ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Miguel Hernandez
Huitt-Zollars, Inc.
430 Exchange, Suite 200
Irvine, CA 92602

RE: Santa Ana Septic to Sewer – Emissions Technical Memorandum

Dear Mr. Hernandez:

ECORP Consulting, Inc. has conducted an Emissions Technical Memorandum for the proposed Santa Ana Septic to Sewer Project (Project) located in City of Santa Ana, California. The purpose of this memorandum is to assess any potential impacts to air quality and/or greenhouse gas (GHG) emissions as a result.

INTRODUCTION

The purpose of this technical memorandum is to assess the Project's potential air quality and GHG impacts within the Project area. The memorandum will compare the Project's emissions to the significant thresholds identified by the South Coast Air Quality Management District (SCAQMD), the air pollution control officer with jurisdiction over the area. Air Quality and GHG impacts are assessed in accordance with methodologies recommended by the California Air Resource Board (CARB) and the SCAQMD. Where quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria air pollutant emissions and GHG emissions associated with both construction and operation of a variety of land use projects.

PROJECT LOCATION & DESCRIPTION

The Project site is located in the City of Santa Ana (City), where it encompasses 2,970 linear feet on Medford Avenue, Pasadena Street, Deodar Street and 17th Street. The entire Project site is located in the public right-of-way. The site is generally bound by single-family residences on Medford Avenue, Pasadena Street and Deodar Street, while retail uses, multi-family residence and undeveloped land surround Ponderosa Street and 17th Street.

The Project proposes to install 670 linear feet of sewer mains and lateral connecters to transfer existing residences and businesses currently employing the use of septic systems to the City's sewer systems. Additionally, the Project would replace 2,300 linear feet of water main and laterals and transfer 50 properties from the City of Tustin water service to the City of Santa Ana.

Air Quality

Environmental Setting

Santa Ana is located within Orange County. CARB has divided California into regional air basins according to topographic features. Orange County and the site area are located in a region identified as the South

Coast Air Basin (SoCAB). The SoCAB includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The air basin is on a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean on the southwest, with high mountains forming the remainder of the perimeter (SCAQMD 1993).

Both the U.S. Environmental Protection Agency (USEPA) and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O_3) (precursor O_3 emissions include nitrogen oxide (NOx) and reactive organic gases (ROG)), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The SoCAB region is designated as a nonattainment area for the state standards for O_3, PM_{10} and $PM_{2.5}$ as well as being in a nonattainment area for federal standards of O_3 and $PM_{2.5}$.

Regulatory Setting

The local air quality agency affecting the SoCAB is the SCAQMD, which is charged with the responsibility of implementing air quality programs and ensuring that national and state ambient air quality standards are not exceeded and that air quality conditions are maintained in the SoCAB. In an attempt to achieve national and state ambient air quality standards and maintain air quality, the air district has completed the several air quality attainment plans and reports, which together constitute the State Implementation Plan (SIP).

The SCAQMD has also adopted various rules and regulations for the control of stationary and area sources of emissions, including Rule 403 (Fugitive Dust). This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce course particulate matter (PM_{10}) emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. Additionally, SCAQMD Rule 1401 requires new source review of any new, relocated, ormodified permit units that emit toxic air contaminants. The rule establishes allowable risks for permit units requiring permits.

AIR QUALITY ENVIRONMENTAL CHECKLIST AND DISCUSSION

Would the Project conflict or obstruct implementation of the applicable air quality plan?

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project site is located within the SoCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the SoCAB is in nonattainment. In order to reduce such emissions, the SCAQMD drafted the 2016 Air Quality Management Plan (AQMP). The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, Southern California Association of Governments (SCAG), and the USEPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest population growth forecasts. (SCAG's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans.) The Project is subject to the SCAQMD's Air Quality Management Plan.

According to the SCAQMD, in order to determine consistency with SCAQMD's air quality planning two main criteria must be addressed.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) *Would the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations?*

As shown in **Table 1** and **Table 2** below, the Proposed Project would result in emissions that would be below the SCAQMD regional and localized thresholds during construction. Operations of the Project would not result in the production of any on-site or off-site emissions. Therefore, the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations and would not have the potential to cause or affect a violation of the ambient air quality standards.

b) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

As shown in **Table 1**, the Proposed Project would be below the SCAQMD regional thresholds for construction. Operations of the Project would not result in the production of any on-site or off-site emissions. Because the Project would result in less than significant regional emission impacts, it would not delay the timely attainment of air quality standards or AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD air quality planning efforts, it is important to recognize that air quality planning within the SoCAB focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population and housing growth trends. Thus, the SCAQMD's second criterion for determining Project consistency focuses on whether or not the Proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the

evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the 2016 AQMP?*

A project is consistent with regional air quality planning efforts in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the SCAQMD air quality plans. Generally, three sources of data form the basis for the projections of air pollutant emissions in Santa Ana. Specifically, SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan and Guide* (*RCPG*) provides regional population forecasts for the region and SCAG's *2016 Regional Transportation Plan/Sustainable Communities Strategy* (*RTP/SCS*) provides socioeconomic forecast projections of regional population growth. The Santa Ana General Plan is referenced by SCAG in order to assist forecasting future growth in Santa Ana.

The Project proposes to install sewer mains, water mains and laterals to existing residences and businesses. It does not involve the development of new housing or employment centers. As such, the Project would not be contributing to an increase in population, housing or employment growth. Therefore, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by SCAQMD to develop the 2016 AQMP.

b) Would the project implement all feasible air quality mitigation measures?

