987 | 0.181060 | 0.102744 | 0.012808 | 0.005030 | 0.012887 | 0.022139 | 0.002195 | 0.001502 | 0.005204 | 0.000638 | 0.000681 |
| Apartments Mid Rise        | 0.618126 | 0.034987 | 0.181060 | 0.102744 | 0.012808 | 0.005030 | 0.012887 | 0.022139 | 0.002195 | 0.001502 | 0.005204 | 0.000638 | 0.000681 |
| Strip Mall                 | 0.618126 | 0.034987 | 0.181060 | 0.102744 | 0.012808 | 0.005030 | 0.012887 | 0.022139 | 0.002195 | 0.001502 | 0.005204 | 0.000638 | 0.000681 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

|                         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category                | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Electricity Mitigated   |         |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 2,833.3984 | 2,833.3984 | 0.2162 | 0.0447 | 2,852.1361 |
| Electricity Unmitigated |         |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 3,139.1156 | 3,139.1156 | 0.2396 | 0.0496 | 3,159.8751 |
| NaturalGas Mitigated    | 0.1419  | 1.2479 | 0.7777 | 7.7400e-003 |               | 0.0980       | 0.0980     |                | 0.0980        | 0.0980      | 0.0000   | 1,403.8223 | 1,403.8223 | 0.0269 | 0.0257 | 1,412.1645 |
| NaturalGas Unmitigated  | 0.1828  | 1.6098 | 1.0140 | 9.9700e-003 |               | 0.1263       | 0.1263     |                | 0.1263        | 0.1263      | 0.0000   | 1,809.2114 | 1,809.2114 | 0.0347 | 0.0332 | 1,819.9627 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                            | NaturalGas Use | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4         | N2O         | CO2e       |
|----------------------------|----------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|------------|------------|-------------|-------------|------------|
| Land Use                   | kBTU/yr        | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |            |            |             |             |            |
| Apartments Mid Rise        | 1.77105e+007   | 0.0955      | 0.8161      | 0.3473      | 5.2100e-003 |               | 0.0660       | 0.0660      |                | 0.0660        | 0.0660      | 0.0000   | 945.1004   | 945.1004   | 0.0181      | 0.0173      | 950.7166   |
| Enclosed Parking Structure | 0              | 0.0000      | 0.0000      | 0.0000      | 0.0000      |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000     | 0.0000     | 0.0000      | 0.0000      | 0.0000     |
| Hotel                      | 1.61571e+007   | 0.0871      | 0.7920      | 0.6653      | 4.7500e-003 |               | 0.0602       | 0.0602      |                | 0.0602        | 0.0602      | 0.0000   | 862.2060   | 862.2060   | 0.0165      | 0.0158      | 867.3297   |
| Parking Lot                | 0              | 0.0000      | 0.0000      | 0.0000      | 0.0000      |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000     | 0.0000     | 0.0000      | 0.0000      | 0.0000     |
| Strip Mall                 | 35700          | 1.9000e-004 | 1.7500e-003 | 1.4700e-003 | 1.0000e-005 |               | 1.3000e-004  | 1.3000e-004 |                | 1.3000e-004   | 1.3000e-004 | 0.0000   | 1.9051     | 1.9051     | 4.0000e-005 | 3.0000e-005 | 1.9164     |
| Total                      |                | 0.1828      | 1.6098      | 1.0140      | 9.9700e-003 |               | 0.1263       | 0.1263      |                | 0.1263        | 0.1263      | 0.0000   | 1,809.2115 | 1,809.2115 | 0.0347      | 0.0332      | 1,819.9627 |

### Mitigated

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

| Land Use                   | kBTU/yr      | tons/yr     |             |             |             |  |             |             |  |             |             | MT/yr  |            |            |             |             |            |
|----------------------------|--------------|-------------|-------------|-------------|-------------|--|-------------|-------------|--|-------------|-------------|--------|------------|------------|-------------|-------------|------------|
| Apartments Mid Rise        | 1.4165e+007  | 0.0764      | 0.6527      | 0.2778      | 4.1700e-003 |  | 0.0528      | 0.0528      |  | 0.0528      | 0.0528      | 0.0000 | 755.8988   | 755.8988   | 0.0145      | 0.0139      | 760.3907   |
| Enclosed Parking Structure | 0            | 0.0000      | 0.0000      | 0.0000      | 0.0000      |  | 0.0000      | 0.0000      |  | 0.0000      | 0.0000      | 0.0000 | 0.0000     | 0.0000     | 0.0000      | 0.0000      | 0.0000     |
| Hotel                      | 1.21159e+007 | 0.0653      | 0.5939      | 0.4989      | 3.5600e-003 |  | 0.0451      | 0.0451      |  | 0.0451      | 0.0451      | 0.0000 | 646.5518   | 646.5518   | 0.0124      | 0.0119      | 650.3940   |
| Parking Lot                | 0            | 0.0000      | 0.0000      | 0.0000      | 0.0000      |  | 0.0000      | 0.0000      |  | 0.0000      | 0.0000      | 0.0000 | 0.0000     | 0.0000     | 0.0000      | 0.0000      | 0.0000     |
| Strip Mall                 | 25704        | 1.4000e-004 | 1.2600e-003 | 1.0600e-003 | 1.0000e-005 |  | 1.0000e-004 | 1.0000e-004 |  | 1.0000e-004 | 1.0000e-004 | 0.0000 | 1.3717     | 1.3717     | 3.0000e-005 | 3.0000e-005 | 1.3798     |
| Total                      |              | 0.1419      | 1.2479      | 0.7777      | 7.7400e-003 |  | 0.0980      | 0.0980      |  | 0.0980      | 0.0980      | 0.0000 | 1,403.8223 | 1,403.8223 | 0.0269      | 0.0257      | 1,412.1645 |

### 5.3 Energy by Land Use - Electricity

Unmitigated

|                            | Electricity Use | Total CO2  | CH4         | N2O         | CO2e       |
|----------------------------|-----------------|------------|-------------|-------------|------------|
| Land Use                   | kWh/yr          | MT/yr      |             |             |            |
| Apartments Mid Rise        | 7.05755e+006    | 1,216.4757 | 0.0928      | 0.0192      | 1,224.5204 |
| Enclosed Parking Structure | 8.15868e+006    | 1,406.2717 | 0.1073      | 0.0222      | 1,415.5716 |
| Hotel                      | 2.82414e+006    | 486.7832   | 0.0372      | 7.6900e-003 | 490.0024   |
| Parking Lot                | 7392            | 1.2741     | 1.0000e-004 | 2.0000e-005 | 1.2826     |
| Strip Mall                 | 164250          | 28.3110    | 2.1600e-003 | 4.5000e-004 | 28.4982    |
| Total                      |                 | 3,139.1156 | 0.2396      | 0.0496      | 3,159.8751 |

Mitigated

|                            | Electricity Use | Total CO2  | CH4         | N2O         | CO2e       |
|----------------------------|-----------------|------------|-------------|-------------|------------|
| Land Use                   | kWh/yr          | MT/yr      |             |             |            |
| Apartments Mid Rise        | 6.88173e+006    | 1,186.1693 | 0.0905      | 0.0187      | 1,194.0136 |
| Enclosed Parking Structure | 6.79151e+006    | 1,170.6192 | 0.0893      | 0.0185      | 1,178.3607 |
| Hotel                      | 2.60561e+006    | 449.1169   | 0.0343      | 7.0900e-003 | 452.0870   |
| Parking Lot                | 7392            | 1.2741     | 1.0000e-004 | 2.0000e-005 | 1.2826     |
| Strip Mall                 | 152112          | 26.2188    | 2.0000e-003 | 4.1000e-004 | 26.3922    |
| Total                      |                 | 2,833.3984 | 0.2162      | 0.0447      | 2,852.1361 |

6.0 Area Detail

6.1 Mitigation Measures Area

|             | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e    |
|-------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|---------|
| Category    | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |         |
| Mitigated   | 9.5214  | 0.1922 | 11.9236 | 9.8000e-004 |               | 0.0704       | 0.0704     |                | 0.0704        | 0.0704      | 0.0000   | 83.3845   | 83.3845   | 0.0200 | 1.1700e-003 | 84.2329 |
| Unmitigated | 9.5214  | 0.1922 | 11.9236 | 9.8000e-004 |               | 0.0704       | 0.0704     |                | 0.0704        | 0.0704      | 0.0000   | 83.3845   | 83.3845   | 0.0200 | 1.1700e-003 | 84.2329 |

6.2 Area by SubCategory

Unmitigated

|                       | ROG         | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-----------------------|-------------|--------|---------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| SubCategory           | tons/yr     |        |         |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |         |
| Architectural Coating | 1.3496      |        |         |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Consumer Products     | 7.8061      |        |         |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Hearth                | 6.4600e-003 | 0.0552 | 0.0235  | 3.5000e-004 |               | 4.4600e-003  | 4.4600e-003 |                | 4.4600e-003   | 4.4600e-003 | 0.0000   | 63.9177   | 63.9177   | 1.2300e-003 | 1.1700e-003 | 64.2976 |
| Landscaping           | 0.3592      | 0.1370 | 11.9001 | 6.3000e-004 |               | 0.0660       | 0.0660      |                | 0.0660        | 0.0660      | 0.0000   | 19.4668   | 19.4668   | 0.0187      | 0.0000      | 19.9354 |
| Total                 | 9.5214      | 0.1922 | 11.9236 | 9.8000e-004 |               | 0.0704       | 0.0704      |                | 0.0704        | 0.0704      | 0.0000   | 83.3845   | 83.3845   | 0.0200      | 1.1700e-003 | 84.2329 |

Mitigated

|                       | ROG         | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-----------------------|-------------|--------|---------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| SubCategory           | tons/yr     |        |         |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |         |
| Architectural Coating | 1.3496      |        |         |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Consumer Products     | 7.8061      |        |         |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000      | 0.0000  |
| Hearth                | 6.4600e-003 | 0.0552 | 0.0235  | 3.5000e-004 |               | 4.4600e-003  | 4.4600e-003 |                | 4.4600e-003   | 4.4600e-003 | 0.0000   | 63.9177   | 63.9177   | 1.2300e-003 | 1.1700e-003 | 64.2976 |
| Landscaping           | 0.3592      | 0.1370 | 11.9001 | 6.3000e-004 |               | 0.0660       | 0.0660      |                | 0.0660        | 0.0660      | 0.0000   | 19.4668   | 19.4668   | 0.0187      | 0.0000      | 19.9354 |
| Total                 | 9.5214      | 0.1922 | 11.9236 | 9.8000e-004 |               | 0.0704       | 0.0704      |                | 0.0704        | 0.0704      | 0.0000   | 83.3845   | 83.3845   | 0.0200      | 1.1700e-003 | 84.2329 |

7.0 Water Detail

7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 180.0989  | 3.6508 | 0.0882 | 297.6593 |
| Unmitigated | 180.0989  | 3.6508 | 0.0882 | 297.6593 |

7.2 Water by Land Use

Unmitigated

|                            | Indoor/Outdoor Use | Total CO2 | CH4    | N2O         | CO2e     |
|----------------------------|--------------------|-----------|--------|-------------|----------|
| Land Use                   | Mgal               | MT/yr     |        |             |          |
| Apartments Mid Rise        | 104.246 / 65.7206  | 169.9476  | 3.4073 | 0.0824      | 279.6764 |
| Enclosed Parking Structure | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Hotel                      | 6.34169 / 0.704632 | 8.3517    | 0.2071 | 4.9800e-003 | 15.0138  |
| Parking Lot                | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Strip Mall                 | 1.11109 / 0.680989 | 1.7996    | 0.0363 | 8.8000e-004 | 2.9690   |
| Total                      |                    | 180.0989  | 3.6508 | 0.0882      | 297.6593 |

Mitigated

|                            | Indoor/Outdoor Use | Total CO2 | CH4    | N2O         | CO2e     |
|----------------------------|--------------------|-----------|--------|-------------|----------|
| Land Use                   | Mgal               | MT/yr     |        |             |          |
| Apartments Mid Rise        | 104.246 / 65.7206  | 169.9476  | 3.4073 | 0.0824      | 279.6764 |
| Enclosed Parking Structure | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Hotel                      | 6.34169 / 0.704632 | 8.3517    | 0.2071 | 4.9800e-003 | 15.0138  |
| Parking Lot                | 0 / 0              | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Strip Mall                 | 1.11109 / 0.680989 | 1.7996    | 0.0363 | 8.8000e-004 | 2.9690   |
| Total                      |                    | 180.0989  | 3.6508 | 0.0882      | 297.6593 |

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

|             | Total CO2 | CH4     | N2O    | CO2e     |
|-------------|-----------|---------|--------|----------|
|             | MT/yr     |         |        |          |
| Mitigated   | 180.3839  | 10.6604 | 0.0000 | 446.8934 |
| Unmitigated | 180.3839  | 10.6604 | 0.0000 | 446.8934 |

8.2 Waste by Land Use

Unmitigated

|                            | Waste Disposed | Total CO2 | CH4     | N2O    | CO2e     |
|----------------------------|----------------|-----------|---------|--------|----------|
| Land Use                   | tons           | MT/yr     |         |        |          |
| Apartments Mid Rise        | 736            | 149.4014  | 8.8294  | 0.0000 | 370.1355 |
| Enclosed Parking Structure | 0              | 0.0000    | 0.0000  | 0.0000 | 0.0000   |
| Hotel                      | 136.88         | 27.7854   | 1.6421  | 0.0000 | 68.8372  |
| Parking Lot                | 0              | 0.0000    | 0.0000  | 0.0000 | 0.0000   |
| Strip Mall                 | 15.75          | 3.1971    | 0.1889  | 0.0000 | 7.9207   |
| Total                      |                | 180.3839  | 10.6604 | 0.0000 | 446.8934 |

Mitigated

|                            | Waste Disposed | Total CO2 | CH4     | N2O    | CO2e     |
|----------------------------|----------------|-----------|---------|--------|----------|
| Land Use                   | tons           | MT/yr     |         |        |          |
| Apartments Mid Rise        | 736            | 149.4014  | 8.8294  | 0.0000 | 370.1355 |
| Enclosed Parking Structure | 0              | 0.0000    | 0.0000  | 0.0000 | 0.0000   |
| Hotel                      | 136.88         | 27.7854   | 1.6421  | 0.0000 | 68.8372  |
| Parking Lot                | 0              | 0.0000    | 0.0000  | 0.0000 | 0.0000   |
| Strip Mall                 | 15.75          | 3.1971    | 0.1889  | 0.0000 | 7.9207   |
| Total                      |                | 180.3839  | 10.6604 | 0.0000 | 446.8934 |

## Gateway Crossings - Existing Use - Santa Clara County, Annual

## Gateway Crossings - Existing Use

### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses              | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|------------------------|--------|----------|-------------|--------------------|------------|
| Research & Development | 272.84 | 1000sqft | 24.00       | 272,840.00         | 0          |

### 1.2 Other Project Characteristics

|                             |                                |                             |       |                             |       |
|-----------------------------|--------------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Urban                          | Wind Speed (m/s)            | 2.2   | Precipitation Freq (Days)   | 58    |
| Climate Zone                | 4                              |                             |       | Operational Year            | 2026  |
| Utility Company             | Pacific Gas & Electric Company |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 380                            | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Use SVP

Land Use - Existing site

Construction Phase - Operational only

Off-road Equipment -

Vehicle Trips -

| Table Name           | Column Name  | Default Value | New Value |
|----------------------|--------------|---------------|-----------|
| tblConstructionPhase | NumDays      | 10.00         | 1.00      |
| tblConstructionPhase | PhaseEndDate | 5/11/2017     | 5/12/2017 |

|                           |                    |        |       |
|---------------------------|--------------------|--------|-------|
| tblLandUse                | LotAcreage         | 6.26   | 24.00 |
| tblProjectCharacteristics | CO2IntensityFactor | 641.35 | 380   |
| tblProjectCharacteristics | OperationalYear    | 2018   | 2026  |

## 2.0 Emissions Summary

### 2.2 Overall Operational Unmitigated Operational

|          | ROG     | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4         | N2O    | CO2e        |
|----------|---------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-------------|-------------|-------------|--------|-------------|
| Category | tons/yr |             |             |             |               |              |             |                |               |             | MT/yr    |             |             |             |        |             |
| Area     | 1.2081  | 2.0000e-005 | 2.5000e-003 | 0.0000      |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 | 0.0000   | 4.8800e-003 | 4.8800e-003 | 1.0000e-005 | 0.0000 | 5.1900e-003 |
| Energy   | 0.0390  | 0.3542      | 0.2975      | 2.1200e-003 |               | 0.0269       | 0.0269      |                | 0.0269        | 0.0269      | 0.0000   | 781.5196    | 781.5196    | 0.0376      | 0.0133 | 786.4293    |
| Mobile   | 0.3140  | 1.2695      | 3.7545      | 0.0149      | 1.5821        | 0.0116       | 1.5937      | 0.4234         | 0.0108        | 0.4342      | 0.0000   | 1,371.6712  | 1,371.6712  | 0.0409      | 0.0000 | 1,372.6923  |
| Waste    |         |             |             |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 4.2080   | 0.0000      | 4.2080      | 0.2487      | 0.0000 | 10.4252     |
| Water    |         |             |             |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 42.5608  | 125.1209    | 167.6817    | 4.3810      | 0.1052 | 308.5532    |
| Total    | 1.5611  | 1.6236      | 4.0545      | 0.0171      | 1.5821        | 0.0386       | 1.6206      | 0.4234         | 0.0377        | 0.4612      | 46.7688  | 2,278.3165  | 2,325.0853  | 4.7081      | 0.1185 | 2,478.1052  |

### Mitigated Operational

|          | ROG     | NOx         | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4         | N2O    | CO2e        |
|----------|---------|-------------|-------------|--------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-------------|-------------|-------------|--------|-------------|
| Category | tons/yr |             |             |        |               |              |             |                |               |             | MT/yr    |             |             |             |        |             |
| Area     | 1.2081  | 2.0000e-005 | 2.5000e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 | 0.0000   | 4.8800e-003 | 4.8800e-003 | 1.0000e-005 | 0.0000 | 5.1900e-003 |

|        |        |        |        |             |        |        |        |        |        |        |         |            |            |        |        |            |
|--------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|--------|---------|------------|------------|--------|--------|------------|
| Energy | 0.0390 | 0.3542 | 0.2975 | 2.1200e-003 |        | 0.0269 | 0.0269 |        | 0.0269 | 0.0269 | 0.0000  | 781.5196   | 781.5196   | 0.0376 | 0.0133 | 786.4293   |
| Mobile | 0.3140 | 1.2695 | 3.7545 | 0.0149      | 1.5821 | 0.0116 | 1.5937 | 0.4234 | 0.0108 | 0.4342 | 0.0000  | 1,371.6712 | 1,371.6712 | 0.0409 | 0.0000 | 1,372.6923 |
| Waste  |        |        |        |             |        | 0.0000 | 0.0000 |        | 0.0000 | 0.0000 | 4.2080  | 0.0000     | 4.2080     | 0.2487 | 0.0000 | 10.4252    |
| Water  |        |        |        |             |        | 0.0000 | 0.0000 |        | 0.0000 | 0.0000 | 42.5608 | 125.1209   | 167.6817   | 4.3810 | 0.1052 | 308.5532   |
| Total  | 1.5611 | 1.6236 | 4.0545 | 0.0171      | 1.5821 | 0.0386 | 1.6206 | 0.4234 | 0.0377 | 0.4612 | 46.7688 | 2,278.3165 | 2,325.0853 | 4.7081 | 0.1185 | 2,478.1052 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

#### 4.0 Operational Detail - Mobile

##### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Mitigated   | 0.3140  | 1.2695 | 3.7545 | 0.0149 | 1.5821        | 0.0116       | 1.5937     | 0.4234         | 0.0108        | 0.4342      | 0.0000   | 1,371.6712 | 1,371.6712 | 0.0409 | 0.0000 | 1,372.6923 |
| Unmitigated | 0.3140  | 1.2695 | 3.7545 | 0.0149 | 1.5821        | 0.0116       | 1.5937     | 0.4234         | 0.0108        | 0.4342      | 0.0000   | 1,371.6712 | 1,371.6712 | 0.0409 | 0.0000 | 1,372.6923 |

##### 4.2 Trip Summary Information

|          | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------|-------------------------|----------|--------|-------------|------------|
| Land Use | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |

|                        |          |        |        |           |           |
|------------------------|----------|--------|--------|-----------|-----------|
| Research & Development | 2,212.73 | 518.40 | 302.85 | 4,255,218 | 4,255,218 |
| Total                  | 2,212.73 | 518.40 | 302.85 | 4,255,218 | 4,255,218 |

4.3 Trip Type Information

|                        | Miles      |            |             | Trip %    |            |             | Trip Purpose % |          |         |
|------------------------|------------|------------|-------------|-----------|------------|-------------|----------------|----------|---------|
| Land Use               | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Research & Development | 9.50       | 7.30       | 7.30        | 33.00     | 48.00      | 19.00       | 82             | 15       | 3       |

4.4 Fleet Mix

| Land Use               | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Research & Development | 0.618126 | 0.034987 | 0.181060 | 0.102744 | 0.012808 | 0.005030 | 0.012887 | 0.022139 | 0.002195 | 0.001502 | 0.005204 | 0.000638 | 0.000681 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

|                         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|-------------------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Category                | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Electricity Mitigated   |         |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 395.9766  | 395.9766  | 0.0302      | 6.2500e-003 | 398.5952 |
| Electricity Unmitigated |         |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 395.9766  | 395.9766  | 0.0302      | 6.2500e-003 | 398.5952 |
| NaturalGas Mitigated    | 0.0390  | 0.3542 | 0.2975 | 2.1200e-003 |               | 0.0269       | 0.0269     |                | 0.0269        | 0.0269      | 0.0000   | 385.5430  | 385.5430  | 7.3900e-003 | 7.0700e-003 | 387.8341 |
| NaturalGas Unmitigated  | 0.0390  | 0.3542 | 0.2975 | 2.1200e-003 |               | 0.0269       | 0.0269     |                | 0.0269        | 0.0269      | 0.0000   | 385.5430  | 385.5430  | 7.3900e-003 | 7.0700e-003 | 387.8341 |

5.2 Energy by Land Use - NaturalGas

Unmitigated

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use               | kBTU/yr        | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |                    |                    |                 |
| Research & Development | 7.2248e+006    | 0.0390        | 0.3542        | 0.2975        | 2.1200e-003        |               | 0.0269        | 0.0269        |                | 0.0269        | 0.0269        | 0.0000        | 385.5430        | 385.5430        | 7.3900e-003        | 7.0700e-003        | 387.8341        |
| <b>Total</b>           |                | <b>0.0390</b> | <b>0.3542</b> | <b>0.2975</b> | <b>2.1200e-003</b> |               | <b>0.0269</b> | <b>0.0269</b> |                | <b>0.0269</b> | <b>0.0269</b> | <b>0.0000</b> | <b>385.5430</b> | <b>385.5430</b> | <b>7.3900e-003</b> | <b>7.0700e-003</b> | <b>387.8341</b> |

Mitigated

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use               | kBTU/yr        | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |                    |                    |                 |
| Research & Development | 7.2248e+006    | 0.0390        | 0.3542        | 0.2975        | 2.1200e-003        |               | 0.0269        | 0.0269        |                | 0.0269        | 0.0269        | 0.0000        | 385.5430        | 385.5430        | 7.3900e-003        | 7.0700e-003        | 387.8341        |
| <b>Total</b>           |                | <b>0.0390</b> | <b>0.3542</b> | <b>0.2975</b> | <b>2.1200e-003</b> |               | <b>0.0269</b> | <b>0.0269</b> |                | <b>0.0269</b> | <b>0.0269</b> | <b>0.0000</b> | <b>385.5430</b> | <b>385.5430</b> | <b>7.3900e-003</b> | <b>7.0700e-003</b> | <b>387.8341</b> |

5.3 Energy by Land Use - Electricity

Unmitigated

|                        | Electricity Use | Total CO2 | CH4    | N2O         | CO2e     |
|------------------------|-----------------|-----------|--------|-------------|----------|
| Land Use               | kWh/yr          | MT/yr     |        |             |          |
| Research & Development | 2.29731e+006    | 395.9766  | 0.0302 | 6.2500e-003 | 398.5952 |

|       |  |          |        |             |          |
|-------|--|----------|--------|-------------|----------|
| Total |  | 395.9766 | 0.0302 | 6.2500e-003 | 398.5952 |
|-------|--|----------|--------|-------------|----------|

Mitigated

|                        |                 |           |        |             |          |
|------------------------|-----------------|-----------|--------|-------------|----------|
|                        | Electricity Use | Total CO2 | CH4    | N2O         | CO2e     |
| Land Use               | kWh/yr          | MT/yr     |        |             |          |
| Research & Development | 2.29731e+006    | 395.9766  | 0.0302 | 6.2500e-003 | 398.5952 |
| Total                  |                 | 395.9766  | 0.0302 | 6.2500e-003 | 398.5952 |

6.0 Area Detail

6.1 Mitigation Measures Area

|             | ROG     | NOx         | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4         | N2O    | CO2e        |
|-------------|---------|-------------|-------------|--------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-------------|-------------|-------------|--------|-------------|
| Category    | tons/yr |             |             |        |               |              |             |                |               |             | MT/yr    |             |             |             |        |             |
| Mitigated   | 1.2081  | 2.0000e-005 | 2.5000e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 | 0.0000   | 4.8800e-003 | 4.8800e-003 | 1.0000e-005 | 0.0000 | 5.1900e-003 |
| Unmitigated | 1.2081  | 2.0000e-005 | 2.5000e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 | 0.0000   | 4.8800e-003 | 4.8800e-003 | 1.0000e-005 | 0.0000 | 5.1900e-003 |

6.2 Area by SubCategory

Unmitigated

|                       | ROG         | NOx         | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4         | N2O    | CO2e        |
|-----------------------|-------------|-------------|-------------|--------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-------------|-------------|-------------|--------|-------------|
| SubCategory           | tons/yr     |             |             |        |               |              |             |                |               |             | MT/yr    |             |             |             |        |             |
| Architectural Coating | 0.1423      |             |             |        |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000      |
| Consumer Products     | 1.0656      |             |             |        |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000      |
| Landscaping           | 2.3000e-004 | 2.0000e-005 | 2.5000e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 | 0.0000   | 4.8800e-003 | 4.8800e-003 | 1.0000e-005 | 0.0000 | 5.1900e-003 |
| Total                 | 1.2081      | 2.0000e-005 | 2.5000e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 | 0.0000   | 4.8800e-003 | 4.8800e-003 | 1.0000e-005 | 0.0000 | 5.1900e-003 |

Mitigated

|                       | ROG         | NOx         | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4         | N2O    | CO2e        |
|-----------------------|-------------|-------------|-------------|--------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-------------|-------------|-------------|--------|-------------|
| SubCategory           | tons/yr     |             |             |        |               |              |             |                |               |             | MT/yr    |             |             |             |        |             |
| Architectural Coating | 0.1423      |             |             |        |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000      |
| Consumer Products     | 1.0656      |             |             |        |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000      |
| Landscaping           | 2.3000e-004 | 2.0000e-005 | 2.5000e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 | 0.0000   | 4.8800e-003 | 4.8800e-003 | 1.0000e-005 | 0.0000 | 5.1900e-003 |
| Total                 | 1.2081      | 2.0000e-005 | 2.5000e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 | 0.0000   | 4.8800e-003 | 4.8800e-003 | 1.0000e-005 | 0.0000 | 5.1900e-003 |

7.0 Water Detail

7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 167.6817  | 4.3810 | 0.1052 | 308.5532 |
| Unmitigated | 167.6817  | 4.3810 | 0.1052 | 308.5532 |

7.2 Water by Land Use

Unmitigated

|                        | Indoor/Outdoor Use | Total CO2 | CH4    | N2O    | CO2e     |
|------------------------|--------------------|-----------|--------|--------|----------|
| Land Use               | Mgal               | MT/yr     |        |        |          |
| Research & Development | 134.154 / 0        | 167.6817  | 4.3810 | 0.1052 | 308.5532 |
| Total                  |                    | 167.6817  | 4.3810 | 0.1052 | 308.5532 |

Mitigated

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

|                        |             |          |        |        |          |
|------------------------|-------------|----------|--------|--------|----------|
| Research & Development | 134.154 / 0 | 167.6817 | 4.3810 | 0.1052 | 308.5532 |
| Total                  |             | 167.6817 | 4.3810 | 0.1052 | 308.5532 |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

#### Category/Year

|             | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|-----------|--------|--------|---------|
|             | MT/yr     |        |        |         |
| Mitigated   | 4.2080    | 0.2487 | 0.0000 | 10.4252 |
| Unmitigated | 4.2080    | 0.2487 | 0.0000 | 10.4252 |

### 8.2 Waste by Land Use

#### Unmitigated

|                        | Waste Disposed | Total CO2 | CH4    | N2O    | CO2e    |
|------------------------|----------------|-----------|--------|--------|---------|
| Land Use               | tons           | MT/yr     |        |        |         |
| Research & Development | 20.73          | 4.2080    | 0.2487 | 0.0000 | 10.4252 |
| Total                  |                | 4.2080    | 0.2487 | 0.0000 | 10.4252 |

Mitigated

|                           | Waste<br>Disposed | Total CO2 | CH4    | N2O    | CO2e    |
|---------------------------|-------------------|-----------|--------|--------|---------|
| Land Use                  | tons              | MT/yr     |        |        |         |
| Research &<br>Development | 20.73             | 4.2080    | 0.2487 | 0.0000 | 10.4252 |
| Total                     |                   | 4.2080    | 0.2487 | 0.0000 | 10.4252 |

Ex. General Plan, Permitted Uses, Operational - Santa Clara County, Annual

### Ex. General Plan, Permitted Uses, Operational Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses               | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|-------------------------|----------|---------------|-------------|--------------------|------------|
| General Office Building | 1,025.04 | 1000sqft      | 23.53       | 1,025,040.00       | 0          |
| Apartments Mid Rise     | 1,278.00 | Dwelling Unit | 33.63       | 1,278,000.00       | 3655       |

### 1.2 Other Project Characteristics

|                         |                                |                         |       |                           |       |
|-------------------------|--------------------------------|-------------------------|-------|---------------------------|-------|
| Urbanization            | Urban                          | Wind Speed (m/s)        | 2.2   | Precipitation Freq (Days) | 58    |
| Climate Zone            | 4                              | Operational Year        | 2026  |                           |       |
| Utility Company         | Pacific Gas & Electric Company |                         |       |                           |       |
| CO2 Intensity (lb/MWhr) | 380                            | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr)   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - SVP current CO2 emission factor