In order to further reduce emissions, the Project would be required to comply with emission reduction measures promulgated by the SCAQMD, such as SCAQMD Rules 402, 403, and 1113, which are directly applicable to construction projects. SCAQMD Rule 402 prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories. As such, the Proposed Project meets this consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth by SCAQMD air quality planning efforts?

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Proposed Project would not be contributing to development density and therefore would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP.

In conclusion, the determination of 2016 AQMP consistency is primarily concerned with the long-term influence of a project on air quality. Once built, the Project would not be a source of operational air pollution. The Proposed Project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. The Proposed Project's long-term influence would also be consistent with the goals and policies of the SCAQMD's 2016 AQMP.

Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Construction Emission Impacts

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in **Table 1**. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance. Construction activities would be subject to SCAQMD Rule 403, which requires taking reasonable precautions to prevent the emissions of fugitive dust, such as using water or chemicals, where possible, for control of dust during the clearing of land and other construction activities.

Table 1. Construction-Related Emissions (Regional Significance Analysis)

Construction Year	Pollutant (pounds per day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction in 2021	2.08	43.07	14.78	0.10	2.87	1.18
SCAQMD Regional Significance Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

*Source: CalEEMod version 2016.3.2. Refer to **Attachment A** for Model Data Outputs.*

Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; washing equipment tires before leaving the construction site; water exposed surfaces three times daily; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied.

Emissions estimates account for the site preparation of 0.48 acres and the paving of 0.48 acres.

As shown in **Table 1**, construction-generated emissions would not exceed the SCAQMD's significance thresholds. The SCAQMD's pollutant significance thresholds were set at emission levels tied to the

region's attainment status. Therefore, since the project's emissions do not exceed SCAQMD thresholds, no exceedance of the ambient air quality standards would occur, and no health effects from project criteria pollutants would occur.

Localized Significance Thresholds

In addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of nitrogen dioxide (NO_2), CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included in the LST analysis protocol). In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific level proposed projects.

LSTs represent the maximum emissions that can be generated at a Project site without expecting to cause or substantially contribute to an exceedance of the most stringent national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day.

The nearest sensitive receptors to the Project site are single-family and multi-family residence located less than 20 feet (±6 meters). Notwithstanding, the SCAQMD Methodology explicitly states: "*It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.*" Therefore, LSTs for receptors located at 25 meters were utilized in this analysis.

For this Project, the appropriate SRA for the localized significance thresholds is the Saddleback Valley source receptor area (SRA 19) as this source receptor area includes the Project site. The Proposed Project would disturb approximately 0.48-acres total during construction. Thus, the LST threshold value for a 0.48-acre site was calculated using the information provided from the LST lookup tables and is presented in **Table 2**.

Table 2. Forecast of Localized Construction Emissions				
Construction Phase	**Criteria Pollutant Emissions (pounds per day)**			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
Demolition	15.32	12.84	0.72	0.67
Site Preparation	13.72	6.57	0.71	0.53
Trenching	8.21	10.54	0.45	0.43
Paving & Painting	8.23	8.89	0.44	0.41
SCAQMD Localized Emissions Threshold *Interpolated for 0.48 acres of daily disturbance*	*82.16*	*339.72*	*1.56*	*1.04*
Exceed Threshold?	**No**	**No**	**No**	**No**

*Source: CalEEMod version 2016.3.2. Refer to **Attachment A** for Model Data Outputs.*
Notes: The reduction/credits for construction emissions are based on measures included in CalEEMod and as required by the SCAQMD through Rule 403. This includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied.

Table 2 shows that the emissions of localized pollutant resulting during Project implementation would not result in significant concentrations of pollutants at nearby sensitive receptors.

Operational Emission Impacts

Operational emissions impacts are long-term air emissions impacts that are associated with any changes in permanent use of the Project site by on-site stationary and off-site mobile sources that substantially increase emissions. The Project proposes improvements to the underground sewer and water infrastructure within the existing right-of-way. The Project would not change the permanent use of the Project site or contribute to on or off-site emissions. No long-term operational emission impacts would occur as a result of the Project.

Localized Operational Significance Analysis

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operations of a proposed project only if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Proposed Project does not include such uses. Therefore, in the case of the Proposed Project, the operational LST protocol is not applied.

Would the Project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NO_x, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. However, as shown in Table 1 the Project would not exceed SCAQMD emission thresholds. The portion of the SoCAB which encompasses the Project area is designated as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$. Thus, existing these levels in the SoCAB are at unhealthy levels during certain periods.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_3) in excess of the SCAQMD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SCAQMD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 0.67 pounds per day during construction activities (see Attachment A). ($PM_{2.5}$ exhaust is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., $PM_{2.5}$). Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) As with O_3 and CO, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SCAQMD's thresholds. Additionally, the Project would be required to comply with SCAQMD Rule 403, which limits the amount of fugitive dust generated during construction. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics. Thus, the Project would not result in a potentially significant contribution to regional

or localized concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Furthermore, the Project has been evaluated against the SCAQMD's LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative and can be used to assist lead agencies in analyzing localized impacts associated with Project-specific level of proposed projects. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. The Environmental Justice Program is divided into three categories, with the LST protocol promulgated under Category I: Further-Reduced Health Risk. As shown in Table 2, the emissions of pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Thus, the fact that onsite Project construction emissions would be generated at rates below the LSTs for NO_x, CO, PM_{10}, and $PM_{2.5}$ demonstrates that the Project would likely not adversely impact nearby sensitive receptors.