Land Use - Existing GP permitted uses - based on 9/12/17 email (Amy Wang, DJP)

Construction Phase - operational only run

Off-road Equipment - operational only

Woodstoves - No wood based fireplaces or stoves

Energy Use - Title 24, 2013 values used

Energy Mitigation - Title 24, 216 values came into effect on 1st january 2017

Vehicle Trips - Adjusted to traffic with internal and transit adjustments - 5.87,5.64 ,5.17 10.13, 2.26, 0.96

| Table Name                | Column Name        | Default Value | New Value |
|---------------------------|--------------------|---------------|-----------|
| tblProjectCharacteristics | CO2IntensityFactor | 641.35        | 380       |
| tblProjectCharacteristics | OperationalYear    | 2018          | 2026      |
| tblVehicleTrips           | ST_TR              | 6.39          | 5.64      |
| tblVehicleTrips           | ST_TR              | 2.46          | 2.26      |
| tblVehicleTrips           | SU_TR              | 5.86          | 5.17      |
| tblVehicleTrips           | SU_TR              | 1.05          | 0.96      |
| tblVehicleTrips           | WD_TR              | 6.65          | 5.87      |
| tblVehicleTrips           | WD_TR              | 11.03         | 10.13     |

## 2.0 Emissions Summary

### 2.2 Overall Operational

#### Unmitigated Operational

|          | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O         | CO2e       |
|----------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|-------------|------------|
| Category | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |            |            |        |             |            |
| Area     | 13.6629 | 0.1772 | 13.5501 | 8.5800e-003 |               | 0.6332       | 0.6332     |                | 0.6332        | 0.6332      | 58.2636  | 39.4506    | 97.7143    | 0.1085 | 3.8200e-003 | 101.5662   |
| Energy   | 0.1672  | 1.4784 | 0.9717  | 9.1200e-003 |               | 0.1155       | 0.1155     |                | 0.1155        | 0.1155      | 0.0000   | 5,845.5045 | 5,845.5045 | 0.3515 | 0.0965      | 5,883.0520 |

|        |         |         |         |        |         |        |         |        |        |        |          |                 |                 |         |        |                 |
|--------|---------|---------|---------|--------|---------|--------|---------|--------|--------|--------|----------|-----------------|-----------------|---------|--------|-----------------|
| Mobile | 2.7517  | 11.0411 | 32.0631 | 0.1262 | 13.3050 | 0.0986 | 13.4035 | 3.5610 | 0.0917 | 3.6526 | 0.0000   | 11,587.71<br>93 | 11,587.719<br>3 | 0.3487  | 0.0000 | 11,596.43<br>61 |
| Waste  |         |         |         |        |         | 0.0000 | 0.0000  |        | 0.0000 | 0.0000 | 312.8436 | 0.0000          | 312.8436        | 18.4885 | 0.0000 | 775.0567        |
| Water  |         |         |         |        |         | 0.0000 | 0.0000  |        | 0.0000 | 0.0000 | 84.2154  | 346.6090        | 430.8244        | 8.6762  | 0.2097 | 710.2229        |
| Total  | 16.5818 | 12.6966 | 46.5850 | 0.1439 | 13.3050 | 0.8472 | 14.1522 | 3.5610 | 0.8403 | 4.4013 | 455.3226 | 17,819.28<br>34 | 18,274.606<br>0 | 27.9735 | 0.3100 | 19,066.33<br>39 |

Mitigated Operational

|          | ROG     | NOx     | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4     | N2O         | CO2e            |
|----------|---------|---------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|---------|-------------|-----------------|
| Category | tons/yr |         |         |             |               |              |            |                |               |             | MT/yr    |                 |                 |         |             |                 |
| Area     | 13.6629 | 0.1772  | 13.5501 | 8.5800e-003 |               | 0.6332       | 0.6332     |                | 0.6332        | 0.6332      | 58.2636  | 39.4506         | 97.7143         | 0.1085  | 3.8200e-003 | 101.5662        |
| Energy   | 0.1266  | 1.1173  | 0.7225  | 6.9000e-003 |               | 0.0875       | 0.0875     |                | 0.0875        | 0.0875      | 0.0000   | 5,102.5306      | 5,102.5306      | 0.3178  | 0.0838      | 5,135.4344      |
| Mobile   | 2.7517  | 11.0411 | 32.0631 | 0.1262      | 13.3050       | 0.0986       | 13.4035    | 3.5610         | 0.0917        | 3.6526      | 0.0000   | 11,587.71<br>93 | 11,587.719<br>3 | 0.3487  | 0.0000      | 11,596.43<br>61 |
| Waste    |         |         |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 312.8436 | 0.0000          | 312.8436        | 18.4885 | 0.0000      | 775.0567        |
| Water    |         |         |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 84.2154  | 346.6090        | 430.8244        | 8.6762  | 0.2097      | 710.2229        |
| Total    | 16.5411 | 12.3356 | 46.3357 | 0.1417      | 13.3050       | 0.8192       | 14.1241    | 3.5610         | 0.8123        | 4.3732      | 455.3226 | 17,076.30<br>95 | 17,531.632<br>1 | 27.9397 | 0.2973      | 18,318.71<br>62 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.25 | 2.84 | 0.54 | 1.54 | 0.00          | 3.31         | 0.20       | 0.00           | 3.34          | 0.64        | 0.00     | 4.17     | 4.07      | 0.12 | 4.12 | 3.92 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

|             | ROG     | NOx     | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|-------------|---------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Category    | tons/yr |         |         |        |               |              |            |                |               |             | MT/yr    |                 |                 |        |        |                 |
| Mitigated   | 2.7517  | 11.0411 | 32.0631 | 0.1262 | 13.3050       | 0.0986       | 13.4035    | 3.5610         | 0.0917        | 3.6526      | 0.0000   | 11,587.71<br>93 | 11,587.719<br>3 | 0.3487 | 0.0000 | 11,596.43<br>61 |
| Unmitigated | 2.7517  | 11.0411 | 32.0631 | 0.1262 | 13.3050       | 0.0986       | 13.4035    | 3.5610         | 0.0917        | 3.6526      | 0.0000   | 11,587.71<br>93 | 11,587.719<br>3 | 0.3487 | 0.0000 | 11,596.43<br>61 |

4.2 Trip Summary Information

| Land Use                | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|-------------------------|-------------------------|----------|----------|-------------|------------|
|                         | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Mid Rise     | 7,501.86                | 7,207.92 | 6607.26  | 16,934,199  | 16,934,199 |
| General Office Building | 10,383.66               | 2,316.59 | 984.04   | 18,851,362  | 18,851,362 |
| Total                   | 17,885.52               | 9,524.51 | 7,591.30 | 35,785,561  | 35,785,561 |

4.3 Trip Type Information

| Land Use | Miles      |            |             | Trip %    |            |             | Trip Purpose % |          |         |
|----------|------------|------------|-------------|-----------|------------|-------------|----------------|----------|---------|
|          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |

|                         |       |      |      |       |       |       |    |    |   |
|-------------------------|-------|------|------|-------|-------|-------|----|----|---|
| Apartments Mid Rise     | 10.80 | 4.80 | 5.70 | 31.00 | 15.00 | 54.00 | 86 | 11 | 3 |
| General Office Building | 9.50  | 7.30 | 7.30 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |

4.4 Fleet Mix

| Land Use                | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Office Building | 0.618126 | 0.034987 | 0.181060 | 0.102744 | 0.012808 | 0.005030 | 0.012887 | 0.022139 | 0.002195 | 0.001502 | 0.005204 | 0.000638 | 0.000681 |
| Apartments Mid Rise     | 0.618126 | 0.034987 | 0.181060 | 0.102744 | 0.012808 | 0.005030 | 0.012887 | 0.022139 | 0.002195 | 0.001502 | 0.005204 | 0.000638 | 0.000681 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

|                         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category                | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Electricity Mitigated   |         |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 3,849.9702 | 3,849.9702 | 0.2938 | 0.0608 | 3,875.4307 |
| Electricity Unmitigated |         |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 4,190.7900 | 4,190.7900 | 0.3198 | 0.0662 | 4,218.5044 |
| NaturalGas Mitigated    | 0.1266  | 1.1173 | 0.7225 | 6.9000e-003 |               | 0.0875       | 0.0875     |                | 0.0875        | 0.0875      | 0.0000   | 1,252.5604 | 1,252.5604 | 0.0240 | 0.0230 | 1,260.0037 |
| NaturalGas Unmitigated  | 0.1672  | 1.4784 | 0.9717 | 9.1200e-003 |               | 0.1155       | 0.1155     |                | 0.1155        | 0.1155      | 0.0000   | 1,654.7145 | 1,654.7145 | 0.0317 | 0.0303 | 1,664.5477 |

5.2 Energy by Land Use - NaturalGas

Unmitigated

|                         | NaturalGas Use | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|----------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Land Use                | kBTU/yr        | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Apartments Mid Rise     | 1.41463e+007   | 0.0763  | 0.6518 | 0.2774 | 4.1600e-003 |               | 0.0527       | 0.0527     |                | 0.0527        | 0.0527      | 0.0000   | 754.8989   | 754.8989   | 0.0145 | 0.0138 | 759.3849   |
| General Office Building | 1.68619e+007   | 0.0909  | 0.8266 | 0.6943 | 4.9600e-003 |               | 0.0628       | 0.0628     |                | 0.0628        | 0.0628      | 0.0000   | 899.8156   | 899.8156   | 0.0173 | 0.0165 | 905.1628   |
| Total                   |                | 0.1672  | 1.4784 | 0.9717 | 9.1200e-003 |               | 0.1155       | 0.1155     |                | 0.1155        | 0.1155      | 0.0000   | 1,654.7145 | 1,654.7145 | 0.0317 | 0.0303 | 1,664.5477 |

Mitigated

|                         | NaturalGas Use | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|----------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Land Use                | kBTU/yr        | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Apartments Mid Rise     | 1.13143e+007   | 0.0610  | 0.5214 | 0.2219 | 3.3300e-003 |               | 0.0422       | 0.0422     |                | 0.0422        | 0.0422      | 0.0000   | 603.7742   | 603.7742   | 0.0116 | 0.0111 | 607.3621   |
| General Office Building | 1.21578e+007   | 0.0656  | 0.5960 | 0.5006 | 3.5800e-003 |               | 0.0453       | 0.0453     |                | 0.0453        | 0.0453      | 0.0000   | 648.7862   | 648.7862   | 0.0124 | 0.0119 | 652.6416   |
| Total                   |                | 0.1266  | 1.1173 | 0.7225 | 6.9100e-003 |               | 0.0874       | 0.0874     |                | 0.0874        | 0.0874      | 0.0000   | 1,252.5604 | 1,252.5604 | 0.0240 | 0.0230 | 1,260.0037 |

5.3 Energy by Land Use - Electricity

Unmitigated

|                         | Electricity Use | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|-----------------|------------|--------|--------|------------|
| Land Use                | kWh/yr          | MT/yr      |        |        |            |
| Apartments Mid Rise     | 5.63722e+006    | 971.6599   | 0.0742 | 0.0153 | 978.0857   |
| General Office Building | 1.86762e+007    | 3,219.1301 | 0.2457 | 0.0508 | 3,240.4187 |
| Total                   |                 | 4,190.7900 | 0.3198 | 0.0662 | 4,218.5043 |

Mitigated

|                         | Electricity Use | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|-----------------|------------|--------|--------|------------|
| Land Use                | kWh/yr          | MT/yr      |        |        |            |
| Apartments Mid Rise     | 5.49678e+006    | 947.4527   | 0.0723 | 0.0150 | 953.7184   |
| General Office Building | 1.68394e+007    | 2,902.5175 | 0.2215 | 0.0458 | 2,921.7123 |
| Total                   |                 | 3,849.9702 | 0.2938 | 0.0608 | 3,875.4307 |

6.0 Area Detail

6.1 Mitigation Measures Area

|             | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e     |
|-------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|----------|
| Category    | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |          |
| Mitigated   | 13.6629 | 0.1772 | 13.5501 | 8.5800e-003 |               | 0.6332       | 0.6332     |                | 0.6332        | 0.6332      | 58.2636  | 39.4506   | 97.7143   | 0.1085 | 3.8200e-003 | 101.5662 |
| Unmitigated | 13.6629 | 0.1772 | 13.5501 | 8.5800e-003 |               | 0.6332       | 0.6332     |                | 0.6332        | 0.6332      | 58.2636  | 39.4506   | 97.7143   | 0.1085 | 3.8200e-003 | 101.5662 |

6.2 Area by SubCategory

Unmitigated

|                       | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e    |
|-----------------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|---------|
| SubCategory           | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |         |
| Architectural Coating | 1.4341  |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000      | 0.0000  |
| Consumer Products     | 8.9945  |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000      | 0.0000  |
| Hearth                | 2.9487  | 0.0679 | 4.0604 | 8.0800e-003 |               | 0.5805       | 0.5805     |                | 0.5805        | 0.5805      | 58.2636  | 23.9317   | 82.1953   | 0.0936 | 3.8200e-003 | 85.6750 |
| Landscaping           | 0.2855  | 0.1093 | 9.4897 | 5.0000e-004 |               | 0.0526       | 0.0526     |                | 0.0526        | 0.0526      | 0.0000   | 15.5189   | 15.5189   | 0.0149 | 0.0000      | 15.8912 |

|       |         |        |         |             |  |        |        |  |        |        |         |         |         |        |             |          |
|-------|---------|--------|---------|-------------|--|--------|--------|--|--------|--------|---------|---------|---------|--------|-------------|----------|
| Total | 13.6629 | 0.1772 | 13.5501 | 8.5800e-003 |  | 0.6332 | 0.6332 |  | 0.6332 | 0.6332 | 58.2636 | 39.4506 | 97.7143 | 0.1085 | 3.8200e-003 | 101.5662 |
|-------|---------|--------|---------|-------------|--|--------|--------|--|--------|--------|---------|---------|---------|--------|-------------|----------|

Mitigated

|                       | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e     |
|-----------------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|----------|
| SubCategory           | tons/yr |        |         |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |          |
| Architectural Coating | 1.4341  |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Consumer Products     | 8.9945  |        |         |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000      | 0.0000   |
| Hearth                | 2.9487  | 0.0679 | 4.0604  | 8.0800e-003 |               | 0.5805       | 0.5805     |                | 0.5805        | 0.5805      | 58.2636  | 23.9317   | 82.1953   | 0.0936 | 3.8200e-003 | 85.6750  |
| Landscaping           | 0.2855  | 0.1093 | 9.4897  | 5.0000e-004 |               | 0.0526       | 0.0526     |                | 0.0526        | 0.0526      | 0.0000   | 15.5189   | 15.5189   | 0.0149 | 0.0000      | 15.8912  |
| Total                 | 13.6629 | 0.1772 | 13.5501 | 8.5800e-003 |               | 0.6332       | 0.6332     |                | 0.6332        | 0.6332      | 58.2636  | 39.4506   | 97.7143   | 0.1085 | 3.8200e-003 | 101.5662 |

7.0 Water Detail

7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 430.8244  | 8.6762 | 0.2097 | 710.2229 |
| Unmitigated | 430.8244  | 8.6762 | 0.2097 | 710.2229 |

7.2 Water by Land Use

Unmitigated

|                         | Indoor/Outdoor Use | Total CO2 | CH4    | N2O    | CO2e     |
|-------------------------|--------------------|-----------|--------|--------|----------|
| Land Use                | Mgal               | MT/yr     |        |        |          |
| Apartments Mid Rise     | 83.2668 / 52.4943  | 135.7457  | 2.7216 | 0.0658 | 223.3916 |
| General Office Building | 182.184 / 111.661  | 295.0787  | 5.9546 | 0.1439 | 486.8313 |
| Total                   |                    | 430.8244  | 8.6762 | 0.2097 | 710.2229 |

Mitigated

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

|                         |                   |                 |               |               |                 |
|-------------------------|-------------------|-----------------|---------------|---------------|-----------------|
| Apartments Mid Rise     | 83.2668 / 52.4943 | 135.7457        | 2.7216        | 0.0658        | 223.3916        |
| General Office Building | 182.184 / 111.661 | 295.0787        | 5.9546        | 0.1439        | 486.8313        |
| <b>Total</b>            |                   | <b>430.8244</b> | <b>8.6762</b> | <b>0.2097</b> | <b>710.2229</b> |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

#### Category/Year

|             | Total CO2 | CH4     | N2O    | CO2e     |
|-------------|-----------|---------|--------|----------|
|             | M1/yr     |         |        |          |
| Mitigated   | 312.8436  | 18.4885 | 0.0000 | 775.0567 |
| Unmitigated | 312.8436  | 18.4885 | 0.0000 | 775.0567 |

### 8.2 Waste by Land Use

#### Unmitigated

|                         | Waste Disposed | Total CO2       | CH4            | N2O           | CO2e            |
|-------------------------|----------------|-----------------|----------------|---------------|-----------------|
| Land Use                | tons           | M1/yr           |                |               |                 |
| Apartments Mid Rise     | 587.88         | 119.3343        | 7.0525         | 0.0000        | 295.6457        |
| General Office Building | 953.29         | 193.5093        | 11.4361        | 0.0000        | 479.4110        |
| <b>Total</b>            |                | <b>312.8436</b> | <b>18.4885</b> | <b>0.0000</b> | <b>775.0567</b> |

#### Mitigated

|                         | Waste Disposed | Total CO2       | CH4            | N2O           | CO2e            |
|-------------------------|----------------|-----------------|----------------|---------------|-----------------|
| Land Use                | tons           | M1/yr           |                |               |                 |
| Apartments Mid Rise     | 587.88         | 119.3343        | 7.0525         | 0.0000        | 295.6457        |
| General Office Building | 953.29         | 193.5093        | 11.4361        | 0.0000        | 479.4110        |
| <b>Total</b>            |                | <b>312.8436</b> | <b>18.4885</b> | <b>0.0000</b> | <b>775.0567</b> |

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

#### Fire Pumps and Emergency Generators

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

**Boilers**

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

**User Defined Equipment**

|                |        |
|----------------|--------|
| Equipment Type | Number |
|----------------|--------|

**11.0 Vegetation**

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## Gateway Crossings Phase 2, TAC Emissions - Santa Clara County, Annual

## Gateway Crossings Phase 2, TAC Emissions

### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|---------------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 625.00 | Space         | 0.00        | 256,900.00         | 0          |
| Parking Lot                    | 7.00   | Space         | 0.06        | 2,800.00           | 0          |
| Apartments Mid Rise            | 332.00 | Dwelling Unit | 21.34       | 414,000.00         | 950        |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 58    |
| <b>Climate Zone</b>             | 4                              |                                 |       | <b>Operational Year</b>          | 2021  |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 380                            | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility company is silicon valley power-CO2 factor from climate action plan 2020

Land Use - Applicant provided land use sizes

Construction Phase - Applicant provided construction schedule

Off-road Equipment - Applicant provided construction information

Off-road Equipment - Applicant provided construction information

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided construction information

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided information

Trips and VMT - Default trip numbers used

800 cy pf paving

800/16\*2=100

Demolition -

Grading - Soil export during grading: 19,496 cy

Vehicle Trips - From project traffic report

Woodstoves - No wood based fireplaces or woodstoves

Energy Use - title 24, 2013

Construction Off-road Equipment Mitigation - Best Management Practices

Tier 4

Energy Mitigation - title 24 106 values came into effect on 1st January, 2017

| Table Name              | Column Name                  | Default Value | New Value |
|-------------------------|------------------------------|---------------|-----------|
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed | 40            | 15        |
| tblConstEquipMitigation | DPF                          | No Change     | Level 3   |
| tblConstEquipMitigation | DPF                          | No Change     | Level 3   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 5.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 6.00      |

|                         |                            |            |              |
|-------------------------|----------------------------|------------|--------------|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 7.00         |
| 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 |
| 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 |
| tblFireplaces           | FireplaceWoodMass          | 228.80     | 0.00         |
| tblFireplaces           | NumberGas                  | 49.80      | 332.00       |
| tblFireplaces           | NumberNoFireplace          | 13.28      | 0.00         |
| tblFireplaces           | NumberWood                 | 56.44      | 0.00         |
| tblGrading              | MaterialExported           | 0.00       | 19,496.00    |
| tblLandUse              | BuildingSpaceSquareFeet    | 250,000.00 | 256,900.00   |
| tblLandUse              | BuildingSpaceSquareFeet    | 332,000.00 | 414,000.00   |

|                           |                    |            |            |
|---------------------------|--------------------|------------|------------|
| tblLandUse                | LandUseSquareFeet  | 250,000.00 | 256,900.00 |
| tblLandUse                | LandUseSquareFeet  | 332,000.00 | 414,000.00 |
| tblLandUse                | LotAcreage         | 5.63       | 0.00       |
| tblLandUse                | LotAcreage         | 8.74       | 21.34      |
| tblProjectCharacteristics | CO2IntensityFactor | 641.35     | 380        |
| tblProjectCharacteristics | OperationalYear    | 2018       | 2021       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripNumber  | 0.00       | 100.00     |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblVehicleTrips           | ST_TR              | 6.39       | 5.83       |
| tblVehicleTrips           | SU_TR              | 5.86       | 5.35       |
| tblVehicleTrips           | WD_TR              | 6.65       | 6.07       |
| tblWoodstoves             | NumberCatalytic    | 6.64       | 0.00       |
| tblWoodstoves             | NumberNoncatalytic | 6.64       | 0.00       |

|               |                   |        |      |
|---------------|-------------------|--------|------|
| tblWoodstoves | WoodstoveWoodMass | 582.40 | 0.00 |
|---------------|-------------------|--------|------|

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2019    | 0.4275  | 4.4395 | 3.0129 | 5.3900e-003 | 0.3830        | 0.1996       | 0.5826     | 0.1501         | 0.1855        | 0.3355      | 0.0000   | 479.8885  | 479.8885  | 0.1317 | 0.0000 | 483.1816 |
| 2020    | 3.1041  | 1.2192 | 1.0902 | 1.7800e-003 | 7.5400e-003   | 0.0628       | 0.0704     | 2.0400e-003    | 0.0589        | 0.0610      | 0.0000   | 155.0913  | 155.0913  | 0.0386 | 0.0000 | 156.0571 |
| Maximum | 3.1041  | 4.4395 | 3.0129 | 5.3900e-003 | 0.3830        | 0.1996       | 0.5826     | 0.1501         | 0.1855        | 0.3355      | 0.0000   | 479.8885  | 479.8885  | 0.1317 | 0.0000 | 483.1816 |

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    | 0.0907  | 0.8781 | 3.0619 | 5.3900e-003 | 0.1799        | 7.0200e-003  | 0.1869      | 0.0367         | 6.9900e-003   | 0.0437      | 0.0000   | 479.8880  | 479.8880  | 0.1317 | 0.0000 | 483.1811 |
| 2020    | 3.0027  | 0.3184 | 1.1637 | 1.7800e-003 | 7.5400e-003   | 2.3300e-003  | 9.8700e-003 | 2.0400e-003    | 2.3100e-003   | 4.3600e-003 | 0.0000   | 155.0912  | 155.0912  | 0.0386 | 0.0000 | 156.0570 |
| Maximum | 3.0027  | 0.8781 | 3.0619 | 5.3900e-003 | 0.1799        | 7.0200e-003  | 0.1869      | 0.0367         | 6.9900e-003   | 0.0437      | 0.0000   | 479.8880  | 479.8880  | 0.1317 | 0.0000 | 483.1811 |

|                   | ROG   | NOx   | CO    | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|-------|-------|-------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 12.41 | 78.86 | -2.99 | 0.00 | 52.00         | 96.44        | 69.86      | 74.55          | 96.19         | 87.89       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 7-1-2019   | 9-30-2019  | 2.9165                                       | 0.4231                                     |
| 2       | 10-1-2019  | 12-31-2019 | 1.7947                                       | 0.5240                                     |
| 3       | 1-1-2020   | 3-31-2020  | 2.0658                                       | 1.4736                                     |
| 4       | 4-1-2020   | 6-30-2020  | 2.1882                                       | 1.7973                                     |
|         |            | Highest    | 2.9165                                       | 1.7973                                     |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 7/1/2019   | 7/26/2019 | 5             | 20       |                   |
| 2            | Grading               | Grading               | 7/29/2019  | 9/20/2019 | 5             | 40       |                   |
| 3            | Trenching             | Trenching             | 9/2/2019   | 9/27/2019 | 5             | 20       |                   |
| 4            | Building Construction | Building Construction | 9/23/2019  | 2/7/2020  | 5             | 100      |                   |
| 5            | Architectural Coating | Architectural Coating | 2/3/2020   | 6/19/2020 | 5             | 100      |                   |
| 6            | Paving                | Paving                | 4/1/2020   | 5/26/2020 | 5             | 40       |                   |

**Acres of Grading (Site Preparation Phase): 80**

**Acres of Grading (Grading Phase): 160**

**Acres of Paving: 0.06**

**Residential Indoor: 838,350; Residential Outdoor: 279,450; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:**

#### OffRoad Equipment

| Phase Name       | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders                | 2      | 8.00        | 187         | 0.41        |
| Site Preparation | Rubber Tired Dozers    | 2      | 8.00        | 247         | 0.40        |
| Site Preparation | Scrapers               | 3      | 8.00        | 367         | 0.48        |
| Site Preparation | Skid Steer Loaders     | 1      | 8.00        | 65          | 0.37        |

|                       |                              |   |      |     |      |
|-----------------------|------------------------------|---|------|-----|------|
| Site Preparation      | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Grading               | Excavators                   | 2 | 8.00 | 158 | 0.38 |
| Grading               | Graders                      | 2 | 8.00 | 187 | 0.41 |
| Grading               | Rollers                      | 2 | 8.00 | 80  | 0.38 |
| Grading               | Rubber Tired Dozers          | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                     | 3 | 8.00 | 367 | 0.48 |
| Grading               | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Grading               | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |
| Grading               | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Excavators                   | 2 | 8.00 | 158 | 0.38 |
| Trenching             | Rough Terrain Forklifts      | 1 | 8.00 | 100 | 0.40 |
| Trenching             | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Aerial Lifts                 | 3 | 8.00 | 63  | 0.31 |
| Building Construction | Cranes                       | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts                    | 4 | 8.00 | 89  | 0.20 |
| Building Construction | Generator Sets               | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Other Construction Equipment | 3 | 8.00 | 172 | 0.42 |
| Building Construction | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                      | 4 | 8.00 | 46  | 0.45 |
| Architectural Coating | Aerial Lifts                 | 1 | 8.00 | 63  | 0.31 |
| Architectural Coating | Air Compressors              | 2 | 3.20 | 78  | 0.48 |
| Architectural Coating | Cranes                       | 1 | 4.00 | 231 | 0.29 |
| Architectural Coating | Forklifts                    | 1 | 8.00 | 89  | 0.20 |
| Paving                | Cement and Mortar Mixers     | 1 | 4.00 | 9   | 0.56 |
| Paving                | Pavers                       | 1 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment             | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                      | 2 | 8.00 | 80  | 0.38 |
| Paving                | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |

|        |                           |   |      |    |      |
|--------|---------------------------|---|------|----|------|
| Paving | Tractors/Loaders/Backhoes | 1 | 4.00 | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 2,437.00            | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 17                      | 348.00             | 78.00              | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 70.00              | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 100.00              | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

- Use Cleaner Engines for Construction Equipment
- Use DPF for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

**3.2 Site Preparation - 2019**

**Unmitigated Construction On-Site**

|               | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|---------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category      | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Fugitive Dust |         |        |        |             | 0.1629        | 0.0000       | 0.1629     | 0.0708         | 0.0000        | 0.0708      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0676  | 0.7951 | 0.4012 | 8.1000e-004 |               | 0.0333       | 0.0333     |                | 0.0306        | 0.0306      | 0.0000   | 72.7354   | 72.7354   | 0.0230 | 0.0000 | 73.3108 |

|       |        |        |        |             |        |        |        |        |        |        |        |         |         |        |        |         |
|-------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|---------|
| Total | 0.0676 | 0.7951 | 0.4012 | 8.1000e-004 | 0.1629 | 0.0333 | 0.1961 | 0.0708 | 0.0306 | 0.1014 | 0.0000 | 72.7354 | 72.7354 | 0.0230 | 0.0000 | 73.3108 |
|-------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|---------|

**Unmitigated Construction Off-Site**

|          | ROG         | NOx         | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|--------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |        |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 2.8000e-004 | 1.3000e-004 | 1.7000e-003 | 0.0000 | 1.7000e-004   | 0.0000       | 1.7000e-004 | 5.0000e-005    | 0.0000        | 5.0000e-005 | 0.0000   | 0.1929    | 0.1929    | 1.0000e-005 | 0.0000 | 0.1932 |
| Total    | 2.8000e-004 | 1.3000e-004 | 1.7000e-003 | 0.0000 | 1.7000e-004   | 0.0000       | 1.7000e-004 | 5.0000e-005    | 0.0000        | 5.0000e-005 | 0.0000   | 0.1929    | 0.1929    | 1.0000e-005 | 0.0000 | 0.1932 |

**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 |         |        |        |             | 0.0733        | 0.0000       | 0.0733      | 0.0159         | 0.0000        | 0.0159      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0102  | 0.0536 | 0.3803 | 8.1000e-004 |               | 1.1400e-003  | 1.1400e-003 |                | 1.1400e-003   | 1.1400e-003 | 0.0000   | 72.7354   | 72.7354   | 0.0230 | 0.0000 | 73.3107 |
| Total         | 0.0102  | 0.0536 | 0.3803 | 8.1000e-004 | 0.0733        | 1.1400e-003  | 0.0744      | 0.0159         | 1.1400e-003   | 0.0171      | 0.0000   | 72.7354   | 72.7354   | 0.0230 | 0.0000 | 73.3107 |

**Mitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |                    |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 2.8000e-004        | 1.3000e-004        | 1.7000e-003        | 0.0000        | 1.7000e-004        | 0.0000        | 1.7000e-004        | 5.0000e-005        | 0.0000        | 5.0000e-005        | 0.0000        | 0.1929        | 0.1929        | 1.0000e-005        | 0.0000        | 0.1932        |
| <b>Total</b> | <b>2.8000e-004</b> | <b>1.3000e-004</b> | <b>1.7000e-003</b> | <b>0.0000</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>1.7000e-004</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>0.1929</b> | <b>0.1929</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1932</b> |

### 3.3 Grading - 2019

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Fugitive Dust |               |               |               |                    | 0.2064        | 0.0000        | 0.2064        | 0.0755         | 0.0000        | 0.0755        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Off-Road      | 0.1376        | 1.5953        | 0.9635        | 1.8100e-003        |               | 0.0698        | 0.0698        |                | 0.0642        | 0.0642        | 0.0000        | 162.6681        | 162.6681        | 0.0515        | 0.0000        | 163.9548        |
| <b>Total</b>  | <b>0.1376</b> | <b>1.5953</b> | <b>0.9635</b> | <b>1.8100e-003</b> | <b>0.2064</b> | <b>0.0698</b> | <b>0.2762</b> | <b>0.0755</b>  | <b>0.0642</b> | <b>0.1398</b> | <b>0.0000</b> | <b>162.6681</b> | <b>162.6681</b> | <b>0.0515</b> | <b>0.0000</b> | <b>163.9548</b> |

#### 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 | 2.9600e-003 | 0.1305      | 0.0218      | 1.6000e-004 | 1.0600e-003 | 1.7000e-004 | 1.2200e-003 | 2.9000e-004 | 1.6000e-004 | 4.5000e-004 | 0.0000 | 15.7860 | 15.7860 | 1.8400e-003 | 0.0000 | 15.8321 |
| Vendor  | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000  | 0.0000  | 0.0000      | 0.0000 | 0.0000  |
| Worker  | 8.1000e-004 | 3.8000e-004 | 4.8800e-003 | 1.0000e-005 | 4.9000e-004 | 1.0000e-005 | 5.0000e-004 | 1.3000e-004 | 1.0000e-005 | 1.4000e-004 | 0.0000 | 0.5536  | 0.5536  | 3.0000e-005 | 0.0000 | 0.5543  |
| Total   | 3.7700e-003 | 0.1309      | 0.0267      | 1.7000e-004 | 1.5500e-003 | 1.8000e-004 | 1.7200e-003 | 4.2000e-004 | 1.7000e-004 | 5.9000e-004 | 0.0000 | 16.3396 | 16.3396 | 1.8700e-003 | 0.0000 | 16.3864 |

**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 |         |        |        |             | 0.0929        | 0.0000       | 0.0929      | 0.0170         | 0.0000        | 0.0170      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.0234  | 0.1432 | 0.9585 | 1.8100e-003 |               | 2.6000e-003  | 2.6000e-003 |                | 2.6000e-003   | 2.6000e-003 | 0.0000   | 162.6680  | 162.6680  | 0.0515 | 0.0000 | 163.9546 |
| Total         | 0.0234  | 0.1432 | 0.9585 | 1.8100e-003 | 0.0929        | 2.6000e-003  | 0.0955      | 0.0170         | 2.6000e-003   | 0.0196      | 0.0000   | 162.6680  | 162.6680  | 0.0515 | 0.0000 | 163.9546 |

**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  | 2.9600e-003 | 0.1305      | 0.0218      | 1.6000e-004 | 1.0600e-003   | 1.7000e-004  | 1.2200e-003 | 2.9000e-004    | 1.6000e-004   | 4.5000e-004 | 0.0000   | 15.7860   | 15.7860   | 1.8400e-003 | 0.0000 | 15.8321 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Worker   | 8.1000e-004 | 3.8000e-004 | 4.8800e-003 | 1.0000e-005 | 4.9000e-004   | 1.0000e-005  | 5.0000e-004 | 1.3000e-004    | 1.0000e-005   | 1.4000e-004 | 0.0000   | 0.5536    | 0.5536    | 3.0000e-005 | 0.0000 | 0.5543  |
| Total    | 3.7700e-003 | 0.1309      | 0.0267      | 1.7000e-004 | 1.5500e-003   | 1.8000e-004  | 1.7200e-003 | 4.2000e-004    | 1.7000e-004   | 5.9000e-004 | 0.0000   | 16.3396   | 16.3396   | 1.8700e-003 | 0.0000 | 16.3864 |

### 3.4 Trenching - 2019

#### Unmitigated Construction On-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 0.0145        | 0.1535        | 0.1712        | 2.5000e-004        |               | 8.6100e-003        | 8.6100e-003        |                | 7.9200e-003        | 7.9200e-003        | 0.0000        | 22.5930        | 22.5930        | 7.1500e-003        | 0.0000        | 22.7717        |
| <b>Total</b> | <b>0.0145</b> | <b>0.1535</b> | <b>0.1712</b> | <b>2.5000e-004</b> |               | <b>8.6100e-003</b> | <b>8.6100e-003</b> |                | <b>7.9200e-003</b> | <b>7.9200e-003</b> | <b>0.0000</b> | <b>22.5930</b> | <b>22.5930</b> | <b>7.1500e-003</b> | <b>0.0000</b> | <b>22.7717</b> |

#### 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       | 2.2000e-004        | 1.0000e-004        | 1.3300e-003        | 0.0000        | 1.3000e-004        | 0.0000        | 1.4000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1510        | 0.1510        | 1.0000e-005        | 0.0000        | 0.1512        |
| <b>Total</b> | <b>2.2000e-004</b> | <b>1.0000e-004</b> | <b>1.3300e-003</b> | <b>0.0000</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1510</b> | <b>0.1510</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1512</b> |

#### Mitigated Construction On-Site

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 3.3400e-003        | 0.0239        | 0.1904        | 2.5000e-004        |               | 4.1000e-004        | 4.1000e-004        |                | 4.1000e-004        | 4.1000e-004        | 0.0000        | 22.5930        | 22.5930        | 7.1500e-003        | 0.0000        | 22.7717        |
| <b>Total</b> | <b>3.3400e-003</b> | <b>0.0239</b> | <b>0.1904</b> | <b>2.5000e-004</b> |               | <b>4.1000e-004</b> | <b>4.1000e-004</b> |                | <b>4.1000e-004</b> | <b>4.1000e-004</b> | <b>0.0000</b> | <b>22.5930</b> | <b>22.5930</b> | <b>7.1500e-003</b> | <b>0.0000</b> | <b>22.7717</b> |

### 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       | 2.2000e-004        | 1.0000e-004        | 1.3300e-003        | 0.0000        | 1.3000e-004        | 0.0000        | 1.4000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1510        | 0.1510        | 1.0000e-005        | 0.0000        | 0.1512        |
| <b>Total</b> | <b>2.2000e-004</b> | <b>1.0000e-004</b> | <b>1.3300e-003</b> | <b>0.0000</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1510</b> | <b>0.1510</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1512</b> |

### 3.5 Building Construction - 2019

#### Unmitigated Construction On-Site

|          | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| Off-Road | 0.1821  | 1.5595 | 1.2978 | 1.9900e-003 |               | 0.0871       | 0.0871     |                | 0.0820        | 0.0820      | 0.0000   | 172.1798  | 172.1798  | 0.0453 | 0.0000 | 173.3119 |

|       |        |        |        |             |  |        |        |  |        |        |        |          |          |        |        |          |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|
| Total | 0.1821 | 1.5595 | 1.2978 | 1.9900e-003 |  | 0.0871 | 0.0871 |  | 0.0820 | 0.0820 | 0.0000 | 172.1798 | 172.1798 | 0.0453 | 0.0000 | 173.3119 |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|

**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   | 6.1200e-003 | 0.1977      | 0.0569 | 2.3000e-004 | 2.5900e-003   | 4.8000e-004  | 3.0800e-003 | 7.6000e-004    | 4.6000e-004   | 1.2200e-003 | 0.0000   | 22.5198   | 22.5198   | 2.4200e-003 | 0.0000 | 22.5803 |
| Worker   | 0.0154      | 7.2700e-003 | 0.0925 | 1.2000e-004 | 9.3100e-003   | 1.3000e-004  | 9.4400e-003 | 2.4900e-003    | 1.2000e-004   | 2.6100e-003 | 0.0000   | 10.5088   | 10.5088   | 5.1000e-004 | 0.0000 | 10.5215 |
| Total    | 0.0215      | 0.2050      | 0.1495 | 3.5000e-004 | 0.0119        | 6.1000e-004  | 0.0125      | 3.2500e-003    | 5.8000e-004   | 3.8300e-003 | 0.0000   | 33.0286   | 33.0286   | 2.9300e-003 | 0.0000 | 33.1018 |

**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 | 0.0280  | 0.3213 | 1.3535 | 1.9900e-003 |               | 2.0800e-003  | 2.0800e-003 |                | 2.0800e-003   | 2.0800e-003 | 0.0000   | 172.1796  | 172.1796  | 0.0453 | 0.0000 | 173.3117 |
| Total    | 0.0280  | 0.3213 | 1.3535 | 1.9900e-003 |               | 2.0800e-003  | 2.0800e-003 |                | 2.0800e-003   | 2.0800e-003 | 0.0000   | 172.1796  | 172.1796  | 0.0453 | 0.0000 | 173.3117 |

**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   | 6.1200e-003 | 0.1977      | 0.0569 | 2.3000e-004 | 2.5900e-003   | 4.8000e-004  | 3.0800e-003 | 7.6000e-004    | 4.6000e-004   | 1.2200e-003 | 0.0000   | 22.5198   | 22.5198   | 2.4200e-003 | 0.0000 | 22.5803 |
| Worker   | 0.0154      | 7.2700e-003 | 0.0925 | 1.2000e-004 | 9.3100e-003   | 1.3000e-004  | 9.4400e-003 | 2.4900e-003    | 1.2000e-004   | 2.6100e-003 | 0.0000   | 10.5088   | 10.5088   | 5.1000e-004 | 0.0000 | 10.5215 |
| Total    | 0.0215      | 0.2050      | 0.1495 | 3.5000e-004 | 0.0119        | 6.1000e-004  | 0.0125      | 3.2500e-003    | 5.8000e-004   | 3.8300e-003 | 0.0000   | 33.0286   | 33.0286   | 2.9300e-003 | 0.0000 | 33.1018 |

3.5 Building Construction - 2020

Unmitigated Construction On-Site

|          | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 0.0645  | 0.5614 | 0.4975 | 7.8000e-004 |               | 0.0302       | 0.0302     |                | 0.0284        | 0.0284      | 0.0000   | 65.9021   | 65.9021   | 0.0174 | 0.0000 | 66.3358 |
| Total    | 0.0645  | 0.5614 | 0.4975 | 7.8000e-004 |               | 0.0302       | 0.0302     |                | 0.0284        | 0.0284      | 0.0000   | 65.9021   | 65.9021   | 0.0174 | 0.0000 | 66.3358 |

Unmitigated Construction Off-Site

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

|         |             |             |        |             |             |             |             |             |             |             |        |         |         |             |        |         |
|---------|-------------|-------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|---------|---------|-------------|--------|---------|
| Hauling | 0.0000      | 0.0000      | 0.0000 | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000  | 0.0000  | 0.0000      | 0.0000 | 0.0000  |
| Vendor  | 2.0600e-003 | 0.0730      | 0.0203 | 9.0000e-005 | 1.0100e-003 | 1.2000e-004 | 1.1300e-003 | 2.9000e-004 | 1.1000e-004 | 4.1000e-004 | 0.0000 | 8.7663  | 8.7663  | 8.6000e-004 | 0.0000 | 8.7877  |
| Worker  | 5.4000e-003 | 2.4700e-003 | 0.0320 | 4.0000e-005 | 3.6200e-003 | 5.0000e-005 | 3.6700e-003 | 9.7000e-004 | 5.0000e-005 | 1.0100e-003 | 0.0000 | 3.9619  | 3.9619  | 1.7000e-004 | 0.0000 | 3.9662  |
| Total   | 7.4600e-003 | 0.0755      | 0.0522 | 1.3000e-004 | 4.6300e-003 | 1.7000e-004 | 4.8000e-003 | 1.2600e-003 | 1.6000e-004 | 1.4200e-003 | 0.0000 | 12.7283 | 12.7283 | 1.0300e-003 | 0.0000 | 12.7539 |

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 | 0.0109  | 0.1249 | 0.5264 | 7.8000e-004 |               | 8.1000e-004  | 8.1000e-004 |                | 8.1000e-004   | 8.1000e-004 | 0.0000   | 65.9020   | 65.9020   | 0.0174 | 0.0000 | 66.3357 |
| Total    | 0.0109  | 0.1249 | 0.5264 | 7.8000e-004 |               | 8.1000e-004  | 8.1000e-004 |                | 8.1000e-004   | 8.1000e-004 | 0.0000   | 65.9020   | 65.9020   | 0.0174 | 0.0000 | 66.3357 |

Mitigated Construction Off-Site

|          | ROG         | NOx         | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|----------|-------------|-------------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category | tons/yr     |             |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Hauling  | 0.0000      | 0.0000      | 0.0000 | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Vendor   | 2.0600e-003 | 0.0730      | 0.0203 | 9.0000e-005 | 1.0100e-003   | 1.2000e-004  | 1.1300e-003 | 2.9000e-004    | 1.1000e-004   | 4.1000e-004 | 0.0000   | 8.7663    | 8.7663    | 8.6000e-004 | 0.0000 | 8.7877  |
| Worker   | 5.4000e-003 | 2.4700e-003 | 0.0320 | 4.0000e-005 | 3.6200e-003   | 5.0000e-005  | 3.6700e-003 | 9.7000e-004    | 5.0000e-005   | 1.0100e-003 | 0.0000   | 3.9619    | 3.9619    | 1.7000e-004 | 0.0000 | 3.9662  |
| Total    | 7.4600e-003 | 0.0755      | 0.0522 | 1.3000e-004 | 4.6300e-003   | 1.7000e-004  | 4.8000e-003 | 1.2600e-003    | 1.6000e-004   | 1.4200e-003 | 0.0000   | 12.7283   | 12.7283   | 1.0300e-003 | 0.0000 | 12.7539 |

### 3.6 Architectural Coating - 2020

#### Unmitigated Construction On-Site

|                 | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|-----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category        | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |                    |               |                |
| Archit. Coating | 2.9685        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road        | 0.0334        | 0.3217        | 0.2643        | 4.6000e-004        |               | 0.0170        | 0.0170        |                | 0.0161        | 0.0161        | 0.0000        | 40.3814        | 40.3814        | 9.7100e-003        | 0.0000        | 40.6241        |
| <b>Total</b>    | <b>3.0019</b> | <b>0.3217</b> | <b>0.2643</b> | <b>4.6000e-004</b> |               | <b>0.0170</b> | <b>0.0170</b> |                | <b>0.0161</b> | <b>0.0161</b> | <b>0.0000</b> | <b>40.3814</b> | <b>40.3814</b> | <b>9.7100e-003</b> | <b>0.0000</b> | <b>40.6241</b> |

#### 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       | 3.8800e-003        | 1.7800e-003        | 0.0230        | 3.0000e-005        | 2.6000e-003        | 4.0000e-005        | 2.6400e-003        | 7.0000e-004        | 3.0000e-005        | 7.3000e-004        | 0.0000        | 2.8462        | 2.8462        | 1.2000e-004        | 0.0000        | 2.8493        |
| <b>Total</b> | <b>3.8800e-003</b> | <b>1.7800e-003</b> | <b>0.0230</b> | <b>3.0000e-005</b> | <b>2.6000e-003</b> | <b>4.0000e-005</b> | <b>2.6400e-003</b> | <b>7.0000e-004</b> | <b>3.0000e-005</b> | <b>7.3000e-004</b> | <b>0.0000</b> | <b>2.8462</b> | <b>2.8462</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>2.8493</b> |

#### Mitigated Construction On-Site

|                 | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|-----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category        | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Archit. Coating | 2.9685        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road        | 6.3700e-003   | 0.0658        | 0.2845        | 4.6000e-004        |               | 7.1000e-004        | 7.1000e-004        |                | 7.1000e-004        | 7.1000e-004        | 0.0000        | 40.3813        | 40.3813        | 9.7100e-003        | 0.0000        | 40.6241        |
| <b>Total</b>    | <b>2.9749</b> | <b>0.0658</b> | <b>0.2845</b> | <b>4.6000e-004</b> |               | <b>7.1000e-004</b> | <b>7.1000e-004</b> |                | <b>7.1000e-004</b> | <b>7.1000e-004</b> | <b>0.0000</b> | <b>40.3813</b> | <b>40.3813</b> | <b>9.7100e-003</b> | <b>0.0000</b> | <b>40.6241</b> |

### 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       | 3.8800e-003        | 1.7800e-003        | 0.0230        | 3.0000e-005        | 2.6000e-003        | 4.0000e-005        | 2.6400e-003        | 7.0000e-004        | 3.0000e-005        | 7.3000e-004        | 0.0000        | 2.8462        | 2.8462        | 1.2000e-004        | 0.0000        | 2.8493        |
| <b>Total</b> | <b>3.8800e-003</b> | <b>1.7800e-003</b> | <b>0.0230</b> | <b>3.0000e-005</b> | <b>2.6000e-003</b> | <b>4.0000e-005</b> | <b>2.6400e-003</b> | <b>7.0000e-004</b> | <b>3.0000e-005</b> | <b>7.3000e-004</b> | <b>0.0000</b> | <b>2.8462</b> | <b>2.8462</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>2.8493</b> |

### 3.7 Paving - 2020

#### Unmitigated Construction On-Site

|          | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 0.0258  | 0.2536 | 0.2500 | 3.7000e-004 |               | 0.0154       | 0.0154     |                | 0.0142        | 0.0142      | 0.0000   | 32.2913   | 32.2913   | 0.0103 | 0.0000 | 32.5499 |

|        |             |        |        |             |  |        |        |  |        |        |        |         |         |        |        |         |
|--------|-------------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|---------|---------|--------|--------|---------|
| Paving | 8.0000e-005 |        |        |             |  | 0.0000 | 0.0000 |  | 0.0000 | 0.0000 | 0.0000 | 0.0000  | 0.0000  | 0.0000 | 0.0000 | 0.0000  |
| Total  | 0.0259      | 0.2536 | 0.2500 | 3.7000e-004 |  | 0.0154 | 0.0154 |  | 0.0142 | 0.0142 | 0.0000 | 32.2913 | 32.2913 | 0.0103 | 0.0000 | 32.5499 |

**Unmitigated Construction Off-Site**

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 1.1000e-004 | 5.1600e-003 | 8.4000e-004 | 1.0000e-005 | 4.0000e-005   | 0.0000       | 5.0000e-005 | 1.0000e-005    | 0.0000        | 2.0000e-005 | 0.0000   | 0.6494    | 0.6494    | 7.0000e-005 | 0.0000 | 0.6511 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 4.0000e-004 | 1.8000e-004 | 2.3600e-003 | 0.0000      | 2.7000e-004   | 0.0000       | 2.7000e-004 | 7.0000e-005    | 0.0000        | 7.0000e-005 | 0.0000   | 0.2928    | 0.2928    | 1.0000e-005 | 0.0000 | 0.2931 |
| Total    | 5.1000e-004 | 5.3400e-003 | 3.2000e-003 | 1.0000e-005 | 3.1000e-004   | 0.0000       | 3.2000e-004 | 8.0000e-005    | 0.0000        | 9.0000e-005 | 0.0000   | 0.9422    | 0.9422    | 8.0000e-005 | 0.0000 | 0.9442 |

**Mitigated Construction On-Site**

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 5.0700e-003 | 0.0450 | 0.2745 | 3.7000e-004 |               | 5.9000e-004  | 5.9000e-004 |                | 5.9000e-004   | 5.9000e-004 | 0.0000   | 32.2912   | 32.2912   | 0.0103 | 0.0000 | 32.5498 |
| Paving   | 8.0000e-005 |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 5.1500e-003 | 0.0450 | 0.2745 | 3.7000e-004 |               | 5.9000e-004  | 5.9000e-004 |                | 5.9000e-004   | 5.9000e-004 | 0.0000   | 32.2912   | 32.2912   | 0.0103 | 0.0000 | 32.5498 |

**Mitigated Construction Off-Site**

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 1.1000e-004 | 5.1600e-003 | 8.4000e-004 | 1.0000e-005 | 4.0000e-005   | 0.0000       | 5.0000e-005 | 1.0000e-005    | 0.0000        | 2.0000e-005 | 0.0000   | 0.6494    | 0.6494    | 7.0000e-005 | 0.0000 | 0.6511 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 4.0000e-004 | 1.8000e-004 | 2.3600e-003 | 0.0000      | 2.7000e-004   | 0.0000       | 2.7000e-004 | 7.0000e-005    | 0.0000        | 7.0000e-005 | 0.0000   | 0.2928    | 0.2928    | 1.0000e-005 | 0.0000 | 0.2931 |
| Total    | 5.1000e-004 | 5.3400e-003 | 3.2000e-003 | 1.0000e-005 | 3.1000e-004   | 0.0000       | 3.2000e-004 | 8.0000e-005    | 0.0000        | 9.0000e-005 | 0.0000   | 0.9422    | 0.9422    | 8.0000e-005 | 0.0000 | 0.9442 |

## Phase 3, TAC Emissions - Santa Clara County, Annual

**Phase 3, TAC Emissions****Santa Clara County, Annual****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses                      | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|---------------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 760.00 | Space         | 0.00        | 311,800.00         | 0          |
| Parking Lot                    | 6.00   | Space         | 0.05        | 2,400.00           | 0          |
| Apartments Mid Rise            | 432.00 | Dwelling Unit | 21.35       | 522,000.00         | 1236       |
| Strip Mall                     | 4.90   | 1000sqft      | 0.00        | 4,900.00           | 0          |

**1.2 Other Project Characteristics**

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 58    |
| <b>Climate Zone</b>             | 4                              |                                 |       | <b>Operational Year</b>          | 2022  |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 380                            | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - PG&E used to represent SVP. Current CO2 emission factor from Santa Clara Climate Action Plan 2020

Land Use - Applicant provided information on construction spreadsheet

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided infromation

Trips and VMT - Paving trips= 800/16\*2

Grading - 20919 cy of soil hauled

Vehicle Trips - Project traffic report

Woodstoves - no woodstoves or wood based firplaces

Energy Use - Title 24, 2013 values

Construction Off-road Equipment Mitigation - Best Management Practices tier 4

Energy Mitigation - title 24,2016 came into effect on 1st january, 2017

| Table Name              | Column Name                  | Default Value | New Value |
|-------------------------|------------------------------|---------------|-----------|
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed | 40            | 15        |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 5.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 6.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |

|                         |                            |            |              |
|-------------------------|----------------------------|------------|--------------|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 7.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 1.00         |
| 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 |
| 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 |
| tblFireplaces           | FireplaceWoodMass          | 228.80     | 0.00         |
| tblFireplaces           | NumberGas                  | 64.80      | 432.00       |
| tblFireplaces           | NumberNoFireplace          | 17.28      | 0.00         |
| tblFireplaces           | NumberWood                 | 73.44      | 0.00         |
| tblGrading              | MaterialExported           | 0.00       | 20,919.00    |
| tblLandUse              | BuildingSpaceSquareFeet    | 304,000.00 | 311,800.00   |
| tblLandUse              | BuildingSpaceSquareFeet    | 432,000.00 | 522,000.00   |
| tblLandUse              | LandUseSquareFeet          | 304,000.00 | 311,800.00   |

|                           |                    |            |            |
|---------------------------|--------------------|------------|------------|
| tblLandUse                | LandUseSquareFeet  | 432,000.00 | 522,000.00 |
| tblLandUse                | LotAcreage         | 6.84       | 0.00       |
| tblLandUse                | LotAcreage         | 11.37      | 21.35      |
| tblLandUse                | LotAcreage         | 0.11       | 0.00       |
| tblProjectCharacteristics | CO2IntensityFactor | 641.35     | 380        |
| tblProjectCharacteristics | OperationalYear    | 2018       | 2022       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripLength  | 20.00      | 1.00       |
| tblTripsAndVMT            | HaulingTripNumber  | 0.00       | 100.00     |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | VendorTripLength   | 7.30       | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblTripsAndVMT            | WorkerTripLength   | 10.80      | 1.00       |
| tblVehicleTrips           | ST_TR              | 6.39       | 5.83       |
| tblVehicleTrips           | ST_TR              | 42.04      | 28.95      |
| tblVehicleTrips           | SU_TR              | 5.86       | 5.35       |
| tblVehicleTrips           | SU_TR              | 20.43      | 14.07      |
| tblVehicleTrips           | WD_TR              | 6.65       | 6.07       |

|                 |                    |        |       |
|-----------------|--------------------|--------|-------|
| tblVehicleTrips | WD_TR              | 44.32  | 30.52 |
| tblWoodstoves   | NumberCatalytic    | 8.64   | 0.00  |
| tblWoodstoves   | NumberNoncatalytic | 8.64   | 0.00  |
| tblWoodstoves   | WoodstoveWoodMass  | 582.40 | 0.00  |

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2020    | 2.1046  | 4.7385 | 3.4186 | 6.2300e-003 | 0.3938        | 0.2119       | 0.6057     | 0.1530         | 0.1963        | 0.3493      | 0.0000   | 550.2118  | 550.2118  | 0.1489 | 0.0000 | 553.9354 |
| 2021    | 2.1559  | 0.4168 | 0.4435 | 6.5000e-004 | 2.1600e-003   | 0.0247       | 0.0269     | 5.8000e-004    | 0.0230        | 0.0236      | 0.0000   | 56.9115   | 56.9115   | 0.0156 | 0.0000 | 57.3011  |
| Maximum | 2.1559  | 4.7385 | 3.4186 | 6.2300e-003 | 0.3938        | 0.2119       | 0.6057     | 0.1530         | 0.1963        | 0.3493      | 0.0000   | 550.2118  | 550.2118  | 0.1489 | 0.0000 | 553.9354 |

Mitigated Construction

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |        |        |          |
| 2020    | 1.7685  | 1.0184 | 3.5960 | 6.2300e-003 | 0.1907        | 9.6100e-003  | 0.2003      | 0.0396         | 9.5600e-003   | 0.0492      | 0.0000   | 550.2113  | 550.2113  | 0.1489 | 0.0000 | 553.9348 |
| 2021    | 2.1203  | 0.0876 | 0.4691 | 6.5000e-004 | 2.1600e-003   | 1.0100e-003  | 3.1700e-003 | 5.8000e-004    | 1.0100e-003   | 1.5900e-003 | 0.0000   | 56.9115   | 56.9115   | 0.0156 | 0.0000 | 57.3011  |
| Maximum | 2.1203  | 1.0184 | 3.5960 | 6.2300e-003 | 0.1907        | 9.6100e-003  | 0.2003      | 0.0396         | 9.5600e-003   | 0.0492      | 0.0000   | 550.2113  | 550.2113  | 0.1489 | 0.0000 | 553.9348 |

|                   | ROG  | NOx   | CO    | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|-------|-------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 8.72 | 78.55 | -5.26 | 0.00 | 51.30         | 95.51        | 67.84      | 73.84          | 95.18         | 86.39       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 4-1-2020   | 6-30-2020  | 2.7121                                       | 0.4043                                     |
| 2       | 7-1-2020   | 9-30-2020  | 1.5292                                       | 0.4644                                     |
| 3       | 10-1-2020  | 12-31-2020 | 2.5146                                       | 1.8668                                     |
| 4       | 1-1-2021   | 3-31-2021  | 2.5609                                       | 2.1970                                     |
|         |            | Highest    | 2.7121                                       | 2.1970                                     |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 4/1/2020   | 4/28/2020  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 4/29/2020  | 6/23/2020  | 5             | 40       |                   |
| 3            | Trenching             | Trenching             | 6/1/2020   | 6/26/2020  | 5             | 20       |                   |
| 4            | Building Construction | Building Construction | 6/29/2020  | 11/13/2020 | 5             | 100      |                   |
| 5            | Architectural Coating | Architectural Coating | 11/2/2020  | 3/19/2021  | 5             | 100      |                   |
| 6            | Paving                | Paving                | 1/1/2021   | 2/25/2021  | 5             | 40       |                   |

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 160

Acres of Paving: 0.05

Residential Indoor: 1,057,050; Residential Outdoor: 352,350; Non-Residential Indoor: 7,350; Non-Residential Outdoor: 2,450; Striped

#### OffRoad Equipment

| Phase Name       | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders                | 2      | 8.00        | 97          | 0.37        |

|                       |                              |   |      |     |      |
|-----------------------|------------------------------|---|------|-----|------|
| Site Preparation      | Rubber Tired Dozers          | 2 | 8.00 | 247 | 0.40 |
| Site Preparation      | Scrapers                     | 3 | 8.00 | 367 | 0.48 |
| Site Preparation      | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Site Preparation      | Tractors/Loaders/Backhoes    | 1 | 8.00 | 187 | 0.41 |
| Grading               | Excavators                   | 2 | 8.00 | 158 | 0.38 |
| Grading               | Graders                      | 2 | 8.00 | 187 | 0.41 |
| Grading               | Rollers                      | 2 | 8.00 | 80  | 0.38 |
| Grading               | Rubber Tired Dozers          | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                     | 3 | 8.00 | 367 | 0.48 |
| Grading               | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Grading               | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |
| Grading               | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Excavators                   | 2 | 8.00 | 158 | 0.38 |
| Trenching             | Rough Terrain Forklifts      | 1 | 8.00 | 100 | 0.40 |
| Trenching             | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Aerial Lifts                 | 3 | 8.00 | 63  | 0.31 |
| Building Construction | Cranes                       | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts                    | 4 | 8.00 | 89  | 0.20 |
| Building Construction | Generator Sets               | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Other Construction Equipment | 3 | 8.00 | 172 | 0.42 |
| Building Construction | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                      | 1 | 8.00 | 46  | 0.45 |
| Architectural Coating | Aerial Lifts                 | 1 | 8.00 | 63  | 0.31 |
| Architectural Coating | Air Compressors              | 2 | 3.20 | 78  | 0.48 |
| Architectural Coating | Cranes                       | 1 | 4.00 | 81  | 0.73 |
| Architectural Coating | Forklifts                    | 1 | 8.00 | 89  | 0.20 |
| Paving                | Cement and Mortar Mixers     | 1 | 4.00 | 9   | 0.56 |
| Paving                | Pavers                       | 1 | 8.00 | 130 | 0.42 |

|        |                           |   |      |     |      |
|--------|---------------------------|---|------|-----|------|
| Paving | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Paving | Sweepers/Scrubbers        | 1 | 8.00 | 64  | 0.46 |
| Paving | Tractors/Loaders/Backhoes | 1 | 4.00 | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 2,615.00            | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 14                      | 445.00             | 98.00              | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 89.00              | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 100.00              | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