Operational Air Contaminants

The Proposed Project involves 2,970 total linear feet of infrastructure improvements for the benefit of residences and businesses located in Santa Ana. It does not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable air toxic emissions from Project operations.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County can be used to demonstrate the potential for CO exceedances. The SCAQMD CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan

Transportation Authority evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

The Proposed Project would not generate any vehicle trips once construction is complete. As such, it would not increase traffic volumes at any intersection to more than 100,000 vehicles per day. There is no likelihood of the Project traffic exceeding CO values.

Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Construction

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area.

Operations

According to the SCAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass

molding. The Proposed Project does not include any uses identified by the SCAQMD as being associated with odors.

Greenhouse Gas Emissions

Environmental Setting

GHGs are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through, but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Regulatory Setting

The local air pollution control officer with jurisdiction regulating pollutant emissions throughout the SoCAB is the SCAQMD, which is charged with the responsibility of implementing air quality programs and ensuring that national and state ambient air quality standards are not exceeded. The SCAQMD recommends a numeric bright-line threshold of 3,000 metric tons of CO_2e annually.

In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the state that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The Supreme Court-reviewed study noted, "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227.)

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The City of Santa Ana may set a project-specific threshold based on the context of each particular project, including using the SCAQMD Working Group expert recommendation. This standard is appropriate for this Project because it is in the same air quality basin that the experts analyzed. For the Proposed Project, the SCAQMD's 3,000 metric tons of CO_2e per year threshold is used as the significance threshold in addition to the qualitative thresholds of significance set forth below from Section VII of CEQA Guidelines Appendix G. The 3,000 metric tons of CO_2e per year threshold represents a 90 percent capture rate (i.e., this threshold captures projects that represent approximately 90 percent of GHG emissions from new sources). The 3,000 metric tons of CO_2e per year value is typically used in defining small projects within this air basin that are considered less than significant because it represents less than one percent of future 2050 statewide GHG emissions target and the lead agency can provide more efficient implementation of CEQA by focusing its scarce resources on the top 90 percent. This threshold is correlated to the 90 percent capture rate for industrial projects within the air basin. Land use projects above the 3,000 metric tons of CO_2e per year level would fall within the percentage of largest projects that are worth mitigating without wasting scarce financial, governmental, physical and social resources. (SCAQMD, Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold, at pp. 3-2 and 3-3; Crockett 2011). As noted in the academic study, the fact that small projects below a numeric bright line threshold are not subject to CEQA-based mitigation, does not mean such small projects do not help the state achieve its climate change goals because even small projects participate in or comply with non-CEQA-based GHG reduction programs, such as constructing development in accordance with statewide GHG-reducing energy efficiency building standards, called Cal Green or Title 24 energy-efficiency building standards (Crockett 2011), which seek to reduce GHG emissions from construction projets.

In 2015, the City adopted a community wide Climate Action Plan (CAP). The CAP identifies a GHG emission reduction target of 15 percent below 2008 levels by 2020 for communitywide emission sources and sets a long term communitywide GHG emission reduction goals of 30 percent below 2008 levels by 2035. The CAP contains a comprehensive set of strategies, measures and implementing actions to achieve the 2020 GHG reduction target. The CAP also identifies potential adverse physical effects related to climate change on the community and includes specific adaptation measures to address mitigation and such effects.

GREENHOUSE GAS EMISSIONS (VIII) ENVIRONMENTAL CHECKLIST AND DISCUSSION

Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with the Project would be emitted during the combustion of fossil fuels during short-term construction activities as well as the pumping of wastewater during on-going operations.

Construction-Generated Greenhouse Gas Emissions

Table 3 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Table 3. Construction-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Construction in 2021	183
Total	183

*Source: CalEEMod version 2016.3.2. Refer to **Attachment B** for Model Data Outputs.*
Notes Emissions estimates account for the site preparation of 0.48 acres and the paving of 0.48 acres.

As shown in **Table 3**, Project construction would result in the generation of approximately 183 metric tons of CO_2e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. The amortized construction emissions are added to the annual average operational emissions (see **Table 4**).

Operational-Generated Greenhouse Gas Emissions

Operations of the Proposed Project would result in GHG emissions, predominantly associated with the pumping of wastewater through sewer lines. Long-term operational GHG emissions attributed to the Project are identified in **Table 4** and compared to SCAQMD's numeric bright-line threshold of 3,000 metric tons of CO_2e annually.

Table 4. Operational-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Construction Emissions (amortized over the 30-year life of the Project)	6
Water & Wastewater Pumping Emissions	9
Total Emissions	**15**
SCAQMD Threshold	*3,000*
Exceed SCAQMD Threshold?	**No**

*Source: CalEEMod version 2016.3.2. Refer to **Attachment B** for Model Data Outputs.*

As shown in **Table 4**, operational-generated emissions would not exceed the SCAQMD's numeric bright-line threshold of 3,000 metric tons of CO_2e annually. SCAQMD thresholds were developed based on substantial evidence that such thresholds represent quantitative levels of GHG emissions, compliance with which means that the environmental impact of the GHG emissions will normally not be cumulatively considerable under CEQA. These thresholds were developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. The working group was formed to assist the SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the state OPR, CARB, the Attorney General's Office, a variety of city and county planning

departments in the SoCAB, various utilities such as sanitation and power companies throughout the basin, industry groups, and environmental and professional organizations.

Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The City of Santa Ana CAP is a strategic planning document that identifies sources of GHG emissions within the City's boundaries, presents current and future emission estimates, identifies a GHG reduction target for future years, and presents strategies, policies and actions to reduce emissions form the energy, transportation, land use, water use, and waste sectors. The GHG reduction strategies in the CAP build on inventory results and key opportunities prioritized by the City staff and members of the public. The CAP consists of strategies that identify steps the City will take to support reductions in GHG emissions. The City will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the CAP respond to the needs of development through achieving more efficient and sustainable resources.