**3.2 Site Preparation - 2020**

**Unmitigated Construction On-Site**

|               | ROG     | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|---------------|---------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category      | tons/yr |     |    |     |               |              |            |                |               |             | MT/yr    |           |           |        |        |        |
| Fugitive Dust |         |     |    |     | 0.1629        | 0.0000       | 0.1629     | 0.0708         | 0.0000        | 0.0708      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

|              |               |               |               |                    |               |               |               |               |               |               |               |                |                |               |               |                |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Off-Road     | 0.0676        | 0.7247        | 0.3942        | 7.7000e-004        |               | 0.0344        | 0.0344        |               | 0.0317        | 0.0317        | 0.0000        | 67.9145        | 67.9145        | 0.0220        | 0.0000        | 68.4636        |
| <b>Total</b> | <b>0.0676</b> | <b>0.7247</b> | <b>0.3942</b> | <b>7.7000e-004</b> | <b>0.1629</b> | <b>0.0344</b> | <b>0.1973</b> | <b>0.0708</b> | <b>0.0317</b> | <b>0.1024</b> | <b>0.0000</b> | <b>67.9145</b> | <b>67.9145</b> | <b>0.0220</b> | <b>0.0000</b> | <b>68.4636</b> |

**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       | 2.5000e-004        | 1.2000e-004        | 1.5100e-003        | 0.0000        | 1.7000e-004        | 0.0000        | 1.7000e-004        | 5.0000e-005        | 0.0000        | 5.0000e-005        | 0.0000        | 0.1870        | 0.1870        | 1.0000e-005        | 0.0000        | 0.1872        |
| <b>Total</b> | <b>2.5000e-004</b> | <b>1.2000e-004</b> | <b>1.5100e-003</b> | <b>0.0000</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>1.7000e-004</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>0.1870</b> | <b>0.1870</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1872</b> |

**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 |                    |               |               |                    | 0.0733        | 0.0000             | 0.0733        | 0.0159         | 0.0000             | 0.0159        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 9.7600e-003        | 0.0517        | 0.3740        | 7.7000e-004        |               | 1.2700e-003        | 1.2700e-003   |                | 1.2700e-003        | 1.2700e-003   | 0.0000        | 67.9144        | 67.9144        | 0.0220        | 0.0000        | 68.4636        |
| <b>Total</b>  | <b>9.7600e-003</b> | <b>0.0517</b> | <b>0.3740</b> | <b>7.7000e-004</b> | <b>0.0733</b> | <b>1.2700e-003</b> | <b>0.0746</b> | <b>0.0159</b>  | <b>1.2700e-003</b> | <b>0.0172</b> | <b>0.0000</b> | <b>67.9144</b> | <b>67.9144</b> | <b>0.0220</b> | <b>0.0000</b> | <b>68.4636</b> |

**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   | 2.5000e-004 | 1.2000e-004 | 1.5100e-003 | 0.0000 | 1.7000e-004   | 0.0000       | 1.7000e-004 | 5.0000e-005    | 0.0000        | 5.0000e-005 | 0.0000   | 0.1870    | 0.1870    | 1.0000e-005 | 0.0000 | 0.1872 |
| Total    | 2.5000e-004 | 1.2000e-004 | 1.5100e-003 | 0.0000 | 1.7000e-004   | 0.0000       | 1.7000e-004 | 5.0000e-005    | 0.0000        | 5.0000e-005 | 0.0000   | 0.1870    | 0.1870    | 1.0000e-005 | 0.0000 | 0.1872 |

3.3 Grading - 2020

Unmitigated Construction On-Site

|               | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category      | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| Fugitive Dust |         |        |        |             | 0.2065        | 0.0000       | 0.2065     | 0.0755         | 0.0000        | 0.0755      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.1295  | 1.4744 | 0.9223 | 1.8100e-003 |               | 0.0640       | 0.0640     |                | 0.0589        | 0.0589      | 0.0000   | 159.1077  | 159.1077  | 0.0515 | 0.0000 | 160.3941 |
| Total         | 0.1295  | 1.4744 | 0.9223 | 1.8100e-003 | 0.2065        | 0.0640       | 0.2705     | 0.0755         | 0.0589        | 0.1344      | 0.0000   | 159.1077  | 159.1077  | 0.0515 | 0.0000 | 160.3941 |

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 | 2.8400e-003 | 0.1349      | 0.0220      | 1.8000e-004 | 1.1300e-003 | 1.3000e-004 | 1.2600e-003 | 3.1000e-004 | 1.2000e-004 | 4.4000e-004 | 0.0000 | 16.9818 | 16.9818 | 1.8100e-003 | 0.0000 | 17.0270 |
| 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  | 7.3000e-004 | 3.3000e-004 | 4.3300e-003 | 1.0000e-005 | 4.9000e-004 | 1.0000e-005 | 5.0000e-004 | 1.3000e-004 | 1.0000e-005 | 1.4000e-004 | 0.0000 | 0.5367  | 0.5367  | 2.0000e-005 | 0.0000 | 0.5373  |
| Total   | 3.5700e-003 | 0.1352      | 0.0263      | 1.9000e-004 | 1.6200e-003 | 1.4000e-004 | 1.7600e-003 | 4.4000e-004 | 1.3000e-004 | 5.8000e-004 | 0.0000 | 17.5185 | 17.5185 | 1.8300e-003 | 0.0000 | 17.5643 |

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 |         |        |        |             | 0.0929        | 0.0000       | 0.0929      | 0.0170         | 0.0000        | 0.0170      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.0234  | 0.1432 | 0.9585 | 1.8100e-003 |               | 2.9700e-003  | 2.9700e-003 |                | 2.9700e-003   | 2.9700e-003 | 0.0000   | 159.1075  | 159.1075  | 0.0515 | 0.0000 | 160.3939 |
| Total         | 0.0234  | 0.1432 | 0.9585 | 1.8100e-003 | 0.0929        | 2.9700e-003  | 0.0959      | 0.0170         | 2.9700e-003   | 0.0200      | 0.0000   | 159.1075  | 159.1075  | 0.0515 | 0.0000 | 160.3939 |

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  | 2.8400e-003 | 0.1349      | 0.0220      | 1.8000e-004 | 1.1300e-003   | 1.3000e-004  | 1.2600e-003 | 3.1000e-004    | 1.2000e-004   | 4.4000e-004 | 0.0000   | 16.9818   | 16.9818   | 1.8100e-003 | 0.0000 | 17.0270 |
| 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   | 7.3000e-004 | 3.3000e-004 | 4.3300e-003 | 1.0000e-005 | 4.9000e-004   | 1.0000e-005  | 5.0000e-004 | 1.3000e-004    | 1.0000e-005   | 1.4000e-004 | 0.0000   | 0.5367    | 0.5367    | 2.0000e-005 | 0.0000 | 0.5373  |
| Total    | 3.5700e-003 | 0.1352      | 0.0263      | 1.9000e-004 | 1.6200e-003   | 1.4000e-004  | 1.7600e-003 | 4.4000e-004    | 1.3000e-004   | 5.8000e-004 | 0.0000   | 17.5185   | 17.5185   | 1.8300e-003 | 0.0000 | 17.5643 |

### 3.4 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     | 0.0133        | 0.1393        | 0.1706        | 2.5000e-004        |               | 7.5100e-003        | 7.5100e-003        |                | 6.9100e-003        | 6.9100e-003        | 0.0000        | 22.1026        | 22.1026        | 7.1500e-003        | 0.0000        | 22.2813        |
| <b>Total</b> | <b>0.0133</b> | <b>0.1393</b> | <b>0.1706</b> | <b>2.5000e-004</b> |               | <b>7.5100e-003</b> | <b>7.5100e-003</b> |                | <b>6.9100e-003</b> | <b>6.9100e-003</b> | <b>0.0000</b> | <b>22.1026</b> | <b>22.1026</b> | <b>7.1500e-003</b> | <b>0.0000</b> | <b>22.2813</b> |

#### 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       | 2.0000e-004        | 9.0000e-005        | 1.1800e-003        | 0.0000        | 1.3000e-004        | 0.0000        | 1.4000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1464        | 0.1464        | 1.0000e-005        | 0.0000        | 0.1465        |
| <b>Total</b> | <b>2.0000e-004</b> | <b>9.0000e-005</b> | <b>1.1800e-003</b> | <b>0.0000</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1464</b> | <b>0.1464</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1465</b> |

#### Mitigated Construction On-Site

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 3.3400e-003        | 0.0239        | 0.1904        | 2.5000e-004        |               | 4.1000e-004        | 4.1000e-004        |                | 4.1000e-004        | 4.1000e-004        | 0.0000        | 22.1026        | 22.1026        | 7.1500e-003        | 0.0000        | 22.2813        |
| <b>Total</b> | <b>3.3400e-003</b> | <b>0.0239</b> | <b>0.1904</b> | <b>2.5000e-004</b> |               | <b>4.1000e-004</b> | <b>4.1000e-004</b> |                | <b>4.1000e-004</b> | <b>4.1000e-004</b> | <b>0.0000</b> | <b>22.1026</b> | <b>22.1026</b> | <b>7.1500e-003</b> | <b>0.0000</b> | <b>22.2813</b> |

### 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       | 2.0000e-004        | 9.0000e-005        | 1.1800e-003        | 0.0000        | 1.3000e-004        | 0.0000        | 1.4000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1464        | 0.1464        | 1.0000e-005        | 0.0000        | 0.1465        |
| <b>Total</b> | <b>2.0000e-004</b> | <b>9.0000e-005</b> | <b>1.1800e-003</b> | <b>0.0000</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1464</b> | <b>0.1464</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1465</b> |

### 3.5 Building Construction - 2020

#### Unmitigated Construction On-Site

|          | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| Off-Road | 0.1791  | 1.7692 | 1.5119 | 2.3800e-003 |               | 0.0949       | 0.0949     |                | 0.0884        | 0.0884      | 0.0000   | 207.1314  | 207.1314  | 0.0578 | 0.0000 | 208.5761 |

|       |        |        |        |             |  |        |        |  |        |        |        |          |          |        |        |          |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|
| Total | 0.1791 | 1.7692 | 1.5119 | 2.3800e-003 |  | 0.0949 | 0.0949 |  | 0.0884 | 0.0884 | 0.0000 | 207.1314 | 207.1314 | 0.0578 | 0.0000 | 208.5761 |
|-------|--------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|----------|----------|--------|--------|----------|

**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   | 9.2500e-003 | 0.3277 | 0.0910 | 4.1000e-004 | 4.5300e-003   | 5.3000e-004  | 5.0600e-003 | 1.3200e-003    | 5.1000e-004   | 1.8300e-003 | 0.0000   | 39.3361   | 39.3361   | 3.8400e-003 | 0.0000 | 39.4320 |
| Worker   | 0.0247      | 0.0113 | 0.1459 | 2.0000e-004 | 0.0165        | 2.3000e-004  | 0.0168      | 4.4200e-003    | 2.1000e-004   | 4.6300e-003 | 0.0000   | 18.0938   | 18.0938   | 7.8000e-004 | 0.0000 | 18.1133 |
| Total    | 0.0339      | 0.3390 | 0.2369 | 6.1000e-004 | 0.0211        | 7.6000e-004  | 0.0218      | 5.7400e-003    | 7.2000e-004   | 6.4600e-003 | 0.0000   | 57.4299   | 57.4299   | 4.6200e-003 | 0.0000 | 57.5453 |

**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 | 0.0324  | 0.2956 | 1.6553 | 2.3800e-003 |               | 3.7500e-003  | 3.7500e-003 |                | 3.7500e-003   | 3.7500e-003 | 0.0000   | 207.1312  | 207.1312  | 0.0578 | 0.0000 | 208.5759 |
| Total    | 0.0324  | 0.2956 | 1.6553 | 2.3800e-003 |               | 3.7500e-003  | 3.7500e-003 |                | 3.7500e-003   | 3.7500e-003 | 0.0000   | 207.1312  | 207.1312  | 0.0578 | 0.0000 | 208.5759 |

**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   | 9.2500e-003 | 0.3277 | 0.0910 | 4.1000e-004 | 4.5300e-003   | 5.3000e-004  | 5.0600e-003 | 1.3200e-003    | 5.1000e-004   | 1.8300e-003 | 0.0000   | 39.3361   | 39.3361   | 3.8400e-003 | 0.0000 | 39.4320 |
| Worker   | 0.0247      | 0.0113 | 0.1459 | 2.0000e-004 | 0.0165        | 2.3000e-004  | 0.0168      | 4.4200e-003    | 2.1000e-004   | 4.6300e-003 | 0.0000   | 18.0938   | 18.0938   | 7.8000e-004 | 0.0000 | 18.1133 |
| Total    | 0.0339      | 0.3390 | 0.2369 | 6.1000e-004 | 0.0211        | 7.6000e-004  | 0.0218      | 5.7400e-003    | 7.2000e-004   | 6.4600e-003 | 0.0000   | 57.4299   | 57.4299   | 4.6200e-003 | 0.0000 | 57.5453 |

### 3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

|                 | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 1.6569  |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0181  | 0.1554 | 0.1409 | 2.0000e-004 |               | 0.0102       | 0.0102     |                | 9.6300e-003   | 9.6300e-003 | 0.0000   | 17.0816   | 17.0816   | 4.0500e-003 | 0.0000 | 17.1829 |
| Total           | 1.6750  | 0.1554 | 0.1409 | 2.0000e-004 |               | 0.0102       | 0.0102     |                | 9.6300e-003   | 9.6300e-003 | 0.0000   | 17.0816   | 17.0816   | 4.0500e-003 | 0.0000 | 17.1829 |

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  | 2.1700e-003 | 9.9000e-004 | 0.0128 | 2.0000e-005 | 1.4600e-003 | 2.0000e-005 | 1.4800e-003 | 3.9000e-004 | 2.0000e-005 | 4.1000e-004 | 0.0000 | 1.5923 | 1.5923 | 7.0000e-005 | 0.0000 | 1.5940 |
| Total   | 2.1700e-003 | 9.9000e-004 | 0.0128 | 2.0000e-005 | 1.4600e-003 | 2.0000e-005 | 1.4800e-003 | 3.9000e-004 | 2.0000e-005 | 4.1000e-004 | 0.0000 | 1.5923 | 1.5923 | 7.0000e-005 | 0.0000 | 1.5940 |

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 | 1.6569      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 2.7100e-003 | 0.0286 | 0.1390 | 2.0000e-004 |               | 3.0000e-004  | 3.0000e-004 |                | 3.0000e-004   | 3.0000e-004 | 0.0000   | 17.0816   | 17.0816   | 4.0500e-003 | 0.0000 | 17.1829 |
| Total           | 1.6596      | 0.0286 | 0.1390 | 2.0000e-004 |               | 3.0000e-004  | 3.0000e-004 |                | 3.0000e-004   | 3.0000e-004 | 0.0000   | 17.0816   | 17.0816   | 4.0500e-003 | 0.0000 | 17.1829 |

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   | 2.1700e-003 | 9.9000e-004 | 0.0128 | 2.0000e-005 | 1.4600e-003   | 2.0000e-005  | 1.4800e-003 | 3.9000e-004    | 2.0000e-005   | 4.1000e-004 | 0.0000   | 1.5923    | 1.5923    | 7.0000e-005 | 0.0000 | 1.5940 |
| Total    | 2.1700e-003 | 9.9000e-004 | 0.0128 | 2.0000e-005 | 1.4600e-003   | 2.0000e-005  | 1.4800e-003 | 3.9000e-004    | 2.0000e-005   | 4.1000e-004 | 0.0000   | 1.5923    | 1.5923    | 7.0000e-005 | 0.0000 | 1.5940 |

### 3.6 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 | 2.1088        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road        | 0.0207        | 0.1791        | 0.1770        | 2.5000e-004        |               | 0.0113        | 0.0113        |                | 0.0106        | 0.0106        | 0.0000        | 21.7403        | 21.7403        | 5.0900e-003        | 0.0000        | 21.8675        |
| <b>Total</b>    | <b>2.1295</b> | <b>0.1791</b> | <b>0.1770</b> | <b>2.5000e-004</b> |               | <b>0.0113</b> | <b>0.0113</b> |                | <b>0.0106</b> | <b>0.0106</b> | <b>0.0000</b> | <b>21.7403</b> | <b>21.7403</b> | <b>5.0900e-003</b> | <b>0.0000</b> | <b>21.8675</b> |

#### 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       | 2.5200e-003        | 1.1100e-003        | 0.0147        | 2.0000e-005        | 1.8500e-003        | 2.0000e-005        | 1.8800e-003        | 5.0000e-004        | 2.0000e-005        | 5.2000e-004        | 0.0000        | 1.9577        | 1.9577        | 8.0000e-005        | 0.0000        | 1.9596        |
| <b>Total</b> | <b>2.5200e-003</b> | <b>1.1100e-003</b> | <b>0.0147</b> | <b>2.0000e-005</b> | <b>1.8500e-003</b> | <b>2.0000e-005</b> | <b>1.8800e-003</b> | <b>5.0000e-004</b> | <b>2.0000e-005</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>1.9577</b> | <b>1.9577</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>1.9596</b> |

#### Mitigated Construction On-Site

|                 | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|-----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category        | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Archit. Coating | 2.1088        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road        | 3.4500e-003   | 0.0364        | 0.1770        | 2.5000e-004        |               | 3.8000e-004        | 3.8000e-004        |                | 3.8000e-004        | 3.8000e-004        | 0.0000        | 21.7403        | 21.7403        | 5.0900e-003        | 0.0000        | 21.8675        |
| <b>Total</b>    | <b>2.1122</b> | <b>0.0364</b> | <b>0.1770</b> | <b>2.5000e-004</b> |               | <b>3.8000e-004</b> | <b>3.8000e-004</b> |                | <b>3.8000e-004</b> | <b>3.8000e-004</b> | <b>0.0000</b> | <b>21.7403</b> | <b>21.7403</b> | <b>5.0900e-003</b> | <b>0.0000</b> | <b>21.8675</b> |

### 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       | 2.5200e-003        | 1.1100e-003        | 0.0147        | 2.0000e-005        | 1.8500e-003        | 2.0000e-005        | 1.8800e-003        | 5.0000e-004        | 2.0000e-005        | 5.2000e-004        | 0.0000        | 1.9577        | 1.9577        | 8.0000e-005        | 0.0000        | 1.9596        |
| <b>Total</b> | <b>2.5200e-003</b> | <b>1.1100e-003</b> | <b>0.0147</b> | <b>2.0000e-005</b> | <b>1.8500e-003</b> | <b>2.0000e-005</b> | <b>1.8800e-003</b> | <b>5.0000e-004</b> | <b>2.0000e-005</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>1.9577</b> | <b>1.9577</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>1.9596</b> |

### 3.7 Paving - 2021

#### Unmitigated Construction On-Site

|          | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 0.0234  | 0.2315 | 0.2489 | 3.7000e-004 |               | 0.0134       | 0.0134     |                | 0.0124        | 0.0124      | 0.0000   | 32.2881   | 32.2881   | 0.0103 | 0.0000 | 32.5467 |

|        |             |        |        |             |  |        |        |  |        |        |        |         |         |        |        |         |
|--------|-------------|--------|--------|-------------|--|--------|--------|--|--------|--------|--------|---------|---------|--------|--------|---------|
| Paving | 7.0000e-005 |        |        |             |  | 0.0000 | 0.0000 |  | 0.0000 | 0.0000 | 0.0000 | 0.0000  | 0.0000  | 0.0000 | 0.0000 | 0.0000  |
| Total  | 0.0235      | 0.2315 | 0.2489 | 3.7000e-004 |  | 0.0134 | 0.0134 |  | 0.0124 | 0.0124 | 0.0000 | 32.2881 | 32.2881 | 0.0103 | 0.0000 | 32.5467 |

**Unmitigated Construction Off-Site**

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 1.0000e-004 | 4.9600e-003 | 8.1000e-004 | 1.0000e-005 | 4.0000e-005   | 0.0000       | 5.0000e-005 | 1.0000e-005    | 0.0000        | 2.0000e-005 | 0.0000   | 0.6426    | 0.6426    | 7.0000e-005 | 0.0000 | 0.6442 |
| 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 | 1.6000e-004 | 2.1300e-003 | 0.0000      | 2.7000e-004   | 0.0000       | 2.7000e-004 | 7.0000e-005    | 0.0000        | 7.0000e-005 | 0.0000   | 0.2828    | 0.2828    | 1.0000e-005 | 0.0000 | 0.2831 |
| Total    | 4.6000e-004 | 5.1200e-003 | 2.9400e-003 | 1.0000e-005 | 3.1000e-004   | 0.0000       | 3.2000e-004 | 8.0000e-005    | 0.0000        | 9.0000e-005 | 0.0000   | 0.9254    | 0.9254    | 8.0000e-005 | 0.0000 | 0.9273 |

**Mitigated Construction On-Site**

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 5.0700e-003 | 0.0450 | 0.2745 | 3.7000e-004 |               | 5.9000e-004  | 5.9000e-004 |                | 5.9000e-004   | 5.9000e-004 | 0.0000   | 32.2881   | 32.2881   | 0.0103 | 0.0000 | 32.5467 |
| Paving   | 7.0000e-005 |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 5.1400e-003 | 0.0450 | 0.2745 | 3.7000e-004 |               | 5.9000e-004  | 5.9000e-004 |                | 5.9000e-004   | 5.9000e-004 | 0.0000   | 32.2881   | 32.2881   | 0.0103 | 0.0000 | 32.5467 |

**Mitigated Construction Off-Site**

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 1.0000e-004 | 4.9600e-003 | 8.1000e-004 | 1.0000e-005 | 4.0000e-005   | 0.0000       | 5.0000e-005 | 1.0000e-005    | 0.0000        | 2.0000e-005 | 0.0000   | 0.6426    | 0.6426    | 7.0000e-005 | 0.0000 | 0.6442 |
| 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 | 1.6000e-004 | 2.1300e-003 | 0.0000      | 2.7000e-004   | 0.0000       | 2.7000e-004 | 7.0000e-005    | 0.0000        | 7.0000e-005 | 0.0000   | 0.2828    | 0.2828    | 1.0000e-005 | 0.0000 | 0.2831 |
| Total    | 4.6000e-004 | 5.1200e-003 | 2.9400e-003 | 1.0000e-005 | 3.1000e-004   | 0.0000       | 3.2000e-004 | 8.0000e-005    | 0.0000        | 9.0000e-005 | 0.0000   | 0.9254    | 0.9254    | 8.0000e-005 | 0.0000 | 0.9273 |

## Gateway Crossings, Phase 4 TAC Emissions - Santa Clara County, Annual

## Gateway Crossings, Phase 4 TAC Emissions

### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|---------------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 905.00 | Space         | 0.00        | 362,000.00         | 0          |
| Parking Lot                    | 4.00   | Space         | 0.04        | 1,600.00           | 0          |
| Apartments Mid Rise            | 556.00 | Dwelling Unit | 21.36       | 556,885.00         | 1590       |

### 1.2 Other Project Characteristics

|                                 |                                |                                 |       |                                  |       |
|---------------------------------|--------------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                          | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 58    |
| <b>Climate Zone</b>             | 4                              |                                 |       | <b>Operational Year</b>          | 2024  |
| <b>Utility Company</b>          | Pacific Gas & Electric Company |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 380                            | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E used to represent SVP (Silicon Valley Power. Current CO2 emission factor from City of Santa Clara 2020 Climate Action Plan

Land Use - Applicant provided project description

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Trips and VMT - Paving trips= 800 cy= 100 trips

Grading - 18459 cy of soil export

Vehicle Trips - From Project Traffic Report

Woodstoves - No woodstoves or wood based fireplaces

Energy Use - Title 24,2013 values used

Construction Off-road Equipment Mitigation - Tier 2 Mitigation and Best Management practices

Energy Mitigation - Title 24, 2016 came into effect on 1st January, 2017

| Table Name              | Column Name                  | Default Value | New Value |
|-------------------------|------------------------------|---------------|-----------|
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed | 40            | 15        |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 5.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 6.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 7.00      |

|                           |                            |            |              |
|---------------------------|----------------------------|------------|--------------|
| 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 |
| 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 |
| tblFireplaces             | FireplaceWoodMass          | 228.80     | 0.00         |
| tblFireplaces             | NumberGas                  | 83.40      | 556.00       |
| tblFireplaces             | NumberNoFireplace          | 22.24      | 0.00         |
| tblFireplaces             | NumberWood                 | 94.52      | 0.00         |
| tblGrading                | MaterialExported           | 0.00       | 18,459.00    |
| tblLandUse                | BuildingSpaceSquareFeet    | 556,000.00 | 556,885.00   |
| tblLandUse                | LandUseSquareFeet          | 556,000.00 | 556,885.00   |
| tblLandUse                | LotAcreage                 | 8.14       | 0.00         |
| tblLandUse                | LotAcreage                 | 14.63      | 21.36        |
| tblProjectCharacteristics | CO2IntensityFactor         | 641.35     | 380          |

|                           |                    |        |        |
|---------------------------|--------------------|--------|--------|
| tblProjectCharacteristics | OperationalYear    | 2018   | 2024   |
| tblTripsAndVMT            | HaulingTripLength  | 20.00  | 1.00   |
| tblTripsAndVMT            | HaulingTripLength  | 20.00  | 1.00   |
| tblTripsAndVMT            | HaulingTripLength  | 20.00  | 1.00   |
| tblTripsAndVMT            | HaulingTripLength  | 20.00  | 1.00   |
| tblTripsAndVMT            | HaulingTripLength  | 20.00  | 1.00   |
| tblTripsAndVMT            | HaulingTripLength  | 20.00  | 1.00   |
| tblTripsAndVMT            | HaulingTripNumber  | 0.00   | 100.00 |
| tblTripsAndVMT            | VendorTripLength   | 7.30   | 1.00   |
| tblTripsAndVMT            | VendorTripLength   | 7.30   | 1.00   |
| tblTripsAndVMT            | VendorTripLength   | 7.30   | 1.00   |
| tblTripsAndVMT            | VendorTripLength   | 7.30   | 1.00   |
| tblTripsAndVMT            | VendorTripLength   | 7.30   | 1.00   |
| tblTripsAndVMT            | VendorTripLength   | 7.30   | 1.00   |
| tblTripsAndVMT            | WorkerTripLength   | 10.80  | 1.00   |
| tblTripsAndVMT            | WorkerTripLength   | 10.80  | 1.00   |
| tblTripsAndVMT            | WorkerTripLength   | 10.80  | 1.00   |
| tblTripsAndVMT            | WorkerTripLength   | 10.80  | 1.00   |
| tblTripsAndVMT            | WorkerTripLength   | 10.80  | 1.00   |
| tblTripsAndVMT            | WorkerTripLength   | 10.80  | 1.00   |
| tblVehicleTrips           | ST_TR              | 6.39   | 5.83   |
| tblVehicleTrips           | SU_TR              | 5.86   | 5.35   |
| tblVehicleTrips           | WD_TR              | 6.65   | 6.07   |
| tblWoodstoves             | NumberCatalytic    | 11.12  | 0.00   |
| tblWoodstoves             | NumberNoncatalytic | 11.12  | 0.00   |
| tblWoodstoves             | WoodstoveWoodMass  | 582.40 | 0.00   |

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2022    | 2.4409  | 5.7614 | 5.1310 | 9.7800e-003 | 0.5165        | 0.2335       | 0.7500     | 0.1962         | 0.2175        | 0.4137      | 0.0000   | 855.3373  | 855.3373  | 0.2199 | 0.0000 | 860.8354 |
| 2023    | 2.2094  | 0.6134 | 0.7425 | 1.2300e-003 | 5.3600e-003   | 0.0293       | 0.0346     | 1.4400e-003    | 0.0273        | 0.0287      | 0.0000   | 107.3268  | 107.3268  | 0.0281 | 0.0000 | 108.0293 |
| Maximum | 2.4409  | 5.7614 | 5.1310 | 9.7800e-003 | 0.5165        | 0.2335       | 0.7500     | 0.1962         | 0.2175        | 0.4137      | 0.0000   | 855.3373  | 855.3373  | 0.2199 | 0.0000 | 860.8354 |

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    | 2.0304  | 1.7257 | 5.6404 | 9.7800e-003 | 0.2570        | 0.0143       | 0.2713      | 0.0536         | 0.0142        | 0.0678      | 0.0000   | 855.3364  | 855.3364  | 0.2199 | 0.0000 | 860.8345 |
| 2023    | 2.1626  | 0.1780 | 0.8190 | 1.2300e-003 | 5.3600e-003   | 1.8500e-003  | 7.2100e-003 | 1.4400e-003    | 1.8400e-003   | 3.2900e-003 | 0.0000   | 107.3267  | 107.3267  | 0.0281 | 0.0000 | 108.0292 |
| Maximum | 2.1626  | 1.7257 | 5.6404 | 9.7800e-003 | 0.2570        | 0.0143       | 0.2713      | 0.0536         | 0.0142        | 0.0678      | 0.0000   | 855.3364  | 855.3364  | 0.2199 | 0.0000 | 860.8345 |

|                   | ROG  | NOx   | CO    | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|-------|-------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 9.84 | 70.14 | -9.98 | 0.00 | 49.72         | 93.85        | 64.50      | 72.16          | 93.43         | 83.93       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 3-1-2022   | 5-31-2022  | 2.2810                                       | 0.3713                                     |
| 2       | 6-1-2022   | 8-31-2022  | 1.9888                                       | 0.7011                                     |
| 3       | 9-1-2022   | 11-30-2022 | 2.7273                                       | 1.8172                                     |
| 4       | 12-1-2022  | 2-28-2023  | 2.7497                                       | 2.1702                                     |

|   |          |           |        |        |
|---|----------|-----------|--------|--------|
| 5 | 3-1-2023 | 5-31-2023 | 1.2289 | 0.9975 |
|   |          | Highest   | 2.7497 | 2.1702 |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 3/1/2022   | 3/28/2022 | 5             | 20       |                   |
| 2            | Grading               | Grading               | 3/29/2022  | 6/20/2022 | 5             | 60       |                   |
| 3            | Trenching             | Trenching             | 5/2/2022   | 6/24/2022 | 5             | 40       |                   |
| 4            | Building Construction | Building Construction | 6/1/2022   | 1/10/2023 | 5             | 160      |                   |
| 5            | Architectural Coating | Architectural Coating | 10/3/2022  | 4/14/2023 | 5             | 140      |                   |
| 6            | Paving                | Paving                | 2/1/2023   | 4/25/2023 | 5             | 60       |                   |

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 240

Acres of Paving: 0.04

Residential Indoor: 1,127,692; Residential Outdoor: 375,897; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

#### OffRoad Equipment

| Phase Name       | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Site Preparation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Site Preparation | Scrapers                  | 3      | 8.00        | 367         | 0.48        |
| Site Preparation | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Site Preparation | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Grading          | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading          | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Grading          | Rollers                   | 2      | 8.00        | 80          | 0.38        |

|                       |                              |   |      |     |      |
|-----------------------|------------------------------|---|------|-----|------|
| Grading               | Rubber Tired Dozers          | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                     | 3 | 8.00 | 367 | 0.48 |
| Grading               | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Grading               | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |
| Grading               | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Excavators                   | 2 | 8.00 | 158 | 0.38 |
| Trenching             | Rough Terrain Forklifts      | 1 | 8.00 | 100 | 0.40 |
| Trenching             | Skid Steer Loaders           | 1 | 8.00 | 65  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Aerial Lifts                 | 3 | 8.00 | 63  | 0.31 |
| Building Construction | Cranes                       | 1 | 6.00 | 231 | 0.29 |
| Building Construction | Forklifts                    | 4 | 8.00 | 89  | 0.20 |
| Building Construction | Generator Sets               | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Other Construction Equipment | 3 | 8.00 | 172 | 0.42 |
| Building Construction | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                      | 4 | 8.00 | 46  | 0.45 |
| Architectural Coating | Aerial Lifts                 | 1 | 8.00 | 63  | 0.31 |
| Architectural Coating | Air Compressors              | 2 | 3.50 | 78  | 0.48 |
| Architectural Coating | Cranes                       | 1 | 4.60 | 231 | 0.29 |
| Architectural Coating | Forklifts                    | 1 | 8.00 | 89  | 0.20 |
| Paving                | Cement and Mortar Mixers     | 1 | 5.30 | 9   | 0.56 |
| Paving                | Pavers                       | 1 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment             | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                      | 2 | 8.00 | 80  | 0.38 |
| Paving                | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |
| Paving                | Tractors/Loaders/Backhoes    | 1 | 5.30 | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 2,307.00            | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 17                      | 553.00             | 119.00             | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 111.00             | 0.00               | 0.00                | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 100.00              | 1.00               | 1.00               | 1.00                | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

### 3.2 Site Preparation - 2022

#### Unmitigated Construction On-Site

|               | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|---------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category      | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Fugitive Dust |         |        |        |             | 0.1629        | 0.0000       | 0.1629     | 0.0708         | 0.0000        | 0.0708      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0520  | 0.5754 | 0.3336 | 8.1000e-004 |               | 0.0234       | 0.0234     |                | 0.0215        | 0.0215      | 0.0000   | 71.2062   | 71.2062   | 0.0230 | 0.0000 | 71.7819 |
| Total         | 0.0520  | 0.5754 | 0.3336 | 8.1000e-004 | 0.1629        | 0.0234       | 0.1863     | 0.0708         | 0.0215        | 0.0923      | 0.0000   | 71.2062   | 71.2062   | 0.0230 | 0.0000 | 71.7819 |

#### 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   | 2.1000e-004 | 9.0000e-005 | 1.2300e-003 | 0.0000 | 1.7000e-004   | 0.0000       | 1.7000e-004 | 5.0000e-005    | 0.0000        | 5.0000e-005 | 0.0000   | 0.1742    | 0.1742    | 1.0000e-005 | 0.0000 | 0.1744 |
| Total    | 2.1000e-004 | 9.0000e-005 | 1.2300e-003 | 0.0000 | 1.7000e-004   | 0.0000       | 1.7000e-004 | 5.0000e-005    | 0.0000        | 5.0000e-005 | 0.0000   | 0.1742    | 0.1742    | 1.0000e-005 | 0.0000 | 0.1744 |

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 |         |        |        |             | 0.0733        | 0.0000       | 0.0733      | 0.0159         | 0.0000        | 0.0159      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0102  | 0.0536 | 0.3803 | 8.1000e-004 |               | 1.3300e-003  | 1.3300e-003 |                | 1.3300e-003   | 1.3300e-003 | 0.0000   | 71.2061   | 71.2061   | 0.0230 | 0.0000 | 71.7819 |
| Total         | 0.0102  | 0.0536 | 0.3803 | 8.1000e-004 | 0.0733        | 1.3300e-003  | 0.0746      | 0.0159         | 1.3300e-003   | 0.0173      | 0.0000   | 71.2061   | 71.2061   | 0.0230 | 0.0000 | 71.7819 |

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       | 2.1000e-004        | 9.0000e-005        | 1.2300e-003        | 0.0000        | 1.7000e-004        | 0.0000        | 1.7000e-004        | 5.0000e-005        | 0.0000        | 5.0000e-005        | 0.0000        | 0.1742        | 0.1742        | 1.0000e-005        | 0.0000        | 0.1744        |
| <b>Total</b> | <b>2.1000e-004</b> | <b>9.0000e-005</b> | <b>1.2300e-003</b> | <b>0.0000</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>1.7000e-004</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>0.1742</b> | <b>0.1742</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.1744</b> |

### 3.3 Grading - 2022

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Fugitive Dust |               |               |               |                    | 0.3090        | 0.0000        | 0.3090        | 0.1132         | 0.0000        | 0.1132        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Off-Road      | 0.1587        | 1.7266        | 1.2578        | 2.7200e-003        |               | 0.0725        | 0.0725        |                | 0.0667        | 0.0667        | 0.0000        | 238.8577        | 238.8577        | 0.0773        | 0.0000        | 240.7890        |
| <b>Total</b>  | <b>0.1587</b> | <b>1.7266</b> | <b>1.2578</b> | <b>2.7200e-003</b> | <b>0.3090</b> | <b>0.0725</b> | <b>0.3814</b> | <b>0.1132</b>  | <b>0.0667</b> | <b>0.1799</b> | <b>0.0000</b> | <b>238.8577</b> | <b>238.8577</b> | <b>0.0773</b> | <b>0.0000</b> | <b>240.7890</b> |

#### 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      | 2.2100e-003        | 0.1100        | 0.0182        | 1.5000e-004        | 1.0000e-003        | 8.0000e-005        | 1.0800e-003        | 2.8000e-004        | 8.0000e-005        | 3.6000e-004        | 0.0000        | 14.6708        | 14.6708        | 1.4300e-003        | 0.0000        | 14.7065        |
| 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       | 9.2000e-004        | 3.9000e-004   | 5.3000e-003   | 1.0000e-005        | 7.4000e-004        | 1.0000e-005        | 7.5000e-004        | 2.0000e-004        | 1.0000e-005        | 2.1000e-004        | 0.0000        | 0.7500         | 0.7500         | 3.0000e-005        | 0.0000        | 0.7507         |
| <b>Total</b> | <b>3.1300e-003</b> | <b>0.1104</b> | <b>0.0235</b> | <b>1.6000e-004</b> | <b>1.7400e-003</b> | <b>9.0000e-005</b> | <b>1.8300e-003</b> | <b>4.8000e-004</b> | <b>9.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>15.4208</b> | <b>15.4208</b> | <b>1.4600e-003</b> | <b>0.0000</b> | <b>15.4571</b> |

### 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 |         |        |        |             | 0.1390        | 0.0000       | 0.1390      | 0.0255         | 0.0000        | 0.0255      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000   |
| Off-Road      | 0.0351  | 0.2148 | 1.4378 | 2.7200e-003 |               | 4.4500e-003  | 4.4500e-003 |                | 4.4500e-003   | 4.4500e-003 | 0.0000   | 238.8575  | 238.8575  | 0.0773 | 0.0000 | 240.7887 |
| Total         | 0.0351  | 0.2148 | 1.4378 | 2.7200e-003 | 0.1390        | 4.4500e-003  | 0.1435      | 0.0255         | 4.4500e-003   | 0.0299      | 0.0000   | 238.8575  | 238.8575  | 0.0773 | 0.0000 | 240.7887 |

### 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  | 2.2100e-003 | 0.1100      | 0.0182      | 1.5000e-004 | 1.0000e-003   | 8.0000e-005  | 1.0800e-003 | 2.8000e-004    | 8.0000e-005   | 3.6000e-004 | 0.0000   | 14.6708   | 14.6708   | 1.4300e-003 | 0.0000 | 14.7065 |
| 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   | 9.2000e-004 | 3.9000e-004 | 5.3000e-003 | 1.0000e-005 | 7.4000e-004   | 1.0000e-005  | 7.5000e-004 | 2.0000e-004    | 1.0000e-005   | 2.1000e-004 | 0.0000   | 0.7500    | 0.7500    | 3.0000e-005 | 0.0000 | 0.7507  |
| Total    | 3.1300e-003 | 0.1104      | 0.0235      | 1.6000e-004 | 1.7400e-003   | 9.0000e-005  | 1.8300e-003 | 4.8000e-004    | 9.0000e-005   | 5.7000e-004 | 0.0000   | 15.4208   | 15.4208   | 1.4600e-003 | 0.0000 | 15.4571 |

## 3.4 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     | 0.0216        | 0.2198        | 0.3380        | 5.0000e-004        |               | 0.0106        | 0.0106        |                | 9.7200e-003        | 9.7200e-003        | 0.0000        | 44.2324        | 44.2324        | 0.0143        | 0.0000        | 44.5900        |
| <b>Total</b> | <b>0.0216</b> | <b>0.2198</b> | <b>0.3380</b> | <b>5.0000e-004</b> |               | <b>0.0106</b> | <b>0.0106</b> |                | <b>9.7200e-003</b> | <b>9.7200e-003</b> | <b>0.0000</b> | <b>44.2324</b> | <b>44.2324</b> | <b>0.0143</b> | <b>0.0000</b> | <b>44.5900</b> |

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        | 1.4000e-004        | 1.9300e-003        | 0.0000        | 2.7000e-004        | 0.0000        | 2.7000e-004        | 7.0000e-005        | 0.0000        | 7.0000e-005        | 0.0000        | 0.2727        | 0.2727        | 1.0000e-005        | 0.0000        | 0.2730        |
| <b>Total</b> | <b>3.3000e-004</b> | <b>1.4000e-004</b> | <b>1.9300e-003</b> | <b>0.0000</b> | <b>2.7000e-004</b> | <b>0.0000</b> | <b>2.7000e-004</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>0.2727</b> | <b>0.2727</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.2730</b> |

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 | 6.6800e-003 | 0.0478 | 0.3808 | 5.0000e-004 |               | 8.2000e-004  | 8.2000e-004 |                | 8.2000e-004   | 8.2000e-004 | 0.0000   | 44.2323   | 44.2323   | 0.0143 | 0.0000 | 44.5900 |

|       |             |        |        |             |  |             |             |  |             |             |        |         |         |        |        |         |
|-------|-------------|--------|--------|-------------|--|-------------|-------------|--|-------------|-------------|--------|---------|---------|--------|--------|---------|
| Total | 6.6800e-003 | 0.0478 | 0.3808 | 5.0000e-004 |  | 8.2000e-004 | 8.2000e-004 |  | 8.2000e-004 | 8.2000e-004 | 0.0000 | 44.2323 | 44.2323 | 0.0143 | 0.0000 | 44.5900 |
|-------|-------------|--------|--------|-------------|--|-------------|-------------|--|-------------|-------------|--------|---------|---------|--------|--------|---------|

### 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 | 1.4000e-004 | 1.9300e-003 | 0.0000 | 2.7000e-004   | 0.0000       | 2.7000e-004 | 7.0000e-005    | 0.0000        | 7.0000e-005 | 0.0000   | 0.2727    | 0.2727    | 1.0000e-005 | 0.0000 | 0.2730 |
| Total    | 3.3000e-004 | 1.4000e-004 | 1.9300e-003 | 0.0000 | 2.7000e-004   | 0.0000       | 2.7000e-004 | 7.0000e-005    | 0.0000        | 7.0000e-005 | 0.0000   | 0.2727    | 0.2727    | 1.0000e-005 | 0.0000 | 0.2730 |

## 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 | 0.2733  | 2.3669 | 2.6067 | 4.1300e-003 |               | 0.1171       | 0.1171     |                | 0.1102        | 0.1102      | 0.0000   | 350.3490  | 350.3490  | 0.0896 | 0.0000 | 352.5902 |
| Total    | 0.2733  | 2.3669 | 2.6067 | 4.1300e-003 |               | 0.1171       | 0.1171     |                | 0.1102        | 0.1102      | 0.0000   | 350.3490  | 350.3490  | 0.0896 | 0.0000 | 352.5902 |

### 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   | 0.0142  | 0.5599 | 0.1453 | 7.5000e-004 | 8.4100e-003   | 4.2000e-004  | 8.8300e-003 | 2.4500e-003    | 4.0000e-004   | 2.8500e-003 | 0.0000   | 71.7290   | 71.7290   | 6.3100e-003 | 0.0000 | 71.8867  |
| Worker   | 0.0393  | 0.0168 | 0.2265 | 3.6000e-004 | 0.0315        | 4.1000e-004  | 0.0319      | 8.4100e-003    | 3.8000e-004   | 8.7900e-003 | 0.0000   | 32.0483   | 32.0483   | 1.1600e-003 | 0.0000 | 32.0772  |
| Total    | 0.0535  | 0.5767 | 0.3718 | 1.1100e-003 | 0.0399        | 8.3000e-004  | 0.0407      | 0.0109         | 7.8000e-004   | 0.0116      | 0.0000   | 103.7773  | 103.7773  | 7.4700e-003 | 0.0000 | 103.9639 |

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 | 0.0582  | 0.6768 | 2.8265 | 4.1300e-003 |               | 6.2300e-003  | 6.2300e-003 |                | 6.2300e-003   | 6.2300e-003 | 0.0000   | 350.3486  | 350.3486  | 0.0896 | 0.0000 | 352.5897 |
| Total    | 0.0582  | 0.6768 | 2.8265 | 4.1300e-003 |               | 6.2300e-003  | 6.2300e-003 |                | 6.2300e-003   | 6.2300e-003 | 0.0000   | 350.3486  | 350.3486  | 0.0896 | 0.0000 | 352.5897 |

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       | 0.0142        | 0.5599        | 0.1453        | 7.5000e-004        | 8.4100e-003   | 4.2000e-004        | 8.8300e-003   | 2.4500e-003   | 4.0000e-004        | 2.8500e-003   | 0.0000        | 71.7290         | 71.7290         | 6.3100e-003        | 0.0000        | 71.8867         |
| Worker       | 0.0393        | 0.0168        | 0.2265        | 3.6000e-004        | 0.0315        | 4.1000e-004        | 0.0319        | 8.4100e-003   | 3.8000e-004        | 8.7900e-003   | 0.0000        | 32.0483         | 32.0483         | 1.1600e-003        | 0.0000        | 32.0772         |
| <b>Total</b> | <b>0.0535</b> | <b>0.5767</b> | <b>0.3718</b> | <b>1.1100e-003</b> | <b>0.0399</b> | <b>8.3000e-004</b> | <b>0.0407</b> | <b>0.0109</b> | <b>7.8000e-004</b> | <b>0.0116</b> | <b>0.0000</b> | <b>103.7773</b> | <b>103.7773</b> | <b>7.4700e-003</b> | <b>0.0000</b> | <b>103.9639</b> |

### 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     | 0.0115        | 0.0999        | 0.1185        | 1.9000e-004        |               | 4.7100e-003        | 4.7100e-003        |                | 4.4300e-003        | 4.4300e-003        | 0.0000        | 16.0294        | 16.0294        | 4.0700e-003        | 0.0000        | 16.1311        |
| <b>Total</b> | <b>0.0115</b> | <b>0.0999</b> | <b>0.1185</b> | <b>1.9000e-004</b> |               | <b>4.7100e-003</b> | <b>4.7100e-003</b> |                | <b>4.4300e-003</b> | <b>4.4300e-003</b> | <b>0.0000</b> | <b>16.0294</b> | <b>16.0294</b> | <b>4.0700e-003</b> | <b>0.0000</b> | <b>16.1311</b> |

#### 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       | 5.1000e-004        | 0.0217        | 5.9700e-003   | 3.0000e-005        | 3.8000e-004        | 1.0000e-005        | 3.9000e-004        | 1.1000e-004        | 1.0000e-005        | 1.2000e-004        | 0.0000        | 3.1716        | 3.1716        | 2.3000e-004        | 0.0000        | 3.1774        |
| Worker       | 1.6500e-003        | 6.8000e-004   | 9.4100e-003   | 2.0000e-005        | 1.4400e-003        | 2.0000e-005        | 1.4600e-003        | 3.8000e-004        | 2.0000e-005        | 4.0000e-004        | 0.0000        | 1.4114        | 1.4114        | 5.0000e-005        | 0.0000        | 1.4126        |
| <b>Total</b> | <b>2.1600e-003</b> | <b>0.0224</b> | <b>0.0154</b> | <b>5.0000e-005</b> | <b>1.8200e-003</b> | <b>3.0000e-005</b> | <b>1.8500e-003</b> | <b>4.9000e-004</b> | <b>3.0000e-005</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>4.5831</b> | <b>4.5831</b> | <b>2.8000e-004</b> | <b>0.0000</b> | <b>4.5900</b> |

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 | 2.6600e-003 | 0.0310 | 0.1293 | 1.9000e-004 |               | 2.9000e-004  | 2.9000e-004 |                | 2.9000e-004   | 2.9000e-004 | 0.0000   | 16.0294   | 16.0294   | 4.0700e-003 | 0.0000 | 16.1311 |
| Total    | 2.6600e-003 | 0.0310 | 0.1293 | 1.9000e-004 |               | 2.9000e-004  | 2.9000e-004 |                | 2.9000e-004   | 2.9000e-004 | 0.0000   | 16.0294   | 16.0294   | 4.0700e-003 | 0.0000 | 16.1311 |

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   | 5.1000e-004 | 0.0217      | 5.9700e-003 | 3.0000e-005 | 3.8000e-004   | 1.0000e-005  | 3.9000e-004 | 1.1000e-004    | 1.0000e-005   | 1.2000e-004 | 0.0000   | 3.1716    | 3.1716    | 2.3000e-004 | 0.0000 | 3.1774 |
| Worker   | 1.6500e-003 | 6.8000e-004 | 9.4100e-003 | 2.0000e-005 | 1.4400e-003   | 2.0000e-005  | 1.4600e-003 | 3.8000e-004    | 2.0000e-005   | 4.0000e-004 | 0.0000   | 1.4114    | 1.4114    | 5.0000e-005 | 0.0000 | 1.4126 |
| Total    | 2.1600e-003 | 0.0224      | 0.0154      | 5.0000e-005 | 1.8200e-003   | 3.0000e-005  | 1.8500e-003 | 4.9000e-004    | 3.0000e-005   | 5.2000e-004 | 0.0000   | 4.5831    | 4.5831    | 2.8000e-004 | 0.0000 | 4.5900 |

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site



|              |               |               |               |                    |  |                    |                    |  |                    |                    |               |                |                |                    |               |                |
|--------------|---------------|---------------|---------------|--------------------|--|--------------------|--------------------|--|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Off-Road     | 4.4100e-003   | 0.0440        | 0.1972        | 3.2000e-004        |  | 5.0000e-004        | 5.0000e-004        |  | 5.0000e-004        | 5.0000e-004        | 0.0000        | 28.3140        | 28.3140        | 6.6600e-003        | 0.0000        | 28.4804        |
| <b>Total</b> | <b>1.8597</b> | <b>0.0440</b> | <b>0.1972</b> | <b>3.2000e-004</b> |  | <b>5.0000e-004</b> | <b>5.0000e-004</b> |  | <b>5.0000e-004</b> | <b>5.0000e-004</b> | <b>0.0000</b> | <b>28.3140</b> | <b>28.3140</b> | <b>6.6600e-003</b> | <b>0.0000</b> | <b>28.4804</b> |

**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       | 3.3500e-003        | 1.4300e-003        | 0.0193        | 3.0000e-005        | 2.6800e-003        | 4.0000e-005        | 2.7200e-003        | 7.2000e-004        | 3.0000e-005        | 7.5000e-004        | 0.0000        | 2.7329        | 2.7329        | 1.0000e-004        | 0.0000        | 2.7354        |
| <b>Total</b> | <b>3.3500e-003</b> | <b>1.4300e-003</b> | <b>0.0193</b> | <b>3.0000e-005</b> | <b>2.6800e-003</b> | <b>4.0000e-005</b> | <b>2.7200e-003</b> | <b>7.2000e-004</b> | <b>3.0000e-005</b> | <b>7.5000e-004</b> | <b>0.0000</b> | <b>2.7329</b> | <b>2.7329</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>2.7354</b> |

**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 | 2.1407        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road        | 0.0211        | 0.1953        | 0.2027        | 3.7000e-004        |               | 9.1000e-003        | 9.1000e-003        |                | 8.6200e-003        | 8.6200e-003        | 0.0000        | 32.6698        | 32.6698        | 7.6200e-003        | 0.0000        | 32.8603        |
| <b>Total</b>    | <b>2.1618</b> | <b>0.1953</b> | <b>0.2027</b> | <b>3.7000e-004</b> |               | <b>9.1000e-003</b> | <b>9.1000e-003</b> |                | <b>8.6200e-003</b> | <b>8.6200e-003</b> | <b>0.0000</b> | <b>32.6698</b> | <b>32.6698</b> | <b>7.6200e-003</b> | <b>0.0000</b> | <b>32.8603</b> |

**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   | 3.5600e-003 | 1.4600e-003 | 0.0202 | 3.0000e-005 | 3.0900e-003   | 4.0000e-005  | 3.1300e-003 | 8.3000e-004    | 4.0000e-005   | 8.6000e-004 | 0.0000   | 3.0354    | 3.0354    | 1.0000e-004 | 0.0000 | 3.0380 |
| Total    | 3.5600e-003 | 1.4600e-003 | 0.0202 | 3.0000e-005 | 3.0900e-003   | 4.0000e-005  | 3.1300e-003 | 8.3000e-004    | 4.0000e-005   | 8.6000e-004 | 0.0000   | 3.0354    | 3.0354    | 1.0000e-004 | 0.0000 | 3.0380 |

Mitigated Construction On-Site

|                 | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 2.1407      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 5.0800e-003 | 0.0507 | 0.2276 | 3.7000e-004 |               | 5.7000e-004  | 5.7000e-004 |                | 5.7000e-004   | 5.7000e-004 | 0.0000   | 32.6698   | 32.6698   | 7.6200e-003 | 0.0000 | 32.8603 |
| Total           | 2.1458      | 0.0507 | 0.2276 | 3.7000e-004 |               | 5.7000e-004  | 5.7000e-004 |                | 5.7000e-004   | 5.7000e-004 | 0.0000   | 32.6698   | 32.6698   | 7.6200e-003 | 0.0000 | 32.8603 |

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  | 3.5600e-003 | 1.4600e-003 | 0.0202 | 3.0000e-005 | 3.0900e-003 | 4.0000e-005 | 3.1300e-003 | 8.3000e-004 | 4.0000e-005 | 8.6000e-004 | 0.0000 | 3.0354 | 3.0354 | 1.0000e-004 | 0.0000 | 3.0380 |
| Total   | 3.5600e-003 | 1.4600e-003 | 0.0202 | 3.0000e-005 | 3.0900e-003 | 4.0000e-005 | 3.1300e-003 | 8.3000e-004 | 4.0000e-005 | 8.6000e-004 | 0.0000 | 3.0354 | 3.0354 | 1.0000e-004 | 0.0000 | 3.0380 |

3.7 Paving - 2023

Unmitigated Construction On-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |         |
| Off-Road | 0.0297      | 0.2902 | 0.3824 | 5.7000e-004 |               | 0.0154       | 0.0154     |                | 0.0142        | 0.0142      | 0.0000   | 50.0041   | 50.0041   | 0.0160 | 0.0000 | 50.4035 |
| Paving   | 5.0000e-005 |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 0.0298      | 0.2902 | 0.3824 | 5.7000e-004 |               | 0.0154       | 0.0154     |                | 0.0142        | 0.0142      | 0.0000   | 50.0041   | 50.0041   | 0.0160 | 0.0000 | 50.4035 |

Unmitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 7.0000e-005 | 3.9200e-003 | 6.9000e-004 | 1.0000e-005 | 4.0000e-005   | 0.0000       | 5.0000e-005 | 1.0000e-005    | 0.0000        | 1.0000e-005 | 0.0000   | 0.6112    | 0.6112    | 5.0000e-005 | 0.0000 | 0.6124 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 4.6000e-004 | 1.9000e-004 | 2.6300e-003 | 0.0000      | 4.0000e-004   | 1.0000e-005  | 4.1000e-004 | 1.1000e-004    | 0.0000        | 1.1000e-004 | 0.0000   | 0.3938    | 0.3938    | 1.0000e-005 | 0.0000 | 0.3941 |
| Total    | 5.3000e-004 | 4.1100e-003 | 3.3200e-003 | 1.0000e-005 | 4.4000e-004   | 1.0000e-005  | 4.6000e-004 | 1.2000e-004    | 0.0000        | 1.2000e-004 | 0.0000   | 1.0050    | 1.0050    | 6.0000e-005 | 0.0000 | 1.0065 |

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 | 7.8000e-003 | 0.0684 | 0.4231 | 5.7000e-004 |               | 9.1000e-004  | 9.1000e-004 |                | 9.1000e-004   | 9.1000e-004 | 0.0000   | 50.0041   | 50.0041   | 0.0160 | 0.0000 | 50.4034 |
| Paving   | 5.0000e-005 |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 7.8500e-003 | 0.0684 | 0.4231 | 5.7000e-004 |               | 9.1000e-004  | 9.1000e-004 |                | 9.1000e-004   | 9.1000e-004 | 0.0000   | 50.0041   | 50.0041   | 0.0160 | 0.0000 | 50.4034 |

Mitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 7.0000e-005 | 3.9200e-003 | 6.9000e-004 | 1.0000e-005 | 4.0000e-005   | 0.0000       | 5.0000e-005 | 1.0000e-005    | 0.0000        | 1.0000e-005 | 0.0000   | 0.6112    | 0.6112    | 5.0000e-005 | 0.0000 | 0.6124 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 4.6000e-004 | 1.9000e-004 | 2.6300e-003 | 0.0000      | 4.0000e-004   | 1.0000e-005  | 4.1000e-004 | 1.1000e-004    | 0.0000        | 1.1000e-004 | 0.0000   | 0.3938    | 0.3938    | 1.0000e-005 | 0.0000 | 0.3941 |
| Total    | 5.3000e-004 | 4.1100e-003 | 3.3200e-003 | 1.0000e-005 | 4.4000e-004   | 1.0000e-005  | 4.6000e-004 | 1.2000e-004    | 0.0000        | 1.2000e-004 | 0.0000   | 1.0050    | 1.0050    | 6.0000e-005 | 0.0000 | 1.0065 |

## Gateway Crossings, Phase 5,TAC Emissions - Santa Clara County, Annual

## Gateway Crossings, Phase 5,TAC Emissions

### Santa Clara County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                      | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|----------|-------------|--------------------|------------|
| Enclosed Parking with Elevator | 339.00 | Space    | 0.00        | 142,500.00         | 0          |
| Hotel                          | 225.00 | Room     | 21.40       | 182,000.00         | 0          |
| Strip Mall                     | 5.20   | 1000sqft | 0.00        | 5,200.00           | 0          |

### 1.2 Other Project Characteristics

|                                     |                                |                                     |       |                                     |       |
|-------------------------------------|--------------------------------|-------------------------------------|-------|-------------------------------------|-------|
| <b>Urbanization</b>                 | Urban                          | <b>Wind Speed (m/s)</b>             | 2.2   | <b>Precipitation Freq (Days)</b>    | 58    |
| <b>Climate Zone</b>                 | 4                              |                                     |       | <b>Operational Year</b>             | 2026  |
| <b>Utility Company</b>              | Pacific Gas & Electric Company |                                     |       |                                     |       |
| <b>CO2 Intensity<br/>(lb/MW hr)</b> | 380                            | <b>CH4 Intensity<br/>(lb/MW hr)</b> | 0.029 | <b>N2O Intensity<br/>(lb/MW hr)</b> | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E used to represent SVP (Silicon Valley Power).CO2 emission factor from City of Santa Clara 2020 Climate Action Plan

Land Use - Land Use Sizes from construction information provided by project applicant

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided information

Off-road Equipment - applicant provided information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided construction information

Off-road Equipment - Applicant provided equipment information

Trips and VMT - 100 paving trips based on 800 cy of asphalt hauled

Grading - 7585 cy of soil off haul

Architectural Coating -

Vehicle Trips - trip rates from TIA

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves -

Area Coating -

Landscape Equipment -

Energy Use - default 2013, title 24 values used

Construction Off-road Equipment Mitigation - Best Management Practices, tier 3 DPF Level 3

Area Mitigation -

Energy Mitigation - title 24, 2016 values became effective on 1st January ,2017

Stationary Sources - Emergency Generators and Fire Pumps - 100 kw generator in the garage

| Table Name              | Column Name                               | Default Value | New Value |
|-------------------------|-------------------------------------------|---------------|-----------|
| tblAreaMitigation       | UseLowVOCPaintNonresidentialInteriorValue | 100           | 150       |
| tblAreaMitigation       | UseLowVOCPaintResidentialExteriorValue    | 150           | 100       |
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed              | 40            | 15        |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 5.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated                | 0.00          | 3.00      |

|                         |                            |           |              |
|-------------------------|----------------------------|-----------|--------------|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 4.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 6.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 7.00         |
| 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 |
| 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 |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblGrading              | MaterialExported           | 0.00      | 7,585.00     |

|                           |                         |            |            |
|---------------------------|-------------------------|------------|------------|
| tblLandUse                | BuildingSpaceSquareFeet | 135,600.00 | 142,500.00 |
| tblLandUse                | BuildingSpaceSquareFeet | 326,700.00 | 182,000.00 |
| tblLandUse                | LandUseSquareFeet       | 135,600.00 | 142,500.00 |
| tblLandUse                | LandUseSquareFeet       | 326,700.00 | 182,000.00 |
| tblLandUse                | LotAcreage              | 3.05       | 0.00       |
| tblLandUse                | LotAcreage              | 7.50       | 21.40      |
| tblLandUse                | LotAcreage              | 0.12       | 0.00       |
| tblProjectCharacteristics | CO2IntensityFactor      | 641.35     | 380        |
| tblProjectCharacteristics | OperationalYear         | 2018       | 2026       |
| tblTripsAndVMT            | HaulingTripNumber       | 0.00       | 100.00     |
| tblVehicleTrips           | ST_TR                   | 8.19       | 8.82       |
| tblVehicleTrips           | ST_TR                   | 42.04      | 28.95      |
| tblVehicleTrips           | SU_TR                   | 5.95       | 6.40       |
| tblVehicleTrips           | SU_TR                   | 20.43      | 14.83      |
| tblVehicleTrips           | WD_TR                   | 8.17       | 8.79       |
| tblVehicleTrips           | WD_TR                   | 44.32      | 30.52      |