Both the existing and the projected GHG inventories in the CAP were derived based on the land use designations and associated designations defined in the City of Santa Ana General Plan. The Proposed Project will be in the public right-of-way and is intended to serve existing and planned land uses designated in the General Plan as single-family residential and two-family residential. Therefore, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by the County to develop the CAP.

The Project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs.

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Attachment A – CalEEMod Output File for Air Quality Emissions

Septic to Sewer

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	20.79	1000sqft	0.48	20,790.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 2,970 LF * 7 feet (depth)= 20,790 SF

Construction Phase - Construction phases updated to match information provided by the applicant.

Off-road Equipment -

Off-road Equipment - Equipment updated to match the project

Off-road Equipment - Equipment updated to match the project

Off-road Equipment -

Off-road Equipment -

Grading - Cut and fill estimated from information provided from project applicant.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Septic to Sewer - Orange County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	PhaseEndDate	1/25/2021	9/1/2021
tblConstructionPhase	PhaseEndDate	8/19/2020	1/14/2021
tblConstructionPhase	PhaseEndDate	8/20/2020	1/28/2021
tblConstructionPhase	PhaseStartDate	1/19/2021	1/29/2021
tblConstructionPhase	PhaseStartDate	8/6/2020	1/1/2021
tblConstructionPhase	PhaseStartDate	8/20/2020	1/15/2021
tblGrading	AcresOfGrading	15.00	0.50
tblGrading	MaterialExported	0.00	5,872.00
tblGrading	MaterialImported	0.00	3,356.00
tblOffRoadEquipment	HorsePower	16.00	78.00
tblOffRoadEquipment	HorsePower	367.00	187.00
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	LoadFactor	0.48	0.41
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Air Compressors	Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblTripsAndVMT	WorkerTripNumber	8.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.0864	43.0730	14.7857	0.1039	2.2224	0.7221	2.8702	0.5864	0.6782	1.1857	0.0000	11,353.3684	11,353.3684	1.5193	0.0000	11,391.3507
Maximum	**2.0864**	**43.0730**	**14.7857**	**0.1039**	**2.2224**	**0.7221**	**2.8702**	**0.5864**	**0.6782**	**1.1857**	**0.0000**	**11,353.3684**	**11,353.3684**	**1.5193**	**0.0000**	**11,391.3507**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.0864	43.0730	14.7857	0.1039	2.1359	0.7221	2.7836	0.5745	0.6782	1.1738	0.0000	11,353.3684	11,353.3684	1.5193	0.0000	11,391.3507
Maximum	**2.0864**	**43.0730**	**14.7857**	**0.1039**	**2.1359**	**0.7221**	**2.7836**	**0.5745**	**0.6782**	**1.1738**	**0.0000**	**11,353.3684**	**11,353.3684**	**1.5193**	**0.0000**	**11,391.3507**

Septic to Sewer - Orange County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	3.89	0.00	3.02	2.02	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.6900e-003	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.5500e-003	4.5500e-003	1.0000e-005		4.8500e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.6900e-003**	**2.0000e-005**	**2.1300e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.5500e-003**	**4.5500e-003**	**1.0000e-005**	**0.0000**	**4.8500e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.6900e-003	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.5500e-003	4.5500e-003	1.0000e-005		4.8500e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.6900e-003**	**2.0000e-005**	**2.1300e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.5500e-003**	**4.5500e-003**	**1.0000e-005**	**0.0000**	**4.8500e-003**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	
2	Site Preparation	Site Preparation	1/15/2021	1/28/2021	5	10	
3	Trenching	Trenching	1/29/2021	9/1/2021	5	154	
4	Paving	Paving	9/2/2021	9/8/2021	5	5	
5	Architectural Coating	Architectural Coating	9/2/2021	9/8/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.48

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 891 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Dumpers/Tenders	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Scrapers	1	6.00	367	0.48
Trenching	Excavators	1	8.00	158	0.38
Site Preparation	Scrapers	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Concrete/Industrial Saws	1	6.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	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	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	5.00	0.00	1,154.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4971	15.3202	12.8489	0.0234		0.7212	0.7212		0.6773	0.6773		2,253.8721	2,253.8721	0.5717		2,268.1642
Total	**1.4971**	**15.3202**	**12.8489**	**0.0234**		**0.7212**	**0.7212**		**0.6773**	**0.6773**		**2,253.8721**	**2,253.8721**	**0.5717**		**2,268.1642**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	**0.0469**	**0.0284**	**0.3949**	**1.3700e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**136.7852**	**136.7852**	**2.9300e-003**		**136.8585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4971	15.3202	12.8489	0.0234		0.7212	0.7212		0.6773	0.6773	0.0000	2,253.8721	2,253.8721	0.5717		2,268.1642
Total	**1.4971**	**15.3202**	**12.8489**	**0.0234**		**0.7212**	**0.7212**		**0.6773**	**0.6773**	**0.0000**	**2,253.8721**	**2,253.8721**	**0.5717**		**2,268.1642**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	**0.0469**	**0.0284**	**0.3949**	**1.3700e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**136.7852**	**136.7852**	**2.9300e-003**		**136.8585**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1574	0.0000	0.1574	0.0215	0.0000	0.0215			0.0000			0.0000
Off-Road	1.1684	13.7256	6.5747	0.0163		0.5552	0.5552		0.5108	0.5108		1,576.9489	1,576.9489	0.5100		1,589.6993
Total	**1.1684**	**13.7256**	**6.5747**	**0.0163**	**0.1574**	**0.5552**	**0.7126**	**0.0215**	**0.5108**	**0.5323**		**1,576.9489**	**1,576.9489**	**0.5100**		**1,589.6993**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8311	29.3364	8.0592	0.0871	2.0092	0.0922	2.1013	0.5500	0.0882	0.6382		9,723.8098	9,723.8098	1.0082		9,749.0135
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0181	0.0109	0.1519	5.3000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.6097	52.6097	1.1300e-003		52.6379
Total	**0.8492**	**29.3473**	**8.2110**	**0.0876**	**2.0651**	**0.0925**	**2.1576**	**0.5648**	**0.0885**	**0.6533**		**9,776.4195**	**9,776.4195**	**1.0093**		**9,801.6513**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0708	0.0000	0.0708	9.6900e-003	0.0000	9.6900e-003			0.0000			0.0000
Off-Road	1.1684	13.7256	6.5747	0.0163		0.5552	0.5552		0.5108	0.5108	0.0000	1,576.9489	1,576.9489	0.5100		1,589.6993
Total	**1.1684**	**13.7256**	**6.5747**	**0.0163**	**0.0708**	**0.5552**	**0.6260**	**9.6900e-003**	**0.5108**	**0.5205**	**0.0000**	**1,576.9489**	**1,576.9489**	**0.5100**		**1,589.6993**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8311	29.3364	8.0592	0.0871	2.0092	0.0922	2.1013	0.5500	0.0882	0.6382		9,723.8098	9,723.8098	1.0082		9,749.0135
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0181	0.0109	0.1519	5.3000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.6097	52.6097	1.1300e-003		52.6379
Total	**0.8492**	**29.3473**	**8.2110**	**0.0876**	**2.0651**	**0.0925**	**2.1576**	**0.5648**	**0.0885**	**0.6533**		**9,776.4195**	**9,776.4195**	**1.0093**		**9,801.6513**