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    |           |           |        |        |          |
| 2024    | 0.9457  | 4.5606 | 5.0768 | 0.0109      | 0.4504        | 0.1795       | 0.6299     | 0.1586         | 0.1680        | 0.3266      | 0.0000   | 958.6107  | 958.6107  | 0.1886 | 0.0000 | 963.3245 |
| 2025    | 0.7441  | 1.4996 | 2.0198 | 3.9800e-003 | 0.0742        | 0.0592       | 0.1334     | 0.0201         | 0.0555        | 0.0756      | 0.0000   | 348.9968  | 348.9968  | 0.0677 | 0.0000 | 350.6887 |
| Maximum | 0.9457  | 4.5606 | 5.0768 | 0.0109      | 0.4504        | 0.1795       | 0.6299     | 0.1586         | 0.1680        | 0.3266      | 0.0000   | 958.6107  | 958.6107  | 0.1886 | 0.0000 | 963.3245 |

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    |           |           |        |        |          |
| 2024    | 0.6039  | 1.5906 | 5.5765 | 0.0109      | 0.3042        | 0.0136       | 0.3178     | 0.0745         | 0.0135        | 0.0880      | 0.0000   | 958.6099  | 958.6099  | 0.1886 | 0.0000 | 963.3236 |
| 2025    | 0.6313  | 0.5904 | 2.1986 | 3.9800e-003 | 0.0742        | 5.0100e-003  | 0.0792     | 0.0201         | 4.9800e-003   | 0.0251      | 0.0000   | 348.9965  | 348.9965  | 0.0677 | 0.0000 | 350.6884 |
| Maximum | 0.6313  | 1.5906 | 5.5765 | 0.0109      | 0.3042        | 0.0136       | 0.3178     | 0.0745         | 0.0135        | 0.0880      | 0.0000   | 958.6099  | 958.6099  | 0.1886 | 0.0000 | 963.3236 |

|                   | ROG   | NOx   | CO    | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|-------|-------|-------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 26.90 | 64.01 | -9.56 | 0.00 | 27.88         | 92.21        | 47.99      | 47.08          | 91.73         | 71.90       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|----------------------------------------------|--------------------------------------------|
| 1       | 1-1-2024   | 3-31-2024  | 1.6168                                       | 0.4154                                     |
| 2       | 4-1-2024   | 6-30-2024  | 1.0781                                       | 0.4257                                     |
| 3       | 7-1-2024   | 9-30-2024  | 1.2284                                       | 0.5450                                     |
| 4       | 10-1-2024  | 12-31-2024 | 1.5327                                       | 0.7975                                     |
| 5       | 1-1-2025   | 3-31-2025  | 1.4101                                       | 0.7768                                     |
| 6       | 4-1-2025   | 6-30-2025  | 0.7438                                       | 0.4153                                     |
| 7       | 7-1-2025   | 9-30-2025  | 0.0654                                       | 0.0189                                     |
|         |            | Highest    | 1.6168                                       | 0.7975                                     |

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|----------|---------------|----------|-------------------|
|--------------|------------|------------|------------|----------|---------------|----------|-------------------|

|   |                       |                       |           |           |   |     |
|---|-----------------------|-----------------------|-----------|-----------|---|-----|
| 1 | Site Preparation      | Site Preparation      | 1/1/2024  | 1/26/2024 | 5 | 20  |
| 2 | Grading               | Grading               | 1/27/2024 | 2/23/2024 | 5 | 20  |
| 3 | Trenching             | Trenching             | 1/27/2024 | 2/23/2024 | 5 | 20  |
| 4 | Building Construction | Building Construction | 2/26/2024 | 4/18/2025 | 5 | 300 |
| 5 | Architectural Coating | Architectural Coating | 9/2/2024  | 6/6/2025  | 5 | 200 |
| 6 | Paving                | Paving                | 4/28/2025 | 7/18/2025 | 5 | 60  |

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 80

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 280,800; Non-Residential Outdoor: 93,600; Striped Parking Area:

OffRoad Equipment

| Phase Name       | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Site Preparation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Site Preparation | Scrapers                  | 3      | 8.00        | 367         | 0.48        |
| Site Preparation | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Site Preparation | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Grading          | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading          | Graders                   | 2      | 8.00        | 187         | 0.41        |
| Grading          | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Grading          | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading          | Scrapers                  | 3      | 8.00        | 367         | 0.48        |
| Grading          | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |
| Grading          | Sweepers/Scrubbers        | 1      | 8.00        | 64          | 0.46        |
| Grading          | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Trenching        | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Trenching        | Rough Terrain Forklifts   | 1      | 8.00        | 100         | 0.40        |
| Trenching        | Skid Steer Loaders        | 1      | 8.00        | 65          | 0.37        |

|                       |                              |   |      |     |      |
|-----------------------|------------------------------|---|------|-----|------|
| Trenching             | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Trenching             | Tractors/Loaders/Backhoes    | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Aerial Lifts                 | 3 | 5.30 | 63  | 0.31 |
| Building Construction | Cranes                       | 1 | 4.30 | 231 | 0.29 |
| Building Construction | Forklifts                    | 4 | 8.00 | 89  | 0.20 |
| Building Construction | Generator Sets               | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Other Construction Equipment | 3 | 8.00 | 172 | 0.42 |
| Building Construction | Tractors/Loaders/Backhoes    | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                      | 4 | 8.00 | 46  | 0.45 |
| Architectural Coating | Aerial Lifts                 | 1 | 4.80 | 63  | 0.31 |
| Architectural Coating | Air Compressors              | 2 | 2.40 | 78  | 0.48 |
| Architectural Coating | Cranes                       | 1 | 2.40 | 231 | 0.29 |
| Architectural Coating | Forklifts                    | 1 | 4.80 | 89  | 0.20 |
| Paving                | Cement and Mortar Mixers     | 1 | 8.00 | 9   | 0.56 |
| Paving                | Pavers                       | 1 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment             | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                      | 2 | 8.00 | 80  | 0.38 |
| Paving                | Sweepers/Scrubbers           | 1 | 8.00 | 64  | 0.46 |
| Paving                | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 9                       | 23.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 13                      | 33.00              | 0.00               | 948.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching             | 7                       | 18.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 17                      | 138.00             | 54.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 5                       | 28.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 100.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Site Preparation - 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 |         |        |        |             | 0.1629        | 0.0000       | 0.1629     | 0.0708         | 0.0000        | 0.0708      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0459  | 0.4793 | 0.3110 | 8.1000e-004 |               | 0.0192       | 0.0192     |                | 0.0176        | 0.0176      | 0.0000   | 71.1651   | 71.1651   | 0.0230 | 0.0000 | 71.7405 |
| Total         | 0.0459  | 0.4793 | 0.3110 | 8.1000e-004 | 0.1629        | 0.0192       | 0.1820     | 0.0708         | 0.0176        | 0.0884      | 0.0000   | 71.1651   | 71.1651   | 0.0230 | 0.0000 | 71.7405 |

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   | 5.8000e-004 | 3.6000e-004 | 4.1300e-003 | 1.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8300e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.3449    | 1.3449    | 2.0000e-005 | 0.0000 | 1.3456 |

|       |             |             |             |             |             |             |             |             |             |             |        |        |        |             |        |        |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|
| Total | 5.8000e-004 | 3.6000e-004 | 4.1300e-003 | 1.0000e-005 | 1.8200e-003 | 1.0000e-005 | 1.8300e-003 | 4.9000e-004 | 1.0000e-005 | 5.0000e-004 | 0.0000 | 1.3449 | 1.3449 | 2.0000e-005 | 0.0000 | 1.3456 |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|

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 |         |        |        |             | 0.0733        | 0.0000       | 0.0733      | 0.0159         | 0.0000        | 0.0159      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0102  | 0.0536 | 0.3803 | 8.1000e-004 |               | 1.3300e-003  | 1.3300e-003 |                | 1.3300e-003   | 1.3300e-003 | 0.0000   | 71.1650   | 71.1650   | 0.0230 | 0.0000 | 71.7404 |
| Total         | 0.0102  | 0.0536 | 0.3803 | 8.1000e-004 | 0.0733        | 1.3300e-003  | 0.0746      | 0.0159         | 1.3300e-003   | 0.0173      | 0.0000   | 71.1650   | 71.1650   | 0.0230 | 0.0000 | 71.7404 |

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   | 5.8000e-004 | 3.6000e-004 | 4.1300e-003 | 1.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8300e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.3449    | 1.3449    | 2.0000e-005 | 0.0000 | 1.3456 |
| Total    | 5.8000e-004 | 3.6000e-004 | 4.1300e-003 | 1.0000e-005 | 1.8200e-003   | 1.0000e-005  | 1.8300e-003 | 4.9000e-004    | 1.0000e-005   | 5.0000e-004 | 0.0000   | 1.3449    | 1.3449    | 2.0000e-005 | 0.0000 | 1.3456 |

3.3 Grading - 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 |         |        |        |             | 0.1031        | 0.0000       | 0.1031     | 0.0378         | 0.0000        | 0.0378      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0472  | 0.4826 | 0.4011 | 9.1000e-004 |               | 0.0199       | 0.0199     |                | 0.0183        | 0.0183      | 0.0000   | 79.5839   | 79.5839   | 0.0257 | 0.0000 | 80.2274 |
| Total         | 0.0472  | 0.4826 | 0.4011 | 9.1000e-004 | 0.1031        | 0.0199       | 0.1230     | 0.0378         | 0.0183        | 0.0561      | 0.0000   | 79.5839   | 79.5839   | 0.0257 | 0.0000 | 80.2274 |

**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  | 2.3700e-003 | 0.0749      | 0.0248      | 3.5000e-004 | 8.0400e-003   | 1.4000e-004  | 8.1800e-003 | 2.2100e-003    | 1.3000e-004   | 2.3400e-003 | 0.0000   | 33.6040   | 33.6040   | 1.4200e-003 | 0.0000 | 33.6395 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Worker   | 8.4000e-004 | 5.1000e-004 | 5.9200e-003 | 2.0000e-005 | 2.6200e-003   | 2.0000e-005  | 2.6300e-003 | 7.0000e-004    | 1.0000e-005   | 7.1000e-004 | 0.0000   | 1.9297    | 1.9297    | 4.0000e-005 | 0.0000 | 1.9306  |
| Total    | 3.2100e-003 | 0.0755      | 0.0307      | 3.7000e-004 | 0.0107        | 1.6000e-004  | 0.0108      | 2.9100e-003    | 1.4000e-004   | 3.0500e-003 | 0.0000   | 35.5337   | 35.5337   | 1.4600e-003 | 0.0000 | 35.5701 |

**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 |        |        |        |             | 0.0464 | 0.0000      | 0.0464      | 8.4900e-003 | 0.0000      | 8.4900e-003 | 0.0000 | 0.0000  | 0.0000  | 0.0000 | 0.0000 | 0.0000  |
| Off-Road      | 0.0117 | 0.0716 | 0.4793 | 9.1000e-004 |        | 1.4800e-003 | 1.4800e-003 |             | 1.4800e-003 | 1.4800e-003 | 0.0000 | 79.5838 | 79.5838 | 0.0257 | 0.0000 | 80.2273 |
| Total         | 0.0117 | 0.0716 | 0.4793 | 9.1000e-004 | 0.0464 | 1.4800e-003 | 0.0479      | 8.4900e-003 | 1.4800e-003 | 9.9700e-003 | 0.0000 | 79.5838 | 79.5838 | 0.0257 | 0.0000 | 80.2273 |

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  | 2.3700e-003 | 0.0749      | 0.0248      | 3.5000e-004 | 8.0400e-003   | 1.4000e-004  | 8.1800e-003 | 2.2100e-003    | 1.3000e-004   | 2.3400e-003 | 0.0000   | 33.6040   | 33.6040   | 1.4200e-003 | 0.0000 | 33.6395 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Worker   | 8.4000e-004 | 5.1000e-004 | 5.9200e-003 | 2.0000e-005 | 2.6200e-003   | 2.0000e-005  | 2.6300e-003 | 7.0000e-004    | 1.0000e-005   | 7.1000e-004 | 0.0000   | 1.9297    | 1.9297    | 4.0000e-005 | 0.0000 | 1.9306  |
| Total    | 3.2100e-003 | 0.0755      | 0.0307      | 3.7000e-004 | 0.0107        | 1.6000e-004  | 0.0108      | 2.9100e-003    | 1.4000e-004   | 3.0500e-003 | 0.0000   | 35.5337   | 35.5337   | 1.4600e-003 | 0.0000 | 35.5701 |

3.4 Trenching - 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 | 9.5700e-003 | 0.0933 | 0.1691 | 2.5000e-004 |               | 4.0500e-003  | 4.0500e-003 |                | 3.7300e-003   | 3.7300e-003 | 0.0000   | 22.1365   | 22.1365   | 7.1600e-003 | 0.0000 | 22.3155 |
| Total    | 9.5700e-003 | 0.0933 | 0.1691 | 2.5000e-004 |               | 4.0500e-003  | 4.0500e-003 |                | 3.7300e-003   | 3.7300e-003 | 0.0000   | 22.1365   | 22.1365   | 7.1600e-003 | 0.0000 | 22.3155 |

Unmitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Hauling  | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 4.6000e-004 | 2.8000e-004 | 3.2300e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.0526    | 1.0526    | 2.0000e-005 | 0.0000 | 1.0530 |
| Total    | 4.6000e-004 | 2.8000e-004 | 3.2300e-003 | 1.0000e-005 | 1.4300e-003   | 1.0000e-005  | 1.4400e-003 | 3.8000e-004    | 1.0000e-005   | 3.9000e-004 | 0.0000   | 1.0526    | 1.0526    | 2.0000e-005 | 0.0000 | 1.0530 |

Mitigated Construction On-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|----------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Off-Road | 3.3400e-003 | 0.0239 | 0.1904 | 2.5000e-004 |               | 4.1000e-004  | 4.1000e-004 |                | 4.1000e-004   | 4.1000e-004 | 0.0000   | 22.1365   | 22.1365   | 7.1600e-003 | 0.0000 | 22.3155 |
| Total    | 3.3400e-003 | 0.0239 | 0.1904 | 2.5000e-004 |               | 4.1000e-004  | 4.1000e-004 |                | 4.1000e-004   | 4.1000e-004 | 0.0000   | 22.1365   | 22.1365   | 7.1600e-003 | 0.0000 | 22.3155 |

Mitigated Construction Off-Site

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

| Category | tons/yr     |             |             |             |             |             |             |             |             |             | MT/yr  |        |        |             |        |        |
|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|
| Hauling  | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000 | 0.0000 | 0.0000      | 0.0000 | 0.0000 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000 | 0.0000 | 0.0000      | 0.0000 | 0.0000 |
| Worker   | 4.6000e-004 | 2.8000e-004 | 3.2300e-003 | 1.0000e-005 | 1.4300e-003 | 1.0000e-005 | 1.4400e-003 | 3.8000e-004 | 1.0000e-005 | 3.9000e-004 | 0.0000 | 1.0526 | 1.0526 | 2.0000e-005 | 0.0000 | 1.0530 |
| Total    | 4.6000e-004 | 2.8000e-004 | 3.2300e-003 | 1.0000e-005 | 1.4300e-003 | 1.0000e-005 | 1.4400e-003 | 3.8000e-004 | 1.0000e-005 | 3.9000e-004 | 0.0000 | 1.0526 | 1.0526 | 2.0000e-005 | 0.0000 | 1.0530 |

3.5 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 | 0.3321  | 2.8430 | 3.5826 | 5.6600e-003 |               | 0.1293       | 0.1293     |                | 0.1216        | 0.1216      | 0.0000   | 479.8372  | 479.8372  | 0.1189 | 0.0000 | 482.8107 |
| Total    | 0.3321  | 2.8430 | 3.5826 | 5.6600e-003 |               | 0.1293       | 0.1293     |                | 0.1216        | 0.1216      | 0.0000   | 479.8372  | 479.8372  | 0.1189 | 0.0000 | 482.8107 |

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   | 0.0133  | 0.4357 | 0.1339 | 1.5400e-003 | 0.0394        | 5.1000e-004  | 0.0400     | 0.0114         | 4.9000e-004   | 0.0119      | 0.0000   | 148.4057  | 148.4057  | 5.3900e-003 | 0.0000 | 148.5404 |
| Worker   | 0.0388  | 0.0238 | 0.2748 | 9.9000e-004 | 0.1215        | 7.2000e-004  | 0.1222     | 0.0323         | 6.6000e-004   | 0.0330      | 0.0000   | 89.5725   | 89.5725   | 1.6600e-003 | 0.0000 | 89.6139  |

|       |        |        |        |             |        |             |        |        |             |        |        |          |          |             |        |          |
|-------|--------|--------|--------|-------------|--------|-------------|--------|--------|-------------|--------|--------|----------|----------|-------------|--------|----------|
| Total | 0.0521 | 0.4595 | 0.4087 | 2.5300e-003 | 0.1609 | 1.2300e-003 | 0.1622 | 0.0437 | 1.1500e-003 | 0.0449 | 0.0000 | 237.9782 | 237.9782 | 7.0500e-003 | 0.0000 | 238.1543 |
|-------|--------|--------|--------|-------------|--------|-------------|--------|--------|-------------|--------|--------|----------|----------|-------------|--------|----------|

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 | 0.0781  | 0.8688 | 3.8966 | 5.6600e-003 |               | 8.5100e-003  | 8.5100e-003 |                | 8.5100e-003   | 8.5100e-003 | 0.0000   | 479.8367  | 479.8367  | 0.1189 | 0.0000 | 482.8101 |
| Total    | 0.0781  | 0.8688 | 3.8966 | 5.6600e-003 |               | 8.5100e-003  | 8.5100e-003 |                | 8.5100e-003   | 8.5100e-003 | 0.0000   | 479.8367  | 479.8367  | 0.1189 | 0.0000 | 482.8101 |

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   | 0.0133  | 0.4357 | 0.1339 | 1.5400e-003 | 0.0394        | 5.1000e-004  | 0.0400     | 0.0114         | 4.9000e-004   | 0.0119      | 0.0000   | 148.4057  | 148.4057  | 5.3900e-003 | 0.0000 | 148.5404 |
| Worker   | 0.0388  | 0.0238 | 0.2748 | 9.9000e-004 | 0.1215        | 7.2000e-004  | 0.1222     | 0.0323         | 6.6000e-004   | 0.0330      | 0.0000   | 89.5725   | 89.5725   | 1.6600e-003 | 0.0000 | 89.6139  |
| Total    | 0.0521  | 0.4595 | 0.4087 | 2.5300e-003 | 0.1609        | 1.2300e-003  | 0.1622     | 0.0437         | 1.1500e-003   | 0.0449      | 0.0000   | 237.9782  | 237.9782  | 7.0500e-003 | 0.0000 | 238.1543 |

3.5 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     | 0.1076        | 0.9124        | 1.2527        | 1.9900e-003        |               | 0.0393        | 0.0393        |                | 0.0369        | 0.0369        | 0.0000        | 168.6424        | 168.6424        | 0.0415        | 0.0000        | 169.6805        |
| <b>Total</b> | <b>0.1076</b> | <b>0.9124</b> | <b>1.2527</b> | <b>1.9900e-003</b> |               | <b>0.0393</b> | <b>0.0393</b> |                | <b>0.0369</b> | <b>0.0369</b> | <b>0.0000</b> | <b>168.6424</b> | <b>168.6424</b> | <b>0.0415</b> | <b>0.0000</b> | <b>169.6805</b> |

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       | 4.5500e-003   | 0.1510        | 0.0458        | 5.4000e-004        | 0.0139        | 1.8000e-004        | 0.0140        | 4.0100e-003    | 1.7000e-004        | 4.1700e-003   | 0.0000        | 51.8043        | 51.8043        | 1.8600e-003        | 0.0000        | 51.8507        |
| Worker       | 0.0129        | 7.6100e-003   | 0.0895        | 3.3000e-004        | 0.0427        | 2.5000e-004        | 0.0429        | 0.0114         | 2.3000e-004        | 0.0116        | 0.0000        | 30.1987        | 30.1987        | 5.3000e-004        | 0.0000        | 30.2118        |
| <b>Total</b> | <b>0.0175</b> | <b>0.1587</b> | <b>0.1353</b> | <b>8.7000e-004</b> | <b>0.0566</b> | <b>4.3000e-004</b> | <b>0.0570</b> | <b>0.0154</b>  | <b>4.0000e-004</b> | <b>0.0158</b> | <b>0.0000</b> | <b>82.0029</b> | <b>82.0029</b> | <b>2.3900e-003</b> | <b>0.0000</b> | <b>82.0625</b> |

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 | 0.0275 | 0.3052 | 1.3691 | 1.9900e-003 |  | 2.9900e-003 | 2.9900e-003 |  | 2.9900e-003 | 2.9900e-003 | 0.0000 | 168.6422 | 168.6422 | 0.0415 | 0.0000 | 169.6803 |
| Total    | 0.0275 | 0.3052 | 1.3691 | 1.9900e-003 |  | 2.9900e-003 | 2.9900e-003 |  | 2.9900e-003 | 2.9900e-003 | 0.0000 | 168.6422 | 168.6422 | 0.0415 | 0.0000 | 169.6803 |

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   | 4.5500e-003 | 0.1510      | 0.0458 | 5.4000e-004 | 0.0139        | 1.8000e-004  | 0.0140     | 4.0100e-003    | 1.7000e-004   | 4.1700e-003 | 0.0000   | 51.8043   | 51.8043   | 1.8600e-003 | 0.0000 | 51.8507 |
| Worker   | 0.0129      | 7.6100e-003 | 0.0895 | 3.3000e-004 | 0.0427        | 2.5000e-004  | 0.0429     | 0.0114         | 2.3000e-004   | 0.0116      | 0.0000   | 30.1987   | 30.1987   | 5.3000e-004 | 0.0000 | 30.2118 |
| Total    | 0.0175      | 0.1587      | 0.1353 | 8.7000e-004 | 0.0566        | 4.3000e-004  | 0.0570     | 0.0154         | 4.0000e-004   | 0.0158      | 0.0000   | 82.0029   | 82.0029   | 2.3900e-003 | 0.0000 | 82.0625 |

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 | 0.4376  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0140  | 0.1249 | 0.1444 | 2.6000e-004 |               | 5.5900e-003  | 5.5900e-003 |                | 5.3100e-003   | 5.3100e-003 | 0.0000   | 22.8564   | 22.8564   | 5.0200e-003 | 0.0000 | 22.9818 |
| Total           | 0.4515  | 0.1249 | 0.1444 | 2.6000e-004 |               | 5.5900e-003  | 5.5900e-003 |                | 5.3100e-003   | 5.3100e-003 | 0.0000   | 22.8564   | 22.8564   | 5.0200e-003 | 0.0000 | 22.9818 |

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   | 3.0900e-003 | 1.8900e-003 | 0.0219 | 8.0000e-005 | 9.6600e-003   | 6.0000e-005  | 9.7200e-003 | 2.5700e-003    | 5.0000e-005   | 2.6200e-003 | 0.0000   | 7.1223    | 7.1223    | 1.3000e-004 | 0.0000 | 7.1256 |
| Total    | 3.0900e-003 | 1.8900e-003 | 0.0219 | 8.0000e-005 | 9.6600e-003   | 6.0000e-005  | 9.7200e-003 | 2.5700e-003    | 5.0000e-005   | 2.6200e-003 | 0.0000   | 7.1223    | 7.1223    | 1.3000e-004 | 0.0000 | 7.1256 |

Mitigated Construction On-Site

|                 | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 0.4376      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 3.5300e-003 | 0.0353 | 0.1613 | 2.6000e-004 |               | 4.0000e-004  | 4.0000e-004 |                | 4.0000e-004   | 4.0000e-004 | 0.0000   | 22.8563   | 22.8563   | 5.0200e-003 | 0.0000 | 22.9818 |
| Total           | 0.4411      | 0.0353 | 0.1613 | 2.6000e-004 |               | 4.0000e-004  | 4.0000e-004 |                | 4.0000e-004   | 4.0000e-004 | 0.0000   | 22.8563   | 22.8563   | 5.0200e-003 | 0.0000 | 22.9818 |

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   | 3.0900e-003 | 1.8900e-003 | 0.0219 | 8.0000e-005 | 9.6600e-003 | 6.0000e-005 | 9.7200e-003 | 2.5700e-003 | 5.0000e-005 | 2.6200e-003 | 0.0000 | 7.1223 | 7.1223 | 1.3000e-004 | 0.0000 | 7.1256 |
| Total    | 3.0900e-003 | 1.8900e-003 | 0.0219 | 8.0000e-005 | 9.6600e-003 | 6.0000e-005 | 9.7200e-003 | 2.5700e-003 | 5.0000e-005 | 2.6200e-003 | 0.0000 | 7.1223 | 7.1223 | 1.3000e-004 | 0.0000 | 7.1256 |

3.6 Architectural Coating - 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    |           |           |             |        |         |
| Archit. Coating | 0.5683  |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 0.0171  | 0.1509 | 0.1866 | 3.4000e-004 |               | 6.4000e-003  | 6.4000e-003 |                | 6.0700e-003   | 6.0700e-003 | 0.0000   | 29.6873   | 29.6873   | 6.5000e-003 | 0.0000 | 29.8497 |
| Total           | 0.5854  | 0.1509 | 0.1866 | 3.4000e-004 |               | 6.4000e-003  | 6.4000e-003 |                | 6.0700e-003   | 6.0700e-003 | 0.0000   | 29.6873   | 29.6873   | 6.5000e-003 | 0.0000 | 29.8497 |

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   | 3.7900e-003 | 2.2400e-003 | 0.0263 | 1.0000e-004 | 0.0126        | 7.0000e-005  | 0.0126     | 3.3400e-003    | 7.0000e-005   | 3.4000e-003 | 0.0000   | 8.8767    | 8.8767    | 1.5000e-004 | 0.0000 | 8.8806 |

|       |             |             |        |             |        |             |        |             |             |             |        |        |        |             |        |        |
|-------|-------------|-------------|--------|-------------|--------|-------------|--------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|
| Total | 3.7900e-003 | 2.2400e-003 | 0.0263 | 1.0000e-004 | 0.0126 | 7.0000e-005 | 0.0126 | 3.3400e-003 | 7.0000e-005 | 3.4000e-003 | 0.0000 | 8.8767 | 8.8767 | 1.5000e-004 | 0.0000 | 8.8806 |
|-------|-------------|-------------|--------|-------------|--------|-------------|--------|-------------|-------------|-------------|--------|--------|--------|-------------|--------|--------|

Mitigated Construction On-Site

|                 | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e    |
|-----------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category        | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |        |         |
| Archit. Coating | 0.5683      |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000  |
| Off-Road        | 4.5800e-003 | 0.0458 | 0.2095 | 3.4000e-004 |               | 5.2000e-004  | 5.2000e-004 |                | 5.2000e-004   | 5.2000e-004 | 0.0000   | 29.6872   | 29.6872   | 6.5000e-003 | 0.0000 | 29.8497 |
| Total           | 0.5729      | 0.0458 | 0.2095 | 3.4000e-004 |               | 5.2000e-004  | 5.2000e-004 |                | 5.2000e-004   | 5.2000e-004 | 0.0000   | 29.6872   | 29.6872   | 6.5000e-003 | 0.0000 | 29.8497 |

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   | 3.7900e-003 | 2.2400e-003 | 0.0263 | 1.0000e-004 | 0.0126        | 7.0000e-005  | 0.0126     | 3.3400e-003    | 7.0000e-005   | 3.4000e-003 | 0.0000   | 8.8767    | 8.8767    | 1.5000e-004 | 0.0000 | 8.8806 |
| Total    | 3.7900e-003 | 2.2400e-003 | 0.0263 | 1.0000e-004 | 0.0126        | 7.0000e-005  | 0.0126     | 3.3400e-003    | 7.0000e-005   | 3.4000e-003 | 0.0000   | 8.8767    | 8.8767    | 1.5000e-004 | 0.0000 | 8.8806 |

3.7 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    |           |           |        |        |         |
| Off-Road | 0.0283  | 0.2670 | 0.4073 | 6.1000e-004 |               | 0.0130       | 0.0130     |                | 0.0120        | 0.0120      | 0.0000   | 53.2386   | 53.2386   | 0.0169 | 0.0000 | 53.6615 |
| Paving   | 0.0000  |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000  |
| Total    | 0.0283  | 0.2670 | 0.4073 | 6.1000e-004 |               | 0.0130       | 0.0130     |                | 0.0120        | 0.0120      | 0.0000   | 53.2386   | 53.2386   | 0.0169 | 0.0000 | 53.6615 |

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  | 2.5000e-004 | 7.7300e-003 | 2.6300e-003 | 4.0000e-005 | 8.5000e-004   | 1.0000e-005  | 8.6000e-004 | 2.3000e-004    | 1.0000e-005   | 2.5000e-004 | 0.0000   | 3.5189    | 3.5189    | 1.5000e-004 | 0.0000 | 3.5227 |
| 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   | 1.2900e-003 | 7.6000e-004 | 8.9800e-003 | 3.0000e-005 | 4.2800e-003   | 3.0000e-005  | 4.3100e-003 | 1.1400e-003    | 2.0000e-005   | 1.1600e-003 | 0.0000   | 3.0300    | 3.0300    | 5.0000e-005 | 0.0000 | 3.0313 |
| Total    | 1.5400e-003 | 8.4900e-003 | 0.0116      | 7.0000e-005 | 5.1300e-003   | 4.0000e-005  | 5.1700e-003 | 1.3700e-003    | 3.0000e-005   | 1.4100e-003 | 0.0000   | 6.5489    | 6.5489    | 2.0000e-004 | 0.0000 | 6.5540 |

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 | 8.1800e-003 | 0.0700 | 0.4469 | 6.1000e-004 |  | 9.7000e-004 | 9.7000e-004 |  | 9.7000e-004 | 9.7000e-004 | 0.0000 | 53.2385 | 53.2385 | 0.0169 | 0.0000 | 53.6614 |
| Paving   | 0.0000      |        |        |             |  | 0.0000      | 0.0000      |  | 0.0000      | 0.0000      | 0.0000 | 0.0000  | 0.0000  | 0.0000 | 0.0000 | 0.0000  |
| Total    | 8.1800e-003 | 0.0700 | 0.4469 | 6.1000e-004 |  | 9.7000e-004 | 9.7000e-004 |  | 9.7000e-004 | 9.7000e-004 | 0.0000 | 53.2385 | 53.2385 | 0.0169 | 0.0000 | 53.6614 |