3.4 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8920	8.2188	10.5459	0.0161		0.4574	0.4574		0.4312	0.4312		1,546.5518	1,546.5518	0.3822		1,556.1078
Total	**0.8920**	**8.2188**	**10.5459**	**0.0161**		**0.4574**	**0.4574**		**0.4312**	**0.4312**		**1,546.5518**	**1,546.5518**	**0.3822**		**1,556.1078**

3.4 Trenching - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	**0.0469**	**0.0284**	**0.3949**	**1.3700e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**136.7852**	**136.7852**	**2.9300e-003**		**136.8585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8920	8.2188	10.5459	0.0161		0.4574	0.4574		0.4312	0.4312	0.0000	1,546.5518	1,546.5518	0.3822		1,556.1078
Total	**0.8920**	**8.2188**	**10.5459**	**0.0161**		**0.4574**	**0.4574**		**0.4312**	**0.4312**	**0.0000**	**1,546.5518**	**1,546.5518**	**0.3822**		**1,556.1078**

3.4 Trenching - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	**0.0469**	**0.0284**	**0.3949**	**1.3700e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**136.7852**	**136.7852**	**2.9300e-003**		**136.8585**

3.5 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	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.2515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9729**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**		**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0650	0.0393	0.5467	1.9000e-003	0.2012	1.3000e-003	0.2025	0.0534	1.2000e-003	0.0546		189.3950	189.3950	4.0600e-003		189.4963
Total	**0.0650**	**0.0393**	**0.5467**	**1.9000e-003**	**0.2012**	**1.3000e-003**	**0.2025**	**0.0534**	**1.2000e-003**	**0.0546**		**189.3950**	**189.3950**	**4.0600e-003**		**189.4963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.2515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9729**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**	**0.0000**	**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0650	0.0393	0.5467	1.9000e-003	0.2012	1.3000e-003	0.2025	0.0534	1.2000e-003	0.0546		189.3950	189.3950	4.0600e-003		189.4963
Total	**0.0650**	**0.0393**	**0.5467**	**1.9000e-003**	**0.2012**	**1.3000e-003**	**0.2025**	**0.0534**	**1.2000e-003**	**0.0546**		**189.3950**	**189.3950**	**4.0600e-003**		**189.4963**

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	lb/day										lb/day					
Archit. Coating	0.8260					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**1.0449**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.6100e-003	2.1800e-003	0.0304	1.1000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0300e-003		10.5219	10.5219	2.3000e-004		10.5276
Total	**3.6100e-003**	**2.1800e-003**	**0.0304**	**1.1000e-004**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**7.0000e-005**	**3.0300e-003**		**10.5219**	**10.5219**	**2.3000e-004**		**10.5276**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.8260					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**1.0449**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.6100e-003	2.1800e-003	0.0304	1.1000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0300e-003		10.5219	10.5219	2.3000e-004		10.5276
Total	**3.6100e-003**	**2.1800e-003**	**0.0304**	**1.1000e-004**	**0.0112**	**7.0000e-005**	**0.0113**	**2.9600e-003**	**7.0000e-005**	**3.0300e-003**		**10.5219**	**10.5219**	**2.3000e-004**		**10.5276**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.6900e-003	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.5500e-003	4.5500e-003	1.0000e-005		4.8500e-003
Unmitigated	8.6900e-003	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.5500e-003	4.5500e-003	1.0000e-005		4.8500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.1300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.3600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-004	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.5500e-003	4.5500e-003	1.0000e-005		4.8500e-003
Total	**8.6900e-003**	**2.0000e-005**	**2.1300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.5500e-003**	**4.5500e-003**	**1.0000e-005**		**4.8500e-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	lb/day										lb/day					
Architectural Coating	1.1300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.3600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-004	2.0000e-005	2.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.5500e-003	4.5500e-003	1.0000e-005		4.8500e-003
Total	**8.6900e-003**	**2.0000e-005**	**2.1300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.5500e-003**	**4.5500e-003**	**1.0000e-005**		**4.8500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment B – CalEEMod Output File for Greenhouse Gas Emissions

Septic to Sewer

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	20.79	1000sqft	0.48	20,790.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 2,970 LF * 7 feet (depth)= 20,790 SF

Construction Phase - Construction phases updated to match information provided by the applicant.

Off-road Equipment -

Off-road Equipment - Equipment updated to match the project

Off-road Equipment - Equipment updated to match the project

Off-road Equipment -

Off-road Equipment -

Grading - Cut and fill estimated from information provided from project applicant.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Septic to Sewer - Orange County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	PhaseEndDate	1/25/2021	9/1/2021
tblConstructionPhase	PhaseEndDate	8/19/2020	1/14/2021
tblConstructionPhase	PhaseEndDate	8/20/2020	1/28/2021
tblConstructionPhase	PhaseStartDate	1/19/2021	1/29/2021
tblConstructionPhase	PhaseStartDate	8/6/2020	1/1/2021
tblConstructionPhase	PhaseStartDate	8/20/2020	1/15/2021
tblGrading	AcresOfGrading	15.00	0.50
tblGrading	MaterialExported	0.00	5,872.00
tblGrading	MaterialImported	0.00	3,356.00
tblOffRoadEquipment	HorsePower	16.00	78.00
tblOffRoadEquipment	HorsePower	367.00	187.00
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	LoadFactor	0.48	0.41
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Air Compressors	Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblTripsAndVMT	WorkerTripNumber	8.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0954	0.9528	1.0053	2.0200e-003	0.0232	0.0433	0.0664	6.1400e-003	0.0407	0.0469	0.0000	182.6624	182.6624	0.0372	0.0000	183.5917
Maximum	**0.0954**	**0.9528**	**1.0053**	**2.0200e-003**	**0.0232**	**0.0433**	**0.0664**	**6.1400e-003**	**0.0407**	**0.0469**	**0.0000**	**182.6624**	**182.6624**	**0.0372**	**0.0000**	**183.5917**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0954	0.9528	1.0053	2.0200e-003	0.0227	0.0433	0.0660	6.0800e-003	0.0407	0.0468	0.0000	182.6622	182.6622	0.0372	0.0000	183.5916
Maximum	**0.0954**	**0.9528**	**1.0053**	**2.0200e-003**	**0.0227**	**0.0433**	**0.0660**	**6.0800e-003**	**0.0407**	**0.0468**	**0.0000**	**182.6622**	**182.6622**	**0.0372**	**0.0000**	**183.5916**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**1.86**	**0.00**	**0.65**	**0.98**	**0.00**	**0.13**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	**11-6-2020**	**2-5-2021**	0.3381	0.3381
3	**2-6-2021**	**5-5-2021**	0.2922	0.2922
4	**5-6-2021**	**8-5-2021**	0.3018	0.3018
5	**8-6-2021**	**9-30-2021**	0.1145	0.1145
		Highest	0.3381	0.3381

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	1.5800e-003	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5800e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.2000e-004**	**5.2000e-004**	**0.0000**	**0.0000**	**5.5000e-004**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5800e-003	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5800e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.2000e-004**	**5.2000e-004**	**0.0000**	**0.0000**	**5.5000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	
2	Site Preparation	Site Preparation	1/15/2021	1/28/2021	5	10	
3	Trenching	Trenching	1/29/2021	9/1/2021	5	154	
4	Paving	Paving	9/2/2021	9/8/2021	5	5	
5	Architectural Coating	Architectural Coating	9/2/2021	9/8/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.48

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 891 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Dumpers/Tenders	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Scrapers	1	6.00	367	0.48
Trenching	Excavators	1	8.00	158	0.38
Site Preparation	Scrapers	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Concrete/Industrial Saws	1	6.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	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	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	5.00	0.00	1,154.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.4900e-003	0.0766	0.0642	1.2000e-004		3.6100e-003	3.6100e-003		3.3900e-003	3.3900e-003	0.0000	10.2234	10.2234	2.5900e-003	0.0000	10.2882
Total	**7.4900e-003**	**0.0766**	**0.0642**	**1.2000e-004**		**3.6100e-003**	**3.6100e-003**		**3.3900e-003**	**3.3900e-003**	**0.0000**	**10.2234**	**10.2234**	**2.5900e-003**	**0.0000**	**10.2882**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	1.8700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5962	0.5962	1.0000e-005	0.0000	0.5965
Total	**2.4000e-004**	**1.6000e-004**	**1.8700e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5962**	**0.5962**	**1.0000e-005**	**0.0000**	**0.5965**

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	7.4900e-003	0.0766	0.0642	1.2000e-004		3.6100e-003	3.6100e-003		3.3900e-003	3.3900e-003	0.0000	10.2234	10.2234	2.5900e-003	0.0000	10.2882
Total	**7.4900e-003**	**0.0766**	**0.0642**	**1.2000e-004**		**3.6100e-003**	**3.6100e-003**		**3.3900e-003**	**3.3900e-003**	**0.0000**	**10.2234**	**10.2234**	**2.5900e-003**	**0.0000**	**10.2882**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	1.8700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5962	0.5962	1.0000e-005	0.0000	0.5965
Total	**2.4000e-004**	**1.6000e-004**	**1.8700e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5962**	**0.5962**	**1.0000e-005**	**0.0000**	**0.5965**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.9000e-004	0.0000	7.9000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8400e-003	0.0686	0.0329	8.0000e-005		2.7800e-003	2.7800e-003		2.5500e-003	2.5500e-003	0.0000	7.1529	7.1529	2.3100e-003	0.0000	7.2108
Total	**5.8400e-003**	**0.0686**	**0.0329**	**8.0000e-005**	**7.9000e-004**	**2.7800e-003**	**3.5700e-003**	**1.1000e-004**	**2.5500e-003**	**2.6600e-003**	**0.0000**	**7.1529**	**7.1529**	**2.3100e-003**	**0.0000**	**7.2108**