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  | 2.5000e-004 | 7.7300e-003 | 2.6300e-003 | 4.0000e-005 | 8.5000e-004   | 1.0000e-005  | 8.6000e-004 | 2.3000e-004    | 1.0000e-005   | 2.5000e-004 | 0.0000   | 3.5189    | 3.5189    | 1.5000e-004 | 0.0000 | 3.5227 |
| 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   | 1.2900e-003 | 7.6000e-004 | 8.9800e-003 | 3.0000e-005 | 4.2800e-003   | 3.0000e-005  | 4.3100e-003 | 1.1400e-003    | 2.0000e-005   | 1.1600e-003 | 0.0000   | 3.0300    | 3.0300    | 5.0000e-005 | 0.0000 | 3.0313 |
| Total    | 1.5400e-003 | 8.4900e-003 | 0.0116      | 7.0000e-005 | 5.1300e-003   | 4.0000e-005  | 5.1700e-003 | 1.3700e-003    | 3.0000e-005   | 1.4100e-003 | 0.0000   | 6.5489    | 6.5489    | 2.0000e-004 | 0.0000 | 6.5540 |

Gateway Crossing, Santa Clara, California

DPM Emissions and Modeling Emission Rates

| Emissions Model Year | Activity       | DPM (ton/year) | Area Source | DPM Emissions |         |          | Modeled Area (m <sup>2</sup> ) | DPM Emission Rate (g/s/m <sup>2</sup> ) |
|----------------------|----------------|----------------|-------------|---------------|---------|----------|--------------------------------|-----------------------------------------|
|                      |                |                |             | (lb/yr)       | (lb/hr) | (g/s)    |                                |                                         |
| 2020                 | Phase2+Phase 3 | 0.2747         | DPM         | 549.4         | 0.16725 | 2.11E-02 | 23,666                         | 8.90E-07                                |
| 2021                 | Phase 3        | 0.0241         | DPM         | 48.2          | 0.01467 | 1.85E-03 | 11,834                         | 1.56E-07                                |
| 2022                 | Phase 4        | 0.2335         | DPM         | 467.0         | 0.14216 | 1.79E-02 | 13,409                         | 1.34E-06                                |
| 2023                 | Phase 4        | 0.0293         | DPM         | 58.6          | 0.01784 | 2.25E-03 | 13,409                         | 1.68E-07                                |
| 2024                 | Phase 5        | 0.1795         | DPM         | 359.0         | 0.10928 | 1.38E-02 | 5,388                          | 2.56E-06                                |
| 2025                 | Phase 5        | 0.0592         | DPM         | 118.4         | 0.03604 | 4.54E-03 | 5,388                          | 8.43E-07                                |
|                      |                | 0.5015         |             | 1003.0        | 0.3053  | 0.0385   |                                |                                         |

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

Gateway Crossing, Santa Clara, California

PM2.5 Fugitive Dust Emissions for Modeling

| Construction Year | Activity       | Area Source | PM2.5 Emissions |         |         |          | Modeled Area (m <sup>2</sup> ) | PM2.5 Emission Rate g/s/m <sup>2</sup> |
|-------------------|----------------|-------------|-----------------|---------|---------|----------|--------------------------------|----------------------------------------|
|                   |                |             | (ton/year)      | (lb/yr) | (lb/hr) | (g/s)    |                                |                                        |
| 2020              | Phase2+Phase 3 | FUG         | 0.1550          | 310.1   | 0.09439 | 1.19E-02 | 23,666                         | 5.03E-07                               |
| 2021              | Phase 3        | FUG         | 0.0003          | 0.6     | 0.00018 | 2.30E-05 | 11,834                         | 1.94E-09                               |
| 2022              | Phase 4        | FUG         | 0.1962          | 392.4   | 0.11945 | 1.51E-02 | 13,409                         | 1.12E-06                               |
| 2023              | Phase 4        | FUG         | 0.0014          | 2.9     | 0.00088 | 1.10E-04 | 13,409                         | 8.24E-09                               |
| 2024              | Phase 5        | FUG         | 0.1586          | 317.2   | 0.09656 | 1.22E-02 | 5,388                          | 2.26E-06                               |
| 2025              | Phase 5        | FUG         | 0.0201          | 40.2    | 0.01224 | 1.54E-03 | 5,388                          | 2.86E-07                               |
| Total             |                |             | 0.3763          | 752.7   | 0.2291  | 0.0289   |                                |                                        |

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

**Gateway Crossing, Santa Clara, California**  
**Maximum DPM Cancer Risk Calculations From Construction**  
**Impacts at Building 3 Receptors-1.5 meter**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

| Construction Cancer Risk by Year - Maximum Impact Receptor Evaluation |                                 |            |                                     |        |                              |                                                 |                              |        |                              |                                          |                   |                |
|-----------------------------------------------------------------------|---------------------------------|------------|-------------------------------------|--------|------------------------------|-------------------------------------------------|------------------------------|--------|------------------------------|------------------------------------------|-------------------|----------------|
| Exposure<br>Year                                                      | Exposure<br>Duration<br>(years) | Age        | Infant/Child - Exposure Information |        |                              | Infant/Child<br>Cancer<br>Risk<br>(per million) | Adult - Exposure Information |        |                              | Adult<br>Cancer<br>Risk<br>(per million) | Fugitive<br>PM2.5 | Total<br>PM2.5 |
|                                                                       |                                 |            | DPM Conc (ug/m3)                    |        | Age<br>Sensitivity<br>Factor |                                                 | Modeled                      |        | Age<br>Sensitivity<br>Factor |                                          |                   |                |
|                                                                       |                                 |            | Year                                | Annual |                              |                                                 | DPM Conc (ug/m3)             | Year   |                              |                                          |                   |                |
| 0                                                                     | 0.25                            | -0.25 - 0* | 2022                                | 0.6169 | 10                           | 8.39                                            | 2022                         | -      | -                            | -                                        |                   |                |
| 1                                                                     | 1                               | 0 - 1      | 2022                                | 0.6169 | 10                           | 101.33                                          | 2022                         | 0.6169 | 1                            | 1.77                                     | 0.7602            | 1.377          |
| 2                                                                     | 1                               | 1 - 2      | 2023                                | 0.0774 | 10                           | 12.70                                           | 2023                         | 0.0774 | 1                            | 0.22                                     | 0.0056            | 0.083          |
| 3                                                                     | 1                               | 2 - 3      | 2024                                | 0.0058 | 3                            | 0.17                                            | 2024                         | 0.0058 | 1                            | 0.02                                     | 0.0050            | 0.011          |
| 4                                                                     | 1                               | 3 - 4      | 2025                                | 0.0019 | 3                            | 0.05                                            | 2025                         | 0.0006 | 1                            | 0.00                                     | 0.0000            | 0.001          |
| 5                                                                     | 1                               | 4 - 5      |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 6                                                                     | 1                               | 5 - 6      |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 7                                                                     | 1                               | 6 - 7      |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 8                                                                     | 1                               | 7 - 8      |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 9                                                                     | 1                               | 8 - 9      |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 10                                                                    | 1                               | 9 - 10     |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 11                                                                    | 1                               | 10 - 11    |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 12                                                                    | 1                               | 11 - 12    |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 13                                                                    | 1                               | 12 - 13    |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 14                                                                    | 1                               | 13 - 14    |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 15                                                                    | 1                               | 14 - 15    |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 16                                                                    | 1                               | 15 - 16    |                                     | 0.0000 | 3                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 17                                                                    | 1                               | 16-17      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 18                                                                    | 1                               | 17-18      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 19                                                                    | 1                               | 18-19      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 20                                                                    | 1                               | 19-20      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 21                                                                    | 1                               | 20-21      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 22                                                                    | 1                               | 21-22      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 23                                                                    | 1                               | 22-23      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 24                                                                    | 1                               | 23-24      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 25                                                                    | 1                               | 24-25      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 26                                                                    | 1                               | 25-26      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 27                                                                    | 1                               | 26-27      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 28                                                                    | 1                               | 27-28      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 29                                                                    | 1                               | 28-29      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| 30                                                                    | 1                               | 29-30      |                                     | 0.0000 | 1                            | 0.00                                            |                              | 0.0000 | 1                            | 0.00                                     |                   |                |
| Total Increased Cancer Risk                                           |                                 |            |                                     |        |                              | 122.64                                          |                              |        |                              | 2.01                                     |                   |                |

\* Third trimester of pregnancy

**Gateway Crossing, Santa Clara, California**

**Maximum Impacts at Building 3 MEI location**

| Emissions<br>Year |                                             |                                           |                              |     |                        |                                                                  |
|-------------------|---------------------------------------------|-------------------------------------------|------------------------------|-----|------------------------|------------------------------------------------------------------|
|                   | Maximum Concentrations                      |                                           | Cancer Risk<br>(per million) |     | Hazard<br>Index<br>(-) | Maximum<br>Annual PM2.5<br>Concentration<br>(µg/m <sup>3</sup> ) |
|                   | Exhaust<br>PM10/DPM<br>(µg/m <sup>3</sup> ) | Fugitive<br>PM2.5<br>(µg/m <sup>3</sup> ) |                              |     |                        |                                                                  |
| 2022              | 0.6169                                      | 0.7602                                    | 109.7                        | 1.8 | 0.123                  | 1.38                                                             |
| 2023              | 0.0774                                      | 0.0056                                    | 12.7                         | 0.2 | 0.015                  | 0.08                                                             |
| 2024              | 0.0058                                      | 0.0050                                    | 0.2                          | 0.0 | 0.001                  | 0.01                                                             |
| 2025              | 0.0019                                      | 0.0000                                    | 0.0                          | 0.0 | 0.000                  | 0.00                                                             |
| <b>Total</b>      |                                             |                                           | 122.6                        | 2.0 |                        |                                                                  |
| <b>Maximum</b>    | <b>0.6169</b>                               | <b>0.7602</b>                             |                              |     | <b>0.123</b>           | <b>1.38</b>                                                      |

## Attachment 3: Rail Impacts Evaluation Methodology

Gateway Crossings, Santa Clara, CA  
DPM Modeling - Rail Line Information and DPM and PM2.5 Emission Rates  
Caltrain Without Electrification - Diesel-Powered Passenger and Freight Trains

| Year      | Description                | Model No. Lines | Link Width (ft) | Link Width (m) | Link Length (ft) | Link Length (miles) | Link Length (m) | Release Height (m) | No. Trains per Day | Train Travel Speed (mph) | DPM Emission Rates                     |                                     |                          |                            |
|-----------|----------------------------|-----------------|-----------------|----------------|------------------|---------------------|-----------------|--------------------|--------------------|--------------------------|----------------------------------------|-------------------------------------|--------------------------|----------------------------|
|           |                            |                 |                 |                |                  |                     |                 |                    |                    |                          | Average Daily Emission Rate (g/mi/day) | Average Daily Emission Rate (g/day) | Link Emission Rate (g/s) | Link Emission Rate (lb/hr) |
| 2020      | Caltrain - Stop at Station | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 50                 | 10                       | 117.3                                  | 63.5                                | 7.35E-04                 | 5.83E-03                   |
|           | Caltrain - Bypass Station  | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 25                 | 40                       | 74.5                                   | 40.3                                | 4.67E-04                 | 3.71E-03                   |
|           | Amtrak - Stop at Station   | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 8                  | 10                       | 17.6                                   | 9.5                                 | 1.10E-04                 | 8.76E-04                   |
|           | Amtrak - Bypass Station    | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 2                  | 40                       | 5.7                                    | 3.1                                 | 3.58E-05                 | 2.84E-04                   |
|           | Freight Trains             | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 10                 | 40                       | 53.4                                   | 28.9                                | 3.35E-04                 | 2.66E-03                   |
|           | <b>Total</b>               | -               | -               | -              | -                | -                   | -               | -                  | <b>95</b>          | -                        | <b>268.5</b>                           | <b>145.4</b>                        | <b>1.68E-03</b>          | <b>1.34E-02</b>            |
| 2021-2025 | Caltrain - Stop at Station | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 76                 | 10                       | 142.0                                  | 76.9                                | 8.90E-04                 | 7.06E-03                   |
|           | Caltrain - Bypass Station  | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 15                 | 40                       | 36.2                                   | 19.6                                | 2.27E-04                 | 1.80E-03                   |
|           | Amtrak - Stop at Station   | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 8                  | 10                       | 14.1                                   | 7.6                                 | 8.83E-05                 | 7.01E-04                   |
|           | Amtrak - Bypass Station    | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 2                  | 40                       | 4.6                                    | 2.5                                 | 2.86E-05                 | 2.27E-04                   |
|           | Freight Trains             | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 10                 | 40                       | 43.7                                   | 23.6                                | 2.73E-04                 | 2.17E-03                   |
|           | <b>Total</b>               | -               | -               | -              | -                | -                   | -               | -                  | <b>111</b>         | -                        | <b>240.5</b>                           | <b>130.2</b>                        | <b>1.51E-03</b>          | <b>1.20E-02</b>            |
| 2026-2049 | Caltrain - Stop at Station | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 76                 | 10                       | 44.3                                   | 24.0                                | 2.78E-04                 | 2.20E-03                   |
|           | Caltrain - Bypass Station  | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 15                 | 40                       | 11.3                                   | 6.1                                 | 7.07E-05                 | 5.61E-04                   |
|           | Amtrak - Stop at Station   | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 8                  | 10                       | 4.4                                    | 2.4                                 | 2.75E-05                 | 2.19E-04                   |
|           | Amtrak - Bypass Station    | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 2                  | 40                       | 1.4                                    | 0.8                                 | 8.93E-06                 | 7.09E-05                   |
|           | Freight Trains             | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 10                 | 40                       | 15.8                                   | 8.5                                 | 9.89E-05                 | 7.85E-04                   |
|           | <b>Total</b>               | -               | -               | -              | -                | -                   | -               | -                  | <b>111</b>         | -                        | <b>77.2</b>                            | <b>41.8</b>                         | <b>4.84E-04</b>          | <b>3.84E-03</b>            |

Notes: Emission based on Emission Factors for Locomotives, USEPA 2009 (EPA-420-F-09-025)  
Average emissions calculated for 2020 and periods 2021-2025, 2026-2049.  
Fuel correction factors from Offroad Modeling Change Technical memo, Changes to the Locomotive Inventory, CARB July 2006.  
PM2.5 calculated as 92% of PM emissions (CARB CEIDERS PM2.5 fractions)  
Passenger trains assumed to operate for 24 hours per day  
Freight trains assumed to operate for 24 hours per day

| Caltrain Diesel Trains- without electrification                           |                 |              |       |                 |              |       | 2026 - 2049     |              |       |
|---------------------------------------------------------------------------|-----------------|--------------|-------|-----------------|--------------|-------|-----------------|--------------|-------|
|                                                                           | 2020            |              |       | 2021 - 2025     |              |       |                 |              |       |
|                                                                           | Stop at Station | Skip Station | Total | Stop at Station | Skip Station | Total | Stop at Station | Skip Station | Total |
| Arrive/Depart Station                                                     |                 |              |       |                 |              |       |                 |              |       |
| Passenger trains - weekday                                                | 58              | 34           | 92    | 94              | 20           | 114   | 94              | 20           | 114   |
| Passenger trains - weekend                                                | 28              | 4            | 32    | 28              | 4            | 32    | 28              | 4            | 32    |
| Passenger trains - Sat only                                               | 4               | 0            | 4     | 4               | 0            | 4     | 4               | 0            | 4     |
| Total Trains                                                              | 90              | 38           | 128   | 126             | 24           | 150   | 126             | 24           | 150   |
| Annual average daily trains                                               | 50              | 25           | 75    | 76              | 15           | 91    | 76              | 15           | 91    |
| Locomotive horsepower                                                     |                 |              | 3285  |                 |              | 3285  |                 |              | 3285  |
| Locomotive engine load =                                                  | 0.1             | 0.5          |       | 0.1             | 0.5          |       | 0.1             | 0.5          |       |
| Other Diesel Passenger Trains (Amtrak Capitol Corridor & Coast Starlight) |                 |              |       |                 |              |       |                 |              |       |
|                                                                           | Stop at Station | Skip Station | Total | Stop at Station | Skip Station | Total | Stop at Station | Skip Station | Total |
| Arrive/Depart Station                                                     |                 |              |       |                 |              |       |                 |              |       |
| Passenger trains - weekday                                                | 8               | 2            | 10    | 8               | 2            | 10    | 8               | 2            | 10    |
| Passenger trains - weekend                                                | 7               | 2            | 9     | 7               | 2            | 9     | 7               | 2            | 9     |
| Passenger trains - Sat only                                               | 0               | 0            | 0     | 0               | 0            | 0     | 0               | 0            | 0     |
| Total Trains =                                                            | 15              | 4            | 19    | 15              | 4            | 19    | 15              | 4            | 19    |
| Annual average daily trains                                               | 8               | 2            | 10    | 8               | 2            | 10    | 8               | 2            | 10    |
| Locomotive horsepower =                                                   |                 |              | 3200  |                 |              | 3200  |                 |              | 3200  |
| Locomotives per train =                                                   |                 |              | 1     |                 |              | 1     |                 |              | 1     |
| Locomotive engine load =                                                  | 0.1             | 0.5          |       | 0.1             | 0.5          |       | 0.1             | 0.5          |       |
| Freight Trains - All Diesel & Bypass Station                              |                 |              |       |                 |              |       |                 |              |       |
| Freight trains per day                                                    |                 | 10           |       |                 | 10           |       |                 | 10           |       |
| Locomotive horsepower                                                     |                 | 2300         |       |                 | 2300         |       |                 | 2300         |       |
| Locomotives per train                                                     |                 | 2            |       |                 | 2            |       |                 | 2            |       |
| Total horsepower                                                          |                 | 4600         |       |                 | 4600         |       |                 | 4600         |       |
| Locomotive engine load                                                    |                 | 0.5          |       |                 | 0.5          |       |                 | 0.5          |       |

| Locomotive DPM Emission Factors (g/hp-hr) |       |           |           |
|-------------------------------------------|-------|-----------|-----------|
| Train Type                                | 2020  | 2021-2025 | 2026-2049 |
| Passenger                                 | 0.101 | 0.0808    | 0.025     |
| Freight                                   | 0.111 | 0.0904    | 0.033     |

\* average emissions for period.

PM2.5 to PM ratio = 0.92

DPM to PM ratio = 1

CARB Fuel Adj Factor

2010 2011+

Passenger 0.717 0.709

Freight 0.851 0.840

**Gateway Crossings, Santa Clara, CA -1st Floor Rail Line DPM & PM2.5 Concentrations**  
**AERMOD Risk Modeling Parameters and Maximum Concentrations**  
**Caltrain Without Electrification - Diesel-Powered Passenger and Freight Trains**

|                                    |                                         |
|------------------------------------|-----------------------------------------|
| <b><u>Receptor Information</u></b> | 1st Floor Receptors                     |
| Number of Receptors                | 395                                     |
| Receptor Height =                  | 1.5 meters                              |
| Receptor distances =               | Various, receptors at residential units |

|                                         |           |
|-----------------------------------------|-----------|
| <b><u>Meteorological Conditions</u></b> |           |
| BAAQMD San Jose Arpt Hourly Data        | 2006-2010 |
| Land Use Classification                 | urban     |
| Wind speed =                            | variable  |
| Wind direction =                        | variable  |

**MEI Maximum Concentrations - Receptor Height = 1.5 m**

| Meteorological<br>Data Years | Period Average DPM<br>Concentration<br>( $\mu\text{g}/\text{m}^3$ )   |           |           |
|------------------------------|-----------------------------------------------------------------------|-----------|-----------|
|                              | 2020                                                                  | 2021-2025 | 2026-2049 |
| 2006-2010                    | 0.02902                                                               | 0.0259    | 0.0083    |
| Meteorological<br>Data Years | Period Average PM2.5<br>Concentration<br>( $\mu\text{g}/\text{m}^3$ ) |           |           |
|                              | 2020                                                                  | 2021-2025 | 2026-2049 |
| 2006-2010                    | 0.0267                                                                | 0.0239    | 0.0077    |

**Gateway Crossings, Santa Clara, CA - 1st Floor Receptors (1.5 meter receptor height)**  
**AERMOD Railroad DPM Risk Modeling Parameters and Maximum Cancer Risk at Project Site**  
**Caltrain Without Electrification - Diesel-Powered Passenger and Freight Trains**

**Cancer Risk Calculation Method**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Values**

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

| TAC | CPF      |
|-----|----------|
| DPM | 1.10E+00 |

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

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

**Rail Locomotive Cancer Risk by Year - Maximum Impact Receptor Location**

| Exposure Year                      | Year | Exposure Duration (years) | Age        | Age Sensitivity Factor | DPM Annual Conc (ug/m3) | DPM Cancer Risk (per million) |
|------------------------------------|------|---------------------------|------------|------------------------|-------------------------|-------------------------------|
| 0                                  | 2020 | 0.25                      | -0.25 - 0* | 10                     | 0.0290                  | 0.395                         |
| 1                                  | 2020 | 1                         | 1          | 10                     | 0.0290                  | 4.766                         |
| 2                                  | 2021 | 1                         | 2          | 10                     | 0.0259                  | 4.259                         |
| 3                                  | 2022 | 1                         | 3          | 3                      | 0.0259                  | 0.670                         |
| 4                                  | 2023 | 1                         | 4          | 3                      | 0.0259                  | 0.670                         |
| 5                                  | 2024 | 1                         | 5          | 3                      | 0.0259                  | 0.670                         |
| 6                                  | 2025 | 1                         | 6          | 3                      | 0.0259                  | 0.670                         |
| 7                                  | 2026 | 1                         | 7          | 3                      | 0.0083                  | 0.216                         |
| 8                                  | 2027 | 1                         | 8          | 3                      | 0.0083                  | 0.216                         |
| 9                                  | 2028 | 1                         | 9          | 3                      | 0.0083                  | 0.216                         |
| 10                                 | 2029 | 1                         | 10         | 3                      | 0.0083                  | 0.216                         |
| 11                                 | 2030 | 1                         | 11         | 3                      | 0.0083                  | 0.216                         |
| 12                                 | 2031 | 1                         | 12         | 3                      | 0.0083                  | 0.216                         |
| 13                                 | 2032 | 1                         | 13         | 3                      | 0.0083                  | 0.216                         |
| 14                                 | 2033 | 1                         | 14         | 3                      | 0.0083                  | 0.216                         |
| 15                                 | 2034 | 1                         | 15         | 3                      | 0.0083                  | 0.216                         |
| 16                                 | 2035 | 1                         | 16         | 3                      | 0.0083                  | 0.216                         |
| 17                                 | 2036 | 1                         | 17         | 1                      | 0.0083                  | 0.024                         |
| 18                                 | 2037 | 1                         | 18         | 1                      | 0.0083                  | 0.024                         |
| 19                                 | 2038 | 1                         | 19         | 1                      | 0.0083                  | 0.024                         |
| 20                                 | 2039 | 1                         | 20         | 1                      | 0.0083                  | 0.024                         |
| 21                                 | 2040 | 1                         | 21         | 1                      | 0.0083                  | 0.024                         |
| 22                                 | 2041 | 1                         | 22         | 1                      | 0.0083                  | 0.024                         |
| 23                                 | 2042 | 1                         | 23         | 1                      | 0.0083                  | 0.024                         |
| 24                                 | 2043 | 1                         | 24         | 1                      | 0.0083                  | 0.024                         |
| 25                                 | 2044 | 1                         | 25         | 1                      | 0.0083                  | 0.024                         |
| 26                                 | 2045 | 1                         | 26         | 1                      | 0.0083                  | 0.024                         |
| 27                                 | 2046 | 1                         | 27         | 1                      | 0.0083                  | 0.024                         |
| 28                                 | 2047 | 1                         | 28         | 1                      | 0.0083                  | 0.024                         |
| 29                                 | 2048 | 1                         | 29         | 1                      | 0.0083                  | 0.024                         |
| 30                                 | 2049 | 1                         | 30         | 1                      | 0.0083                  | 0.024                         |
| <b>Total Increased Cancer Risk</b> |      |                           |            |                        |                         | <b>14.6</b>                   |

\* Third trimester of pregnancy

Gateway Crossings, Santa Clara, CA  
DPM Modeling - Rail Line Information and DPM and PM2.5 Emission Rates  
Caltrain Electrification and Diesel-Powered Freight Trains

| Year      | Description                | Model No. Lines | Link Width (ft) | Link Width (m) | Link Length (ft) | Link Length (miles) | Link Length (m) | Release Height (m) | No. Trains per Day | Train Travel Speed (mph) | DPM Emission Rates                     |                                     |                          |                            |
|-----------|----------------------------|-----------------|-----------------|----------------|------------------|---------------------|-----------------|--------------------|--------------------|--------------------------|----------------------------------------|-------------------------------------|--------------------------|----------------------------|
|           |                            |                 |                 |                |                  |                     |                 |                    |                    |                          | Average Daily Emission Rate (g/mi/day) | Average Daily Emission Rate (g/day) | Link Emission Rate (g/s) | Link Emission Rate (lb/hr) |
| 2020      | Caltrain - Stop at Station | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 50                 | 10                       | 117.3                                  | 63.5                                | 7.35E-04                 | 5.83E-03                   |
|           | Caltrain - Bypass Station  | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 25                 | 40                       | 74.5                                   | 40.3                                | 4.67E-04                 | 3.71E-03                   |
|           | Amtrak - Stop at Station   | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 8                  | 10                       | 17.6                                   | 9.5                                 | 1.10E-04                 | 8.76E-04                   |
|           | Amtrak - Bypass Station    | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 2                  | 40                       | 5.7                                    | 3.1                                 | 3.58E-05                 | 2.84E-04                   |
|           | Freight Trains             | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 10                 | 40                       | 53.4                                   | 28.9                                | 3.35E-04                 | 2.66E-03                   |
|           | <b>Total</b>               | -               | -               | -              | -                | -                   | -               | -                  | <b>95</b>          | -                        | <b>268.5</b>                           | <b>145.4</b>                        | <b>1.68E-03</b>          | <b>1.34E-02</b>            |
| 2021-2025 | Caltrain - Stop at Station | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 1                  | 10                       | 1.1                                    | 0.6                                 | 7.09E-06                 | 5.63E-05                   |
|           | Caltrain - Bypass Station  | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 18                 | 40                       | 45.3                                   | 24.5                                | 2.83E-04                 | 2.25E-03                   |
|           | Amtrak - Stop at Station   | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 8                  | 10                       | 14.1                                   | 7.6                                 | 8.83E-05                 | 7.01E-04                   |
|           | Amtrak - Bypass Station    | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 2                  | 40                       | 4.6                                    | 2.5                                 | 2.86E-05                 | 2.27E-04                   |
|           | Freight Trains             | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 10                 | 40                       | 43.7                                   | 23.6                                | 2.73E-04                 | 2.17E-03                   |
|           | <b>Total</b>               | <b>1</b>        | <b>12</b>       | <b>3.7</b>     | <b>2,858</b>     | <b>0.54</b>         | <b>871</b>      | <b>5.0</b>         | <b>38</b>          | -                        | <b>108.7</b>                           | <b>58.8</b>                         | <b>6.81E-04</b>          | <b>5.41E-03</b>            |
| 2026-2049 | Caltrain - Stop at Station | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 0                  | 10                       | 0.0                                    | 0.0                                 | 0.00E+00                 | 0.00E+00                   |
|           | Caltrain - Bypass Station  | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 3                  | 40                       | 2.2                                    | 1.2                                 | 1.38E-05                 | 1.10E-04                   |
|           | Amtrak - Stop at Station   | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 8                  | 10                       | 4.4                                    | 2.4                                 | 2.75E-05                 | 2.19E-04                   |
|           | Amtrak - Bypass Station    | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 2                  | 40                       | 1.4                                    | 0.8                                 | 8.93E-06                 | 7.09E-05                   |
|           | Freight Trains             | 1               | 12              | 3.7            | 2,858            | 0.54                | 871             | 5.0                | 10                 | 40                       | 15.8                                   | 8.5                                 | 9.89E-05                 | 7.85E-04                   |
|           | <b>Total</b>               | <b>1</b>        | <b>12</b>       | <b>3.7</b>     | <b>2,858</b>     | <b>0.54</b>         | <b>871</b>      | <b>5.0</b>         | <b>23</b>          | -                        | <b>23.8</b>                            | <b>12.9</b>                         | <b>1.49E-04</b>          | <b>1.18E-03</b>            |

Notes: Emission based on Emission Factors for Locomotives, USEPA 2009 (EPA-420-F-09-025)  
Average emissions calculated for 2020 and periods 2021-2025, 2026-2049.  
Fuel correction factors from Offroad Modeling Change Technical memo, Changes to the Locomotive Inventory, CARB July 2006.  
PM2.5 calculated as 92% of PM emissions (CARB CEIDERS PM2.5 fractions)  
Passenger trains assumed to operate for 24 hours per day  
Freight trains assumed to operate for 24 hours per day

| Caltrain Diesel Trains- with electrification                       |                       |              |       |                       |              |       |                       |              |       |
|--------------------------------------------------------------------|-----------------------|--------------|-------|-----------------------|--------------|-------|-----------------------|--------------|-------|
| Arrive/Depart Station                                              | 2020                  |              |       | 2021 - 2025           |              |       | 2026 - 2049           |              |       |
|                                                                    | Stop at Station       | Skip Station | Total | Stop at Station       | Skip Station | Total | Stop at Station       | Skip Station | Total |
| Passenger trains - weekday =                                       | 58                    | 34           | 92    | 0                     | 24           | 24    | 0                     | 4            | 4     |
| Passenger trains - weekend =                                       | 28                    | 4            | 32    | 0                     | 4            | 4     | 0                     | 0            | 0     |
| Passenger trains - Sat only =                                      | 4                     | 0            | 4     | 4                     | 0            | 4     | 0                     | 0            | 0     |
| Total Trains =                                                     | 90                    | 38           | 128   | 4                     | 28           | 32    | 0                     | 4            | 4     |
| Annual average daily trains =                                      | 50                    | 25           | 75    | 1                     | 18           | 19    | 0                     | 3            | 3     |
| Locomotive horsepower =                                            | (before 2021) 3285    |              |       | (before 2021) 3285    |              |       | (before 2021) 3285    |              |       |
|                                                                    | (2021 and later) 3467 |              |       | (2021 and later) 3467 |              |       | (2021 and later) 3467 |              |       |
| Locomotive engine load =                                           | 0.1                   | 0.5          |       | 0.1                   | 0.5          |       | 0.1                   | 0.5          |       |
| Other Passenger Trains (Amtrak Capitol Corridor & Coast Starlight) |                       |              |       |                       |              |       |                       |              |       |
| Arrive/Depart Station                                              | Stop at Station       | Skip Station | Total | Stop at Station       | Skip Station | Total | Stop at Station       | Skip Station | Total |
| Passenger trains - weekday =                                       | 8                     | 2            | 10    | 8                     | 2            | 10    | 8                     | 2            | 10    |
| Passenger trains - weekend =                                       | 7                     | 2            | 9     | 7                     | 2            | 9     | 7                     | 2            | 9     |
| Passenger trains - Sat only =                                      | 0                     | 0            | 0     | 0                     | 0            | 0     | 0                     | 0            | 0     |
| Total Trains =                                                     | 15                    | 4            | 19    | 15                    | 4            | 19    | 15                    | 4            | 19    |
| Annual average daily trains =                                      | 8                     | 2            | 10    | 8                     | 2            | 10    | 8                     | 2            | 10    |
| Locomotive horsepower =                                            | 3200                  |              |       | 3200                  |              |       | 3200                  |              |       |
| Locomotives per train =                                            | 1                     |              |       | 1                     |              |       | 1                     |              |       |
| Locomotive engine load =                                           | 0.1                   | 0.5          |       | 0.1                   | 0.5          |       | 0.1                   | 0.5          |       |
| Freight                                                            |                       |              |       |                       |              |       |                       |              |       |
| Freight trains per day =                                           | 10                    |              |       | 10                    |              |       | 10                    |              |       |
| Locomotive horsepower =                                            | 2300                  |              |       | 2300                  |              |       | 2300                  |              |       |
| Locomotives per train =                                            | 2                     |              |       | 2                     |              |       | 2                     |              |       |
| Total horsepower =                                                 | 4600                  |              |       | 4600                  |              |       | 4600                  |              |       |
| Locomotive engine load =                                           | 0.5                   |              |       | 0.5                   |              |       | 0.5                   |              |       |

| Locomotive DPM Emission Factors (g/hp-hr) |           |           |           |
|-------------------------------------------|-----------|-----------|-----------|
| Train Type                                | 2019-2020 | 2021-2025 | 2026-2049 |
| Passenger                                 | 0.101     | 0.0808    | 0.025     |
| Freight                                   | 0.111     | 0.0904    | 0.033     |

\* average emissions for period.