3.3 Site Preparation - 2021

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-003	0.1513	0.0412	4.3000e-004	9.8900e-003	4.6000e-004	0.0104	2.7100e-003	4.4000e-004	3.1600e-003	0.0000	43.8258	43.8258	4.6200e-003	0.0000	43.9412
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	6.0000e-005	7.2000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2293	0.2293	0.0000	0.0000	0.2294
Total	**4.2900e-003**	**0.1513**	**0.0419**	**4.3000e-004**	**0.0102**	**4.6000e-004**	**0.0106**	**2.7800e-003**	**4.4000e-004**	**3.2300e-003**	**0.0000**	**44.0551**	**44.0551**	**4.6200e-003**	**0.0000**	**44.1706**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5000e-004	0.0000	3.5000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8400e-003	0.0686	0.0329	8.0000e-005		2.7800e-003	2.7800e-003		2.5500e-003	2.5500e-003	0.0000	7.1529	7.1529	2.3100e-003	0.0000	7.2108
Total	**5.8400e-003**	**0.0686**	**0.0329**	**8.0000e-005**	**3.5000e-004**	**2.7800e-003**	**3.1300e-003**	**5.0000e-005**	**2.5500e-003**	**2.6000e-003**	**0.0000**	**7.1529**	**7.1529**	**2.3100e-003**	**0.0000**	**7.2108**

3.3 Site Preparation - 2021

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-003	0.1513	0.0412	4.3000e-004	9.8900e-003	4.6000e-004	0.0104	2.7100e-003	4.4000e-004	3.1600e-003	0.0000	43.8258	43.8258	4.6200e-003	0.0000	43.9412
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	6.0000e-005	7.2000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2293	0.2293	0.0000	0.0000	0.2294
Total	**4.2900e-003**	**0.1513**	**0.0419**	**4.3000e-004**	**0.0102**	**4.6000e-004**	**0.0106**	**2.7800e-003**	**4.4000e-004**	**3.2300e-003**	**0.0000**	**44.0551**	**44.0551**	**4.6200e-003**	**0.0000**	**44.1706**

3.4 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0687	0.6329	0.8120	1.2400e-003		0.0352	0.0352		0.0332	0.0332	0.0000	108.0316	108.0316	0.0267	0.0000	108.6992
Total	**0.0687**	**0.6329**	**0.8120**	**1.2400e-003**		**0.0352**	**0.0352**		**0.0332**	**0.0332**	**0.0000**	**108.0316**	**108.0316**	**0.0267**	**0.0000**	**108.6992**

3.4 Trenching - 2021

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	3.6700e-003	2.4700e-003	0.0288	1.0000e-004	0.0110	7.0000e-005	0.0111	2.9200e-003	7.0000e-005	2.9800e-003	0.0000	9.1811	9.1811	2.0000e-004	0.0000	9.1860
Total	**3.6700e-003**	**2.4700e-003**	**0.0288**	**1.0000e-004**	**0.0110**	**7.0000e-005**	**0.0111**	**2.9200e-003**	**7.0000e-005**	**2.9800e-003**	**0.0000**	**9.1811**	**9.1811**	**2.0000e-004**	**0.0000**	**9.1860**

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	0.0687	0.6329	0.8120	1.2400e-003		0.0352	0.0352		0.0332	0.0332	0.0000	108.0315	108.0315	0.0267	0.0000	108.6990
Total	**0.0687**	**0.6329**	**0.8120**	**1.2400e-003**		**0.0352**	**0.0352**		**0.0332**	**0.0332**	**0.0000**	**108.0315**	**108.0315**	**0.0267**	**0.0000**	**108.6990**

3.4 Trenching - 2021

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	3.6700e-003	2.4700e-003	0.0288	1.0000e-004	0.0110	7.0000e-005	0.0111	2.9200e-003	7.0000e-005	2.9800e-003	0.0000	9.1811	9.1811	2.0000e-004	0.0000	9.1860
Total	**3.6700e-003**	**2.4700e-003**	**0.0288**	**1.0000e-004**	**0.0110**	**7.0000e-005**	**0.0111**	**2.9200e-003**	**7.0000e-005**	**2.9800e-003**	**0.0000**	**9.1811**	**9.1811**	**2.0000e-004**	**0.0000**	**9.1860**

3.5 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	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	6.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.4300e-003**	**0.0168**	**0.0177**	**3.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.3481**	**2.3481**	**6.8000e-004**	**0.0000**	**2.3652**

3.5 Paving - 2021

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	1.6000e-004	1.1000e-004	1.2900e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4127	0.4127	1.0000e-005	0.0000	0.4130
Total	**1.6000e-004**	**1.1000e-004**	**1.2900e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4127**	**0.4127**	**1.0000e-005**	**0.0000**	**0.4130**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	6.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.4300e-003**	**0.0168**	**0.0177**	**3.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.3481**	**2.3481**	**6.8000e-004**	**0.0000**	**2.3652**

3.5 Paving - 2021

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	1.6000e-004	1.1000e-004	1.2900e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4127	0.4127	1.0000e-005	0.0000	0.4130
Total	**1.6000e-004**	**1.1000e-004**	**1.2900e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4127**	**0.4127**	**1.0000e-005**	**0.0000**	**0.4130**