PM2.5 to PM ratio = 0.92

DPM to PM ratio = 1

CARB Fuel Adj Factor

2010 2011+

Passenger 0.717 0.709

Freight 0.851 0.840

**Gateway Crossings, Santa Clara, CA -1st Floor Rail Line DPM & PM2.5 Concentrations**  
**AERMOD Risk Modeling Parameters and Maximum Concentrations**  
**Caltrain Electrification and Diesel-Powered Amtrak and Freight Trains**

**Receptor Information**                      1st Floor Receptors  
Number of Receptors                      395  
Receptor Height =                      1.5 meters  
Receptor distances =                      Various, receptors at residential units

**Meteorological Conditions**  
BAAQMD San Jose Arpt Hourly Data    2006-2010  
Land Use Classification                      urban  
Wind speed =                      variable  
Wind direction =                      variable

**MEI Maximum Concentrations - Receptor Height = 1.5 m**

| Meteorological<br>Data Years | Period Average DPM<br>Concentration<br>( $\mu\text{g}/\text{m}^3$ )   |           |           |
|------------------------------|-----------------------------------------------------------------------|-----------|-----------|
|                              | 2020                                                                  | 2021-2025 | 2026-2049 |
| 2006-2010                    | 0.02902                                                               | 0.0121    | 0.0027    |
| Meteorological<br>Data Years | Period Average PM2.5<br>Concentration<br>( $\mu\text{g}/\text{m}^3$ ) |           |           |
|                              | 2020                                                                  | 2021-2025 | 2026-2049 |
| 2006-2010                    | 0.0267                                                                | 0.0111    | 0.0025    |

**Gateway Crossings, Santa Clara, CA - 1st Floor Receptors (1.5 meter receptor height)**  
**AERMOD Railroad DPM Risk Modeling Parameters and Maximum Cancer Risk at Project Site**  
**Caltrain Electrification and Diesel-Powered Amtrak and Freight Trains**

**Cancer Risk Calculation Method**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Values**

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

| TAC | CPF      |
|-----|----------|
| DPM | 1.10E+00 |

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

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

**Rail Locomotive Cancer Risk by Year - Maximum Impact Receptor Location**

| Exposure Year                      | Year | Exposure Duration (years) | Age        | Age Sensitivity Factor | DPM Annual Conc (ug/m3) | DPM Cancer Risk (per million) |
|------------------------------------|------|---------------------------|------------|------------------------|-------------------------|-------------------------------|
| 0                                  | 2020 | 0.25                      | -0.25 - 0* | 10                     | 0.0290                  | 0.395                         |
| 1                                  | 2020 | 1                         | 1          | 10                     | 0.0290                  | 4.766                         |
| 2                                  | 2021 | 1                         | 2          | 10                     | 0.0121                  | 1.984                         |
| 3                                  | 2022 | 1                         | 3          | 3                      | 0.0121                  | 0.312                         |
| 4                                  | 2023 | 1                         | 4          | 3                      | 0.0121                  | 0.312                         |
| 5                                  | 2024 | 1                         | 5          | 3                      | 0.0121                  | 0.312                         |
| 6                                  | 2025 | 1                         | 6          | 3                      | 0.0121                  | 0.312                         |
| 7                                  | 2026 | 1                         | 7          | 3                      | 0.0027                  | 0.070                         |
| 8                                  | 2027 | 1                         | 8          | 3                      | 0.0027                  | 0.070                         |
| 9                                  | 2028 | 1                         | 9          | 3                      | 0.0027                  | 0.070                         |
| 10                                 | 2029 | 1                         | 10         | 3                      | 0.0027                  | 0.070                         |
| 11                                 | 2030 | 1                         | 11         | 3                      | 0.0027                  | 0.070                         |
| 12                                 | 2031 | 1                         | 12         | 3                      | 0.0027                  | 0.070                         |
| 13                                 | 2032 | 1                         | 13         | 3                      | 0.0027                  | 0.070                         |
| 14                                 | 2033 | 1                         | 14         | 3                      | 0.0027                  | 0.070                         |
| 15                                 | 2034 | 1                         | 15         | 3                      | 0.0027                  | 0.070                         |
| 16                                 | 2035 | 1                         | 16         | 3                      | 0.0027                  | 0.070                         |
| 17                                 | 2036 | 1                         | 17         | 1                      | 0.0027                  | 0.008                         |
| 18                                 | 2037 | 1                         | 18         | 1                      | 0.0027                  | 0.008                         |
| 19                                 | 2038 | 1                         | 19         | 1                      | 0.0027                  | 0.008                         |
| 20                                 | 2039 | 1                         | 20         | 1                      | 0.0027                  | 0.008                         |
| 21                                 | 2040 | 1                         | 21         | 1                      | 0.0027                  | 0.008                         |
| 22                                 | 2041 | 1                         | 22         | 1                      | 0.0027                  | 0.008                         |
| 23                                 | 2042 | 1                         | 23         | 1                      | 0.0027                  | 0.008                         |
| 24                                 | 2043 | 1                         | 24         | 1                      | 0.0027                  | 0.008                         |
| 25                                 | 2044 | 1                         | 25         | 1                      | 0.0027                  | 0.008                         |
| 26                                 | 2045 | 1                         | 26         | 1                      | 0.0027                  | 0.008                         |
| 27                                 | 2046 | 1                         | 27         | 1                      | 0.0027                  | 0.008                         |
| 28                                 | 2047 | 1                         | 28         | 1                      | 0.0027                  | 0.008                         |
| 29                                 | 2048 | 1                         | 29         | 1                      | 0.0027                  | 0.008                         |
| 30                                 | 2049 | 1                         | 30         | 1                      | 0.0027                  | 0.008                         |
| <b>Total Increased Cancer Risk</b> |      |                           |            |                        |                         | <b>9.2</b>                    |

\* Third trimester of pregnancy

## Attachment 4: Generator Risk Modeling

Gateway Crossings  
Standby Emergency Generator Impacts

Rating: 100 kW  
134 HP  
Operating Hours per Unit: 1 hours/day  
50 hours/year  
Load 0.74 from CARB OFFROAD  
Standby Emergency Generator Emissions (PER UNIT)

| Units                   | Criteria Pollutants |       |       |      |        |        |      |
|-------------------------|---------------------|-------|-------|------|--------|--------|------|
|                         | ROG                 | NOX   | CO    | SOX  | PM10   | PM2.5  | CO2e |
| tons/yr (from CalEEMod) | 0.01                | 0.02  | 0.02  | 0.00 | 0.0008 | 0.0008 |      |
| metric tons/yr          | —                   | —     | —     | —    | —      | —      | 8    |
|                         |                     |       |       |      |        |        |      |
| g/HP-hr                 | 0.75                | 2.10  | 2.72  | 0.00 | 0.110  | 0.110  |      |
| lbs/hr                  | 0.22                | 0.62  | 0.80  | 0.00 | 0.032  | 0.032  |      |
| lbs/yr                  | 11.08               | 31.00 | 40.20 | 0.06 | 1.620  | 1.620  |      |
| Average annual lbs/day  | 0.03                | 0.08  | 0.11  | 0.00 | 0.004  | 0.004  |      |

Community Risk

|                                                            | Worst Location |      | Construction MEI |                                     |
|------------------------------------------------------------|----------------|------|------------------|-------------------------------------|
| Cancer Risk at Source =<br>at closest unit and constr. MEI | 2.74E+00       | ~160 | 0,33             | single unit with OEHHA Adj.<br>~800 |
| Annual PM2.5 at Source<br>at closest unit and constr. MEI  | 0.005          |      | <0.001           |                                     |

## Attachment 5: Roadway Modeling

# Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County

Santa Clara

Roadway Direction

North-South

Side of the Roadway

East

Distance from Roadway

900

feet

Annual Average Daily Traffic (ADT)

48,370

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.070

(µg/m<sup>3</sup>)

Cancer Risk

3.08

(per million)

Coleman

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

Adjusted for EMFAC2014 for 2018

2.12

(per million)

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

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.

2. Roadways were modeled using CALINE4 Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.

3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

# Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County

Santa Clara

Roadway Direction

East-West

Side of the Roadway

South

Distance from Roadway

50

feet

Annual Average Daily Traffic (ADT)

4,780

Results

Santa Clara County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.059

(µg/m<sup>3</sup>)

Cancer Risk

2.33

(per million)

Brokaw Rd

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

Adjusted for EMFAC2014 for 2018

1.60

(per million)

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

Notes and References:

- Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
- Roadways were modeled using CALINE4 Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
- Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

## Attachment 6: Stationary Source Modeling

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.](#)

| Table A: Requestor Contact Information                       |                                                                                    |
|--------------------------------------------------------------|------------------------------------------------------------------------------------|
| Contact Name:                                                | Tanushree Ganguly                                                                  |
| Affiliation:                                                 | Illingworth & Rodkin, Inc.                                                         |
| Phone:                                                       | 707-794-0400                                                                       |
| Email:                                                       | <a href="mailto:tganguly@illingworthrodkin.com">tganguly@illingworthrodkin.com</a> |
| Date of Request                                              | 5/5/2017                                                                           |
| Project Name:                                                | Gateway Crossings                                                                  |
| Address:                                                     | Coleman Avenue and Brokaw Road                                                     |
| City:                                                        | Santa Clara                                                                        |
| County:                                                      | Santa Clara                                                                        |
| Type (residential, commercial, mixed use, industrial, etc.): | Mixed Use-Residential                                                              |
| Project size (# of units, or building square feet):          | 24 acres                                                                           |
|                                                              |                                                                                    |
| Comments:                                                    |                                                                                    |
|                                                              |                                                                                    |
|                                                              |                                                                                    |

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. Using the Google Earth ruler function, measure the distance in feet between the project's fenceline and the stationary source's fenceline for all the sources that are within 1,000 feet of the project's fenceline. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm that the source is within 1,000 feet of the project. Please report any mapping errors to the District (District contact information in Step 9). If the stationary source is within 1,000 feet of the project's fenceline and the stationary source's information table does not list the cancer risk, hazard index, and PM2.5 concentration, and instead says to "Contact District Staff", 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 noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further. Email this completed form to District staff (Step 9). District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks. **Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request. Submit forms, maps, and questions to Alison Kirk at 415-749-5169, or [akirk@baaqmd.gov](mailto:akirk@baaqmd.gov).**



| Cancer Risk and Chronic Hazard Index<br>Distance Adjustment Multiplier for Diesel IC<br>Engines |      |            |
|-------------------------------------------------------------------------------------------------|------|------------|
| Meters                                                                                          | Feet | Multiplier |
| 25                                                                                              | 83   | 0.85       |
| 30                                                                                              | 99   | 0.73       |
| 35                                                                                              | 116  | 0.64       |
| 40                                                                                              | 132  | 0.58       |
| 50                                                                                              | 165  | 0.5        |
| 60                                                                                              | 198  | 0.41       |
| 70                                                                                              | 231  | 0.31       |
| 80                                                                                              | 264  | 0.28       |
| 90                                                                                              | 297  | 0.25       |
| 100                                                                                             | 330  | 0.22       |
| 110                                                                                             | 363  | 0.18       |
| 120                                                                                             | 396  | 0.16       |
| 130                                                                                             | 429  | 0.15       |
| 131.718                                                                                         | 435  | 0.140827   |
| 140                                                                                             | 462  | 0.14       |
| 150                                                                                             | 495  | 0.12       |
| 160                                                                                             | 528  | 0.1        |
| 180                                                                                             | 594  | 0.09       |
| 200                                                                                             | 661  | 0.08       |
| 220                                                                                             | 727  | 0.07       |
| 240                                                                                             | 793  | 0.06       |
| 260                                                                                             | 859  | 0.05       |
| 280                                                                                             | 925  | 0.04       |

| Cancer Risk and Chronic Hazard Index Distance Adjustment Multiplier for<br>Gasoline Dispensing Facilities |      |            |
|-----------------------------------------------------------------------------------------------------------|------|------------|
| Meters                                                                                                    | Feet | Multiplier |
| 20                                                                                                        | 66   | 1          |
| 25                                                                                                        | 82   | 0.728      |
| 30                                                                                                        | 98   | 0.559      |
| 35                                                                                                        | 115  | 0.445      |
| 40                                                                                                        | 131  | 0.365      |
| 45                                                                                                        | 148  | 0.305      |
| 50                                                                                                        | 164  | 0.26       |
| 55                                                                                                        | 180  | 0.225      |
| 60                                                                                                        | 197  | 0.197      |
| 65                                                                                                        | 213  | 0.174      |
| 70                                                                                                        | 230  | 0.155      |
| 75                                                                                                        | 246  | 0.139      |
| 80                                                                                                        | 262  | 0.126      |
|                                                                                                           |      |            |
| 85                                                                                                        | 279  | 0.114      |
| 90                                                                                                        | 295  | 0.104      |
| 95                                                                                                        | 312  | 0.096      |
| 100                                                                                                       | 328  | 0.088      |
| 110                                                                                                       | 361  | 0.076      |
| 120                                                                                                       | 394  | 0.066      |
| 130                                                                                                       | 427  | 0.058      |
|                                                                                                           |      |            |
| 140                                                                                                       | 459  | 0.052      |
| 145                                                                                                       | 476  | 0.049      |
| 150                                                                                                       | 492  | 0.046      |
| 155                                                                                                       | 509  | 0.044      |
| 160                                                                                                       | 525  | 0.042      |
| 165                                                                                                       | 541  | 0.04       |
| 170                                                                                                       | 558  | 0.038      |
| 175                                                                                                       | 574  | 0.036      |
| 180                                                                                                       | 591  | 0.034      |
| 185                                                                                                       | 607  | 0.033      |
| 190                                                                                                       | 623  | 0.031      |
| 195                                                                                                       | 640  | 0.03       |
| 200                                                                                                       | 656  | 0.029      |
|                                                                                                           |      |            |
| 205                                                                                                       | 673  | 0.028      |
| 210                                                                                                       | 689  | 0.027      |
| 220                                                                                                       | 722  | 0.025      |
| 230                                                                                                       | 755  | 0.023      |
| 250                                                                                                       | 820  | 0.02       |
| 270                                                                                                       | 886  | 0.018      |
| 290                                                                                                       | 951  | 0.016      |

Plant# 19357      Atlantic - San Jose  
1250 Aviation Avenue  
San Jose, CA 95110

[C]urrent, [A]rchive, or [F]uture? c  
[P]lant, [S]ource, [A]bate. device, or [E]mis. Point? p

CURRENT Sources:

- 1 Fireguard Insulate AST, AVGAS  
Fixed roof tank, 15K gal, White, Avgas, 10 ft diam  
T43??662      no train
- 2 AVGAS (Tank Fill) - Loading Arm  
Aircraft/Marine Servicing, 1 gasoline filler, Avgas  
TD5?2662      no train

DETAIL POLLUTANTS - ABATED  
MOST RECENT P/O APPROVED (2017)

Atlantic - San Jose (P# 19357)

| S# SOURCE NAME                    |             |                        |      |          |  |
|-----------------------------------|-------------|------------------------|------|----------|--|
| MATERIAL                          | SOURCE CODE |                        |      |          |  |
| THROUGHPUT                        | DATE        | POLLUTANT              | CODE | LBS/DAY  |  |
| -----                             |             |                        |      |          |  |
| 1 Fireguard Insulate AST, AVGAS   |             |                        |      |          |  |
| T43??662                          |             |                        |      |          |  |
|                                   |             | Benzene                | 41   | 1.14E-01 |  |
|                                   |             | Cyclohexane            | 91   | 5.59E-02 |  |
|                                   |             | Hexane                 | 148  | 1.16E-01 |  |
|                                   |             | Toluene                | 293  | 3.26E-01 |  |
|                                   |             | Xylene                 | 307  | 4.05E-01 |  |
|                                   |             | Ethylbenzene           | 333  | 9.31E-02 |  |
|                                   |             | Tetra-Ethyl Lead (TEL) | 422  | 4.66E-02 |  |
|                                   |             | Avgas                  | 662  | 1.17E+00 |  |
| 2 AVGAS (Tank Fill) - Loading Arm |             |                        |      |          |  |
| TD5?2662                          |             |                        |      |          |  |
|                                   |             | Benzene                | 41   | 1.40E-02 |  |
|                                   |             | Cyclohexane            | 91   | 6.86E-03 |  |
|                                   |             | Hexane                 | 148  | 1.43E-02 |  |
|                                   |             | Toluene                | 293  | 4.00E-02 |  |
|                                   |             | Xylene                 | 307  | 4.97E-02 |  |
|                                   |             | Ethylbenzene           | 333  | 1.14E-02 |  |
|                                   |             | Tetra-Ethyl Lead (TEL) | 422  | 5.72E-03 |  |
|                                   |             | Avgas                  | 662  | 1.44E-01 |  |

PLANT TOTAL:  
lbs/day Pollutant

- 1.32E+00 Avgas (662)
- 1.28E-01 Benzene (41)
- 6.27E-02 Cyclohexane (91)
- 1.05E-01 Ethylbenzene (333)
- 1.31E-01 Hexane (148)
- 5.23E-02 Tetra-Ethyl Lead (TEL) (422)
- 3.66E-01 Toluene (293)
- 4.55E-01 Xylene (307)

Plant# 15839     Santa Clara Police Facility  
601 El Camino Real  
Santa Clara, CA 95050

[C]urrent, [A]rchive, or [F]uture? c  
[P]lant, [S]ource, [A]bate. device, or [E]mis. Point? p

CURRENT Sources:

- 1   Emergency Standby Generator: 750 KW/ 1006 HP, 601 ECR, San  
Standby Diesel engine, 1114 hp, Caterpillar S/N BLG00565, 1649 cu in  
C22BG098     /,P1,
- 3   Police Department #1, 601 ECR (Benton, Santa Clara, #2474)  
Standby Diesel engine, 404 hp, Detroit Diesel S/N 06VF221536, 549 cu in  
C22AG098     /,P3,

No CURRENT Abatement Devices

CURRENT Emission Points:

- 1   train: ,S1,/
- 3   train: ,S3,/

BAY AREA AIR QUALITY MANAGEMENT DISTRICT     Printed: MAY 10, 2017  
DETAIL POLLUTANTS - ABATED  
MOST RECENT P/O APPROVED (2017)

Santa Clara Police Facility (P# 15839)

| S#         | SOURCE NAME                                                 |           |          |         |  |
|------------|-------------------------------------------------------------|-----------|----------|---------|--|
| MATERIAL   | SOURCE CODE                                                 |           |          |         |  |
| THROUGHPUT | DATE                                                        | POLLUTANT | CODE     | LBS/DAY |  |
| -----      |                                                             |           |          |         |  |
| 1          | Emergency Standby Generator: 750 KW/ 1006 HP, 601 ECR, Sant |           |          |         |  |
|            | C22BG098                                                    |           |          |         |  |
|            | Benzene                                                     | 41        | 3.37E-04 |         |  |
|            | Formaldehyde                                                | 124       | 2.79E-05 |         |  |
|            | Organics (other, including                                  | 990       | 1.63E-02 |         |  |
|            | Arsenic (all)                                               | 1030      | 2.93E-07 |         |  |
|            | Beryllium (all) pollutant                                   | 1040      | 1.72E-07 |         |  |
|            | Cadmium                                                     | 1070      | 7.33E-07 |         |  |
|            | Chromium (hexavalent)                                       | 1095      | 1.52E-08 |         |  |
|            | Lead (all) pollutant                                        | 1140      | 6.22E-07 |         |  |
|            | Manganese                                                   | 1160      | 9.76E-07 |         |  |
|            | Nickel pollutant                                            | 1180      | 1.19E-05 |         |  |
|            | Mercury (all) pollutant                                     | 1190      | 2.07E-07 |         |  |
|            | Diesel Engine Exhaust Part                                  | 1350      | 2.24E-03 |         |  |
|            | PAH's (non-speciated)                                       | 1840      | 1.55E-06 |         |  |
|            | Nitrous Oxide (N2O)                                         | 2030      | 9.02E-05 |         |  |
|            | Nitrogen Oxides (part not                                   | 2990      | 1.41E-01 |         |  |
|            | Sulfur Dioxide (SO2)                                        | 3990      | 1.10E-04 |         |  |
|            | Carbon Monoxide (CO) pollu                                  | 4990      | 6.23E-02 |         |  |
|            | Carbon Dioxide, non-biogen                                  | 6960      | 1.13E+01 |         |  |
|            | Methane (CH4)                                               | 6970      | 4.51E-04 |         |  |
| 3          | Police Department #1, 601 ECR                               |           |          |         |  |
|            | C22AG098                                                    |           |          |         |  |
|            | Benzene                                                     | 41        | 1.00E-03 |         |  |
|            | Formaldehyde                                                | 124       | 8.27E-05 |         |  |
|            | Organics (other, including                                  | 990       | 1.17E-02 |         |  |
|            | Arsenic (all)                                               | 1030      | 8.71E-07 |         |  |
|            | Beryllium (all) pollutant                                   | 1040      | 5.10E-07 |         |  |
|            | Cadmium                                                     | 1070      | 2.18E-06 |         |  |
|            | Chromium (hexavalent)                                       | 1095      | 4.50E-08 |         |  |
|            | Lead (all) pollutant                                        | 1140      | 1.85E-06 |         |  |
|            | Manganese                                                   | 1160      | 2.90E-06 |         |  |
|            | Nickel pollutant                                            | 1180      | 3.52E-05 |         |  |
|            | Mercury (all) pollutant                                     | 1190      | 6.16E-07 |         |  |
|            | Diesel Engine Exhaust Part                                  | 1350      | 8.00E-03 |         |  |
|            | PAH's (non-speciated)                                       | 1840      | 4.59E-06 |         |  |
|            | Nitrous Oxide (N2O)                                         | 2030      | 2.68E-04 |         |  |
|            | Nitrogen Oxides (part not                                   | 2990      | 2.43E-01 |         |  |
|            | Sulfur Dioxide (SO2)                                        | 3990      | 3.27E-04 |         |  |
|            | Carbon Monoxide (CO) pollu                                  | 4990      | 1.39E-01 |         |  |
|            | Carbon Dioxide, non-biogen                                  | 6960      | 3.35E+01 |         |  |
|            | Methane (CH4)                                               | 6970      | 1.34E-03 |         |  |

PLANT TOTAL:  
lbs/day Pollutant

- 1.16E-06   Arsenic (all) (1030)
- 1.34E-03   Benzene (41)
- 6.82E-07   Beryllium (all) pollutant (1040)
- 2.91E-06   Cadmium (1070)
- 4.48E+01   Carbon Dioxide, non-biogenic CO2 (6960)
- 2.01E-01   Carbon Monoxide (CO) pollutant (4990)
- 6.02E-08   Chromium (hexavalent) (1095)
- 1.02E-02   Diesel Engine Exhaust Particulate Matter (1350)
- 1.11E-04   Formaldehyde (124)
- 2.47E-06   Lead (all) pollutant (1140)
- 3.87E-06   Manganese (1160)
- 8.23E-07   Mercury (all) pollutant (1190)
- 1.79E-03   Methane (CH4) (6970)
- 4.71E-05   Nickel pollutant (1180)
- 3.84E-01   Nitrogen Oxides (part not spec elsewhere) (2990)
- 3.58E-04   Nitrous Oxide (N2O) (2030)
- 2.80E-02   Organics (other, including CH4) (990)
- 6.14E-06   PAH's (non-speciated) (1840)
- 4.36E-04   Sulfur Dioxide (SO2) (3990)

Plant# 10821     Hewlett-Packard Aviation  
1210 Aviation Avenue  
San Jose, CA 95110  
Plant Closed: 02/05/16  
Transfer to New Plant# 23329  
List ARCHIVED devices (Y/N)? n

Plant# 23329     Hewlett Packard Enterprise Company  
1210 Aviation Avenue  
San Jose, CA 95110

[C]urrent, [A]rchive, or [F]uture? c  
[P]lant, [S]ource, [A]bated. device, or [E]mis. Point? p

CURRENT Sources:

- 1 HP Airport Olympian D200P4  
Standby Diesel engine, 300 hp, Caterpillar, 531 cu in  
C22AG098     /,P1,
- 2 Sk Parts Washer  
Degreaser, Methylated siloxane solvent, 59 deg F  
SD01A810     no train

No CURRENT Abatement Devices

CURRENT Emission Points:

- 1 train: ,S1,/

BAY AREA AIR QUALITY MANAGEMENT DISTRICT     Printed: MAY 10, 2017  
DETAIL POLLUTANTS - ABATED  
MOST RECENT P/O APPROVED (2016)

Hewlett-Packard Aviation (P# 10821)

| S#         | SOURCE NAME                |           |          |         |  |
|------------|----------------------------|-----------|----------|---------|--|
| MATERIAL   | SOURCE CODE                |           |          |         |  |
| THROUGHPUT | DATE                       | POLLUTANT | CODE     | LBS/DAY |  |
| -----      |                            |           |          |         |  |
| 1          | HP Airport Olympian D200P4 |           |          |         |  |
|            | C22AG098                   |           |          |         |  |
|            | Benzene                    | 41        | 2.19E-05 |         |  |
|            | Formaldehyde               | 124       | 1.81E-06 |         |  |
|            | Organics (other, including | 990       | 1.06E-03 |         |  |
|            | Arsenic (all)              | 1030      | 1.91E-08 |         |  |
|            | Beryllium (all) pollutant  | 1040      | 1.12E-08 |         |  |
|            | Cadmium                    | 1070      | 4.77E-08 |         |  |
|            | Chromium (hexavalent)      | 1095      | 9.86E-10 |         |  |
|            | Lead (all) pollutant       | 1140      | 4.04E-08 |         |  |
|            | Manganese                  | 1160      | 6.35E-08 |         |  |
|            | Nickel pollutant           | 1180      | 7.71E-07 |         |  |
|            | Mercury (all) pollutant    | 1190      | 1.35E-08 |         |  |
|            | Diesel Engine Exhaust Part | 1350      | 2.10E-04 |         |  |
|            | PAH's (non-speciated)      | 1840      | 1.01E-07 |         |  |
|            | Nitrous Oxide (N2O)        | 2030      | 5.87E-06 |         |  |
|            | Nitrogen Oxides (part not  | 2990      | 1.54E-02 |         |  |
|            | Sulfur Dioxide (SO2)       | 3990      | 7.15E-06 |         |  |
|            | Carbon Monoxide (CO) pollu | 4990      | 3.35E-03 |         |  |
|            | Carbon Dioxide, non-biogen | 6960      | 7.33E-01 |         |  |
|            | Methane (CH4)              | 6970      | 2.93E-05 |         |  |
| 2          | Sk Parts Washer            |           |          |         |  |
|            | SD01A810                   |           |          |         |  |
|            | Methylated siloxane solven | 810       | 0.00E+00 |         |  |

PLANT TOTAL:  
lbs/day Pollutant

- 1.91E-08 Arsenic (all) (1030)
- 2.19E-05 Benzene (41)
- 1.12E-08 Beryllium (all) pollutant (1040)
- 4.77E-08 Cadmium (1070)
- 7.33E-01 Carbon Dioxide, non-biogenic CO2 (6960)
- 3.35E-03 Carbon Monoxide (CO) pollutant (4990)
- 9.86E-10 Chromium (hexavalent) (1095)
- 2.10E-04 Diesel Engine Exhaust Particulate Matter (1350)
- 1.81E-06 Formaldehyde (124)
- 4.04E-08 Lead (all) pollutant (1140)
- 6.35E-08 Manganese (1160)
- 1.35E-08 Mercury (all) pollutant (1190)
- 2.93E-05 Methane (CH4) (6970)
- 0.00E+00 Methylated siloxane solvent (810)
- 7.71E-07 Nickel pollutant (1180)
- 1.54E-02 Nitrogen Oxides (part not spec elsewhere) (2990)
- 5.87E-06 Nitrous Oxide (N2O) (2030)
- 1.06E-03 Organics (other, including CH4) (990)
- 1.01E-07 PAH's (non-speciated) (1840)
- 7.15E-06 Sulfur Dioxide (SO2) (3990)