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	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**2.6100e-003**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0229	0.0229	0.0000	0.0000	0.0229
Total	**1.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0229**	**0.0229**	**0.0000**	**0.0000**	**0.0229**

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	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**2.6100e-003**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0229	0.0229	0.0000	0.0000	0.0229
Total	**1.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0229**	**0.0229**	**0.0000**	**0.0000**	**0.0229**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5800e-003	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Unmitigated	1.5800e-003	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Total	**1.5700e-003**	**0.0000**	**2.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.2000e-004**	**5.2000e-004**	**0.0000**	**0.0000**	**5.5000e-004**

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	2.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Total	**1.5700e-003**	**0.0000**	**2.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.2000e-004**	**5.2000e-004**	**0.0000**	**0.0000**	**5.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Santa Ana Septic to Sewer Operations

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	28.00	Dwelling Unit	9.09	50,400.00	80

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Santa Ana Septic to Sewer Operations - Orange County, Annual

Project Characteristics -

Land Use -

Construction Phase - No construction in operations.

Off-road Equipment - No construction in operations.

Trips and VMT - No construction in operations.

On-road Fugitive Dust - No construction in operations.

Architectural Coating - No construction in operations.

Vehicle Trips - VMT does not apply.

Woodstoves - No woodstoves or fireplaces.

Consumer Products -

Area Coating - No coating.

Energy Use - Energy use form homes does not apply for operations.

Water And Wastewater - 100% of the homes will be on sewer.

Solid Waste - Soild waste generated does not apply.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	24,300.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	72,900.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	50.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblAreaCoating	Area_EF_Parking	100	0
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	20.00	0.00

Santa Ana Septic to Sewer Operations - Orange County, Annual

tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	5,516.00	0.00
tblEnergyUse	T24E	253.73	0.00
tblEnergyUse	T24NG	20,288.91	0.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	17.00	0.00
tblFireplaces	NumberNoFireplace	2.00	0.00
tblFireplaces	NumberWood	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblSolidWaste	LandfillCaptureGasFlare	94.00	0.00
tblSolidWaste	LandfillNoGasCapture	6.00	0.00
tblSolidWaste	SolidWasteGenerationRate	23.37	0.00
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblWater	AerobicPercent	87.46	100.00

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2022	3.3400e-003	0.2894	2.0000e-005		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	0.4717	0.4717	4.6000e-004	0.0000	0.4831
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.4610	8.3142	8.7753	1.9300e-003	1.0700e-003	9.1434
Total	**0.2022**	**3.3400e-003**	**0.2894**	**2.0000e-005**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.4610**	**8.7859**	**9.2469**	**2.3900e-003**	**1.0700e-003**	**9.6265**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2022	3.3400e-003	0.2894	2.0000e-005		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	0.4717	0.4717	4.6000e-004	0.0000	0.4831
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.4610	8.3142	8.7753	1.9300e-003	1.0700e-003	9.1434
Total	**0.2022**	**3.3400e-003**	**0.2894**	**2.0000e-005**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.4610**	**8.7859**	**9.2469**	**2.3900e-003**	**1.0700e-003**	**9.6265**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/23/2020	6/22/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating - sqft)

Off Road Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Architectural Coating - 2020

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Single Family Housing	0.00	0.00	0.00	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.558976	0.043534	0.209821	0.113949	0.016111	0.005791	0.025447	0.016654	0.001713	0.001553	0.004896	0.000590	0.000966

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2022	3.3400e-003	0.2894	2.0000e-005		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	0.4717	0.4717	4.6000e-004	0.0000	0.4831
Unmitigated	0.2022	3.3400e-003	0.2894	2.0000e-005		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	0.4717	0.4717	4.6000e-004	0.0000	0.4831

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	0.0113					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7700e-003	3.3400e-003	0.2894	2.0000e-005		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	0.4717	0.4717	4.6000e-004	0.0000	0.4831
Total	**0.2022**	**3.3400e-003**	**0.2894**	**2.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**0.4717**	**0.4717**	**4.6000e-004**	**0.0000**	**0.4831**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0113					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7700e-003	3.3400e-003	0.2894	2.0000e-005		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	0.4717	0.4717	4.6000e-004	0.0000	0.4831
Total	**0.2022**	**3.3400e-003**	**0.2894**	**2.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**0.4717**	**0.4717**	**4.6000e-004**	**0.0000**	**0.4831**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.7753	1.9300e-003	1.0700e-003	9.1434
Unmitigated	8.7753	1.9300e-003	1.0700e-003	9.1434

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.30308 / 0.821507	8.7753	1.9300e-003	1.0700e-003	9.1434
Total		**8.7753**	**1.9300e-003**	**1.0700e-003**	**9.1434**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.30308 / 0.821507	8.7753	1.9300e-003	1.0700e-003	9.1434
Total		**8.7753**	**1.9300e-003**	**1.0700e-003**	**9.1434**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Proposed Project
Total Construction-Related
and Operational
Gasoline Usage

Action	Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]	Conversion of Metric Tons to Kilograms[2]	Construction Equipment Emission Factor[2]	Total Gallons of Fuel Consumed
Project Construction	**183**	**183000**	**10.15**	**18,030**
		Per Climate Registry Equation 13e	Per Climate Registry Equation 13e	
	Per CalEEMod Output Files.			

Total Gallons Consumed During Project Construction: 18,030

Notes:
Fuel used by all construction equipment, including vehicle hauling trucks, assumed to be diesel.

Sources:
[1]ECORP Consulting, 2020.

[2]Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1.* January 2016.
http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf