Appendix C –
Air Quality and Greenhouse Gas Emissions Impact Analysis Prepared by Giroux & Associates dated July 12, 2013; Health Risk Assessment Prepared by Giroux & Associates

AIR QUALITY and GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS

ESPERANZA HILLS-YORBA LINDA ESTATES

ORANGE COUNTY, CALIFORNIA

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CLIMATE AND METEOROLOGY

Yorba Linda's climate, as with all of Southern California, is largely dominated by the strength and position of the semi-permanent high-pressure center over the Pacific Ocean near Hawaii. It creates cool summers, mild winters, infrequent rainfall, it drives the refreshing daytime sea breeze, and it maintains comfortable humidity's and ample sunshine. Unfortunately, the same atmospheric processes that create the desirable living climate combine to severely restrict the ability of the atmosphere to disperse the air pollution generated mainly by the large population attracted by the climate. Portions of the Los Angeles Basin, including northern Orange County, therefore, experience some of the worst air quality in the nation for certain pollution species.

Regional air quality is controlled by the location and strength of pollutant sources and by the winds and inversions that control the horizontal and vertical regional dispersion patterns. Winds near the project site, as monitored at the nearest South Coast Air Quality Management District (SCAQMD) measurement station in Anaheim, display several characteristic regimes. During the day, especially in summer, winds are from the west and southwest at 7-9 miles per hour. At night, especially in winter, the land becomes cooler than the ocean and an offshore wind of 3-5 miles per hour develops. One other important wind regime occurs when a high-pressure center forms over the western United States and creates strong offshore winds. These winds are warmed and dried by air compression as they descend from the upper desert regions into the basin. These winds are accelerated through local canyons and create hot, dry, gusty Santa Ana's from the east and northeast across northern Orange and southern Los Angeles Counties.

The low frequency of calms and adequate daytime ventilation speed typically do not allow for any daytime stagnation of air pollutants in the Yorba Linda area. The moderate onshore breeze carries any locally generated emissions eastward toward the Chino Hills or across northern Orange County and then up Santa Ana or Carbon Canyons toward receptors in western San Bernardino and Riverside Counties. Any daytime air quality problems occur mainly when winds shift more into the northwest and the daytime clean sea breeze is replaced by airflow across substantial pollution generation areas of southwestern Los Angeles County. These winds bring occasional unhealthful smog levels across the project site during the summer and early fall. Wind at night drifting seaward across the air basin and off the nearby hills is much slower and does allow for localized stagnation of pollution, but the density of vehicular sources in the upwind area is generally low enough to minimize any major air pollution problems. Any air pollution episodes, if they occur, are, therefore, due mainly to pollutants transported into the area rather than any locally generated emissions.

In addition to winds that govern the horizontal rate and trajectory of any air pollutants, Southern California experiences several characteristic temperature inversions that control the vertical depth through which pollutants can be mixed. The daytime onshore flow of marine air is capped by a massive dome of warm air that acts like a giant lid over the basin. As the clean ocean air moves inland, pollutants are continually added from below without any dilution from above. As this layer slows down in inland valleys of the basin and undergoes photochemical transformations under abundant sunlight, it creates very unhealthful levels of smog (mainly ozone).

A second inversion forms at night as cool air pools in low elevations while the air aloft remains warm. Shallow radiation inversions are formed (especially in winter) that trap pollutants near intensive traffic sources such as freeways, shopping centers, etc., and form localized violations of clean air standards called "hot spots." If any noticeable, direct air pollution effects were to occur from changes in the vehicular distribution around the proposed roadway improvement project area, it would be from automotive exhaust trapped by these nocturnal radiation inversions.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed Esperanza Hills project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to “non-attainment” for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[8]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[9]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[9]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[9]	—	
Lead[10,11]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

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Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.
8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
9. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

   Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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Table 2

Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide ($NO_{2)}$ that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. Draft standards were published. The anticipated future 8-hour standard was 0.065 ppm. Environmental organizations generally praised this proposal. Most manufacturing, transportation or power generation groups opposed the new standard as economically unwise in an uncertain fiscal climate. In recognition of the fact that a stronger ozone standard could adversely impact employment, that proposal has been placed on indefinite hold. EPA did proposed and adopt a revised annual PM-2.5 standard that may require a revision to the basin-wide fine particulate attainment plan.

A new federal one-hour standard for nitrogen dioxide (NO_2) has also recently been adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO_2) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO_2 is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing and probable future levels of air quality around the project area can best be best inferred from ambient air quality measurements conducted by the SCAQMD at the Anaheim monitoring station. This station measures both regional pollution levels such as smog, as well as primary vehicular pollution levels near busy roadways such as carbon monoxide and nitrogen oxides. Pollutants such as particulates (PM-10 and PM-2.5) are also monitored at Anaheim. Table 3 is a 6-year summary of monitoring data for the major air pollutants compiled from this air monitoring station. From these data the following conclusions regarding air quality trends can be drawn:

a. Photochemical smog (ozone) levels occasionally exceed standards. The 1-hour state standard and the 8-hour state and federal ozone standard have been exceeded an average of 1 percent of all days in the past six years. Years 2009, 2010 and 2011 demonstrate progressively improved ozone levels in the area. While ozone levels are still high, they are much lower than 10 to 20 years ago.

b. Respirable dust (PM-10) levels occasionally exceed the state standard on approximately 6 percent of measured days. As with ozone, the frequency of violations has noticeably decreased in 2009-2011. The less stringent federal PM-10 standard was violated once in 2007 during a wildfire event.

c. The federal ultra-fine particulate (PM-2.5) standard of 35 $\mu g/m^3$ has been exceeded about two percent of measurement days in the last six years. Similarly, 2009-2011 have been the "cleanest" years on records.

d. More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the project site. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable AAQS.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 3

Air Quality Monitoring Summary (2006-2011)
(Number of Days Standards Were Exceeded, and Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)

Pollutant/Standard	2006	2007	2008	2009	2010	2011
Ozone						
1-Hour > 0.09 ppm (S)	6	2	2	0	1	0
8-Hour > 0.07 ppm (S)	5	7	10	2	1	1
8- Hour > 0.075 ppm (F)	3	1	5	1	1	0
Max. 1-Hour Conc. (ppm)	0.113	0.127	0.105	0.093	0.104	0.088
Max. 8-Hour Conc. (ppm)	0.089	0.100	0.086	0.077	0.088	0.072
Carbon Monoxide						
1-hour > 20. ppm (S)	0	0	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0	0	0
Max 1-hour Conc. (ppm)	4.5	3.6	4.1	3.2	3.0	2.7
Max 8-hour Conc. (ppm)	2.9	2.9	3.4	2.7	2.0	2.1
Nitrogen Dioxide						
1-Hour > 0.18 ppm (S)	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.114	0.086	0.093	0.068	0.073	0.074
Inhalable Particulates (PM-10)						
24-hour > 50 $\mu g/m^3$ (S)	7/55	6/59	3/58	1/56	0/57	2/57
24-hour > 150 $\mu g/m^3$ (F)	0/55	1/59	0/58	0/56	0/57	0/57
Max. 24-Hr. Conc. ($\mu g/m^3$)	103.	488.*	61.	62.	43.	53.
Ultra-Fine Particulates (PM-2.5)						
24-Hour > 35 $\mu g/m^3$ (F)	7/314	14/336	5/304	4/334	0/331	2/365
Max. 24-Hr. Conc. ($\mu g/m^3$)	56.2	79.4	67.8	64.5	31.7	39.2

*wild fire event

Source: South Coast AQMD Air Monitoring Station Data Summary, Anaheim Station (3176)

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NOx) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 requires control technologies that do not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation will allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification sets a later attainment deadline, but also requires the air basin to adopt even more stringent emissions controls.

Table 4

South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2008[a]	2010[b]	2015[b]	2020[b]
NOx	917	836	667	561
ROG	632	596	545	525
CO	3,344	3,039	2,556	2,281
PM-10	308	314	328	340
PM-2.5	110	110	111	113

[a]2008 Base Year.
[b]With current emissions reduction programs and adopted growth forecasts.

Source: California Air Resources Board, California Emissions Projection Analysis Model, 2009

In other air quality attainment plan reviews, EPA has disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA has stated that the current attainment plan relies on PM-2.5 control regulations that have not yet been approved or implemented. It is expected that a number of rules that are pending approval will remove the identified deficiencies. If these issues are not resolved within the next several years, federal funding sanctions for transportation projects could result. The recently adopted 2012 AQMP being readied for ARB submittal to EPA as part of the California State Implementation Plan (SIP) is expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked around seven years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now forced to develop an AQMP for the long since revoked one-hour federal ozone standard.

Projects such as the proposed Esperanza Hills project do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general development. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

a. Conflicts with or obstructs implementation of the applicable air quality plan.

b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.

c. Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

d. Exposes sensitive receptors to substantial pollutant concentrations.

e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based

upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation

- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.

- Project could generate vehicle trips that cause a CO hot spot.

The SCAQMD CEQA Handbook also identifies various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Except for the small diameter particulate matter ("PM-2.5") fraction of diesel exhaust generated by heavy construction equipment, there are no secondary impact indicators associated with project construction and subsequent occupancy. For PM-2.5 exhaust emissions, recently adopted policies require the gradual conversion of on-road delivery fleets and off-road heavy equipment to low NOx and low PM-2.5 emissions or the use

of “clean” diesel if their emissions are demonstrated to be as low as those required by “Tier 4” standards. Because health risks from toxic air contaminants (TAC’s) are cumulative over an assumed 70-year lifespan, measurable off-site public health risk from diesel TAC exposure would occur for only a brief construction portion of a project lifetime, and only in dilute quantity.

SENSITIVE RECEPTORS

Air quality impacts are analyzed relative to those persons with the greatest sensitivity to air pollution exposure. Such persons are called “sensitive receptors.” Sensitive population groups include young children, the elderly and the acutely and chronically ill (especially those with cardio-respiratory disease).

Residential areas are considered to be sensitive to air pollution exposure because they may be occupied for extended periods, and residents may be outdoors when exposure is highest. Schools are similarly considered to be sensitive receptors.

Several development options are being considered for this project, each with a different primary main access roadway. Proximity to access/egress roadways for each project option is shown below:

Option	**Access Roadway**	**Distance to Closest Home**
Option 1	Stonehaven Way	50 feet to receiver
Option 2	Aspen Way @ San Antonio	50 feet to receiver
Option 2A	San Antonio (1,850 feet S of Aspen)	250 feet to receiver

CONSTRUCTION ACTIVITY IMPACTS

Dust is typically the primary concern during construction of new homes and infrastructure. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). These parameters are not known with any reasonable certainty prior to project development and may change from day to day. Any assignment of specific parameters to an unknown future date is speculative and conjectural.

Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed assuming that all other input parameters into emission rate prediction fall into midrange average values. This assumption may or may not be totally applicable to site-specific conditions on the proposed project site. As noted previously, emissions estimation for project-specific fugitive dust sources is therefore characterized by a considerable degree of imprecision.

Average daily PM-10 emissions during site grading and other disturbance average about 10 pounds per acre. This estimate presumes the use of reasonably available control measures (RACMs). The SCAQMD requires the use of best available control measures (BACMs) for fugitive dust from construction activities. With the use of BACMs, fugitive dust emissions can be reduced to 1-2 pounds per day per acre disturbed.

Current research in particulate-exposure health suggests that the most adverse effects derive from ultra-small diameter particulate matter comprised of chemically reactive pollutants such as sulfates, nitrates or organic material. A national clean air standard for particulate matter of 2.5 microns or smaller in diameter (called "PM-2.5") was adopted in 1997. A limited amount of construction activity particulate matter is in the PM-2.5 range. PM-2.5 emissions are estimated to comprise 10-20 percent of PM-10.

In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate many larger particles with shorter atmospheric residence times. This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and are further readily filtered out by human breathing passages. These fugitive dust particles are therefore more of a potential soiling nuisance as they settle out on parked cars, outdoor furniture or landscape foliage rather than any adverse health hazard. The deposition distance of most soiling nuisance particulates is less than 100 feet from the source (EPA, 1995) under normal wind conditions. Most adjacent sensitive receptors are further than 100 feet from the Esperanza Hills project construction site perimeter. Existing uses closer than 100 feet will only have construction activities in close proximity for a short period of time.

Exhaust emissions will result from on and off-site heavy equipment. The types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. Initial clearing and grading activities will shift towards construction and paving, etc. Each of the three development option requires a varying amount of grading. No earthworks are anticipated to require on-road haul, rather transported or borrowed from an adjacent undeveloped

sites. The volume of earthworks anticipated by each option is shown below. The center of each borrow site in relationship to the center of the proposed project development is also indicated below. The grading quantities and haul distance indicated below were modeled to determine all construction emissions associated with project grading.

Option	Borrow	Distance to Borrow Site
1	286,700 CY	1,000 feet
2	730 CY	1,700 feet
2A	57,000 CY	2,400 feet

The project build-out schedule will depend strongly on market demand; however, for this analysis it was assumed that each project construction task would be continuous and sequential (clearing, grading, construction and finish work). This provides a worst case air quality scenario as daily emissions would be higher than if they were spread out for a longer time frame.

The CalEEMod was developed by the SCAQMD and provides a model to calculate both construction emissions and operational emissions from a residential land use project. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. The CalEEMod 2011.1.1 computer model was used to calculate emissions from the prototype construction equipment fleet and schedule anticipated by CalEEMod for a residential land use consisting of 378 residential units as shown in Table 5. The equipment fleet shown is primarily CalEEMod's default fleet for a residential-use project, with the addition of several scrapers and a grader to the grading phase to ensure an accurate and conservative analysis. Activity duration estimates were provided by the project developer. CalEEMod defaults and modeled data details are found in the appendix of this report.

Table 5

CalEEMod Equipment Fleet

Clearing (60 Days)	4 Tractor/Loader/Backhoes
	3 Dozers
Grading (1.5 years)	2 Excavators
	1 Dozer
	2 Graders
	6 Scrapers
	2 Tractor/Loader/Backhoes
Construction (5 years)	1 Crane
	3 Forklifts
	1 Generator Set
	3 Tractor/Loader/Backhoes
	1 Welder
Paving (60 days)	2 Pavers
	2 Paving equipment
	2 Rollers

Utilizing this indicated equipment fleet the following worst case daily emissions were calculated by CalEEMod. Required dust mitigation measures are provided in the mitigation section of this

report. The mitigation measures applied to construction equipment for the "with mitigation" scenario include the best available construction management practices provided in the mitigation section of this report as well as the following additional measures:

- ❖ All project Excavators, Graders, and Scrapers utilized for grading activities shall be equipped with:

    - Tier 3 Engines
    - Oxidation Catalysts (capable of achieving a 40% reduction in NOx emissions)

CalEEMod construction demonstrating the unmitigated and mitigated emissions are shown in Table 6 for an assumed eight year construction scenario. It should be noted that application of some mitigation measures have trade-offs in pollutant reductions and therefore may result in increases of some pollutants (CalEEMod User Guide, SCAQMD, February, 2011 pages 34 and 35). Therefore, in some cases, the mitigated emissions for CO are often slightly higher than unmitigated emissions.

The off-road equipment emissions load factors were adjusted in CalEEMod to account for a 33 percent reduction attributable to overestimation of load factors, which CARB has indicated to be appropriate.[1]

Three model runs were evaluated; one for each of the development alternative. Emissions associated with Option 1 are presented in Table 6, emissions for Option 2 are provided in Table 7 and emissions for Option 2A are shown in Table 8. Only the first two years, where grading is assumed to occur, vary to account for the different grading scenarios.

Without the use of mitigation, equipment emissions could exceed their SCAQMD thresholds for NOx during project grading. However, because the construction phasing will be driven by market demand, the assumption that the entire site will be graded at once is speculative. Either phased grading, or as shown in Tables 6 - 8, the use of new or recently retrofit diesel equipment, could reduce daily NOx emissions to less than significant levels. Therefore, either an extended build-out schedule or aggressive equipment NOx control would reduce daily NOx impacts to less-than-significant levels.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. The majority of diesel exhaust would occur during the grading phase, which would be a period of less than two years. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over briefer periods due to the lack of health risk associated with such a brief exposure.

[1] In September 2010, the CARB announced that its methods used to estimate the load factor for off-road equipment were incorrect and led to an overestimate of emissions by a factor of 33 percent. CARB is currently revising their emissions model, a modified OFFROAD which has not yet been released. CalEEMod is based on the historical OFFROAD.

Table 6
Option 1
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2014						
Unmitigated	15.6	128.2	69.7	0.1	21.1	12.4
Mitigated	12.2	59.6	81.9	0.1	12.8	6.3
2015						
Unmitigated	14.8	118.4	66.5	0.1	20.6	8.2
Mitigated	12.1	58.5	80.6	0.1	12.7	2.8
2016						
Unmitigated	3.9	24.0	25.9	0.1	3.5	1.4
Mitigated	3.9	24.0	25.9	0.1	3.5	1.4
2017						
Unmitigated	3.6	21.9	25.0	0.1	3.3	1.2
Mitigated	3.6	21.9	25.0	0.1	3.3	1.2
2018						
Unmitigated	3.3	20.0	24.2	0.1	3.2	1.1
Mitigated	3.3	20.0	24.2	0.1	3.2	1.1
2019						
Unmitigated	3.1	18.3	23.5	0.1	3.1	0.9
Mitigated	3.1	18.3	23.5	0.1	3.1	0.9
2020						
Unmitigated	44.7	16.7	22.9	0.1	2.9	1.1
Mitigated	44.7	16.7	22.9	0.1	2.9	1.1
2021						
Unmitigated	44.6	1.6	2.8	0.0	0.5	0.1
Mitigated	44.6	1.6	2.8	0.0	0.5	0.1
SCAQMD Thresholds	75	100	550	150	150	55

Source: CalEEMod.2011.1.1 output in appendix, includes on-road materials delivery as well as construction crew commuting

Table 7
Option 2
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2014						
Unmitigated	14.9	122.2	64.2	0.1	20.8	12.4
Mitigated	11.5	53.7	76.4	0.1	9.7	6.3
2015						
Unmitigated	14.1	112.4	61.4	0.1	12.6	8.1
Mitigated	11.4	52.4	75.7	0.1	4.7	2.7
2016						
Unmitigated	3.9	24.0	25.9	0.1	3.5	1.4
Mitigated	3.9	24.0	25.9	0.1	3.5	1.4
2017						
Unmitigated	3.6	21.9	25.0	0.1	3.3	1.2
Mitigated	3.6	21.9	25.0	0.1	3.3	1.2
2018						
Unmitigated	3.3	20.0	24.2	0.1	3.2	1.1
Mitigated	3.3	20.0	24.2	0.1	3.2	1.1
2019						
Unmitigated	3.1	18.3	23.5	0.1	3.1	0.9
Mitigated	3.1	18.3	23.5	0.1	3.1	0.9
2020						
Unmitigated	44.7	16.7	22.9	0.1	2.9	1.1
Mitigated	44.7	16.7	22.9	0.1	2.9	1.1
2021						
Unmitigated	44.6	1.6	2.8	0.0	0.5	0.1
Mitigated	44.6	1.6	2.8	0.0	0.5	0.1
SCAQMD Thresholds	75	100	550	150	150	55

Source: CalEEMod.2011.1.1 output in appendix, includes on-road materials delivery as well as construction crew commuting

Table 8
Option 2A
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2014						
Unmitigated	15.0	123.5	65.3	0.1	20.8	12.4
Mitigated	11.7	55.0	77.5	0.1	9.7	6.3
2015						
Unmitigated	14.2	113.7	62.4	0.1	16.3	8.2
Mitigated	11.5	53.7	76.8	0.1	8.4	2.7
2016						
Unmitigated	3.9	24.0	25.9	0.1	3.5	1.4
Mitigated	3.9	24.0	25.9	0.1	3.5	1.4
2017						
Unmitigated	3.6	21.9	25.0	0.1	3.3	1.2
Mitigated	3.6	21.9	25.0	0.1	3.3	1.2
2018						
Unmitigated	3.3	20.0	24.2	0.1	3.2	1.1
Mitigated	3.3	20.0	24.2	0.1	3.2	1.1
2019						
Unmitigated	3.1	18.3	23.5	0.1	3.1	0.9
Mitigated	3.1	18.3	23.5	0.1	3.1	0.9
2020						
Unmitigated	44.7	16.7	22.9	0.1	2.9	1.1
Mitigated	44.7	16.7	22.9	0.1	2.9	1.1
2021						
Unmitigated	44.6	1.6	2.8	0.0	0.5	0.1
Mitigated	44.6	1.6	2.8	0.0	0.5	0.1
SCAQMD Thresholds	75	100	550	150	150	55

Source: CalEEMod.2011.1.1 output in appendix, includes on-road materials delivery as well as construction crew commuting

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant concentration data is currently published for 1, 2 and 5 acre sites for varying distances. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, the following tables should be used to determine the maximum daily disturbed-acreage for comparison to LSTs.

Maximum Daily Disturbed Acreage

Equipment Type	Acres/8-hr-day
Tractor	0.5
Graders	0.5
Rubber Tired Dozers	0.5
Scrapers	1

Based on this table, the proposed will result in a maximum of 7.5 acres disturbed during peak construction grading activity (1 dozer x 0.5 + 2 graders x 0.5 + 6 Scrapers x 1 = 7.5 acres disturbed).

The SCAQMD has developed LST screening tables for construction disturbance of five acres and less. However, these tables can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required. If emissions exceed the LST screening value for a five-acre site, then dispersion modeling needs to be conducted. Use of a five-acre site model for the project site for construction activities would result in more stringent LSTs because emissions would occur in a more concentrated area and closer to the nearest sensitive receptors than in reality.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. The nearest residential use is approximately 600 feet (200 meters) from the closest Esperanza Hills lot. Per LST guidance, only on-site construction activity is considered in the LST analysis. On-site construction emissions are provided in the CalEEMod output files and do not include sources such as on-road haul, worker commuting or vendor delivery emissions. Therefore, the following thresholds and emissions in Table 9 are determined (pounds per day).

Table 9
LST and Project Emissions

	CO	NOx	PM-10	PM-2.5
LST Thresholds 5 acres, 200 meters	3,605	249	78	34
Max On-Site Emissions				
Option 1	70	128	21	12
Unmitigated	81	60	13	6
Mitigated				
Option 2	64	122	21	12
Unmitigated	76	54	10	6
Mitigated				
Option 2A				
Unmitigated	125	65	21	12
Mitigated	77	55	10	6

CalEEMod Output in Appendix (maximum mitigated emissions from on-site construction)

LSTs were compared to the maximum daily construction activities. As seen above, emissions are below the LST for construction each analyzed option. LST impacts are less-than-significant. Because LST thresholds would not be exceeded for the more conservative concentrated 5-acre disturbance assumption, they would also not be exceeded if the same emissions are dispersed over a larger project area.

OPERATIONAL IMPACTS

The proposed residential project will generate 3,617 average daily trips (ADT). Residential uses also generate small quantities of area source emissions derived from organic compounds from cleaning products, landscape maintenance, etc. The contribution of these sources is small and incorporated into the analysis below.

Operational emissions for proposed residential were calculated using CalEEMod 2011.1.1. for a project build-out year of 2018 as shown in Table 10. Actual project build-out will most likely not occur until 2020-2021. Since CalEEMod assumes mobile source emissions become cleaner in the future due to technology and fuel formulation improvements, use of 2018 represents a worst case scenario. Build-out occurring in subsequent years will have lower associated operational emissions.

Calculations assume that there will be no wood-burning fireplaces to minimize smoke and unburned hydrocarbon emissions. With the inclusion of wood burning fireplaces, ROG emissions could exceed operational thresholds, but are reduced to below significance levels with the mandatory requirement of providing gas hearths.

Table 10

Proposed Residential Daily Operational Impacts

	Operational Emissions (lbs/day)						
Source	**ROG**	**NOx**	**CO**	**SO_2**	**PM-10**	**PM-2.5**	**CO2**
Area	16.6	0.4	31.8	0.0	0.6	0.6	7,306.1
Energy	0.5	4.0	1.7	0.0	0.3	0.3	5,183.3
Mobile	15.6	35.4	148.1	0.3	37.6	2.3	30,509.2
Total	**32.6**	**39.8**	**181.7**	**0.3**	**38.6**	**3.2**	**42,998.6**
SCAQMD Threshold	55	55	550	150	150	55	-
Exceeds Threshold?	No	No	No	No	No	No	NA

Source: CalEEMod Output in Appendix

Project development will not cause the SCAQMD's recommended threshold levels to be exceeded with the inclusion of gas hearths and the elimination of wood burning fireplaces. Therefore, it is required that no wood burning fireplaces be included in project design. Operational emissions will be at a less-than-significant level.

MICROSCALE IMPACT ANALYSIS

There is a direct relationship between traffic/circulation congestion and CO impacts since exhaust fumes from vehicular traffic are the primary source of CO. CO is a localized gas that dissipates very quickly under normal meteorological conditions. Therefore, CO concentrations decrease substantially as distance from the source (intersection) increases. The highest CO concentrations are typically found in areas directly adjacent to congested roadway intersections. These areas of vehicle congestion have the potential to create pockets of elevated levels of CO which are called "hot spots ".

Micro-scale air quality impacts have traditionally been analyzed in environmental documents when the air basin was a non-attainment area for carbon monoxide (CO). However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no "hot spots", i.e., locations where emission concentrations expose individuals to elevated risks of adverse health effects, anywhere in SCAB.

To verify this conclusion, a CO screening analysis was performed at all intersections within the project area for which the project traffic report provided data. One-hour CO concentrations were calculated on the sidewalks adjacent to these intersections. The significance of localized project impacts depends on whether the project would cause substantial concentrations of CO. A project is considered to have significant impacts if project-related mobile-source emissions result in an exceedance of the California one-hour and eight-hour CO standards, which are:

- 1-hour = 20 ppm
- 8-hour = 9 ppm

Calculations were made for existing traffic and future time frames for the morning and evening peak hours. Combining future project build-out traffic with existing conditions represents a worst-case analysis. The results of the microscale impact analysis are shown in Tables 11 for the 1-hour concentration and Table 12 for the 8-hour concentration.

Table 11
Option 1 One-Hour CO Concentrations (ppm) *

Intersections	Existing No Project	Existing + Option 1	2020 No Project	2020 + Option 1	Future No Project	Future + Option 1
AM Peak Hours						
Yorba Linda Blvd/						
Las Palomas	3.4	3.5	3.2	3.2	3.0	3.0
San Antonio	3.5	3.6	3.2	3.3	3.1	3.1
Yorba Ranch	3.5	3.6	3.2	3.3	3.1	3.1
La Palma	4.0	4.1	3.7	3.7	3.4	3.5
PM Peak Hours						
Yorba Linda Blvd/						
Las Palomas	3.5	3.6	3.2	3.3	3.0	3.1
San Antonio	3.5	3.6	3.3	3.3	3.1	3.1
Yorba Ranch	3.6	3.6	3.3	3.3	3.1	3.2
La Palma	4.3	4.4	3.8	3.9	3.7	3.7

*including 2.7 ppm background concentration

Option 2 One-Hour CO Concentrations (ppm) *

Intersections	Existing No Project	Existing + Option 2	2020 No Project	2020 + Option 2	Future No Project	Future + Option 2
AM Peak Hours						
Yorba Linda Blvd/						
Las Palomas	3.4	3.5	3.2	3.2	3.0	3.0
San Antonio	3.5	3.6	3.2	3.3	3.1	3.1
Yorba Ranch	3.5	3.5	3.2	3.3	3.1	3.1
La Palma	4.0	4.1	3.7	3.7	3.4	3.5
PM Peak Hours						
Yorba Linda Blvd/						
Las Palomas	3.5	3.6	3.2	3.3	3.0	3.1
San Antonio	3.5	3.7	3.3	3.3	3.1	3.1
Yorba Ranch	3.6	3.6	3.3	3.3	3.1	3.1
La Palma	4.3	4.4	3.8	3.8	3.7	3.7

*including 2.7 ppm background concentration

Option 2A One-Hour CO Concentrations (ppm) *

Intersections	Existing No Project	Existing + Option 2A	2020 No Project	2020 + Option 2A	Future No Project	Future + Option 2A
AM Peak Hours						
Yorba Linda Blvd/						
Las Palomas	3.5	3.2	3.2	3.5	3.0	3
San Antonio	3.6	3.3	3.3	3.6	3.1	3.1
Yorba Ranch	3.6	3.3	3.3	3.6	3.1	3.1
La Palma	4.1	3.7	3.7	4.1	3.4	3.5
PM Peak Hours						
Yorba Linda Blvd/						
Las Palomas	3.6	3.6	3.5	3.3	3.0	3.1
San Antonio	3.7	3.7	3.5	3.3	3.1	3.1
Yorba Ranch	3.6	3.6	3.6	3.3	3.1	3.1
La Palma	4.4	4.4	4.3	3.8	3.7	3.7

*including 2.7 ppm background concentration

Table 12

Option 1 8-Hour CO Concentrations (ppm) *

Intersections	Existing No Project	Existing + Option 1	2020 No Project	2020 + Option 1	Future No Project	Future + Option 1
Yorba Linda Blvd/						
Las Palomas	2.6	2.6	2.4	2.4	2.3	2.3
San Antonio	2.6	2.6	2.4	2.5	2.3	2.3
Yorba Ranch	2.6	2.6	2.4	2.5	2.3	2.4
La Palma	3.0	3.0	2.7	2.8	2.6	2.6

*including 2.1 ppm background concentration

Option 2 8-Hour CO Concentrations (ppm) *

Intersections	Existing No Project	Existing + Option 2	2020 No Project	2020 + Option 2	Future No Project	Future + Option 2
Yorba Linda Blvd/						
Las Palomas	2.6	2.6	2.4	2.4	2.3	2.3
San Antonio	2.7	2.7	2.4	2.5	2.3	2.3
Yorba Ranch	2.6	2.6	2.4	2.5	2.3	2.3
La Palma	3.0	3.0	2.7	2.7	2.6	2.6

*including 2.1 ppm background concentration

Option 2A 8-Hour CO Concentrations (ppm) *

Intersections	Existing No Project	Existing + Option 2A	2020 No Project	2020 + Option 2A	Future No Project	Future + Option 2A
Yorba Linda Blvd/						
Las Palomas	2.6	2.6	2.4	2.4	2.3	2.3
San Antonio	2.7	2.7	2.4	2.5	2.3	2.3
Yorba Ranch	2.6	2.6	2.4	2.5	2.3	2.3
La Palma	3.0	3.0	2.7	2.7	2.6	2.6

*including 2.1 ppm background concentration

The existing peak one-hour local CO background level in 2011 in the project area vicinity was 2.7 ppm. With project implementation, in the existing time frame, inclusive of the local concentration, maximum one-hour concentration is estimated to be 4.4 ppm, which is well below the one-hour standard of 20 ppm. The maximum ambient 8-hour CO concentration in 2011 was 2.1 ppm. Maximum with project 8-hour CO concentration of 3.0 ppm (inclusive of the background concentration) were compared to the 9 ppm significance threshold. Micro-scale air quality impacts are not significant.

CONSTRUCTION EMISSIONS MITIGATION

In the absence of any mitigation project-related air quality impacts were shown to be potentially significant during project grading due to off-road diesel equipment NOx emissions. PM-10 (fugitive dust and equipment exhaust soot) emissions are predicted to remain below the SCAQMD CEQA significance threshold. However, the anticipated long construction duration and the volume of earthworks movement requires use of best management practices for dust control.

Fugitive Dust Control (PM-10)

- Apply soil stabilizers or moisten inactive areas.
- Prepare a high wind dust control plan.
- Address previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 3 times/day).
- Wet down or cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material or require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site
- Use perimeter sandbags and wind fences for erosion control

NOx is calculated to potentially exceed SCAQMD CEQA thresholds during site grading. The use of enhanced control measures for diesel exhaust is required to maintain NOx emissions at less-than-significant levels. Combustion diesel exhaust emissions control includes:

Exhaust Emissions Control (ROG, NOx)

- Utilize well-tuned off-road construction equipment.
- During grading activities require that contractors employ Tier 3 certified heavy equipment during grading for excavators, graders and scrapers exceeding 100 HP rated power if the entire project is graded at one time for NOx emissions unless use of such mitigation is demonstrated to be technically infeasible for a given piece of equipment.
- During grading activities require that contractors employ oxidation catalysts during grading for excavators, graders and scrapers exceeding 100 HP rated power if the entire project is graded at one time for NOx emissions unless use of such mitigation is demonstrated to be technically infeasible for a given piece of equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

OPERATIONAL EMISSIONS MITIGATION

Operational emissions would not exceed their respective SCAQMD significance thresholds with the following mitigation measure:

- Utilize gas hearths rather than wood burning fireplaces for any residential use.

GREENHOUSE GAS EMISSIONS

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been

developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

Greenhouse Gas Emissions Significance Thresholds

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,

- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2 equivalent/year. In September 2010, the Working Group released revisions which recommended a threshold of 3,500 MT CO_2e for residential projects. This 3,500 MT/year recommendation has been used as a guideline for this analysis. Some jurisdictions have adopted a numerical annual GHG emissions level as a CEQA threshold of significance. Others, such as Orange County, have taken the numerical threshold to be an indicator level that signals a requirement for incorporating reasonable and feasible enhanced "green" building practices without formal adoption of an absolute significance standard.

Construction Activity GHG Emissions

The build-out timetable for this project is estimated by CalEEMod to be between 6 and 7 years. During project construction, the CalEEMod computer model predicts that the constructions activities will generate the annual CO_2(e) emissions identified in Table 12.

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level from is also provided in Table 13 for each Study alternative. GHG impacts from construction are considered individually less-than-significant

Table 13

Construction Emissions (Metric Tons CO_2(e))

	Option 1	Option 2	Option 2A
Year 2014	1,557.3	1525.5	1,512.7
Year 2015	1,501.9	1470.9	1,487.6
Year 2016	613.0	613.0	613.0
Year 2017	607.5	607.5	607.5
Year 2018	606.9	606.9	606.9
Year 2019	604.2	604.2	604.2
Year 2020	490.1	490.1	497.8
Year 2021	24.4	24.4	28.1
Overall Total	**6,005.2**	**5,942.4**	**5,957.9**
Amortized	**200.2**	**198.1**	**198.6**

*CalEEMod Output provided in appendix

Project Operational GHG Emissions

The input assumptions for operational GHG emissions calculations, and the GHG conversion from consumption to annual regional CO_2(e) emissions are summarized in the CalEEMod output files found in the appendix of this report.

The total operational and annualized construction emissions are identified in Table 14.

Table 14
Proposed Residential Operational Emissions

Consumption Source	MT CO_2(e) tons/year
Area Sources	256.2
Energy Utilization	1,572.1
Mobile Source	4,535.7
Solid Waste Generation	201.6
Water Consumption	166.2
Annualized Construction	200.2
Total	6,932.0

Total project GHG emissions are substantially above the proposed significance threshold of 3,500 MT. GHG emissions for the proposed project are considered potentially significant. That finding requires consideration/implementation of reasonably available control measures.

The second GHG emissions significance evaluation relates to consistency with GHG plans and policies. Consistency with GHG plans and policies is typically evaluated relative to AB-32 requirements. AB-32 has a goal of a 28.9 percent reduction in statewide GHG emissions compared to the business-as-usual (BAU) scenario. In preparing the impact analysis for the Esperanza Hills, BAU conditions were conservatively presumed to continue throughout the lifetime of the project. However, a number of statewide programs are in place that will achieve GHG emissions reductions that will attain a very substantial fraction of the AB-32 goal. SCAQMD has estimated that, as shown in Table 15, the adopted low carbon fuel standard, the enhanced renewable portfolio standard, and required enhanced energy efficiencies will combine to achieve 23.9 percent of the 28.9 percent AB-32 goal.

If the remaining 5 percent of GHG reductions can be achieved by local initiatives, then the proposed action would not interfere with timely implementation of AB 32. If it can be demonstrated that more than adequate options exist to attain the local mitigation responsibility, mitigation would not be considered to be deferred even if the development plan is not yet finalized. In the absence of an adopted Orange County Climate Action Plan (CAP), reasonable and feasible mitigation measures were evaluated that could achieve the 5 percent reduction as an interim measure to be taken prior to any CAP adoption.

Table 15
GHG Emissions Reductions from State Regulations

Category	Source	Percent of Category	Percent of State Total
Mobile	AB 1493	19.7%	8.9%
	LCFS-auto	7.2%	3.2%
	LCFS-medium	7.2%	0.4%
	Truck efficiency	2.9%	0.2%
	Passenger efficiency	2.8%	1.3%
Area	Res. Energy Efficiency (gas)	9.5%	1.0%
	Non-Res. Energy Efficiency (gas)	9.5%	1.0%
Indirect	RPS	21.0%	3.5%
	Energy efficiency (elec)	15.7%	4.0%
	Solar roofs	1.5%	0.2%
Total			**23.9%**

LCFS = low carbon fuel standard
RPS = renewable portfolio standard
Totals may not sum due to rounding.
Source: http://www.aqmd.gov/ceqa/handbook/GHG/2009/nov19mtg/ghgmtg14.pdf

The California Air Pollution Control Officers Association (CAPCOA) is one of several groups that has developed candidate GHG reduction programs to supplement the statewide AB-32 compliance program. CAPCOA's "CEQA and Climate Change" (2010) is one of the most detailed and annotated mitigation plans outlined. Because it is so comprehensive, and because it quantifies the potential measure effectiveness in great detail, it was applied to the preliminary Esperanza Hills GHG Mitigation Plan.

Five general categories of emissions reduction potential were evaluated, including transportation control measures, energy conservation enhancement, water supply, solid waste generation and miscellaneous measures. Tables 16A through 16E present a detailed breakdown of the mitigation measures and levels of emissions reduction potential that CAPCOA considers feasible on a project-level basis. In presenting the potential effectiveness, the CAPCOA document presents a percent range of documented results. In Tables 16A through 16E, the low end of the effectiveness range is presented. This is considered appropriate because the implementation of multiple programs simultaneously tends to result in duplicated efforts, which reduces the effectiveness of each measure. For example, while some measures may achieve a 3 to 5 percent capture rate independently, they may not achieve maximum efficiency when a larger array of "green" options is employed. Table 17 summarizes the GHG reductions attainable with the application of reasonable control measures (RCM).

It is assumed that the project area will eventually be annexed to Yorba Linda. The City has requested that the County consult with the City with regard to sustainability initiatives planned to be incorporated as project design features to reduce GHG emissions/climate change impacts. The City, like the County, has no formally adopted climate action plan (CAP). However, any adoption and implementation of mitigation measures for GHG impact minimization under Orange County CEQA responsibilities will be equally effective if the project site is ultimately annexed to the City of Yorba Linda. In recognition of the constant advances in emissions control strategies and technologies, no specific measures in Tables 16A through 16E are proposed for use as mitigation measures on the proposed project. Rather, the proposed mitigation is for the County and project proponent to select an appropriate set of control measures for implementation on the project site prior to first occupancy. These control measures must, in sum, achieve the required 5 percent reduction in GHG emissions. The following is the text of the recommended mitigation measure:

> ***MM GHG:*** *Prior to occupancy of project facilities, the developer/permit holder will implement or develop a plan for implementation of one or more mitigation strategies for the reduction of greenhouse gas (GHG) emissions from the report "CEQA and Climate Change" prepared by the California Air Pollution Control Officers Association (CAPCOA) as updated in 2010. The total benefit of the mitigation strategies must result in a minimum 5 percent reduction in GHG emissions from the business-as-usual value. Alternative strategies not listed in the CAPCOA report may be used with approval of the Orange County Planning Director. The selected strategies, including measures for their long-term maintenance, must be described in a memo submitted to and approved by the County Planning Department prior to initial occupancy of any on-site facility.*

TABLE 16A

Transportation Control Measures	Effectiveness
Bus Shelters for Future Transit	1.0%
Pedestrian Access and Paths though Parking Areas	1.0%
Voluntary Rideshare w/ Incentives	1.0%
Preferential Parking for EVs and Hybrids	1.0%
Electric Vehicle Charge Stations	1.0%
Total (Transportation)	5.0%

Source: CAPCOA (2008), Chapter 7

TABLE 16B

Energy Efficiency	Effectiveness
Energy Star and Cool Roofs	0.5%
On-Site Solar Panels on Flat Roofs	2.0%
Exceed Title 24 Requirements by 10%	3.0%
Solar Orientation of Buildings	0.5%
Low Energy Cooling	0.5%
Energy Star Appliances	0.5%
"Green Building" Materials	0.25%
Shading Mechanisms	0.25%
High Efficiency Lighting Systems	0.5%
Total Energy Conservation	8.0%

Source: CAPCOA (2008), Chapter 7

TABLE 16C

Water Supply	Effectiveness
Use Reclaimed Water	0.5%
Low Flow Fixtures	0.5%
Water Efficient Landscape	5.0%
Total	6.0%

Source: CAPCOA (2008), Chapter 7

TABLE 16D

Solid Waste	Effectiveness
Enhanced Recycling/Recovery Programs	10.0%
Reuse Cut-and-Fill	10.0%
Total	20.0%

Source: CAPCOA (2008), Chapter 7

TABLE 16E

Miscellaneous Measures	Effectiveness	Reduction
Electric Lawnmowers	Benefits Not Quantified	
Enhanced Recycling, Reduction and Reuse		
LEED Certification		
Drought Resistant Landscaping		
Local Farmer's Markets		

Table 17
GHG Reductions Attainable with RCM Implementation

Category	Applies To:	Overall Effectiveness[a]	Overall Percent Reduction[b]	Annual MT Tons Reduced
Transportation Control	Transportation	5.0%	3.3%	227
Water Supply	Water Use	6.0%	0.1%	10
Solid Waste	Solid Waste	20.0%	0.6%	40
Energy Efficiency	Electric and NG	8.0%	1.8%	126
Miscellaneous	All	unknown	unknown	na
Total			5.8%	403

[a] – percentage reduction within a given source category
[b] – effectiveness within a given source category times the source category share of the total burden

With feasible options and realistic expectations of effectiveness, mitigation levels exceeding the local goal of 5 percent can be demonstrated. Achievement of this emissions reduction goal would require the implementation of the proposed mitigation measures provided above. With available options, project compliance with AB-32 goals and policies can be assured with a reasonable margin of safety.

SUMMARY

As shown in Table 16, the size of the project is such that direct and indirect GHG emissions will exceed the SCAQMD screening level threshold (3,500 $MTCO_2e$ per year) for residential projects by a large margin. This finding is based upon a business-as-usual assumption and does not include statewide or locally sponsored mitigation. State program reductions reduce the emissions figure in the BAU scenario by 23.9 percent. Feasible local reductions, as summarized in Table 15, would result in an additional 5.8 percent reduction. Specific local reductions to be implemented on the site would be determined prior to project occupancy based on then-current strategies and technologies, with additional coordination between the project proponent and the City of Yorba Linda. However, even with implementation of required and discretionary GHG reduction measures, annual emissions cannot be reduced below the SCAQMD's advisory threshold.

APPENDIX

CalEEMod2011.1.1 Computer Model Output

Option 1

- Daily Emissions (lbs per day)
- Annual Emissions (tons per year)

Option 2

- Daily Emissions (lbs per day)
- Annual Emissions (tons per year)

Option 2a

- Daily Emissions (lbs per day)
- Annual Emissions (tons per year)

CalEE Input and Defaults

COScreening Protocols

Microscale Analysis Input Data

CalEEMod Defaults and Modeled Data

Activity	CalEE Default # Days	Modeled # Days	CalEE Default Equipment	Modeled Equipment
Site Prep	300	120	3 Dozers	3 Dozers
			4 Backhoes	4 Backhoes
Grading	775	390	2 Excavators	2 Excavators
			1 Grader	2 Graders
			1 Dozer	1 Dozer
			2 Scrapers	6 Scrapers
			2 Loader/Backhoes	2 Loader/Backhoes
Construction	7,750	1.300	1 Crane	1 Crane
			3 Forklifts	3 Forklifts
			1 Gen Set	1 Gen Set
			3 Loader/Backhoes	3 Loader/Backhoes
			1 Welder	1 Welder
Paving	550	60	2 Pavers	2 Pavers
			2 Paving Equipment	2 Paving Equipment
			2 Rollers	2 Rollers

CO SCREENING ANALYSIS PROTOCOLS

(Bay Area AQMD CEQA Guidelines, modified to include congestion/delay)

CO(1-hour) = Vol (major in) * Emfac(25 mph) * DF(major)

+ Vol (major in) * Sec. Delay * Idle (3 mph) * DF(major)

+ Vol(major out) * Emfac(25 mph) * DF(major)

+ Vol(minor in) * Emfac(25 mph) * DF(minor)

+ Vol(minor in) * Sec. delay * Idle(3 mph) * DF(minor)

+ Vol(minor out) * Emfac(25 mph) * DF(minor)

DF(major) = 6.1 / 100,000

DF(minor) = 2.7 / 100,000

Delay = 2.5 sec LOS=A
= 10.0 sec LOS=B
= 20.0 sec LOS=C
= 32.5 sec LOS=D
= 50.0 sec LOS=E
= 75.0 sec LOS=F

Year	Emfac(25) (g/mi)	Idle(3) (g/sec/mile)
2015	4.69	0.052
2020	3.28	0.052
2025	2.47	0.054
2030	2.08	0.056

Source: EMFAC2007

CO(8-hour) = CO(1-hour) * 0.6 (persistence)

Data Used for Microscale Analysis (from turning movements in Traffic Report)

AM - Existing		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1081	812	160	71	A
	San Antonio	1184	1044	185	78	A
	Yorba Ranch	1166	1019	110	140	A
	La Palma	1338	1516	1257	739	C

AM - Existing + Project, Option 1		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1208	855	166	88	A
	San Antonio	1311	1083	185	78	A
	Yorba Ranch	1299	1064	112	146	A
	La Palma	1412	1542	1258	741	C

AM - 2020		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1177	939	175	82	A
	San Antonio	1339	1199	201	85	A
	Yorba Ranch	1322	1166	118	54	A
	La Palma	1500	1664	1358	801	D

AM - 2020 + Project, Option 1		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1304	982	181	99	A
	San Antonio	1466	1242	201	85	A
	Yorba Ranch	1455	1211	120	160	A
	La Palma	1574	1690	1359	803	D

AM - 2035		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1179	942	206	123	A
	San Antonio	1398	1235	201	85	A
	Yorba Ranch	1509	1279	137	172	A
	La Palma	1651	1832	1494	886	D

AM - 2035 + Project, Option 1		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1306	985	212	140	A
	San Antonio	1526	1283	201	85	A
	Yorba Ranch	1643	1323	139	178	A
	La Palma	1725	1858	1495	888	D

AM - Existing + Project, Option 2		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1208	855	166	88	A
	San Antonio	1213	1129	397	150	A
	Yorba Ranch	1193	1097	112	146	A
	La Palma	1412	1542	1258	741	C

AM - 2020 + Project, Option 2		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1304	982	181	99	A
	San Antonio	1143	1488	413	157	A
	Yorba Ranch	1349	1244	120	160	A
	La Palma	1574	1690	1359	803	D

AM - 2035 + Project, Option 2		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1306	985	212	140	A
	San Antonio	1427	1325	413	157	A
	Yorba Ranch	1536	1357	139	178	A
	La Palma	1725	1858	1495	888	D

AM - Existing + Project, Option 2A		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1208	855	166	88	A
	San Antonio	1213	1129	397	150	A
	Yorba Ranch	1193	1097	112	146	A
	La Palma	1412	1542	1258	741	C

AM - 2020 + Project, Option 2A		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1304	982	181	99	A
	San Antonio	1368	1284	413	157	A
	Yorba Ranch	1349	1244	120	160	A

	La Palma	1574	1690	1359	803	D

AM - 2035 + Project, Option 2A		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1306	985	212	140	A
	San Antonio	1427	1325	413	157	A
	Yorba Ranch	1536	1357	139	178	A
	La Palma	1725	1858	1487	888	D

PM - Existing		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1147	977	168	175	A
	San Antonio	1238	1030	131	130	A
	Yorba Ranch	1258	1080	132	140	A
	La Palma	2160	1526	1057	588	C

PM - Existing + Project, Option 1		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1273	1050	187	186	A
	San Antonio	1383	1114	131	130	A
	Yorba Ranch	1403	1164	139	144	A
	La Palma	2240	1572	1059	589	C

PM - 2020		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1256	1114	182	199	A
	San Antonio	1420	1197	148	146	A
	Yorba Ranch	1443	1255	144	155	A
	La Palma	2395	1692	1150	640	C

PM - 2020 + Project, Option 1		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1382	1187	201	199	B
	San Antonio	1565	1281	148	146	A
	Yorba Ranch	1588	1339	151	155	A

	La Palma	2475	1738	1150	640	D

PM - 2035		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1287	1134	202	219	A
	San Antonio	1493	1256	161	146	A
	Yorba Ranch	1621	1362	162	174	A
	La Palma	2635	1867	1261	692	D

PM - 2035 + Project, Option 1		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1413	1207	221	230	B
	San Antonio	1638	1340	161	146	A
	Yorba Ranch	1767	1447	169	178	B
	La Palma	2715	1908	1263	693	D

Esperanza Hills

Turning Movements, p.4

PM - Existing + Project, Option 2		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1152	1376	187	186	A
	San Antonio	1383	1114	271	372	A
	Yorba Ranch	1314	1177	139	144	A
	La Palma	2240	1572	1059	589	C

PM - 2020 + Project, Option 2		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1382	1187	201	199	A
	San Antonio	1565	1281	288	388	A
	Yorba Ranch	1499	1352	151	155	A
	La Palma	2475	1738	1150	640	C

PM - 2035 + Project, Option	Major In	Major	Minor In	Minor	LOS

2			Out		Out	
Yorba Linda Blvd/	Las Palomas	1413	1207	221	230	B
	San Antonio	1638	1340	301	388	A
	Yorba Ranch	1677	1459	169	178	A
	La Palma	2715	1908	1263	693	D

PM - Existing + Project, Option 2A		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1273	1050	187	186	A
	San Antonio	1383	1114	271	372	A
	Yorba Ranch	1314	1177	139	144	A
	La Palma	2240	1572	1059	589	C

PM - 2020 + Project, Option 2A		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1382	1187	201	199	A
	San Antonio	1565	1281	288	388	A
	Yorba Ranch	1499	1352	151	155	A
	La Palma	2475	1738	1150	640	C

PM - 2035 + Project, Option 2A		Major In	Major Out	Minor In	Minor Out	LOS
Yorba Linda Blvd/	Las Palomas	1413	1207	221	230	B
	San Antonio	1638	1340	301	388	A
	Yorba Ranch	1677	1459	169	178	A
	La Palma	2715	1908	1263	693	D

Yorba Linda Estates Study Option 1

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Single Family Housing	378	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics -

Land Use - 378 Units, 468 acres

Construction Phase - Site Prep: 60days, Grading: 390 days, Construction: 1,300 days, Paving: 60 days
Start year 2014

Off-road Equipment - Construction: 1 Crane, 3 Forklifts, 1 Gen Set, 3 Loader/Backhoes, 1 Welder

Off-road Equipment - Grading: 2 Excavators, 2 Graders, 1 Dozer, 6 Scrapers, 2 Loader/Backhoes
reduce load factor by 33%

Off-road Equipment - 2 Pavers, 2 Paving Equipment, 2 Rollers
reduce load factor by 33%

Off-road Equipment - Site Prep 3 Dozers, 4 Loader/Backhoes
reduce load factor by 33%

Trips and VMT - 1000 feet movement

Grading - 286700 CY earthmovement, 1000 feet

Vehicle Trips -

Construction Off-road Equipment Mitigation - water 3x a day
excavators, graders, and scrapers: tier 3, 40% oxidation catalyst

Area Mitigation -

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					
2014	1.76	14.32	8.00	0.02	2.74	0.61	3.34	0.97	0.61	1.58	0.00	1,554.35	1,554.35	0.14	0.00	1,557.30
2015	1.56	12.17	7.39	0.02	2.22	0.52	2.74	0.68	0.52	1.19	0.00	1,499.26	1,499.26	0.12	0.00	1,501.85
2016	0.51	3.13	3.38	0.01	0.25	0.17	0.43	0.00	0.17	0.18	0.00	612.11	612.11	0.04	0.00	612.97
2017	0.47	2.85	3.25	0.01	0.25	0.15	0.41	0.00	0.15	0.16	0.00	606.75	606.75	0.04	0.00	607.54
2018	0.43	2.61	3.16	0.01	0.25	0.14	0.39	0.00	0.13	0.14	0.00	606.20	606.20	0.03	0.00	606.93
2019	0.40	2.38	3.07	0.01	0.25	0.12	0.37	0.00	0.12	0.12	0.00	603.50	603.50	0.03	0.00	604.17
2020	0.69	2.01	2.58	0.01	0.19	0.11	0.30	0.00	0.11	0.11	0.00	489.49	489.49	0.03	0.00	490.06
2021	2.32	0.08	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01	0.00	24.34	24.34	0.00	0.00	24.37
Total	**8.14**	**39.55**	**30.97**	**0.09**	**6.17**	**1.83**	**8.00**	**1.65**	**1.82**	**3.49**	**0.00**	**5,996.00**	**5,996.00**	**0.43**	**0.00**	**6,005.19**

2.1 Overall Construction

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					
2014	1.42	7.47	9.22	0.02	1.53	0.23	1.76	0.38	0.23	0.61	0.00	1,554.35	1,554.35	0.14	0.00	1,557.30
2015	1.30	6.47	8.75	0.02	1.34	0.19	1.54	0.26	0.19	0.46	0.00	1,499.26	1,499.26	0.12	0.00	1,501.85
2016	0.51	3.13	3.38	0.01	0.25	0.17	0.43	0.00	0.17	0.18	0.00	612.11	612.11	0.04	0.00	612.97
2017	0.47	2.85	3.25	0.01	0.25	0.15	0.41	0.00	0.15	0.16	0.00	606.75	606.75	0.04	0.00	607.54
2018	0.43	2.61	3.16	0.01	0.25	0.14	0.39	0.00	0.13	0.14	0.00	606.20	606.20	0.03	0.00	606.93
2019	0.40	2.38	3.07	0.01	0.25	0.12	0.37	0.00	0.12	0.12	0.00	603.50	603.50	0.03	0.00	604.17
2020	0.69	2.01	2.58	0.01	0.19	0.11	0.30	0.00	0.11	0.11	0.00	489.49	489.49	0.03	0.00	490.06
2021	2.32	0.08	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01	0.00	24.34	24.34	0.00	0.00	24.37
Total	**7.54**	**27.00**	**33.55**	**0.09**	**4.08**	**1.12**	**5.22**	**0.64**	**1.11**	**1.79**	**0.00**	**5,996.00**	**5,996.00**	**0.43**	**0.00**	**6,005.19**

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	4.16	0.10	8.17	0.00		0.00	0.40		0.00	0.40	40.15	240.87	281.02	0.13	0.01	285.52
Energy	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	1,562.50	1,562.50	0.05	0.03	1,572.14
Mobile	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Waste						0.00	0.00		0.00	0.00	89.97	0.00	89.97	5.32	0.00	201.62
Water						0.00	0.00		0.00	0.00	0.00	143.73	143.73	0.76	0.02	166.19
Total	**6.90**	**7.03**	**33.65**	**0.05**	**5.56**	**0.31**	**6.33**	**0.09**	**0.30**	**0.85**	**130.12**	**6,479.17**	**6,609.29**	**6.43**	**0.06**	**6,761.20**

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	2.93	0.07	5.80	0.00		0.00	0.05		0.00	0.05	0.00	254.49	254.49	0.01	0.00	256.17
Energy	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	1,562.50	1,562.50	0.05	0.03	1,572.14
Mobile	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Waste						0.00	0.00		0.00	0.00	89.97	0.00	89.97	5.32	0.00	201.62
Water						0.00	0.00		0.00	0.00	0.00	143.73	143.73	0.76	0.02	166.19
Total	**5.67**	**7.00**	**31.28**	**0.05**	**5.56**	**0.31**	**5.98**	**0.09**	**0.30**	**0.50**	**89.97**	**6,492.79**	**6,582.76**	**6.31**	**0.05**	**6,731.85**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.54	0.00	0.54	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	1.52	0.87	0.00		0.07	0.07		0.07	0.07	0.00	147.29	147.29	0.02	0.00	147.62
Total	**0.19**	**1.52**	**0.87**	**0.00**	**0.54**	**0.07**	**0.61**	**0.30**	**0.07**	**0.37**	**0.00**	**147.29**	**147.29**	**0.02**	**0.00**	**147.62**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.86	4.86	0.00	0.00	4.87
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.86**	**4.86**	**0.00**	**0.00**	**4.87**

3.2 Site Preparation - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.21	0.00	0.21	0.12	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	1.52	0.87	0.00		0.07	0.07		0.07	0.07	0.00	147.29	147.29	0.02	0.00	147.62
Total	**0.19**	**1.52**	**0.87**	**0.00**	**0.21**	**0.07**	**0.28**	**0.12**	**0.07**	**0.19**	**0.00**	**147.29**	**147.29**	**0.02**	**0.00**	**147.62**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.86	4.86	0.00	0.00	4.87
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.86**	**4.86**	**0.00**	**0.00**	**4.87**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.44	0.00	1.44	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.47	12.20	6.22	0.01		0.53	0.53		0.53	0.53	0.00	1,340.63	1,340.63	0.12	0.00	1,343.13
Total	**1.47**	**12.20**	**6.22**	**0.01**	**1.44**	**0.53**	**1.97**	**0.67**	**0.53**	**1.20**	**0.00**	**1,340.63**	**1,340.63**	**0.12**	**0.00**	**1,343.13**

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	0.08	0.58	0.69	0.00	0.71	0.01	0.72	0.00	0.01	0.01	0.00	31.86	31.86	0.00	0.00	31.94
Vendor	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
Worker	0.02	0.02	0.19	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.71	29.71	0.00	0.00	29.75
Total	**0.10**	**0.60**	**0.88**	**0.00**	**0.75**	**0.01**	**0.76**	**0.00**	**0.01**	**0.01**	**0.00**	**61.57**	**61.57**	**0.00**	**0.00**	**61.69**

3.3 Grading - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.56	0.00	0.56	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.13	5.35	7.44	0.01		0.15	0.15		0.15	0.15	0.00	1,340.63	1,340.63	0.12	0.00	1,343.13
Total	**1.13**	**5.35**	**7.44**	**0.01**	**0.56**	**0.15**	**0.71**	**0.26**	**0.15**	**0.41**	**0.00**	**1,340.63**	**1,340.63**	**0.12**	**0.00**	**1,343.13**

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	0.08	0.58	0.69	0.00	0.71	0.01	0.72	0.00	0.01	0.01	0.00	31.86	31.86	0.00	0.00	31.94
Vendor	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
Worker	0.02	0.02	0.19	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.71	29.71	0.00	0.00	29.75
Total	**0.10**	**0.60**	**0.88**	**0.00**	**0.75**	**0.01**	**0.76**	**0.00**	**0.01**	**0.01**	**0.00**	**61.57**	**61.57**	**0.00**	**0.00**	**61.69**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.44	0.00	1.44	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.32	10.66	5.66	0.01		0.46	0.46		0.46	0.46	0.00	1,273.59	1,273.59	0.11	0.00	1,275.83
Total	**1.32**	**10.66**	**5.66**	**0.01**	**1.44**	**0.46**	**1.90**	**0.67**	**0.46**	**1.13**	**0.00**	**1,273.59**	**1,273.59**	**0.11**	**0.00**	**1,275.83**

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	0.07	0.56	0.62	0.00	0.68	0.01	0.68	0.00	0.01	0.01	0.00	30.93	30.93	0.00	0.00	31.00
Vendor	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
Worker	0.01	0.02	0.16	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	27.62	27.62	0.00	0.00	27.65
Total	**0.08**	**0.58**	**0.78**	**0.00**	**0.72**	**0.01**	**0.72**	**0.00**	**0.01**	**0.01**	**0.00**	**58.55**	**58.55**	**0.00**	**0.00**	**58.65**

3.3 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.56	0.00	0.56	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.06	4.96	7.02	0.01		0.13	0.13		0.13	0.13	0.00	1,273.59	1,273.59	0.11	0.00	1,275.83
Total	**1.06**	**4.96**	**7.02**	**0.01**	**0.56**	**0.13**	**0.69**	**0.26**	**0.13**	**0.39**	**0.00**	**1,273.59**	**1,273.59**	**0.11**	**0.00**	**1,275.83**

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	0.07	0.56	0.62	0.00	0.68	0.01	0.68	0.00	0.01	0.01	0.00	30.93	30.93	0.00	0.00	31.00
Vendor	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
Worker	0.01	0.02	0.16	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	27.62	27.62	0.00	0.00	27.65
Total	**0.08**	**0.58**	**0.78**	**0.00**	**0.72**	**0.01**	**0.72**	**0.00**	**0.01**	**0.01**	**0.00**	**58.55**	**58.55**	**0.00**	**0.00**	**58.65**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.11	0.72	0.57	0.00		0.04	0.04		0.04	0.04	0.00	89.54	89.54	0.01	0.00	89.73
Total	**0.11**	**0.72**	**0.57**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**89.54**	**89.54**	**0.01**	**0.00**	**89.73**

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	0.00	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
Vendor	0.02	0.19	0.13	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	35.05	35.05	0.00	0.00	35.06
Worker	0.02	0.02	0.25	0.00	0.06	0.00	0.06	0.00	0.00	0.00	0.00	42.53	42.53	0.00	0.00	42.58
Total	**0.04**	**0.21**	**0.38**	**0.00**	**0.07**	**0.01**	**0.08**	**0.00**	**0.01**	**0.01**	**0.00**	**77.58**	**77.58**	**0.00**	**0.00**	**77.64**

3.4 Building Construction - 2015

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	0.11	0.72	0.57	0.00		0.04	0.04		0.04	0.04	0.00	89.54	89.54	0.01	0.00	89.73
Total	**0.11**	**0.72**	**0.57**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**89.54**	**89.54**	**0.01**	**0.00**	**89.73**

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	0.00	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
Vendor	0.02	0.19	0.13	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	35.05	35.05	0.00	0.00	35.06
Worker	0.02	0.02	0.25	0.00	0.06	0.00	0.06	0.00	0.00	0.00	0.00	42.53	42.53	0.00	0.00	42.58
Total	**0.04**	**0.21**	**0.38**	**0.00**	**0.07**	**0.01**	**0.08**	**0.00**	**0.01**	**0.01**	**0.00**	**77.58**	**77.58**	**0.00**	**0.00**	**77.64**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.37	2.40	2.08	0.00		0.14	0.14		0.14	0.14	0.00	329.16	329.16	0.03	0.00	329.79
Total	**0.37**	**2.40**	**2.08**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.79**

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	0.00	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
Vendor	0.06	0.65	0.44	0.00	0.04	0.02	0.07	0.00	0.02	0.02	0.00	129.20	129.20	0.00	0.00	129.26
Worker	0.08	0.08	0.86	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	153.75	153.75	0.01	0.00	153.92
Total	**0.14**	**0.73**	**1.30**	**0.00**	**0.25**	**0.03**	**0.29**	**0.00**	**0.03**	**0.03**	**0.00**	**282.95**	**282.95**	**0.01**	**0.00**	**283.18**

3.4 Building Construction - 2016

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	0.37	2.40	2.08	0.00		0.14	0.14		0.14	0.14	0.00	329.16	329.16	0.03	0.00	329.79
Total	**0.37**	**2.40**	**2.08**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.79**

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	0.00	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
Vendor	0.06	0.65	0.44	0.00	0.04	0.02	0.07	0.00	0.02	0.02	0.00	129.20	129.20	0.00	0.00	129.26
Worker	0.08	0.08	0.86	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	153.75	153.75	0.01	0.00	153.92
Total	**0.14**	**0.73**	**1.30**	**0.00**	**0.25**	**0.03**	**0.29**	**0.00**	**0.03**	**0.03**	**0.00**	**282.95**	**282.95**	**0.01**	**0.00**	**283.18**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.34	2.18	2.06	0.00		0.13	0.13		0.13	0.13	0.00	327.90	327.90	0.03	0.00	328.47
Total	**0.34**	**2.18**	**2.06**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**327.90**	**327.90**	**0.03**	**0.00**	**328.47**

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	0.00	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
Vendor	0.06	0.60	0.40	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	128.93	128.93	0.00	0.00	128.98
Worker	0.07	0.07	0.79	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	149.93	149.93	0.01	0.00	150.08
Total	**0.13**	**0.67**	**1.19**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**278.86**	**278.86**	**0.01**	**0.00**	**279.06**

3.4 Building Construction - 2017

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	0.34	2.18	2.06	0.00		0.13	0.13		0.13	0.13	0.00	327.90	327.90	0.03	0.00	328.47
Total	**0.34**	**2.18**	**2.06**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**327.90**	**327.90**	**0.03**	**0.00**	**328.47**

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	0.00	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
Vendor	0.06	0.60	0.40	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	128.93	128.93	0.00	0.00	128.98
Worker	0.07	0.07	0.79	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	149.93	149.93	0.01	0.00	150.08
Total	**0.13**	**0.67**	**1.19**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**278.86**	**278.86**	**0.01**	**0.00**	**279.06**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.31	1.98	2.05	0.00		0.11	0.11		0.11	0.11	0.00	329.16	329.16	0.03	0.00	329.69
Total	**0.31**	**1.98**	**2.05**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.69**

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	0.00	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
Vendor	0.05	0.56	0.38	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.64	129.64	0.00	0.00	129.68
Worker	0.07	0.07	0.73	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	147.41	147.41	0.01	0.00	147.55
Total	**0.12**	**0.63**	**1.11**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**277.05**	**277.05**	**0.01**	**0.00**	**277.23**

3.4 Building Construction - 2018

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	0.31	1.98	2.05	0.00		0.11	0.11		0.11	0.11	0.00	329.16	329.16	0.03	0.00	329.69
Total	**0.31**	**1.98**	**2.05**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.69**

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	0.00	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
Vendor	0.05	0.56	0.38	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.64	129.64	0.00	0.00	129.68
Worker	0.07	0.07	0.73	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	147.41	147.41	0.01	0.00	147.55
Total	**0.12**	**0.63**	**1.11**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**277.05**	**277.05**	**0.01**	**0.00**	**277.23**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.28	1.80	2.03	0.00		0.09	0.09		0.09	0.09	0.00	329.16	329.16	0.02	0.00	329.64
Total	**0.28**	**1.80**	**2.03**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**329.16**	**329.16**	**0.02**	**0.00**	**329.64**

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	0.00	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
Vendor	0.05	0.52	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.84	129.84	0.00	0.00	129.88
Worker	0.07	0.06	0.68	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	144.51	144.51	0.01	0.00	144.65
Total	**0.12**	**0.58**	**1.04**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**274.35**	**274.35**	**0.01**	**0.00**	**274.53**

3.4 Building Construction - 2019

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	0.28	1.80	2.03	0.00		0.09	0.09		0.09	0.09	0.00	329.16	329.16	0.02	0.00	329.64
Total	**0.28**	**1.80**	**2.03**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**329.16**	**329.16**	**0.02**	**0.00**	**329.64**

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	0.00	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
Vendor	0.05	0.52	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.84	129.84	0.00	0.00	129.88
Worker	0.07	0.06	0.68	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	144.51	144.51	0.01	0.00	144.65
Total	**0.12**	**0.58**	**1.04**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**274.35**	**274.35**	**0.01**	**0.00**	**274.53**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.19	1.17	1.44	0.00		0.06	0.06		0.06	0.06	0.00	234.57	234.57	0.01	0.00	234.89
Total	**0.19**	**1.17**	**1.44**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**234.57**	**234.57**	**0.01**	**0.00**	**234.89**

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	0.00	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
Vendor	0.03	0.35	0.24	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	92.66	92.66	0.00	0.00	92.69
Worker	0.04	0.04	0.45	0.00	0.15	0.01	0.15	0.00	0.01	0.01	0.00	101.05	101.05	0.00	0.00	101.14
Total	**0.07**	**0.39**	**0.69**	**0.00**	**0.18**	**0.02**	**0.19**	**0.00**	**0.02**	**0.02**	**0.00**	**193.71**	**193.71**	**0.00**	**0.00**	**193.83**

3.4 Building Construction - 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					
Off-Road	0.19	1.17	1.44	0.00		0.06	0.06		0.06	0.06	0.00	234.57	234.57	0.01	0.00	234.89
Total	**0.19**	**1.17**	**1.44**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**234.57**	**234.57**	**0.01**	**0.00**	**234.89**

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	0.00	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
Vendor	0.03	0.35	0.24	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	92.66	92.66	0.00	0.00	92.69
Worker	0.04	0.04	0.45	0.00	0.15	0.01	0.15	0.00	0.01	0.01	0.00	101.05	101.05	0.00	0.00	101.14
Total	**0.07**	**0.39**	**0.69**	**0.00**	**0.18**	**0.02**	**0.19**	**0.00**	**0.02**	**0.02**	**0.00**	**193.71**	**193.71**	**0.00**	**0.00**	**193.83**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.07	0.44	0.40	0.00		0.03	0.03		0.03	0.03	0.00	53.85	53.85	0.01	0.00	53.97
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.07**	**0.44**	**0.40**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**53.85**	**53.85**	**0.01**	**0.00**	**53.97**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.60	3.60	0.00	0.00	3.60
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.60**	**3.60**	**0.00**	**0.00**	**3.60**

3.5 Paving - 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					
Off-Road	0.07	0.44	0.40	0.00		0.03	0.03		0.03	0.03	0.00	53.85	53.85	0.01	0.00	53.97
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.07**	**0.44**	**0.40**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**53.85**	**53.85**	**0.01**	**0.00**	**53.97**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.60	3.60	0.00	0.00	3.60
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.60**	**3.60**	**0.00**	**0.00**	**3.60**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.35					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	2.04	2.04	0.00	0.00	2.04
Total	**0.35**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.04**	**2.04**	**0.00**	**0.00**	**2.04**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73	1.73	0.00	0.00	1.73
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.73**	**1.73**	**0.00**	**0.00**	**1.73**

3.6 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	0.35					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	2.04	2.04	0.00	0.00	2.04
Total	**0.35**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.04**	**2.04**	**0.00**	**0.00**	**2.04**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73	1.73	0.00	0.00	1.73
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.73**	**1.73**	**0.00**	**0.00**	**1.73**

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	2.30					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.08	0.09	0.00		0.00	0.00		0.00	0.00	0.00	13.26	13.26	0.00	0.00	13.28
Total	**2.31**	**0.08**	**0.09**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**13.26**	**13.26**	**0.00**	**0.00**	**13.28**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.05	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	11.08	11.08	0.00	0.00	11.09
Total	**0.00**	**0.00**	**0.05**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**11.08**	**11.08**	**0.00**	**0.00**	**11.09**

3.6 Architectural Coating - 2021

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	2.30					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.08	0.09	0.00		0.00	0.00		0.00	0.00	0.00	13.26	13.26	0.00	0.00	13.28
Total	**2.31**	**0.08**	**0.09**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**13.26**	**13.26**	**0.00**	**0.00**	**13.28**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.05	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	11.08	11.08	0.00	0.00	11.09
Total	**0.00**	**0.00**	**0.05**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**11.08**	**11.08**	**0.00**	**0.00**	**11.09**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Unmitigated	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	3,617.46	3,810.24	3315.06	10,229,544	10,229,544
Total	3,617.46	3,810.24	3,315.06	10,229,544	10,229,544

4.3 Trip Type Information

	Miles			Trip %		
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
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	709.54	709.54	0.03	0.01	713.99
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	709.54	709.54	0.03	0.01	713.99
NaturalGas Mitigated	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
NaturalGas Unmitigated	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Single Family Housing	1.59839e+007	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total		**0.09**	**0.74**	**0.31**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**852.96**	**852.96**	**0.02**	**0.02**	**858.15**

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	tons/yr										MT/yr					
Single Family Housing	1.59839e+007	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total		**0.09**	**0.74**	**0.31**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**852.96**	**852.96**	**0.02**	**0.02**	**858.15**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Single Family Housing	2.43937e+006					709.54	0.03	0.01	713.99
Total						**709.54**	**0.03**	**0.01**	**713.99**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Single Family Housing	2.43937e+006					709.54	0.03	0.01	713.99
Total						**709.54**	**0.03**	**0.01**	**713.99**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.93	0.07	5.80	0.00		0.00	0.05		0.00	0.05	0.00	254.49	254.49	0.01	0.00	256.17
Unmitigated	4.16	0.10	8.17	0.00		0.00	0.40		0.00	0.40	40.15	240.87	281.02	0.13	0.01	285.52
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.27					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	1.25	0.03	2.38	0.00		0.00	0.37		0.00	0.37	40.15	231.47	271.62	0.12	0.01	275.92
Landscaping	0.18	0.07	5.79	0.00		0.00	0.03		0.00	0.03	0.00	9.40	9.40	0.01	0.00	9.60
Total	**4.16**	**0.10**	**8.17**	**0.00**		**0.00**	**0.40**		**0.00**	**0.40**	**40.15**	**240.87**	**281.02**	**0.13**	**0.01**	**285.52**

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	0.27					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.02	0.00	0.00	0.00		0.00	0.02		0.00	0.02	0.00	245.08	245.08	0.00	0.00	246.58
Landscaping	0.18	0.07	5.79	0.00		0.00	0.03		0.00	0.03	0.00	9.40	9.40	0.01	0.00	9.60
Total	**2.93**	**0.07**	**5.79**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**254.48**	**254.48**	**0.01**	**0.00**	**256.18**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					143.73	0.76	0.02	166.19
Unmitigated					143.73	0.76	0.02	166.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Single Family Housing	24.6282 / 15.5265					143.73	0.76	0.02	166.19
Total						**143.73**	**0.76**	**0.02**	**166.19**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Single Family Housing	24.6282 / 15.5265					143.73	0.76	0.02	166.19
Total						**143.73**	**0.76**	**0.02**	**166.19**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					89.97	5.32	0.00	201.62
Unmitigated					89.97	5.32	0.00	201.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Single Family Housing	443.21					89.97	5.32	0.00	201.62
Total						**89.97**	**5.32**	**0.00**	**201.62**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Single Family Housing	443.21					89.97	5.32	0.00	201.62
Total						**89.97**	**5.32**	**0.00**	**201.62**

9.0 Vegetation

Yorba Linda Estates Study Option 2

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Single Family Housing	378	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics -

Land Use - 378 Units, 468 acres

Construction Phase - Site Prep: 60days, Grading: 390 days, Construction: 1,300 days, Paving: 60 days
Start year 2014

Off-road Equipment - Construction: 1 Crane, 3 Forklifts, 1 Gen Set, 3 Loader/Backhoes, 1 Welder

Off-road Equipment - Grading: 2 Excavators, 2 Graders, 1 Dozer, 6 Scrapers, 2 Loader/Backhoes
reduce load factor by 33%

Off-road Equipment - 2 Pavers, 2 Paving Equipment, 2 Rollers
reduce load factor by 33%

Off-road Equipment - Site Prep 3 Dozers, 4 Loader/Backhoes
reduce load factor by 33%

Trips and VMT - 1700 feet to borrow area

Grading - 730 CY Import

Vehicle Trips -

Construction Off-road Equipment Mitigation - water 3x a day
excavators, graders, and scrapers: tier 3, 40% oxidation catalyst

Area Mitigation -

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					
2014	1.68	13.74	7.31	0.02	2.01	0.60	2.61	0.97	0.60	1.57	0.00	1,522.58	1,522.58	0.14	0.00	1,525.46
2015	1.49	11.61	6.77	0.02	1.53	0.51	2.04	0.67	0.51	1.18	0.00	1,468.42	1,468.42	0.12	0.00	1,470.94
2016	0.51	3.13	3.38	0.01	0.25	0.17	0.43	0.00	0.17	0.18	0.00	612.11	612.11	0.04	0.00	612.97
2017	0.47	2.85	3.25	0.01	0.25	0.15	0.41	0.00	0.15	0.16	0.00	606.75	606.75	0.04	0.00	607.54
2018	0.43	2.61	3.16	0.01	0.25	0.14	0.39	0.00	0.13	0.14	0.00	606.20	606.20	0.03	0.00	606.93
2019	0.40	2.38	3.07	0.01	0.25	0.12	0.37	0.00	0.12	0.12	0.00	603.50	603.50	0.03	0.00	604.17
2020	0.69	2.01	2.58	0.01	0.19	0.11	0.30	0.00	0.11	0.11	0.00	489.49	489.49	0.03	0.00	490.06
2021	2.32	0.08	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01	0.00	24.34	24.34	0.00	0.00	24.37
Total	**7.99**	**38.41**	**29.66**	**0.09**	**4.75**	**1.81**	**6.57**	**1.64**	**1.80**	**3.47**	**0.00**	**5,933.39**	**5,933.39**	**0.43**	**0.00**	**5,942.44**

2.1 Overall Construction

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					
2014	1.34	6.89	8.53	0.02	0.81	0.22	1.04	0.38	0.22	0.60	0.00	1,522.58	1,522.58	0.14	0.00	1,525.46
2015	1.23	5.91	8.13	0.02	0.66	0.19	0.85	0.26	0.19	0.45	0.00	1,468.42	1,468.42	0.12	0.00	1,470.94
2016	0.51	3.13	3.38	0.01	0.25	0.17	0.43	0.00	0.17	0.18	0.00	612.11	612.11	0.04	0.00	612.97
2017	0.47	2.85	3.25	0.01	0.25	0.15	0.41	0.00	0.15	0.16	0.00	606.75	606.75	0.04	0.00	607.54
2018	0.43	2.61	3.16	0.01	0.25	0.14	0.39	0.00	0.13	0.14	0.00	606.20	606.20	0.03	0.00	606.93
2019	0.40	2.38	3.07	0.01	0.25	0.12	0.37	0.00	0.12	0.12	0.00	603.50	603.50	0.03	0.00	604.17
2020	0.69	2.01	2.58	0.01	0.19	0.11	0.30	0.00	0.11	0.11	0.00	489.49	489.49	0.03	0.00	490.06
2021	2.32	0.08	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01	0.00	24.34	24.34	0.00	0.00	24.37
Total	**7.39**	**25.86**	**32.24**	**0.09**	**2.68**	**1.11**	**3.81**	**0.64**	**1.10**	**1.77**	**0.00**	**5,933.39**	**5,933.39**	**0.43**	**0.00**	**5,942.44**

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	4.16	0.10	8.17	0.00		0.00	0.40		0.00	0.40	40.15	240.87	281.02	0.13	0.01	285.52
Energy	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	1,562.50	1,562.50	0.05	0.03	1,572.14
Mobile	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Waste						0.00	0.00		0.00	0.00	89.97	0.00	89.97	5.32	0.00	201.62
Water						0.00	0.00		0.00	0.00	0.00	143.73	143.73	0.76	0.02	166.19
Total	**6.90**	**7.03**	**33.65**	**0.05**	**5.56**	**0.31**	**6.33**	**0.09**	**0.30**	**0.85**	**130.12**	**6,479.17**	**6,609.29**	**6.43**	**0.06**	**6,761.20**

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	2.93	0.07	5.80	0.00		0.00	0.05		0.00	0.05	0.00	254.49	254.49	0.01	0.00	256.17
Energy	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	1,562.50	1,562.50	0.05	0.03	1,572.14
Mobile	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Waste						0.00	0.00		0.00	0.00	89.97	0.00	89.97	5.32	0.00	201.62
Water						0.00	0.00		0.00	0.00	0.00	143.73	143.73	0.76	0.02	166.19
Total	**5.67**	**7.00**	**31.28**	**0.05**	**5.56**	**0.31**	**5.98**	**0.09**	**0.30**	**0.50**	**89.97**	**6,492.79**	**6,582.76**	**6.31**	**0.05**	**6,731.85**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.54	0.00	0.54	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	1.52	0.87	0.00		0.07	0.07		0.07	0.07	0.00	147.29	147.29	0.02	0.00	147.62
Total	**0.19**	**1.52**	**0.87**	**0.00**	**0.54**	**0.07**	**0.61**	**0.30**	**0.07**	**0.37**	**0.00**	**147.29**	**147.29**	**0.02**	**0.00**	**147.62**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.86	4.86	0.00	0.00	4.87
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.86**	**4.86**	**0.00**	**0.00**	**4.87**

3.2 Site Preparation - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.21	0.00	0.21	0.12	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	1.52	0.87	0.00		0.07	0.07		0.07	0.07	0.00	147.29	147.29	0.02	0.00	147.62
Total	**0.19**	**1.52**	**0.87**	**0.00**	**0.21**	**0.07**	**0.28**	**0.12**	**0.07**	**0.19**	**0.00**	**147.29**	**147.29**	**0.02**	**0.00**	**147.62**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.86	4.86	0.00	0.00	4.87
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.86**	**4.86**	**0.00**	**0.00**	**4.87**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.42	0.00	1.42	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.47	12.20	6.22	0.01		0.53	0.53		0.53	0.53	0.00	1,340.63	1,340.63	0.12	0.00	1,343.13
Total	**1.47**	**12.20**	**6.22**	**0.01**	**1.42**	**0.53**	**1.95**	**0.67**	**0.53**	**1.20**	**0.00**	**1,340.63**	**1,340.63**	**0.12**	**0.00**	**1,343.13**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.09
Vendor	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
Worker	0.02	0.02	0.19	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.71	29.71	0.00	0.00	29.75
Total	**0.02**	**0.02**	**0.19**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**29.80**	**29.80**	**0.00**	**0.00**	**29.84**

3.3 Grading - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.55	0.00	0.55	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.13	5.35	7.44	0.01		0.15	0.15		0.15	0.15	0.00	1,340.63	1,340.63	0.12	0.00	1,343.13
Total	**1.13**	**5.35**	**7.44**	**0.01**	**0.55**	**0.15**	**0.70**	**0.26**	**0.15**	**0.41**	**0.00**	**1,340.63**	**1,340.63**	**0.12**	**0.00**	**1,343.13**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.09
Vendor	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
Worker	0.02	0.02	0.19	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.71	29.71	0.00	0.00	29.75
Total	**0.02**	**0.02**	**0.19**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**29.80**	**29.80**	**0.00**	**0.00**	**29.84**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.42	0.00	1.42	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.32	10.66	5.66	0.01		0.46	0.46		0.46	0.46	0.00	1,273.59	1,273.59	0.11	0.00	1,275.83
Total	**1.32**	**10.66**	**5.66**	**0.01**	**1.42**	**0.46**	**1.88**	**0.67**	**0.46**	**1.13**	**0.00**	**1,273.59**	**1,273.59**	**0.11**	**0.00**	**1,275.83**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.09
Vendor	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
Worker	0.01	0.02	0.16	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	27.62	27.62	0.00	0.00	27.65
Total	**0.01**	**0.02**	**0.16**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**27.71**	**27.71**	**0.00**	**0.00**	**27.74**

3.3 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.55	0.00	0.55	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.06	4.96	7.02	0.01		0.13	0.13		0.13	0.13	0.00	1,273.59	1,273.59	0.11	0.00	1,275.83
Total	**1.06**	**4.96**	**7.02**	**0.01**	**0.55**	**0.13**	**0.68**	**0.26**	**0.13**	**0.39**	**0.00**	**1,273.59**	**1,273.59**	**0.11**	**0.00**	**1,275.83**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.09
Vendor	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
Worker	0.01	0.02	0.16	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	27.62	27.62	0.00	0.00	27.65
Total	**0.01**	**0.02**	**0.16**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**27.71**	**27.71**	**0.00**	**0.00**	**27.74**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.11	0.72	0.57	0.00		0.04	0.04		0.04	0.04	0.00	89.54	89.54	0.01	0.00	89.73
Total	**0.11**	**0.72**	**0.57**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**89.54**	**89.54**	**0.01**	**0.00**	**89.73**

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	0.00	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
Vendor	0.02	0.19	0.13	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	35.05	35.05	0.00	0.00	35.06
Worker	0.02	0.02	0.25	0.00	0.06	0.00	0.06	0.00	0.00	0.00	0.00	42.53	42.53	0.00	0.00	42.58
Total	**0.04**	**0.21**	**0.38**	**0.00**	**0.07**	**0.01**	**0.08**	**0.00**	**0.01**	**0.01**	**0.00**	**77.58**	**77.58**	**0.00**	**0.00**	**77.64**

3.4 Building Construction - 2015

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	0.11	0.72	0.57	0.00		0.04	0.04		0.04	0.04	0.00	89.54	89.54	0.01	0.00	89.73
Total	**0.11**	**0.72**	**0.57**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**89.54**	**89.54**	**0.01**	**0.00**	**89.73**

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	0.00	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
Vendor	0.02	0.19	0.13	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	35.05	35.05	0.00	0.00	35.06
Worker	0.02	0.02	0.25	0.00	0.06	0.00	0.06	0.00	0.00	0.00	0.00	42.53	42.53	0.00	0.00	42.58
Total	**0.04**	**0.21**	**0.38**	**0.00**	**0.07**	**0.01**	**0.08**	**0.00**	**0.01**	**0.01**	**0.00**	**77.58**	**77.58**	**0.00**	**0.00**	**77.64**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.37	2.40	2.08	0.00		0.14	0.14		0.14	0.14	0.00	329.16	329.16	0.03	0.00	329.79
Total	**0.37**	**2.40**	**2.08**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.79**

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	0.00	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
Vendor	0.06	0.65	0.44	0.00	0.04	0.02	0.07	0.00	0.02	0.02	0.00	129.20	129.20	0.00	0.00	129.26
Worker	0.08	0.08	0.86	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	153.75	153.75	0.01	0.00	153.92
Total	**0.14**	**0.73**	**1.30**	**0.00**	**0.25**	**0.03**	**0.29**	**0.00**	**0.03**	**0.03**	**0.00**	**282.95**	**282.95**	**0.01**	**0.00**	**283.18**

3.4 Building Construction - 2016

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	0.37	2.40	2.08	0.00		0.14	0.14		0.14	0.14	0.00	329.16	329.16	0.03	0.00	329.79
Total	**0.37**	**2.40**	**2.08**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.79**

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	0.00	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
Vendor	0.06	0.65	0.44	0.00	0.04	0.02	0.07	0.00	0.02	0.02	0.00	129.20	129.20	0.00	0.00	129.26
Worker	0.08	0.08	0.86	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	153.75	153.75	0.01	0.00	153.92
Total	**0.14**	**0.73**	**1.30**	**0.00**	**0.25**	**0.03**	**0.29**	**0.00**	**0.03**	**0.03**	**0.00**	**282.95**	**282.95**	**0.01**	**0.00**	**283.18**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.34	2.18	2.06	0.00		0.13	0.13		0.13	0.13	0.00	327.90	327.90	0.03	0.00	328.47
Total	**0.34**	**2.18**	**2.06**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**327.90**	**327.90**	**0.03**	**0.00**	**328.47**

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	0.00	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
Vendor	0.06	0.60	0.40	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	128.93	128.93	0.00	0.00	128.98
Worker	0.07	0.07	0.79	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	149.93	149.93	0.01	0.00	150.08
Total	**0.13**	**0.67**	**1.19**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**278.86**	**278.86**	**0.01**	**0.00**	**279.06**

3.4 Building Construction - 2017

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	0.34	2.18	2.06	0.00		0.13	0.13		0.13	0.13	0.00	327.90	327.90	0.03	0.00	328.47
Total	**0.34**	**2.18**	**2.06**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**327.90**	**327.90**	**0.03**	**0.00**	**328.47**

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	0.00	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
Vendor	0.06	0.60	0.40	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	128.93	128.93	0.00	0.00	128.98
Worker	0.07	0.07	0.79	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	149.93	149.93	0.01	0.00	150.08
Total	**0.13**	**0.67**	**1.19**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**278.86**	**278.86**	**0.01**	**0.00**	**279.06**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.31	1.98	2.05	0.00		0.11	0.11		0.11	0.11	0.00	329.16	329.16	0.03	0.00	329.69
Total	**0.31**	**1.98**	**2.05**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.69**

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	0.00	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
Vendor	0.05	0.56	0.38	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.64	129.64	0.00	0.00	129.68
Worker	0.07	0.07	0.73	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	147.41	147.41	0.01	0.00	147.55
Total	**0.12**	**0.63**	**1.11**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**277.05**	**277.05**	**0.01**	**0.00**	**277.23**

3.4 Building Construction - 2018

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	0.31	1.98	2.05	0.00		0.11	0.11		0.11	0.11	0.00	329.16	329.16	0.03	0.00	329.69
Total	**0.31**	**1.98**	**2.05**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.69**

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	0.00	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
Vendor	0.05	0.56	0.38	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.64	129.64	0.00	0.00	129.68
Worker	0.07	0.07	0.73	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	147.41	147.41	0.01	0.00	147.55
Total	**0.12**	**0.63**	**1.11**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**277.05**	**277.05**	**0.01**	**0.00**	**277.23**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.28	1.80	2.03	0.00		0.09	0.09		0.09	0.09	0.00	329.16	329.16	0.02	0.00	329.64
Total	**0.28**	**1.80**	**2.03**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**329.16**	**329.16**	**0.02**	**0.00**	**329.64**

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	0.00	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
Vendor	0.05	0.52	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.84	129.84	0.00	0.00	129.88
Worker	0.07	0.06	0.68	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	144.51	144.51	0.01	0.00	144.65
Total	**0.12**	**0.58**	**1.04**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**274.35**	**274.35**	**0.01**	**0.00**	**274.53**

3.4 Building Construction - 2019

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	0.28	1.80	2.03	0.00		0.09	0.09		0.09	0.09	0.00	329.16	329.16	0.02	0.00	329.64
Total	**0.28**	**1.80**	**2.03**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**329.16**	**329.16**	**0.02**	**0.00**	**329.64**

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	0.00	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
Vendor	0.05	0.52	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.84	129.84	0.00	0.00	129.88
Worker	0.07	0.06	0.68	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	144.51	144.51	0.01	0.00	144.65
Total	**0.12**	**0.58**	**1.04**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**274.35**	**274.35**	**0.01**	**0.00**	**274.53**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.19	1.17	1.44	0.00		0.06	0.06		0.06	0.06	0.00	234.57	234.57	0.01	0.00	234.89
Total	**0.19**	**1.17**	**1.44**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**234.57**	**234.57**	**0.01**	**0.00**	**234.89**

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	0.00	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
Vendor	0.03	0.35	0.24	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	92.66	92.66	0.00	0.00	92.69
Worker	0.04	0.04	0.45	0.00	0.15	0.01	0.15	0.00	0.01	0.01	0.00	101.05	101.05	0.00	0.00	101.14
Total	**0.07**	**0.39**	**0.69**	**0.00**	**0.18**	**0.02**	**0.19**	**0.00**	**0.02**	**0.02**	**0.00**	**193.71**	**193.71**	**0.00**	**0.00**	**193.83**

3.4 Building Construction - 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					
Off-Road	0.19	1.17	1.44	0.00		0.06	0.06		0.06	0.06	0.00	234.57	234.57	0.01	0.00	234.89
Total	**0.19**	**1.17**	**1.44**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**234.57**	**234.57**	**0.01**	**0.00**	**234.89**

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	0.00	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
Vendor	0.03	0.35	0.24	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	92.66	92.66	0.00	0.00	92.69
Worker	0.04	0.04	0.45	0.00	0.15	0.01	0.15	0.00	0.01	0.01	0.00	101.05	101.05	0.00	0.00	101.14
Total	**0.07**	**0.39**	**0.69**	**0.00**	**0.18**	**0.02**	**0.19**	**0.00**	**0.02**	**0.02**	**0.00**	**193.71**	**193.71**	**0.00**	**0.00**	**193.83**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.07	0.44	0.40	0.00		0.03	0.03		0.03	0.03	0.00	53.85	53.85	0.01	0.00	53.97
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.07**	**0.44**	**0.40**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**53.85**	**53.85**	**0.01**	**0.00**	**53.97**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.60	3.60	0.00	0.00	3.60
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.60**	**3.60**	**0.00**	**0.00**	**3.60**

3.5 Paving - 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					
Off-Road	0.07	0.44	0.40	0.00		0.03	0.03		0.03	0.03	0.00	53.85	53.85	0.01	0.00	53.97
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.07**	**0.44**	**0.40**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**53.85**	**53.85**	**0.01**	**0.00**	**53.97**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.60	3.60	0.00	0.00	3.60
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.60**	**3.60**	**0.00**	**0.00**	**3.60**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.35					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	2.04	2.04	0.00	0.00	2.04
Total	**0.35**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.04**	**2.04**	**0.00**	**0.00**	**2.04**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73	1.73	0.00	0.00	1.73
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.73**	**1.73**	**0.00**	**0.00**	**1.73**

3.6 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	0.35					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	2.04	2.04	0.00	0.00	2.04
Total	**0.35**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.04**	**2.04**	**0.00**	**0.00**	**2.04**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73	1.73	0.00	0.00	1.73
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.73**	**1.73**	**0.00**	**0.00**	**1.73**

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	2.30					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.08	0.09	0.00		0.00	0.00		0.00	0.00	0.00	13.26	13.26	0.00	0.00	13.28
Total	**2.31**	**0.08**	**0.09**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**13.26**	**13.26**	**0.00**	**0.00**	**13.28**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.05	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	11.08	11.08	0.00	0.00	11.09
Total	**0.00**	**0.00**	**0.05**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**11.08**	**11.08**	**0.00**	**0.00**	**11.09**

3.6 Architectural Coating - 2021

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	2.30					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.08	0.09	0.00		0.00	0.00		0.00	0.00	0.00	13.26	13.26	0.00	0.00	13.28
Total	**2.31**	**0.08**	**0.09**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**13.26**	**13.26**	**0.00**	**0.00**	**13.28**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.05	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	11.08	11.08	0.00	0.00	11.09
Total	**0.00**	**0.00**	**0.05**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**11.08**	**11.08**	**0.00**	**0.00**	**11.09**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Unmitigated	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	3,617.46	3,810.24	3315.06	10,229,544	10,229,544
Total	3,617.46	3,810.24	3,315.06	10,229,544	10,229,544

4.3 Trip Type Information

	Miles			Trip %		
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
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	709.54	709.54	0.03	0.01	713.99
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	709.54	709.54	0.03	0.01	713.99
NaturalGas Mitigated	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
NaturalGas Unmitigated	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Single Family Housing	1.59839e+007	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total		**0.09**	**0.74**	**0.31**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**852.96**	**852.96**	**0.02**	**0.02**	**858.15**

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	tons/yr										MT/yr					
Single Family Housing	1.59839e+007	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total		**0.09**	**0.74**	**0.31**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**852.96**	**852.96**	**0.02**	**0.02**	**858.15**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Single Family Housing	2.43937e+006					709.54	0.03	0.01	713.99
Total						**709.54**	**0.03**	**0.01**	**713.99**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Single Family Housing	2.43937e+006					709.54	0.03	0.01	713.99
Total						**709.54**	**0.03**	**0.01**	**713.99**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.93	0.07	5.80	0.00		0.00	0.05		0.00	0.05	0.00	254.49	254.49	0.01	0.00	256.17
Unmitigated	4.16	0.10	8.17	0.00		0.00	0.40		0.00	0.40	40.15	240.87	281.02	0.13	0.01	285.52
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.27					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	1.25	0.03	2.38	0.00		0.00	0.37		0.00	0.37	40.15	231.47	271.62	0.12	0.01	275.92
Landscaping	0.18	0.07	5.79	0.00		0.00	0.03		0.00	0.03	0.00	9.40	9.40	0.01	0.00	9.60
Total	**4.16**	**0.10**	**8.17**	**0.00**		**0.00**	**0.40**		**0.00**	**0.40**	**40.15**	**240.87**	**281.02**	**0.13**	**0.01**	**285.52**

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	0.27					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.02	0.00	0.00	0.00		0.00	0.02		0.00	0.02	0.00	245.08	245.08	0.00	0.00	246.58
Landscaping	0.18	0.07	5.79	0.00		0.00	0.03		0.00	0.03	0.00	9.40	9.40	0.01	0.00	9.60
Total	**2.93**	**0.07**	**5.79**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**254.48**	**254.48**	**0.01**	**0.00**	**256.18**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					143.73	0.76	0.02	166.19
Unmitigated					143.73	0.76	0.02	166.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Single Family Housing	24.6282 / 15.5265					143.73	0.76	0.02	166.19
Total						**143.73**	**0.76**	**0.02**	**166.19**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Single Family Housing	24.6282 / 15.5265					143.73	0.76	0.02	166.19
Total						**143.73**	**0.76**	**0.02**	**166.19**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					89.97	5.32	0.00	201.62
Unmitigated					89.97	5.32	0.00	201.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Single Family Housing	443.21					89.97	5.32	0.00	201.62
Total						**89.97**	**5.32**	**0.00**	**201.62**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Single Family Housing	443.21					89.97	5.32	0.00	201.62
Total						**89.97**	**5.32**	**0.00**	**201.62**

9.0 Vegetation

Yorba Linda Estates Study Option 2A

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Single Family Housing	378	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics -

Land Use - 378 Units, 468 acres

Construction Phase - Site Prep: 60days, Grading: 390 days, Construction: 1,300 days, Paving: 60 days
Start year 2014

Off-road Equipment - Construction: 1 Crane, 3 Forklifts, 1 Gen Set, 3 Loader/Backhoes, 1 Welder

Off-road Equipment - Grading: 2 Excavators, 2 Graders, 1 Dozer, 6 Scrapers, 2 Loader/Backhoes
reduce load factor by 33%

Off-road Equipment - 2 Pavers, 2 Paving Equipment, 2 Rollers
reduce load factor by 33%

Off-road Equipment - Site Prep 3 Dozers, 4 Loader/Backhoes
reduce load factor by 33%

Trips and VMT - 2400 feet from YLE cut area to center of Option 2A fill area

Grading - 57,000 CY import from the YLE

Vehicle Trips -

Construction Off-road Equipment Mitigation - water 3x a day
excavators, graders, and scrapers: tier 3, 40% oxidation catalyst

Area Mitigation -

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					
2014	1.68	13.68	7.35	0.02	2.34	0.59	2.94	0.97	0.59	1.57	0.00	1,509.88	1,509.88	0.14	0.00	1,512.73
2015	1.51	11.83	6.92	0.02	1.85	0.52	2.37	0.67	0.52	1.19	0.00	1,485.03	1,485.03	0.12	0.00	1,487.58
2016	0.51	3.13	3.38	0.01	0.25	0.17	0.43	0.00	0.17	0.18	0.00	612.11	612.11	0.04	0.00	612.97
2017	0.47	2.85	3.25	0.01	0.25	0.15	0.41	0.00	0.15	0.16	0.00	606.75	606.75	0.04	0.00	607.54
2018	0.43	2.61	3.16	0.01	0.25	0.14	0.39	0.00	0.13	0.14	0.00	606.20	606.20	0.03	0.00	606.93
2019	0.40	2.38	3.07	0.01	0.25	0.12	0.37	0.00	0.12	0.12	0.00	603.50	603.50	0.03	0.00	604.17
2020	0.34	2.04	2.61	0.01	0.19	0.11	0.30	0.00	0.11	0.11	0.00	497.24	497.24	0.03	0.00	497.81
2021	2.68	0.10	0.16	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	28.08	28.08	0.00	0.00	28.12
Total	**8.02**	**38.62**	**29.90**	**0.09**	**5.40**	**1.81**	**7.24**	**1.64**	**1.80**	**3.48**	**0.00**	**5,948.79**	**5,948.79**	**0.43**	**0.00**	**5,957.85**

2.1 Overall Construction

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					
2014	1.34	6.94	8.55	0.02	1.14	0.22	1.37	0.38	0.22	0.60	0.00	1,509.88	1,509.88	0.14	0.00	1,512.73
2015	1.25	6.04	8.31	0.02	0.98	0.19	1.17	0.26	0.19	0.45	0.00	1,485.03	1,485.03	0.12	0.00	1,487.58
2016	0.51	3.13	3.38	0.01	0.25	0.17	0.43	0.00	0.17	0.18	0.00	612.11	612.11	0.04	0.00	612.97
2017	0.47	2.85	3.25	0.01	0.25	0.15	0.41	0.00	0.15	0.16	0.00	606.75	606.75	0.04	0.00	607.54
2018	0.43	2.61	3.16	0.01	0.25	0.14	0.39	0.00	0.13	0.14	0.00	606.20	606.20	0.03	0.00	606.93
2019	0.40	2.38	3.07	0.01	0.25	0.12	0.37	0.00	0.12	0.12	0.00	603.50	603.50	0.03	0.00	604.17
2020	0.34	2.04	2.61	0.01	0.19	0.11	0.30	0.00	0.11	0.11	0.00	497.24	497.24	0.03	0.00	497.81
2021	2.68	0.10	0.16	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	28.08	28.08	0.00	0.00	28.12
Total	**7.42**	**26.09**	**32.49**	**0.09**	**3.33**	**1.11**	**4.47**	**0.64**	**1.10**	**1.77**	**0.00**	**5,948.79**	**5,948.79**	**0.43**	**0.00**	**5,957.85**

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	4.16	0.10	8.17	0.00		0.00	0.40		0.00	0.40	40.15	240.87	281.02	0.13	0.01	285.52
Energy	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	1,562.50	1,562.50	0.05	0.03	1,572.14
Mobile	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Waste						0.00	0.00		0.00	0.00	89.97	0.00	89.97	5.32	0.00	201.62
Water						0.00	0.00		0.00	0.00	0.00	143.73	143.73	0.76	0.02	166.19
Total	**6.90**	**7.03**	**33.65**	**0.05**	**5.56**	**0.31**	**6.33**	**0.09**	**0.30**	**0.85**	**130.12**	**6,479.17**	**6,609.29**	**6.43**	**0.06**	**6,761.20**

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	2.93	0.07	5.80	0.00		0.00	0.05		0.00	0.05	0.00	254.49	254.49	0.01	0.00	256.17
Energy	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	1,562.50	1,562.50	0.05	0.03	1,572.14
Mobile	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Waste						0.00	0.00		0.00	0.00	89.97	0.00	89.97	5.32	0.00	201.62
Water						0.00	0.00		0.00	0.00	0.00	143.73	143.73	0.76	0.02	166.19
Total	**5.67**	**7.00**	**31.28**	**0.05**	**5.56**	**0.31**	**5.98**	**0.09**	**0.30**	**0.50**	**89.97**	**6,492.79**	**6,582.76**	**6.31**	**0.05**	**6,731.85**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.54	0.00	0.54	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	1.52	0.87	0.00		0.07	0.07		0.07	0.07	0.00	147.29	147.29	0.02	0.00	147.62
Total	**0.19**	**1.52**	**0.87**	**0.00**	**0.54**	**0.07**	**0.61**	**0.30**	**0.07**	**0.37**	**0.00**	**147.29**	**147.29**	**0.02**	**0.00**	**147.62**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.86	4.86	0.00	0.00	4.87
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.86**	**4.86**	**0.00**	**0.00**	**4.87**

3.2 Site Preparation - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.21	0.00	0.21	0.12	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	1.52	0.87	0.00		0.07	0.07		0.07	0.07	0.00	147.29	147.29	0.02	0.00	147.62
Total	**0.19**	**1.52**	**0.87**	**0.00**	**0.21**	**0.07**	**0.28**	**0.12**	**0.07**	**0.19**	**0.00**	**147.29**	**147.29**	**0.02**	**0.00**	**147.62**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.86	4.86	0.00	0.00	4.87
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.86**	**4.86**	**0.00**	**0.00**	**4.87**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.43	0.00	1.43	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.45	12.02	6.12	0.01		0.52	0.52		0.52	0.52	0.00	1,320.52	1,320.52	0.12	0.00	1,322.99
Total	**1.45**	**12.02**	**6.12**	**0.01**	**1.43**	**0.52**	**1.95**	**0.67**	**0.52**	**1.19**	**0.00**	**1,320.52**	**1,320.52**	**0.12**	**0.00**	**1,322.99**

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	0.02	0.12	0.14	0.00	0.33	0.00	0.33	0.00	0.00	0.00	0.00	7.94	7.94	0.00	0.00	7.96
Vendor	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
Worker	0.02	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.27	29.27	0.00	0.00	29.30
Total	**0.04**	**0.14**	**0.32**	**0.00**	**0.37**	**0.00**	**0.37**	**0.00**	**0.00**	**0.00**	**0.00**	**37.21**	**37.21**	**0.00**	**0.00**	**37.26**

3.3 Grading - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.56	0.00	0.56	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.12	5.27	7.32	0.01		0.15	0.15		0.15	0.15	0.00	1,320.52	1,320.52	0.12	0.00	1,322.99
Total	**1.12**	**5.27**	**7.32**	**0.01**	**0.56**	**0.15**	**0.71**	**0.26**	**0.15**	**0.41**	**0.00**	**1,320.52**	**1,320.52**	**0.12**	**0.00**	**1,322.99**

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	0.02	0.12	0.14	0.00	0.33	0.00	0.33	0.00	0.00	0.00	0.00	7.94	7.94	0.00	0.00	7.96
Vendor	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
Worker	0.02	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.27	29.27	0.00	0.00	29.30
Total	**0.04**	**0.14**	**0.32**	**0.00**	**0.37**	**0.00**	**0.37**	**0.00**	**0.00**	**0.00**	**0.00**	**37.21**	**37.21**	**0.00**	**0.00**	**37.26**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.43	0.00	1.43	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.34	10.83	5.74	0.01		0.46	0.46		0.46	0.46	0.00	1,293.70	1,293.70	0.11	0.00	1,295.97
Total	**1.34**	**10.83**	**5.74**	**0.01**	**1.43**	**0.46**	**1.89**	**0.67**	**0.46**	**1.13**	**0.00**	**1,293.70**	**1,293.70**	**0.11**	**0.00**	**1,295.97**

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	0.02	0.12	0.13	0.00	0.32	0.00	0.32	0.00	0.00	0.00	0.00	7.92	7.92	0.00	0.00	7.93
Vendor	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
Worker	0.02	0.02	0.17	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	28.06	28.06	0.00	0.00	28.09
Total	**0.04**	**0.14**	**0.30**	**0.00**	**0.36**	**0.00**	**0.36**	**0.00**	**0.00**	**0.00**	**0.00**	**35.98**	**35.98**	**0.00**	**0.00**	**36.02**

3.3 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.56	0.00	0.56	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.08	5.04	7.13	0.01		0.14	0.14		0.14	0.14	0.00	1,293.70	1,293.70	0.11	0.00	1,295.97
Total	**1.08**	**5.04**	**7.13**	**0.01**	**0.56**	**0.14**	**0.70**	**0.26**	**0.14**	**0.40**	**0.00**	**1,293.70**	**1,293.70**	**0.11**	**0.00**	**1,295.97**

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	0.02	0.12	0.13	0.00	0.32	0.00	0.32	0.00	0.00	0.00	0.00	7.92	7.92	0.00	0.00	7.93
Vendor	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
Worker	0.02	0.02	0.17	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	28.06	28.06	0.00	0.00	28.09
Total	**0.04**	**0.14**	**0.30**	**0.00**	**0.36**	**0.00**	**0.36**	**0.00**	**0.00**	**0.00**	**0.00**	**35.98**	**35.98**	**0.00**	**0.00**	**36.02**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.10	0.67	0.53	0.00		0.04	0.04		0.04	0.04	0.00	83.24	83.24	0.01	0.00	83.41
Total	**0.10**	**0.67**	**0.53**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**83.24**	**83.24**	**0.01**	**0.00**	**83.41**

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	0.00	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
Vendor	0.02	0.18	0.12	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	32.58	32.58	0.00	0.00	32.59
Worker	0.02	0.02	0.23	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	39.54	39.54	0.00	0.00	39.58
Total	**0.04**	**0.20**	**0.35**	**0.00**	**0.06**	**0.01**	**0.07**	**0.00**	**0.01**	**0.01**	**0.00**	**72.12**	**72.12**	**0.00**	**0.00**	**72.17**

3.4 Building Construction - 2015

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	0.10	0.67	0.53	0.00		0.04	0.04		0.04	0.04	0.00	83.24	83.24	0.01	0.00	83.41
Total	**0.10**	**0.67**	**0.53**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**83.24**	**83.24**	**0.01**	**0.00**	**83.41**

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	0.00	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
Vendor	0.02	0.18	0.12	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	32.58	32.58	0.00	0.00	32.59
Worker	0.02	0.02	0.23	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	39.54	39.54	0.00	0.00	39.58
Total	**0.04**	**0.20**	**0.35**	**0.00**	**0.06**	**0.01**	**0.07**	**0.00**	**0.01**	**0.01**	**0.00**	**72.12**	**72.12**	**0.00**	**0.00**	**72.17**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.37	2.40	2.08	0.00		0.14	0.14		0.14	0.14	0.00	329.16	329.16	0.03	0.00	329.79
Total	**0.37**	**2.40**	**2.08**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.79**

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	0.00	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
Vendor	0.06	0.65	0.44	0.00	0.04	0.02	0.07	0.00	0.02	0.02	0.00	129.20	129.20	0.00	0.00	129.26
Worker	0.08	0.08	0.86	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	153.75	153.75	0.01	0.00	153.92
Total	**0.14**	**0.73**	**1.30**	**0.00**	**0.25**	**0.03**	**0.29**	**0.00**	**0.03**	**0.03**	**0.00**	**282.95**	**282.95**	**0.01**	**0.00**	**283.18**

3.4 Building Construction - 2016

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	0.37	2.40	2.08	0.00		0.14	0.14		0.14	0.14	0.00	329.16	329.16	0.03	0.00	329.79
Total	**0.37**	**2.40**	**2.08**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.79**

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	0.00	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
Vendor	0.06	0.65	0.44	0.00	0.04	0.02	0.07	0.00	0.02	0.02	0.00	129.20	129.20	0.00	0.00	129.26
Worker	0.08	0.08	0.86	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	153.75	153.75	0.01	0.00	153.92
Total	**0.14**	**0.73**	**1.30**	**0.00**	**0.25**	**0.03**	**0.29**	**0.00**	**0.03**	**0.03**	**0.00**	**282.95**	**282.95**	**0.01**	**0.00**	**283.18**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.34	2.18	2.06	0.00		0.13	0.13		0.13	0.13	0.00	327.90	327.90	0.03	0.00	328.47
Total	**0.34**	**2.18**	**2.06**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**327.90**	**327.90**	**0.03**	**0.00**	**328.47**

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	0.00	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
Vendor	0.06	0.60	0.40	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	128.93	128.93	0.00	0.00	128.98
Worker	0.07	0.07	0.79	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	149.93	149.93	0.01	0.00	150.08
Total	**0.13**	**0.67**	**1.19**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**278.86**	**278.86**	**0.01**	**0.00**	**279.06**

3.4 Building Construction - 2017

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	0.34	2.18	2.06	0.00		0.13	0.13		0.13	0.13	0.00	327.90	327.90	0.03	0.00	328.47
Total	**0.34**	**2.18**	**2.06**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**327.90**	**327.90**	**0.03**	**0.00**	**328.47**

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	0.00	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
Vendor	0.06	0.60	0.40	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	128.93	128.93	0.00	0.00	128.98
Worker	0.07	0.07	0.79	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	149.93	149.93	0.01	0.00	150.08
Total	**0.13**	**0.67**	**1.19**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**278.86**	**278.86**	**0.01**	**0.00**	**279.06**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.31	1.98	2.05	0.00		0.11	0.11		0.11	0.11	0.00	329.16	329.16	0.03	0.00	329.69
Total	**0.31**	**1.98**	**2.05**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.69**

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	0.00	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
Vendor	0.05	0.56	0.38	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.64	129.64	0.00	0.00	129.68
Worker	0.07	0.07	0.73	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	147.41	147.41	0.01	0.00	147.55
Total	**0.12**	**0.63**	**1.11**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**277.05**	**277.05**	**0.01**	**0.00**	**277.23**

3.4 Building Construction - 2018

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	0.31	1.98	2.05	0.00		0.11	0.11		0.11	0.11	0.00	329.16	329.16	0.03	0.00	329.69
Total	**0.31**	**1.98**	**2.05**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**329.16**	**329.16**	**0.03**	**0.00**	**329.69**

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	0.00	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
Vendor	0.05	0.56	0.38	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.64	129.64	0.00	0.00	129.68
Worker	0.07	0.07	0.73	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	147.41	147.41	0.01	0.00	147.55
Total	**0.12**	**0.63**	**1.11**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**277.05**	**277.05**	**0.01**	**0.00**	**277.23**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.28	1.80	2.03	0.00		0.09	0.09		0.09	0.09	0.00	329.16	329.16	0.02	0.00	329.64
Total	**0.28**	**1.80**	**2.03**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**329.16**	**329.16**	**0.02**	**0.00**	**329.64**

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	0.00	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
Vendor	0.05	0.52	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.84	129.84	0.00	0.00	129.88
Worker	0.07	0.06	0.68	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	144.51	144.51	0.01	0.00	144.65
Total	**0.12**	**0.58**	**1.04**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**274.35**	**274.35**	**0.01**	**0.00**	**274.53**

3.4 Building Construction - 2019

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	0.28	1.80	2.03	0.00		0.09	0.09		0.09	0.09	0.00	329.16	329.16	0.02	0.00	329.64
Total	**0.28**	**1.80**	**2.03**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**329.16**	**329.16**	**0.02**	**0.00**	**329.64**

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	0.00	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
Vendor	0.05	0.52	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	129.84	129.84	0.00	0.00	129.88
Worker	0.07	0.06	0.68	0.00	0.21	0.01	0.22	0.00	0.01	0.01	0.00	144.51	144.51	0.01	0.00	144.65
Total	**0.12**	**0.58**	**1.04**	**0.00**	**0.25**	**0.03**	**0.28**	**0.00**	**0.03**	**0.03**	**0.00**	**274.35**	**274.35**	**0.01**	**0.00**	**274.53**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.19	1.20	1.48	0.00		0.06	0.06		0.06	0.06	0.00	240.88	240.88	0.02	0.00	241.20
Total	**0.19**	**1.20**	**1.48**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**240.88**	**240.88**	**0.02**	**0.00**	**241.20**

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	0.00	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
Vendor	0.03	0.36	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	95.15	95.15	0.00	0.00	95.18
Worker	0.05	0.04	0.46	0.00	0.15	0.01	0.16	0.00	0.01	0.01	0.00	103.77	103.77	0.00	0.00	103.86
Total	**0.08**	**0.40**	**0.71**	**0.00**	**0.18**	**0.02**	**0.20**	**0.00**	**0.02**	**0.02**	**0.00**	**198.92**	**198.92**	**0.00**	**0.00**	**199.04**

3.4 Building Construction - 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					
Off-Road	0.19	1.20	1.48	0.00		0.06	0.06		0.06	0.06	0.00	240.88	240.88	0.02	0.00	241.20
Total	**0.19**	**1.20**	**1.48**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**240.88**	**240.88**	**0.02**	**0.00**	**241.20**

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	0.00	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
Vendor	0.03	0.36	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	95.15	95.15	0.00	0.00	95.18
Worker	0.05	0.04	0.46	0.00	0.15	0.01	0.16	0.00	0.01	0.01	0.00	103.77	103.77	0.00	0.00	103.86
Total	**0.08**	**0.40**	**0.71**	**0.00**	**0.18**	**0.02**	**0.20**	**0.00**	**0.02**	**0.02**	**0.00**	**198.92**	**198.92**	**0.00**	**0.00**	**199.04**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.07	0.44	0.40	0.00		0.03	0.03		0.03	0.03	0.00	53.85	53.85	0.01	0.00	53.97
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.07**	**0.44**	**0.40**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**53.85**	**53.85**	**0.01**	**0.00**	**53.97**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.60	3.60	0.00	0.00	3.60
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.60**	**3.60**	**0.00**	**0.00**	**3.60**

3.5 Paving - 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					
Off-Road	0.07	0.44	0.40	0.00		0.03	0.03		0.03	0.03	0.00	53.85	53.85	0.01	0.00	53.97
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.07**	**0.44**	**0.40**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**53.85**	**53.85**	**0.01**	**0.00**	**53.97**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.60	3.60	0.00	0.00	3.60
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.60**	**3.60**	**0.00**	**0.00**	**3.60**

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	2.66					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09	0.11	0.00		0.01	0.01		0.01	0.01	0.00	15.30	15.30	0.00	0.00	15.32
Total	**2.67**	**0.09**	**0.11**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**15.30**	**15.30**	**0.00**	**0.00**	**15.32**

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	0.00	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
Vendor	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
Worker	0.01	0.00	0.05	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	12.78	12.78	0.00	0.00	12.79
Total	**0.01**	**0.00**	**0.05**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**12.78**	**12.78**	**0.00**	**0.00**	**12.79**

3.6 Architectural Coating - 2021

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	2.66					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09	0.11	0.00		0.01	0.01		0.01	0.01	0.00	15.30	15.30	0.00	0.00	15.32
Total	**2.67**	**0.09**	**0.11**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**15.30**	**15.30**	**0.00**	**0.00**	**15.32**

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	0.00	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
Vendor	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
Worker	0.01	0.00	0.05	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	12.78	12.78	0.00	0.00	12.79
Total	**0.01**	**0.00**	**0.05**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**12.78**	**12.78**	**0.00**	**0.00**	**12.79**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Unmitigated	2.65	6.19	25.17	0.05	5.56	0.31	5.87	0.09	0.30	0.39	0.00	4,532.07	4,532.07	0.17	0.00	4,535.73
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	3,617.46	3,810.24	3315.06	10,229,544	10,229,544
Total	3,617.46	3,810.24	3,315.06	10,229,544	10,229,544

4.3 Trip Type Information

	Miles			Trip %		
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
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	709.54	709.54	0.03	0.01	713.99
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	709.54	709.54	0.03	0.01	713.99
NaturalGas Mitigated	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
NaturalGas Unmitigated	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Single Family Housing	1.59839e+007	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total		**0.09**	**0.74**	**0.31**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**852.96**	**852.96**	**0.02**	**0.02**	**858.15**

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	tons/yr										MT/yr					
Single Family Housing	1.59839e+007	0.09	0.74	0.31	0.00		0.00	0.06		0.00	0.06	0.00	852.96	852.96	0.02	0.02	858.15
Total		**0.09**	**0.74**	**0.31**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**852.96**	**852.96**	**0.02**	**0.02**	**858.15**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Single Family Housing	2.43937e+006					709.54	0.03	0.01	713.99
Total						**709.54**	**0.03**	**0.01**	**713.99**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Single Family Housing	2.43937e+006					709.54	0.03	0.01	713.99
Total						**709.54**	**0.03**	**0.01**	**713.99**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.93	0.07	5.80	0.00		0.00	0.05		0.00	0.05	0.00	254.49	254.49	0.01	0.00	256.17
Unmitigated	4.16	0.10	8.17	0.00		0.00	0.40		0.00	0.40	40.15	240.87	281.02	0.13	0.01	285.52
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.27					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	1.25	0.03	2.38	0.00		0.00	0.37		0.00	0.37	40.15	231.47	271.62	0.12	0.01	275.92
Landscaping	0.18	0.07	5.79	0.00		0.00	0.03		0.00	0.03	0.00	9.40	9.40	0.01	0.00	9.60
Total	**4.16**	**0.10**	**8.17**	**0.00**		**0.00**	**0.40**		**0.00**	**0.40**	**40.15**	**240.87**	**281.02**	**0.13**	**0.01**	**285.52**

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	0.27					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.02	0.00	0.00	0.00		0.00	0.02		0.00	0.02	0.00	245.08	245.08	0.00	0.00	246.58
Landscaping	0.18	0.07	5.79	0.00		0.00	0.03		0.00	0.03	0.00	9.40	9.40	0.01	0.00	9.60
Total	**2.93**	**0.07**	**5.79**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**254.48**	**254.48**	**0.01**	**0.00**	**256.18**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					143.73	0.76	0.02	166.19
Unmitigated					143.73	0.76	0.02	166.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Single Family Housing	24.6282 / 15.5265					143.73	0.76	0.02	166.19
Total						**143.73**	**0.76**	**0.02**	**166.19**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Single Family Housing	24.6282 / 15.5265					143.73	0.76	0.02	166.19
Total						**143.73**	**0.76**	**0.02**	**166.19**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					89.97	5.32	0.00	201.62
Unmitigated					89.97	5.32	0.00	201.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Single Family Housing	443.21					89.97	5.32	0.00	201.62
Total						**89.97**	**5.32**	**0.00**	**201.62**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Single Family Housing	443.21					89.97	5.32	0.00	201.62
Total						**89.97**	**5.32**	**0.00**	**201.62**

9.0 Vegetation

Yorba Linda Estates Study Option 1

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Single Family Housing	378	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics -

Land Use - 378 Units, 468 acres

Construction Phase - Site Prep: 60days, Grading: 390 days, Construction: 1,300 days, Paving: 60 days
Start year 2014

Off-road Equipment - Construction: 1 Crane, 3 Forklifts, 1 Gen Set, 3 Loader/Backhoes, 1 Welder

Off-road Equipment - Grading: 2 Excavators, 2 Graders, 1 Dozer, 6 Scrapers, 2 Loader/Backhoes
reduce load factor by 33%

Off-road Equipment - 2 Pavers, 2 Paving Equipment, 2 Rollers
reduce load factor by 33%

Off-road Equipment - Site Prep 3 Dozers, 4 Loader/Backhoes
reduce load factor by 33%

Trips and VMT - 1000 feet movement

Grading - 286700 CY earthmovement, 1000 feet

Vehicle Trips -

Construction Off-road Equipment Mitigation - water 3x a day
excavators, graders, and scrapers: tier 3, 40% oxidation catalyst

Area Mitigation -

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					
2014	15.62	128.16	69.74	0.14	18.30	5.33	21.06	9.93	5.32	12.38	0.00	15,496.75	0.00	1.37	0.00	15,525.60
2015	14.76	118.43	66.51	0.14	15.73	4.87	20.60	3.33	4.86	8.19	0.00	15,497.48	0.00	1.29	0.00	15,524.52
2016	3.93	23.99	25.89	0.05	2.14	1.34	3.48	0.03	1.32	1.35	0.00	5,255.62	0.00	0.35	0.00	5,262.93
2017	3.61	21.91	25.00	0.05	2.14	1.19	3.33	0.03	1.17	1.20	0.00	5,228.72	0.00	0.32	0.00	5,235.43
2018	3.31	19.98	24.20	0.05	2.14	1.04	3.19	0.03	1.03	1.06	0.00	5,203.05	0.00	0.29	0.00	5,209.20
2019	3.05	18.28	23.53	0.06	2.14	0.91	3.06	0.03	0.90	0.93	0.00	5,179.04	0.00	0.27	0.00	5,184.71
2020	44.65	16.75	22.95	0.06	2.14	1.13	2.94	0.03	1.13	1.13	0.00	5,156.56	0.00	0.25	0.00	5,161.77
2021	44.62	1.60	2.78	0.01	0.35	0.11	0.46	0.00	0.11	0.11	0.00	530.88	0.00	0.03	0.00	531.50
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.1 Overall Construction (Maximum Daily Emission)

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					
2014	12.24	59.64	81.93	0.14	11.23	2.45	12.79	3.88	2.45	6.32	0.00	15,496.75	0.00	1.37	0.00	15,525.60
2015	12.06	58.45	80.85	0.14	11.23	1.50	12.70	1.30	1.48	2.76	0.00	15,497.48	0.00	1.29	0.00	15,524.52
2016	3.93	23.99	25.89	0.05	2.14	1.34	3.48	0.03	1.32	1.35	0.00	5,255.62	0.00	0.35	0.00	5,262.93
2017	3.61	21.91	25.00	0.05	2.14	1.19	3.33	0.03	1.17	1.20	0.00	5,228.72	0.00	0.32	0.00	5,235.43
2018	3.31	19.98	24.20	0.05	2.14	1.04	3.19	0.03	1.03	1.06	0.00	5,203.05	0.00	0.29	0.00	5,209.20
2019	3.05	18.28	23.53	0.06	2.14	0.91	3.06	0.03	0.90	0.93	0.00	5,179.04	0.00	0.27	0.00	5,184.71
2020	44.65	16.75	22.95	0.06	2.14	1.13	2.94	0.03	1.13	1.13	0.00	5,156.56	0.00	0.25	0.00	5,161.77
2021	44.62	1.60	2.78	0.01	0.35	0.11	0.46	0.00	0.11	0.11	0.00	530.88	0.00	0.03	0.00	531.50
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	56.14	2.21	156.90	0.30		0.00	20.16		0.00	20.16	2,667.44	6,860.84		10.62	0.16	9,801.81
Energy	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Mobile	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**72.20**	**41.61**	**306.74**	**0.66**	**35.82**	**1.82**	**58.13**	**0.51**	**1.76**	**22.75**	**2,667.44**	**42,497.56**		**11.88**	**0.25**	**45,494.30**

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	16.57	0.37	31.82	0.00		0.00	0.63		0.00	0.62	0.00	7,261.07		0.19	0.13	7,306.10
Energy	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Mobile	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**32.63**	**39.77**	**181.66**	**0.36**	**35.82**	**1.82**	**38.60**	**0.51**	**1.76**	**3.21**	**0.00**	**42,897.79**		**1.45**	**0.22**	**42,998.59**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2014

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					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	6.34	50.69	29.13	0.05		2.44	2.44		2.44	2.44		5,413.51		0.57		5,425.43
Total	**6.34**	**50.69**	**29.13**	**0.05**	**18.07**	**2.44**	**20.51**	**9.93**	**2.44**	**12.37**		**5,413.51**		**0.57**		**5,425.43**

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.09	1.07	0.00	0.23	0.01	0.24	0.00	0.01	0.01		189.72		0.01		189.94
Total	**0.09**	**0.09**	**1.07**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**		**189.72**		**0.01**		**189.94**

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					7.05	0.00	7.05	3.87	0.00	3.87						0.00
Off-Road	6.34	50.69	29.13	0.05		2.44	2.44		2.44	2.44	0.00	5,413.51		0.57		5,425.43
Total	**6.34**	**50.69**	**29.13**	**0.05**	**7.05**	**2.44**	**9.49**	**3.87**	**2.44**	**6.31**	**0.00**	**5,413.51**		**0.57**		**5,425.43**

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.09	1.07	0.00	0.23	0.01	0.24	0.00	0.01	0.01		189.72		0.01		189.94
Total	**0.09**	**0.09**	**1.07**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**		**189.72**		**0.01**		**189.94**

3.3 Grading - 2014

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					7.38	0.00	7.38	3.32	0.00	3.32						0.00
Off-Road	14.72	122.05	62.18	0.14		5.25	5.25		5.25	5.25		14,781.89		1.32		14,809.56
Total	**14.72**	**122.05**	**62.18**	**0.14**	**7.38**	**5.25**	**12.63**	**3.32**	**5.25**	**8.57**		**14,781.89**		**1.32**		**14,809.56**

3.3 Grading - 2014

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	0.73	5.94	5.59	0.00	7.92	0.06	7.98	0.00	0.05	0.05		367.03		0.04		367.81
Vendor	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
Worker	0.17	0.17	1.96	0.00	0.43	0.01	0.45	0.01	0.01	0.02		347.82		0.02		348.23
Total	**0.90**	**6.11**	**7.55**	**0.00**	**8.35**	**0.07**	**8.43**	**0.01**	**0.06**	**0.07**		**714.85**		**0.06**		**716.04**

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					2.88	0.00	2.88	1.30	0.00	1.30						0.00
Off-Road	11.34	53.54	74.38	0.14		1.49	1.49		1.49	1.49	0.00	14,781.89		1.32		14,809.56
Total	**11.34**	**53.54**	**74.38**	**0.14**	**2.88**	**1.49**	**4.37**	**1.30**	**1.49**	**2.79**	**0.00**	**14,781.89**		**1.32**		**14,809.56**

3.3 Grading - 2014

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	0.73	5.94	5.59	0.00	7.92	0.06	7.98	0.00	0.05	0.05		367.03		0.04		367.81
Vendor	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
Worker	0.17	0.17	1.96	0.00	0.43	0.01	0.45	0.01	0.01	0.02		347.82		0.02		348.23
Total	**0.90**	**6.11**	**7.55**	**0.00**	**8.35**	**0.07**	**8.43**	**0.01**	**0.06**	**0.07**		**714.85**		**0.06**		**716.04**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.38	0.00	7.38	3.32	0.00	3.32						0.00
Off-Road	13.91	112.22	59.55	0.14		4.80	4.80		4.80	4.80		14,781.89		1.24		14,807.83
Total	**13.91**	**112.22**	**59.55**	**0.14**	**7.38**	**4.80**	**12.18**	**3.32**	**4.80**	**8.12**		**14,781.89**		**1.24**		**14,807.83**

3.3 Grading - 2015

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	0.69	6.06	5.16	0.00	7.92	0.05	7.98	0.00	0.05	0.05		375.18		0.03		375.91
Vendor	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
Worker	0.16	0.15	1.80	0.00	0.43	0.01	0.45	0.01	0.01	0.02		340.40		0.02		340.78
Total	**0.85**	**6.21**	**6.96**	**0.00**	**8.35**	**0.06**	**8.43**	**0.01**	**0.06**	**0.07**		**715.58**		**0.05**		**716.69**

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					2.88	0.00	2.88	1.30	0.00	1.30						0.00
Off-Road	11.21	52.24	73.89	0.14		1.40	1.40		1.40	1.40	0.00	14,781.89		1.24		14,807.83
Total	**11.21**	**52.24**	**73.89**	**0.14**	**2.88**	**1.40**	**4.28**	**1.30**	**1.40**	**2.70**	**0.00**	**14,781.89**		**1.24**		**14,807.83**

3.3 Grading - 2015

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	0.69	6.06	5.16	0.00	7.92	0.05	7.98	0.00	0.05	0.05		375.18		0.03		375.91
Vendor	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
Worker	0.16	0.15	1.80	0.00	0.43	0.01	0.45	0.01	0.01	0.02		340.40		0.02		340.78
Total	**0.85**	**6.21**	**6.96**	**0.00**	**8.35**	**0.06**	**8.43**	**0.01**	**0.06**	**0.07**		**715.58**		**0.05**		**716.69**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.12	20.20	16.09	0.03		1.26	1.26		1.26	1.26		2,781.09		0.28		2,786.99
Total	**3.12**	**20.20**	**16.09**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**		**2,781.09**		**0.28**		**2,786.99**

3.4 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.49	5.41	3.29	0.01	0.37	0.18	0.55	0.01	0.17	0.18		1,091.75		0.02		1,092.25
Worker	0.66	0.62	7.43	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,402.88		0.07		1,404.43
Total	**1.15**	**6.03**	**10.72**	**0.02**	**2.15**	**0.24**	**2.39**	**0.03**	**0.23**	**0.26**		**2,494.63**		**0.09**		**2,496.68**

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	3.12	20.20	16.09	0.03		1.26	1.26		1.26	1.26	0.00	2,781.09		0.28		2,786.99
Total	**3.12**	**20.20**	**16.09**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**	**0.00**	**2,781.09**		**0.28**		**2,786.99**

3.4 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.49	5.41	3.29	0.01	0.37	0.18	0.55	0.01	0.17	0.18		1,091.75		0.02		1,092.25
Worker	0.66	0.62	7.43	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,402.88		0.07		1,404.43
Total	**1.15**	**6.03**	**10.72**	**0.02**	**2.15**	**0.24**	**2.39**	**0.03**	**0.23**	**0.26**		**2,494.63**		**0.09**		**2,496.68**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.86	18.41	15.95	0.03		1.11	1.11		1.11	1.11		2,781.09		0.26		2,786.47
Total	**2.86**	**18.41**	**15.95**	**0.03**		**1.11**	**1.11**		**1.11**	**1.11**		**2,781.09**		**0.26**		**2,786.47**

3.4 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.45	5.00	3.03	0.01	0.37	0.16	0.53	0.01	0.15	0.16		1,094.95		0.02		1,095.42
Worker	0.62	0.57	6.90	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,379.58		0.07		1,381.04
Total	**1.07**	**5.57**	**9.93**	**0.02**	**2.15**	**0.22**	**2.37**	**0.03**	**0.21**	**0.24**		**2,474.53**		**0.09**		**2,476.46**

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	2.86	18.41	15.95	0.03		1.11	1.11		1.11	1.11	0.00	2,781.09		0.26		2,786.47
Total	**2.86**	**18.41**	**15.95**	**0.03**		**1.11**	**1.11**		**1.11**	**1.11**	**0.00**	**2,781.09**		**0.26**		**2,786.47**

3.4 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.45	5.00	3.03	0.01	0.37	0.16	0.53	0.01	0.15	0.16		1,094.95		0.02		1,095.42
Worker	0.62	0.57	6.90	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,379.58		0.07		1,381.04
Total	**1.07**	**5.57**	**9.93**	**0.02**	**2.15**	**0.22**	**2.37**	**0.03**	**0.21**	**0.24**		**2,474.53**		**0.09**		**2,476.46**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.62	16.75	15.82	0.03		0.97	0.97		0.97	0.97		2,781.09		0.23		2,786.00
Total	**2.62**	**16.75**	**15.82**	**0.03**		**0.97**	**0.97**		**0.97**	**0.97**		**2,781.09**		**0.23**		**2,786.00**

3.4 Building Construction - 2017

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.41	4.63	2.81	0.01	0.37	0.15	0.52	0.01	0.14	0.15		1,096.94		0.02		1,097.36
Worker	0.58	0.52	6.37	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,350.70		0.07		1,352.07
Total	**0.99**	**5.15**	**9.18**	**0.02**	**2.15**	**0.21**	**2.36**	**0.03**	**0.20**	**0.23**		**2,447.64**		**0.09**		**2,449.43**

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	2.62	16.75	15.82	0.03		0.97	0.97		0.97	0.97	0.00	2,781.09		0.23		2,786.00
Total	**2.62**	**16.75**	**15.82**	**0.03**		**0.97**	**0.97**		**0.97**	**0.97**	**0.00**	**2,781.09**		**0.23**		**2,786.00**

3.4 Building Construction - 2017

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.41	4.63	2.81	0.01	0.37	0.15	0.52	0.01	0.14	0.15		1,096.94		0.02		1,097.36
Worker	0.58	0.52	6.37	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,350.70		0.07		1,352.07
Total	**0.99**	**5.15**	**9.18**	**0.02**	**2.15**	**0.21**	**2.36**	**0.03**	**0.20**	**0.23**		**2,447.64**		**0.09**		**2,449.43**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.39	15.19	15.71	0.03		0.84	0.84		0.84	0.84		2,781.09		0.21		2,785.57
Total	**2.39**	**15.19**	**15.71**	**0.03**		**0.84**	**0.84**		**0.84**	**0.84**		**2,781.09**		**0.21**		**2,785.57**

3.4 Building Construction - 2018

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.38	4.31	2.61	0.01	0.37	0.14	0.50	0.01	0.12	0.13		1,098.82		0.02		1,099.21
Worker	0.54	0.48	5.89	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,323.14		0.06		1,324.42
Total	**0.92**	**4.79**	**8.50**	**0.02**	**2.15**	**0.20**	**2.34**	**0.03**	**0.18**	**0.21**		**2,421.96**		**0.08**		**2,423.63**

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	2.39	15.19	15.71	0.03		0.84	0.84		0.84	0.84	0.00	2,781.09		0.21		2,785.57
Total	**2.39**	**15.19**	**15.71**	**0.03**		**0.84**	**0.84**		**0.84**	**0.84**	**0.00**	**2,781.09**		**0.21**		**2,785.57**

3.4 Building Construction - 2018

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.38	4.31	2.61	0.01	0.37	0.14	0.50	0.01	0.12	0.13		1,098.82		0.02		1,099.21
Worker	0.54	0.48	5.89	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,323.14		0.06		1,324.42
Total	**0.92**	**4.79**	**8.50**	**0.02**	**2.15**	**0.20**	**2.34**	**0.03**	**0.18**	**0.21**		**2,421.96**		**0.08**		**2,423.63**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.17	13.79	15.60	0.03		0.72	0.72		0.72	0.72		2,781.10		0.19		2,785.19
Total	**2.17**	**13.79**	**15.60**	**0.03**		**0.72**	**0.72**		**0.72**	**0.72**		**2,781.10**		**0.19**		**2,785.19**

3.4 Building Construction - 2019

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.36	4.04	2.45	0.01	0.37	0.12	0.49	0.01	0.11	0.12		1,100.59		0.02		1,100.96
Worker	0.52	0.44	5.49	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,297.36		0.06		1,298.56
Total	**0.88**	**4.48**	**7.94**	**0.02**	**2.15**	**0.18**	**2.33**	**0.03**	**0.17**	**0.20**		**2,397.95**		**0.08**		**2,399.52**

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	2.17	13.79	15.60	0.03		0.72	0.72		0.72	0.72	0.00	2,781.10		0.19		2,785.19
Total	**2.17**	**13.79**	**15.60**	**0.03**		**0.72**	**0.72**		**0.72**	**0.72**	**0.00**	**2,781.10**		**0.19**		**2,785.19**

3.4 Building Construction - 2019

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.36	4.04	2.45	0.01	0.37	0.12	0.49	0.01	0.11	0.12		1,100.59		0.02		1,100.96
Worker	0.52	0.44	5.49	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,297.36		0.06		1,298.56
Total	**0.88**	**4.48**	**7.94**	**0.02**	**2.15**	**0.18**	**2.33**	**0.03**	**0.17**	**0.20**		**2,397.95**		**0.08**		**2,399.52**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.99	12.53	15.51	0.03		0.62	0.62		0.62	0.62		2,781.09		0.18		2,784.82
Total	**1.99**	**12.53**	**15.51**	**0.03**		**0.62**	**0.62**		**0.62**	**0.62**		**2,781.09**		**0.18**		**2,784.82**

3.4 Building Construction - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.33	3.81	2.30	0.01	0.37	0.11	0.48	0.01	0.11	0.11		1,102.23		0.02		1,102.57
Worker	0.49	0.41	5.14	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,273.23		0.05		1,274.37
Total	**0.82**	**4.22**	**7.44**	**0.02**	**2.15**	**0.17**	**2.32**	**0.03**	**0.17**	**0.19**		**2,375.46**		**0.07**		**2,376.94**

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	1.99	12.53	15.51	0.03		0.62	0.62		0.62	0.62	0.00	2,781.09		0.18		2,784.82
Total	**1.99**	**12.53**	**15.51**	**0.03**		**0.62**	**0.62**		**0.62**	**0.62**	**0.00**	**2,781.09**		**0.18**		**2,784.82**

3.4 Building Construction - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.33	3.81	2.30	0.01	0.37	0.11	0.48	0.01	0.11	0.11		1,102.23		0.02		1,102.57
Worker	0.49	0.41	5.14	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,273.23		0.05		1,274.37
Total	**0.82**	**4.22**	**7.44**	**0.02**	**2.15**	**0.17**	**2.32**	**0.03**	**0.17**	**0.19**		**2,375.46**		**0.07**		**2,376.94**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.38	14.68	13.48	0.02		1.12	1.12		1.12	1.12		1,979.15		0.21		1,983.62
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.38**	**14.68**	**13.48**	**0.02**		**1.12**	**1.12**		**1.12**	**1.12**		**1,979.15**		**0.21**		**1,983.62**

3.5 Paving - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.05	0.04	0.57	0.00	0.20	0.01	0.20	0.00	0.01	0.01		140.43		0.01		140.56
Total	**0.05**	**0.04**	**0.57**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**		**140.43**		**0.01**		**140.56**

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	2.38	14.68	13.48	0.02		1.12	1.12		1.12	1.12	0.00	1,979.15		0.21		1,983.62
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.38**	**14.68**	**13.48**	**0.02**		**1.12**	**1.12**		**1.12**	**1.12**	**0.00**	**1,979.15**		**0.21**		**1,983.62**

3.5 Paving - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.05	0.04	0.57	0.00	0.20	0.01	0.20	0.00	0.01	0.01		140.43		0.01		140.56
Total	**0.05**	**0.04**	**0.57**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**		**140.43**		**0.01**		**140.56**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.24	1.68	1.83	0.00		0.11	0.11		0.11	0.11		281.19		0.02		281.65
Total	**44.55**	**1.68**	**1.83**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**		**281.19**		**0.02**		**281.65**

3.6 Architectural Coating - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.10	0.08	1.02	0.00	0.35	0.01	0.37	0.00	0.01	0.02		252.77		0.01		253.00
Total	**0.10**	**0.08**	**1.02**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**252.77**		**0.01**		**253.00**

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	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.24	1.68	1.83	0.00		0.11	0.11		0.11	0.11	0.00	281.19		0.02		281.65
Total	**44.55**	**1.68**	**1.83**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**281.19**		**0.02**		**281.65**

3.6 Architectural Coating - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.10	0.08	1.02	0.00	0.35	0.01	0.37	0.00	0.01	0.02		252.77		0.01		253.00
Total	**0.10**	**0.08**	**1.02**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**252.77**		**0.01**		**253.00**

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	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.22	1.53	1.82	0.00		0.09	0.09		0.09	0.09		281.19		0.02		281.60
Total	**44.53**	**1.53**	**1.82**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**		**281.19**		**0.02**		**281.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.08	0.96	0.00	0.35	0.01	0.37	0.00	0.01	0.02		249.69		0.01		249.91
Total	**0.09**	**0.08**	**0.96**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**249.69**		**0.01**		**249.91**

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	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.22	1.53	1.82	0.00		0.09	0.09		0.09	0.09	0.00	281.19		0.02		281.60
Total	**44.53**	**1.53**	**1.82**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**281.19**		**0.02**		**281.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.08	0.96	0.00	0.35	0.01	0.37	0.00	0.01	0.02		249.69		0.01		249.91
Total	**0.09**	**0.08**	**0.96**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**249.69**		**0.01**		**249.91**

4.0 Mobile Detail

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	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Unmitigated	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	3,617.46	3,810.24	3315.06	10,229,544	10,229,544
Total	3,617.46	3,810.24	3,315.06	10,229,544	10,229,544

4.3 Trip Type Information

	Miles			Trip %		
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
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
NaturalGas Unmitigated	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Single Family Housing	43791.4	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total		**0.47**	**4.04**	**1.72**	**0.03**		**0.00**	**0.33**		**0.00**	**0.33**		**5,151.93**		**0.10**	**0.09**	**5,183.29**

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	lb/day										lb/day					
Single Family Housing	43.7914	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total		**0.47**	**4.04**	**1.72**	**0.03**		**0.00**	**0.33**		**0.00**	**0.33**		**5,151.93**		**0.10**	**0.09**	**5,183.29**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	16.57	0.37	31.82	0.00		0.00	0.63		0.00	0.62	0.00	7,261.07		0.19	0.13	7,306.10
Unmitigated	56.14	2.21	156.90	0.30		0.00	20.16		0.00	20.16	2,667.44	6,860.84		10.62	0.16	9,801.81
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	13.47					0.00	0.00		0.00	0.00						0.00
Hearth	40.23	1.85	125.12	0.30		0.00	19.99		0.00	19.98	2,667.44	6,804.00		10.56	0.16	9,743.80
Landscaping	0.98	0.37	31.78	0.00		0.00	0.17		0.00	0.17		56.84		0.06		58.02
Total	**56.14**	**2.22**	**156.90**	**0.30**		**0.00**	**20.16**		**0.00**	**20.15**	**2,667.44**	**6,860.84**		**10.62**	**0.16**	**9,801.82**

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	1.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	13.47					0.00	0.00		0.00	0.00						0.00
Hearth	0.66	0.00	0.04	0.00		0.00	0.46		0.00	0.45	0.00	7,204.24		0.14	0.13	7,248.08
Landscaping	0.98	0.37	31.78	0.00		0.00	0.17		0.00	0.17		56.84		0.06		58.02
Total	**16.57**	**0.37**	**31.82**	**0.00**		**0.00**	**0.63**		**0.00**	**0.62**	**0.00**	**7,261.08**		**0.20**	**0.13**	**7,306.10**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Yorba Linda Estates Study Option 2

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Single Family Housing	378	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics -

Land Use - 378 Units, 468 acres

Construction Phase - Site Prep: 60days, Grading: 390 days, Construction: 1,300 days, Paving: 60 days
Start year 2014

Off-road Equipment - Construction: 1 Crane, 3 Forklifts, 1 Gen Set, 3 Loader/Backhoes, 1 Welder

Off-road Equipment - Grading: 2 Excavators, 2 Graders, 1 Dozer, 6 Scrapers, 2 Loader/Backhoes
reduce load factor by 33%

Off-road Equipment - 2 Pavers, 2 Paving Equipment, 2 Rollers
reduce load factor by 33%

Off-road Equipment - Site Prep 3 Dozers, 4 Loader/Backhoes
reduce load factor by 33%

Trips and VMT - 1700 feet to borrow area

Grading - 730 CY Import

Vehicle Trips -

Construction Off-road Equipment Mitigation - water 3x a day
excavators, graders, and scrapers: tier 3, 40% oxidation catalyst

Area Mitigation -

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					
2014	14.89	122.23	64.16	0.14	18.30	5.27	20.75	9.93	5.27	12.38	0.00	15,130.77	0.00	1.34	0.00	15,158.84
2015	14.07	112.39	61.36	0.14	7.76	4.82	12.58	3.32	4.82	8.13	0.00	15,123.37	0.00	1.25	0.00	15,149.69
2016	3.93	23.99	25.89	0.05	2.14	1.34	3.48	0.03	1.32	1.35	0.00	5,255.62	0.00	0.35	0.00	5,262.93
2017	3.61	21.91	25.00	0.05	2.14	1.19	3.33	0.03	1.17	1.20	0.00	5,228.72	0.00	0.32	0.00	5,235.43
2018	3.31	19.98	24.20	0.05	2.14	1.04	3.19	0.03	1.03	1.06	0.00	5,203.05	0.00	0.29	0.00	5,209.20
2019	3.05	18.28	23.53	0.06	2.14	0.91	3.06	0.03	0.90	0.93	0.00	5,179.04	0.00	0.27	0.00	5,184.71
2020	44.65	16.75	22.95	0.06	2.14	1.13	2.94	0.03	1.13	1.13	0.00	5,156.56	0.00	0.25	0.00	5,161.77
2021	44.62	1.60	2.78	0.01	0.35	0.11	0.46	0.00	0.11	0.11	0.00	530.88	0.00	0.03	0.00	531.50
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.1 Overall Construction (Maximum Daily Emission)

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					
2014	11.52	53.72	76.35	0.14	7.28	2.45	9.73	3.88	2.45	6.32	0.00	15,130.77	0.00	1.34	0.00	15,158.84
2015	11.37	52.41	75.71	0.14	3.31	1.50	4.72	1.30	1.48	2.71	0.00	15,123.37	0.00	1.25	0.00	15,149.69
2016	3.93	23.99	25.89	0.05	2.14	1.34	3.48	0.03	1.32	1.35	0.00	5,255.62	0.00	0.35	0.00	5,262.93
2017	3.61	21.91	25.00	0.05	2.14	1.19	3.33	0.03	1.17	1.20	0.00	5,228.72	0.00	0.32	0.00	5,235.43
2018	3.31	19.98	24.20	0.05	2.14	1.04	3.19	0.03	1.03	1.06	0.00	5,203.05	0.00	0.29	0.00	5,209.20
2019	3.05	18.28	23.53	0.06	2.14	0.91	3.06	0.03	0.90	0.93	0.00	5,179.04	0.00	0.27	0.00	5,184.71
2020	44.65	16.75	22.95	0.06	2.14	1.13	2.94	0.03	1.13	1.13	0.00	5,156.56	0.00	0.25	0.00	5,161.77
2021	44.62	1.60	2.78	0.01	0.35	0.11	0.46	0.00	0.11	0.11	0.00	530.88	0.00	0.03	0.00	531.50
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	56.14	2.21	156.90	0.30		0.00	20.16		0.00	20.16	2,667.44	6,860.84		10.62	0.16	9,801.81
Energy	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Mobile	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**72.20**	**41.61**	**306.74**	**0.66**	**35.82**	**1.82**	**58.13**	**0.51**	**1.76**	**22.75**	**2,667.44**	**42,497.56**		**11.88**	**0.25**	**45,494.30**

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	16.57	0.37	31.82	0.00		0.00	0.63		0.00	0.62	0.00	7,261.07		0.19	0.13	7,306.10
Energy	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Mobile	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**32.63**	**39.77**	**181.66**	**0.36**	**35.82**	**1.82**	**38.60**	**0.51**	**1.76**	**3.21**	**0.00**	**42,897.79**		**1.45**	**0.22**	**42,998.59**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2014

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					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	6.34	50.69	29.13	0.05		2.44	2.44		2.44	2.44		5,413.51		0.57		5,425.43
Total	**6.34**	**50.69**	**29.13**	**0.05**	**18.07**	**2.44**	**20.51**	**9.93**	**2.44**	**12.37**		**5,413.51**		**0.57**		**5,425.43**

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.09	1.07	0.00	0.23	0.01	0.24	0.00	0.01	0.01		189.72		0.01		189.94
Total	**0.09**	**0.09**	**1.07**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**		**189.72**		**0.01**		**189.94**

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					7.05	0.00	7.05	3.87	0.00	3.87						0.00
Off-Road	6.34	50.69	29.13	0.05		2.44	2.44		2.44	2.44	0.00	5,413.51		0.57		5,425.43
Total	**6.34**	**50.69**	**29.13**	**0.05**	**7.05**	**2.44**	**9.49**	**3.87**	**2.44**	**6.31**	**0.00**	**5,413.51**		**0.57**		**5,425.43**

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.09	1.07	0.00	0.23	0.01	0.24	0.00	0.01	0.01		189.72		0.01		189.94
Total	**0.09**	**0.09**	**1.07**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**		**189.72**		**0.01**		**189.94**

3.3 Grading - 2014

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					7.29	0.00	7.29	3.31	0.00	3.31						0.00
Off-Road	14.72	122.05	62.18	0.14		5.25	5.25		5.25	5.25		14,781.89		1.32		14,809.56
Total	**14.72**	**122.05**	**62.18**	**0.14**	**7.29**	**5.25**	**12.54**	**3.31**	**5.25**	**8.56**		**14,781.89**		**1.32**		**14,809.56**

3.3 Grading - 2014

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	0.00	0.02	0.01	0.00	0.03	0.00	0.03	0.00	0.00	0.00		1.05		0.00		1.06
Vendor	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
Worker	0.17	0.17	1.96	0.00	0.43	0.01	0.45	0.01	0.01	0.02		347.82		0.02		348.23
Total	**0.17**	**0.19**	**1.97**	**0.00**	**0.46**	**0.01**	**0.48**	**0.01**	**0.01**	**0.02**		**348.87**		**0.02**		**349.29**

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					2.85	0.00	2.85	1.29	0.00	1.29						0.00
Off-Road	11.34	53.54	74.38	0.14		1.49	1.49		1.49	1.49	0.00	14,781.89		1.32		14,809.56
Total	**11.34**	**53.54**	**74.38**	**0.14**	**2.85**	**1.49**	**4.34**	**1.29**	**1.49**	**2.78**	**0.00**	**14,781.89**		**1.32**		**14,809.56**

3.3 Grading - 2014

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	0.00	0.02	0.01	0.00	0.03	0.00	0.03	0.00	0.00	0.00		1.05		0.00		1.06
Vendor	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
Worker	0.17	0.17	1.96	0.00	0.43	0.01	0.45	0.01	0.01	0.02		347.82		0.02		348.23
Total	**0.17**	**0.19**	**1.97**	**0.00**	**0.46**	**0.01**	**0.48**	**0.01**	**0.01**	**0.02**		**348.87**		**0.02**		**349.29**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.29	0.00	7.29	3.31	0.00	3.31						0.00
Off-Road	13.91	112.22	59.55	0.14		4.80	4.80		4.80	4.80		14,781.89		1.24		14,807.83
Total	**13.91**	**112.22**	**59.55**	**0.14**	**7.29**	**4.80**	**12.09**	**3.31**	**4.80**	**8.11**		**14,781.89**		**1.24**		**14,807.83**

3.3 Grading - 2015

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	0.00	0.02	0.01	0.00	0.03	0.00	0.03	0.00	0.00	0.00		1.07		0.00		1.08
Vendor	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
Worker	0.16	0.15	1.80	0.00	0.43	0.01	0.45	0.01	0.01	0.02		340.40		0.02		340.78
Total	**0.16**	**0.17**	**1.81**	**0.00**	**0.46**	**0.01**	**0.48**	**0.01**	**0.01**	**0.02**		**341.47**		**0.02**		**341.86**

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					2.85	0.00	2.85	1.29	0.00	1.29						0.00
Off-Road	11.21	52.24	73.89	0.14		1.40	1.40		1.40	1.40	0.00	14,781.89		1.24		14,807.83
Total	**11.21**	**52.24**	**73.89**	**0.14**	**2.85**	**1.40**	**4.25**	**1.29**	**1.40**	**2.69**	**0.00**	**14,781.89**		**1.24**		**14,807.83**

3.3 Grading - 2015

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	0.00	0.02	0.01	0.00	0.03	0.00	0.03	0.00	0.00	0.00		1.07		0.00		1.08
Vendor	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
Worker	0.16	0.15	1.80	0.00	0.43	0.01	0.45	0.01	0.01	0.02		340.40		0.02		340.78
Total	**0.16**	**0.17**	**1.81**	**0.00**	**0.46**	**0.01**	**0.48**	**0.01**	**0.01**	**0.02**		**341.47**		**0.02**		**341.86**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.12	20.20	16.09	0.03		1.26	1.26		1.26	1.26		2,781.09		0.28		2,786.99
Total	**3.12**	**20.20**	**16.09**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**		**2,781.09**		**0.28**		**2,786.99**

3.4 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.49	5.41	3.29	0.01	0.37	0.18	0.55	0.01	0.17	0.18		1,091.75		0.02		1,092.25
Worker	0.66	0.62	7.43	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,402.88		0.07		1,404.43
Total	**1.15**	**6.03**	**10.72**	**0.02**	**2.15**	**0.24**	**2.39**	**0.03**	**0.23**	**0.26**		**2,494.63**		**0.09**		**2,496.68**

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	3.12	20.20	16.09	0.03		1.26	1.26		1.26	1.26	0.00	2,781.09		0.28		2,786.99
Total	**3.12**	**20.20**	**16.09**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**	**0.00**	**2,781.09**		**0.28**		**2,786.99**

3.4 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.49	5.41	3.29	0.01	0.37	0.18	0.55	0.01	0.17	0.18		1,091.75		0.02		1,092.25
Worker	0.66	0.62	7.43	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,402.88		0.07		1,404.43
Total	**1.15**	**6.03**	**10.72**	**0.02**	**2.15**	**0.24**	**2.39**	**0.03**	**0.23**	**0.26**		**2,494.63**		**0.09**		**2,496.68**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.86	18.41	15.95	0.03		1.11	1.11		1.11	1.11		2,781.09		0.26		2,786.47
Total	**2.86**	**18.41**	**15.95**	**0.03**		**1.11**	**1.11**		**1.11**	**1.11**		**2,781.09**		**0.26**		**2,786.47**

3.4 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.45	5.00	3.03	0.01	0.37	0.16	0.53	0.01	0.15	0.16		1,094.95		0.02		1,095.42
Worker	0.62	0.57	6.90	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,379.58		0.07		1,381.04
Total	**1.07**	**5.57**	**9.93**	**0.02**	**2.15**	**0.22**	**2.37**	**0.03**	**0.21**	**0.24**		**2,474.53**		**0.09**		**2,476.46**

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	2.86	18.41	15.95	0.03		1.11	1.11		1.11	1.11	0.00	2,781.09		0.26		2,786.47
Total	**2.86**	**18.41**	**15.95**	**0.03**		**1.11**	**1.11**		**1.11**	**1.11**	**0.00**	**2,781.09**		**0.26**		**2,786.47**

3.4 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.45	5.00	3.03	0.01	0.37	0.16	0.53	0.01	0.15	0.16		1,094.95		0.02		1,095.42
Worker	0.62	0.57	6.90	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,379.58		0.07		1,381.04
Total	**1.07**	**5.57**	**9.93**	**0.02**	**2.15**	**0.22**	**2.37**	**0.03**	**0.21**	**0.24**		**2,474.53**		**0.09**		**2,476.46**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.62	16.75	15.82	0.03		0.97	0.97		0.97	0.97		2,781.09		0.23		2,786.00
Total	**2.62**	**16.75**	**15.82**	**0.03**		**0.97**	**0.97**		**0.97**	**0.97**		**2,781.09**		**0.23**		**2,786.00**

3.4 Building Construction - 2017

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.41	4.63	2.81	0.01	0.37	0.15	0.52	0.01	0.14	0.15		1,096.94		0.02		1,097.36
Worker	0.58	0.52	6.37	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,350.70		0.07		1,352.07
Total	**0.99**	**5.15**	**9.18**	**0.02**	**2.15**	**0.21**	**2.36**	**0.03**	**0.20**	**0.23**		**2,447.64**		**0.09**		**2,449.43**

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	2.62	16.75	15.82	0.03		0.97	0.97		0.97	0.97	0.00	2,781.09		0.23		2,786.00
Total	**2.62**	**16.75**	**15.82**	**0.03**		**0.97**	**0.97**		**0.97**	**0.97**	**0.00**	**2,781.09**		**0.23**		**2,786.00**

3.4 Building Construction - 2017

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.41	4.63	2.81	0.01	0.37	0.15	0.52	0.01	0.14	0.15		1,096.94		0.02		1,097.36
Worker	0.58	0.52	6.37	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,350.70		0.07		1,352.07
Total	**0.99**	**5.15**	**9.18**	**0.02**	**2.15**	**0.21**	**2.36**	**0.03**	**0.20**	**0.23**		**2,447.64**		**0.09**		**2,449.43**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.39	15.19	15.71	0.03		0.84	0.84		0.84	0.84		2,781.09		0.21		2,785.57
Total	**2.39**	**15.19**	**15.71**	**0.03**		**0.84**	**0.84**		**0.84**	**0.84**		**2,781.09**		**0.21**		**2,785.57**

3.4 Building Construction - 2018

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.38	4.31	2.61	0.01	0.37	0.14	0.50	0.01	0.12	0.13		1,098.82		0.02		1,099.21
Worker	0.54	0.48	5.89	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,323.14		0.06		1,324.42
Total	**0.92**	**4.79**	**8.50**	**0.02**	**2.15**	**0.20**	**2.34**	**0.03**	**0.18**	**0.21**		**2,421.96**		**0.08**		**2,423.63**

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	2.39	15.19	15.71	0.03		0.84	0.84		0.84	0.84	0.00	2,781.09		0.21		2,785.57
Total	**2.39**	**15.19**	**15.71**	**0.03**		**0.84**	**0.84**		**0.84**	**0.84**	**0.00**	**2,781.09**		**0.21**		**2,785.57**

3.4 Building Construction - 2018

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.38	4.31	2.61	0.01	0.37	0.14	0.50	0.01	0.12	0.13		1,098.82		0.02		1,099.21
Worker	0.54	0.48	5.89	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,323.14		0.06		1,324.42
Total	**0.92**	**4.79**	**8.50**	**0.02**	**2.15**	**0.20**	**2.34**	**0.03**	**0.18**	**0.21**		**2,421.96**		**0.08**		**2,423.63**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.17	13.79	15.60	0.03		0.72	0.72		0.72	0.72		2,781.10		0.19		2,785.19
Total	**2.17**	**13.79**	**15.60**	**0.03**		**0.72**	**0.72**		**0.72**	**0.72**		**2,781.10**		**0.19**		**2,785.19**

3.4 Building Construction - 2019

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.36	4.04	2.45	0.01	0.37	0.12	0.49	0.01	0.11	0.12		1,100.59		0.02		1,100.96
Worker	0.52	0.44	5.49	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,297.36		0.06		1,298.56
Total	**0.88**	**4.48**	**7.94**	**0.02**	**2.15**	**0.18**	**2.33**	**0.03**	**0.17**	**0.20**		**2,397.95**		**0.08**		**2,399.52**

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	2.17	13.79	15.60	0.03		0.72	0.72		0.72	0.72	0.00	2,781.10		0.19		2,785.19
Total	**2.17**	**13.79**	**15.60**	**0.03**		**0.72**	**0.72**		**0.72**	**0.72**	**0.00**	**2,781.10**		**0.19**		**2,785.19**

3.4 Building Construction - 2019

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.36	4.04	2.45	0.01	0.37	0.12	0.49	0.01	0.11	0.12		1,100.59		0.02		1,100.96
Worker	0.52	0.44	5.49	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,297.36		0.06		1,298.56
Total	**0.88**	**4.48**	**7.94**	**0.02**	**2.15**	**0.18**	**2.33**	**0.03**	**0.17**	**0.20**		**2,397.95**		**0.08**		**2,399.52**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.99	12.53	15.51	0.03		0.62	0.62		0.62	0.62		2,781.09		0.18		2,784.82
Total	**1.99**	**12.53**	**15.51**	**0.03**		**0.62**	**0.62**		**0.62**	**0.62**		**2,781.09**		**0.18**		**2,784.82**

3.4 Building Construction - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.33	3.81	2.30	0.01	0.37	0.11	0.48	0.01	0.11	0.11		1,102.23		0.02		1,102.57
Worker	0.49	0.41	5.14	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,273.23		0.05		1,274.37
Total	**0.82**	**4.22**	**7.44**	**0.02**	**2.15**	**0.17**	**2.32**	**0.03**	**0.17**	**0.19**		**2,375.46**		**0.07**		**2,376.94**

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	1.99	12.53	15.51	0.03		0.62	0.62		0.62	0.62	0.00	2,781.09		0.18		2,784.82
Total	**1.99**	**12.53**	**15.51**	**0.03**		**0.62**	**0.62**		**0.62**	**0.62**	**0.00**	**2,781.09**		**0.18**		**2,784.82**

3.4 Building Construction - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.33	3.81	2.30	0.01	0.37	0.11	0.48	0.01	0.11	0.11		1,102.23		0.02		1,102.57
Worker	0.49	0.41	5.14	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,273.23		0.05		1,274.37
Total	**0.82**	**4.22**	**7.44**	**0.02**	**2.15**	**0.17**	**2.32**	**0.03**	**0.17**	**0.19**		**2,375.46**		**0.07**		**2,376.94**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.38	14.68	13.48	0.02		1.12	1.12		1.12	1.12		1,979.15		0.21		1,983.62
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.38**	**14.68**	**13.48**	**0.02**		**1.12**	**1.12**		**1.12**	**1.12**		**1,979.15**		**0.21**		**1,983.62**

3.5 Paving - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.05	0.04	0.57	0.00	0.20	0.01	0.20	0.00	0.01	0.01		140.43		0.01		140.56
Total	**0.05**	**0.04**	**0.57**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**		**140.43**		**0.01**		**140.56**

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	2.38	14.68	13.48	0.02		1.12	1.12		1.12	1.12	0.00	1,979.15		0.21		1,983.62
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.38**	**14.68**	**13.48**	**0.02**		**1.12**	**1.12**		**1.12**	**1.12**	**0.00**	**1,979.15**		**0.21**		**1,983.62**

3.5 Paving - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.05	0.04	0.57	0.00	0.20	0.01	0.20	0.00	0.01	0.01		140.43		0.01		140.56
Total	**0.05**	**0.04**	**0.57**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**		**140.43**		**0.01**		**140.56**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.24	1.68	1.83	0.00		0.11	0.11		0.11	0.11		281.19		0.02		281.65
Total	**44.55**	**1.68**	**1.83**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**		**281.19**		**0.02**		**281.65**

3.6 Architectural Coating - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.10	0.08	1.02	0.00	0.35	0.01	0.37	0.00	0.01	0.02		252.77		0.01		253.00
Total	**0.10**	**0.08**	**1.02**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**252.77**		**0.01**		**253.00**

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	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.24	1.68	1.83	0.00		0.11	0.11		0.11	0.11	0.00	281.19		0.02		281.65
Total	**44.55**	**1.68**	**1.83**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**281.19**		**0.02**		**281.65**

3.6 Architectural Coating - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.10	0.08	1.02	0.00	0.35	0.01	0.37	0.00	0.01	0.02		252.77		0.01		253.00
Total	**0.10**	**0.08**	**1.02**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**252.77**		**0.01**		**253.00**

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	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.22	1.53	1.82	0.00		0.09	0.09		0.09	0.09		281.19		0.02		281.60
Total	**44.53**	**1.53**	**1.82**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**		**281.19**		**0.02**		**281.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.08	0.96	0.00	0.35	0.01	0.37	0.00	0.01	0.02		249.69		0.01		249.91
Total	**0.09**	**0.08**	**0.96**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**249.69**		**0.01**		**249.91**

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	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.22	1.53	1.82	0.00		0.09	0.09		0.09	0.09	0.00	281.19		0.02		281.60
Total	**44.53**	**1.53**	**1.82**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**281.19**		**0.02**		**281.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.08	0.96	0.00	0.35	0.01	0.37	0.00	0.01	0.02		249.69		0.01		249.91
Total	**0.09**	**0.08**	**0.96**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**249.69**		**0.01**		**249.91**

4.0 Mobile Detail

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	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Unmitigated	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	3,617.46	3,810.24	3315.06	10,229,544	10,229,544
Total	3,617.46	3,810.24	3,315.06	10,229,544	10,229,544

4.3 Trip Type Information

	Miles			Trip %		
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
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
NaturalGas Unmitigated	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Single Family Housing	43791.4	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total		**0.47**	**4.04**	**1.72**	**0.03**		**0.00**	**0.33**		**0.00**	**0.33**		**5,151.93**		**0.10**	**0.09**	**5,183.29**

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	lb/day										lb/day					
Single Family Housing	43.7914	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total		**0.47**	**4.04**	**1.72**	**0.03**		**0.00**	**0.33**		**0.00**	**0.33**		**5,151.93**		**0.10**	**0.09**	**5,183.29**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	16.57	0.37	31.82	0.00		0.00	0.63		0.00	0.62	0.00	7,261.07		0.19	0.13	7,306.10
Unmitigated	56.14	2.21	156.90	0.30		0.00	20.16		0.00	20.16	2,667.44	6,860.84		10.62	0.16	9,801.81
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	13.47					0.00	0.00		0.00	0.00						0.00
Hearth	40.23	1.85	125.12	0.30		0.00	19.99		0.00	19.98	2,667.44	6,804.00		10.56	0.16	9,743.80
Landscaping	0.98	0.37	31.78	0.00		0.00	0.17		0.00	0.17		56.84		0.06		58.02
Total	**56.14**	**2.22**	**156.90**	**0.30**		**0.00**	**20.16**		**0.00**	**20.15**	**2,667.44**	**6,860.84**		**10.62**	**0.16**	**9,801.82**

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	1.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	13.47					0.00	0.00		0.00	0.00						0.00
Hearth	0.66	0.00	0.04	0.00		0.00	0.46		0.00	0.45	0.00	7,204.24		0.14	0.13	7,248.08
Landscaping	0.98	0.37	31.78	0.00		0.00	0.17		0.00	0.17		56.84		0.06		58.02
Total	**16.57**	**0.37**	**31.82**	**0.00**		**0.00**	**0.63**		**0.00**	**0.62**	**0.00**	**7,261.08**		**0.20**	**0.13**	**7,306.10**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Yorba Linda Estates Study Option 2A

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Single Family Housing	378	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics -

Land Use - 378 Units, 468 acres

Construction Phase - Site Prep: 60days, Grading: 390 days, Construction: 1,300 days, Paving: 60 days
Start year 2014

Off-road Equipment - Construction: 1 Crane, 3 Forklifts, 1 Gen Set, 3 Loader/Backhoes, 1 Welder

Off-road Equipment - Grading: 2 Excavators, 2 Graders, 1 Dozer, 6 Scrapers, 2 Loader/Backhoes
reduce load factor by 33%

Off-road Equipment - 2 Pavers, 2 Paving Equipment, 2 Rollers
reduce load factor by 33%

Off-road Equipment - Site Prep 3 Dozers, 4 Loader/Backhoes
reduce load factor by 33%

Trips and VMT - 2400 feet from YLE cut area to center of Option 2A fill area

Grading - 57,000 CY import from the YLE

Vehicle Trips -

Construction Off-road Equipment Mitigation - water 3x a day
excavators, graders, and scrapers: tier 3, 40% oxidation catalyst

Area Mitigation -

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					
2014	15.04	123.50	65.30	0.14	18.30	5.28	20.75	9.93	5.28	12.38	0.00	15,221.74	0.00	1.34	0.00	15,249.97
2015	14.22	113.67	62.42	0.14	11.47	4.83	16.31	3.32	4.83	8.15	0.00	15,215.97	0.00	1.26	0.00	15,242.43
2016	3.93	23.99	25.89	0.05	2.14	1.34	3.48	0.03	1.32	1.35	0.00	5,255.62	0.00	0.35	0.00	5,262.93
2017	3.61	21.91	25.00	0.05	2.14	1.19	3.33	0.03	1.17	1.20	0.00	5,228.72	0.00	0.32	0.00	5,235.43
2018	3.31	19.98	24.20	0.05	2.14	1.04	3.19	0.03	1.03	1.06	0.00	5,203.05	0.00	0.29	0.00	5,209.20
2019	3.05	18.28	23.53	0.06	2.14	0.91	3.06	0.03	0.90	0.93	0.00	5,179.04	0.00	0.27	0.00	5,184.71
2020	2.82	16.75	22.95	0.06	2.14	1.13	2.94	0.03	1.13	1.13	0.00	5,156.56	0.00	0.25	0.00	5,161.77
2021	44.62	1.60	2.78	0.01	0.35	0.11	0.46	0.00	0.11	0.11	0.00	530.88	0.00	0.03	0.00	531.50
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.1 Overall Construction (Maximum Daily Emission)

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					
2014	11.67	54.98	77.50	0.14	7.28	2.45	9.73	3.88	2.45	6.32	0.00	15,221.74	0.00	1.34	0.00	15,249.97
2015	11.51	53.68	76.76	0.14	7.01	1.50	8.44	1.30	1.48	2.73	0.00	15,215.97	0.00	1.26	0.00	15,242.43
2016	3.93	23.99	25.89	0.05	2.14	1.34	3.48	0.03	1.32	1.35	0.00	5,255.62	0.00	0.35	0.00	5,262.93
2017	3.61	21.91	25.00	0.05	2.14	1.19	3.33	0.03	1.17	1.20	0.00	5,228.72	0.00	0.32	0.00	5,235.43
2018	3.31	19.98	24.20	0.05	2.14	1.04	3.19	0.03	1.03	1.06	0.00	5,203.05	0.00	0.29	0.00	5,209.20
2019	3.05	18.28	23.53	0.06	2.14	0.91	3.06	0.03	0.90	0.93	0.00	5,179.04	0.00	0.27	0.00	5,184.71
2020	2.82	16.75	22.95	0.06	2.14	1.13	2.94	0.03	1.13	1.13	0.00	5,156.56	0.00	0.25	0.00	5,161.77
2021	44.62	1.60	2.78	0.01	0.35	0.11	0.46	0.00	0.11	0.11	0.00	530.88	0.00	0.03	0.00	531.50
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	56.14	2.21	156.90	0.30		0.00	20.16		0.00	20.16	2,667.44	6,860.84		10.62	0.16	9,801.81
Energy	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Mobile	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**72.20**	**41.61**	**306.74**	**0.66**	**35.82**	**1.82**	**58.13**	**0.51**	**1.76**	**22.75**	**2,667.44**	**42,497.56**		**11.88**	**0.25**	**45,494.30**

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	16.57	0.37	31.82	0.00		0.00	0.63		0.00	0.62	0.00	7,261.07		0.19	0.13	7,306.10
Energy	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Mobile	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**32.63**	**39.77**	**181.66**	**0.36**	**35.82**	**1.82**	**38.60**	**0.51**	**1.76**	**3.21**	**0.00**	**42,897.79**		**1.45**	**0.22**	**42,998.59**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2014

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					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	6.34	50.69	29.13	0.05		2.44	2.44		2.44	2.44		5,413.51		0.57		5,425.43
Total	**6.34**	**50.69**	**29.13**	**0.05**	**18.07**	**2.44**	**20.51**	**9.93**	**2.44**	**12.37**		**5,413.51**		**0.57**		**5,425.43**

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.09	1.07	0.00	0.23	0.01	0.24	0.00	0.01	0.01		189.72		0.01		189.94
Total	**0.09**	**0.09**	**1.07**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**		**189.72**		**0.01**		**189.94**

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					7.05	0.00	7.05	3.87	0.00	3.87						0.00
Off-Road	6.34	50.69	29.13	0.05		2.44	2.44		2.44	2.44	0.00	5,413.51		0.57		5,425.43
Total	**6.34**	**50.69**	**29.13**	**0.05**	**7.05**	**2.44**	**9.49**	**3.87**	**2.44**	**6.31**	**0.00**	**5,413.51**		**0.57**		**5,425.43**

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.09	1.07	0.00	0.23	0.01	0.24	0.00	0.01	0.01		189.72		0.01		189.94
Total	**0.09**	**0.09**	**1.07**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**		**189.72**		**0.01**		**189.94**

3.3 Grading - 2014

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					7.31	0.00	7.31	3.31	0.00	3.31						0.00
Off-Road	14.72	122.05	62.18	0.14		5.25	5.25		5.25	5.25		14,781.89		1.32		14,809.56
Total	**14.72**	**122.05**	**62.18**	**0.14**	**7.31**	**5.25**	**12.56**	**3.31**	**5.25**	**8.56**		**14,781.89**		**1.32**		**14,809.56**

3.3 Grading - 2014

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	0.15	1.28	1.16	0.00	3.73	0.02	3.75	0.00	0.01	0.02		92.02		0.01		92.18
Vendor	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
Worker	0.17	0.17	1.96	0.00	0.43	0.01	0.45	0.01	0.01	0.02		347.82		0.02		348.23
Total	**0.32**	**1.45**	**3.12**	**0.00**	**4.16**	**0.03**	**4.20**	**0.01**	**0.02**	**0.04**		**439.84**		**0.03**		**440.41**

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					2.85	0.00	2.85	1.29	0.00	1.29						0.00
Off-Road	11.34	53.54	74.38	0.14		1.49	1.49		1.49	1.49	0.00	14,781.89		1.32		14,809.56
Total	**11.34**	**53.54**	**74.38**	**0.14**	**2.85**	**1.49**	**4.34**	**1.29**	**1.49**	**2.78**	**0.00**	**14,781.89**		**1.32**		**14,809.56**

3.3 Grading - 2014

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	0.15	1.28	1.16	0.00	3.73	0.02	3.75	0.00	0.01	0.02		92.02		0.01		92.18
Vendor	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
Worker	0.17	0.17	1.96	0.00	0.43	0.01	0.45	0.01	0.01	0.02		347.82		0.02		348.23
Total	**0.32**	**1.45**	**3.12**	**0.00**	**4.16**	**0.03**	**4.20**	**0.01**	**0.02**	**0.04**		**439.84**		**0.03**		**440.41**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.31	0.00	7.31	3.31	0.00	3.31						0.00
Off-Road	13.91	112.22	59.55	0.14		4.80	4.80		4.80	4.80		14,781.89		1.24		14,807.83
Total	**13.91**	**112.22**	**59.55**	**0.14**	**7.31**	**4.80**	**12.11**	**3.31**	**4.80**	**8.11**		**14,781.89**		**1.24**		**14,807.83**

3.3 Grading - 2015

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	0.15	1.29	1.07	0.00	3.73	0.01	3.75	0.00	0.01	0.01		93.67		0.01		93.82
Vendor	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
Worker	0.16	0.15	1.80	0.00	0.43	0.01	0.45	0.01	0.01	0.02		340.40		0.02		340.78
Total	**0.31**	**1.44**	**2.87**	**0.00**	**4.16**	**0.02**	**4.20**	**0.01**	**0.02**	**0.03**		**434.07**		**0.03**		**434.60**

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					2.85	0.00	2.85	1.29	0.00	1.29						0.00
Off-Road	11.21	52.24	73.89	0.14		1.40	1.40		1.40	1.40	0.00	14,781.89		1.24		14,807.83
Total	**11.21**	**52.24**	**73.89**	**0.14**	**2.85**	**1.40**	**4.25**	**1.29**	**1.40**	**2.69**	**0.00**	**14,781.89**		**1.24**		**14,807.83**

3.3 Grading - 2015

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	0.15	1.29	1.07	0.00	3.73	0.01	3.75	0.00	0.01	0.01		93.67		0.01		93.82
Vendor	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
Worker	0.16	0.15	1.80	0.00	0.43	0.01	0.45	0.01	0.01	0.02		340.40		0.02		340.78
Total	**0.31**	**1.44**	**2.87**	**0.00**	**4.16**	**0.02**	**4.20**	**0.01**	**0.02**	**0.03**		**434.07**		**0.03**		**434.60**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.12	20.20	16.09	0.03		1.26	1.26		1.26	1.26		2,781.09		0.28		2,786.99
Total	**3.12**	**20.20**	**16.09**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**		**2,781.09**		**0.28**		**2,786.99**

3.4 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.49	5.41	3.29	0.01	0.37	0.18	0.55	0.01	0.17	0.18		1,091.75		0.02		1,092.25
Worker	0.66	0.62	7.43	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,402.88		0.07		1,404.43
Total	**1.15**	**6.03**	**10.72**	**0.02**	**2.15**	**0.24**	**2.39**	**0.03**	**0.23**	**0.26**		**2,494.63**		**0.09**		**2,496.68**

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	3.12	20.20	16.09	0.03		1.26	1.26		1.26	1.26	0.00	2,781.09		0.28		2,786.99
Total	**3.12**	**20.20**	**16.09**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**	**0.00**	**2,781.09**		**0.28**		**2,786.99**

3.4 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.49	5.41	3.29	0.01	0.37	0.18	0.55	0.01	0.17	0.18		1,091.75		0.02		1,092.25
Worker	0.66	0.62	7.43	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,402.88		0.07		1,404.43
Total	**1.15**	**6.03**	**10.72**	**0.02**	**2.15**	**0.24**	**2.39**	**0.03**	**0.23**	**0.26**		**2,494.63**		**0.09**		**2,496.68**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.86	18.41	15.95	0.03		1.11	1.11		1.11	1.11		2,781.09		0.26		2,786.47
Total	**2.86**	**18.41**	**15.95**	**0.03**		**1.11**	**1.11**		**1.11**	**1.11**		**2,781.09**		**0.26**		**2,786.47**

3.4 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.45	5.00	3.03	0.01	0.37	0.16	0.53	0.01	0.15	0.16		1,094.95		0.02		1,095.42
Worker	0.62	0.57	6.90	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,379.58		0.07		1,381.04
Total	**1.07**	**5.57**	**9.93**	**0.02**	**2.15**	**0.22**	**2.37**	**0.03**	**0.21**	**0.24**		**2,474.53**		**0.09**		**2,476.46**

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	2.86	18.41	15.95	0.03		1.11	1.11		1.11	1.11	0.00	2,781.09		0.26		2,786.47
Total	**2.86**	**18.41**	**15.95**	**0.03**		**1.11**	**1.11**		**1.11**	**1.11**	**0.00**	**2,781.09**		**0.26**		**2,786.47**

3.4 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.45	5.00	3.03	0.01	0.37	0.16	0.53	0.01	0.15	0.16		1,094.95		0.02		1,095.42
Worker	0.62	0.57	6.90	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,379.58		0.07		1,381.04
Total	**1.07**	**5.57**	**9.93**	**0.02**	**2.15**	**0.22**	**2.37**	**0.03**	**0.21**	**0.24**		**2,474.53**		**0.09**		**2,476.46**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.62	16.75	15.82	0.03		0.97	0.97		0.97	0.97		2,781.09		0.23		2,786.00
Total	**2.62**	**16.75**	**15.82**	**0.03**		**0.97**	**0.97**		**0.97**	**0.97**		**2,781.09**		**0.23**		**2,786.00**

3.4 Building Construction - 2017

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.41	4.63	2.81	0.01	0.37	0.15	0.52	0.01	0.14	0.15		1,096.94		0.02		1,097.36
Worker	0.58	0.52	6.37	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,350.70		0.07		1,352.07
Total	**0.99**	**5.15**	**9.18**	**0.02**	**2.15**	**0.21**	**2.36**	**0.03**	**0.20**	**0.23**		**2,447.64**		**0.09**		**2,449.43**

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	2.62	16.75	15.82	0.03		0.97	0.97		0.97	0.97	0.00	2,781.09		0.23		2,786.00
Total	**2.62**	**16.75**	**15.82**	**0.03**		**0.97**	**0.97**		**0.97**	**0.97**	**0.00**	**2,781.09**		**0.23**		**2,786.00**

3.4 Building Construction - 2017

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.41	4.63	2.81	0.01	0.37	0.15	0.52	0.01	0.14	0.15		1,096.94		0.02		1,097.36
Worker	0.58	0.52	6.37	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,350.70		0.07		1,352.07
Total	**0.99**	**5.15**	**9.18**	**0.02**	**2.15**	**0.21**	**2.36**	**0.03**	**0.20**	**0.23**		**2,447.64**		**0.09**		**2,449.43**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.39	15.19	15.71	0.03		0.84	0.84		0.84	0.84		2,781.09		0.21		2,785.57
Total	**2.39**	**15.19**	**15.71**	**0.03**		**0.84**	**0.84**		**0.84**	**0.84**		**2,781.09**		**0.21**		**2,785.57**

3.4 Building Construction - 2018

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.38	4.31	2.61	0.01	0.37	0.14	0.50	0.01	0.12	0.13		1,098.82		0.02		1,099.21
Worker	0.54	0.48	5.89	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,323.14		0.06		1,324.42
Total	**0.92**	**4.79**	**8.50**	**0.02**	**2.15**	**0.20**	**2.34**	**0.03**	**0.18**	**0.21**		**2,421.96**		**0.08**		**2,423.63**

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	2.39	15.19	15.71	0.03		0.84	0.84		0.84	0.84	0.00	2,781.09		0.21		2,785.57
Total	**2.39**	**15.19**	**15.71**	**0.03**		**0.84**	**0.84**		**0.84**	**0.84**	**0.00**	**2,781.09**		**0.21**		**2,785.57**

3.4 Building Construction - 2018

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.38	4.31	2.61	0.01	0.37	0.14	0.50	0.01	0.12	0.13		1,098.82		0.02		1,099.21
Worker	0.54	0.48	5.89	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,323.14		0.06		1,324.42
Total	**0.92**	**4.79**	**8.50**	**0.02**	**2.15**	**0.20**	**2.34**	**0.03**	**0.18**	**0.21**		**2,421.96**		**0.08**		**2,423.63**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.17	13.79	15.60	0.03		0.72	0.72		0.72	0.72		2,781.10		0.19		2,785.19
Total	**2.17**	**13.79**	**15.60**	**0.03**		**0.72**	**0.72**		**0.72**	**0.72**		**2,781.10**		**0.19**		**2,785.19**

3.4 Building Construction - 2019

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.36	4.04	2.45	0.01	0.37	0.12	0.49	0.01	0.11	0.12		1,100.59		0.02		1,100.96
Worker	0.52	0.44	5.49	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,297.36		0.06		1,298.56
Total	**0.88**	**4.48**	**7.94**	**0.02**	**2.15**	**0.18**	**2.33**	**0.03**	**0.17**	**0.20**		**2,397.95**		**0.08**		**2,399.52**

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	2.17	13.79	15.60	0.03		0.72	0.72		0.72	0.72	0.00	2,781.10		0.19		2,785.19
Total	**2.17**	**13.79**	**15.60**	**0.03**		**0.72**	**0.72**		**0.72**	**0.72**	**0.00**	**2,781.10**		**0.19**		**2,785.19**

3.4 Building Construction - 2019

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.36	4.04	2.45	0.01	0.37	0.12	0.49	0.01	0.11	0.12		1,100.59		0.02		1,100.96
Worker	0.52	0.44	5.49	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,297.36		0.06		1,298.56
Total	**0.88**	**4.48**	**7.94**	**0.02**	**2.15**	**0.18**	**2.33**	**0.03**	**0.17**	**0.20**		**2,397.95**		**0.08**		**2,399.52**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.99	12.53	15.51	0.03		0.62	0.62		0.62	0.62		2,781.09		0.18		2,784.82
Total	**1.99**	**12.53**	**15.51**	**0.03**		**0.62**	**0.62**		**0.62**	**0.62**		**2,781.09**		**0.18**		**2,784.82**

3.4 Building Construction - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.33	3.81	2.30	0.01	0.37	0.11	0.48	0.01	0.11	0.11		1,102.23		0.02		1,102.57
Worker	0.49	0.41	5.14	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,273.23		0.05		1,274.37
Total	**0.82**	**4.22**	**7.44**	**0.02**	**2.15**	**0.17**	**2.32**	**0.03**	**0.17**	**0.19**		**2,375.46**		**0.07**		**2,376.94**

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	1.99	12.53	15.51	0.03		0.62	0.62		0.62	0.62	0.00	2,781.09		0.18		2,784.82
Total	**1.99**	**12.53**	**15.51**	**0.03**		**0.62**	**0.62**		**0.62**	**0.62**	**0.00**	**2,781.09**		**0.18**		**2,784.82**

3.4 Building Construction - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.33	3.81	2.30	0.01	0.37	0.11	0.48	0.01	0.11	0.11		1,102.23		0.02		1,102.57
Worker	0.49	0.41	5.14	0.01	1.78	0.06	1.84	0.02	0.06	0.08		1,273.23		0.05		1,274.37
Total	**0.82**	**4.22**	**7.44**	**0.02**	**2.15**	**0.17**	**2.32**	**0.03**	**0.17**	**0.19**		**2,375.46**		**0.07**		**2,376.94**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.38	14.68	13.48	0.02		1.12	1.12		1.12	1.12		1,979.15		0.21		1,983.62
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.38**	**14.68**	**13.48**	**0.02**		**1.12**	**1.12**		**1.12**	**1.12**		**1,979.15**		**0.21**		**1,983.62**

3.5 Paving - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.05	0.04	0.57	0.00	0.20	0.01	0.20	0.00	0.01	0.01		140.43		0.01		140.56
Total	**0.05**	**0.04**	**0.57**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**		**140.43**		**0.01**		**140.56**

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	2.38	14.68	13.48	0.02		1.12	1.12		1.12	1.12	0.00	1,979.15		0.21		1,983.62
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.38**	**14.68**	**13.48**	**0.02**		**1.12**	**1.12**		**1.12**	**1.12**	**0.00**	**1,979.15**		**0.21**		**1,983.62**

3.5 Paving - 2020

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.05	0.04	0.57	0.00	0.20	0.01	0.20	0.00	0.01	0.01		140.43		0.01		140.56
Total	**0.05**	**0.04**	**0.57**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**		**140.43**		**0.01**		**140.56**

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	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.22	1.53	1.82	0.00		0.09	0.09		0.09	0.09		281.19		0.02		281.60
Total	**44.53**	**1.53**	**1.82**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**		**281.19**		**0.02**		**281.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.08	0.96	0.00	0.35	0.01	0.37	0.00	0.01	0.02		249.69		0.01		249.91
Total	**0.09**	**0.08**	**0.96**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**249.69**		**0.01**		**249.91**

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	44.31					0.00	0.00		0.00	0.00						0.00
Off-Road	0.22	1.53	1.82	0.00		0.09	0.09		0.09	0.09	0.00	281.19		0.02		281.60
Total	**44.53**	**1.53**	**1.82**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**281.19**		**0.02**		**281.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.08	0.96	0.00	0.35	0.01	0.37	0.00	0.01	0.02		249.69		0.01		249.91
Total	**0.09**	**0.08**	**0.96**	**0.00**	**0.35**	**0.01**	**0.37**	**0.00**	**0.01**	**0.02**		**249.69**		**0.01**		**249.91**

4.0 Mobile Detail

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	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Unmitigated	15.59	35.36	148.12	0.33	35.82	1.82	37.64	0.51	1.76	2.26		30,484.79		1.16		30,509.20
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	3,617.46	3,810.24	3315.06	10,229,544	10,229,544
Total	3,617.46	3,810.24	3,315.06	10,229,544	10,229,544

4.3 Trip Type Information

	Miles			Trip %		
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
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
NaturalGas Unmitigated	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Single Family Housing	43791.4	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total		**0.47**	**4.04**	**1.72**	**0.03**		**0.00**	**0.33**		**0.00**	**0.33**		**5,151.93**		**0.10**	**0.09**	**5,183.29**

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	lb/day										lb/day					
Single Family Housing	43.7914	0.47	4.04	1.72	0.03		0.00	0.33		0.00	0.33		5,151.93		0.10	0.09	5,183.29
Total		**0.47**	**4.04**	**1.72**	**0.03**		**0.00**	**0.33**		**0.00**	**0.33**		**5,151.93**		**0.10**	**0.09**	**5,183.29**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	16.57	0.37	31.82	0.00		0.00	0.63		0.00	0.62	0.00	7,261.07		0.19	0.13	7,306.10
Unmitigated	56.14	2.21	156.90	0.30		0.00	20.16		0.00	20.16	2,667.44	6,860.84		10.62	0.16	9,801.81
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	13.47					0.00	0.00		0.00	0.00						0.00
Hearth	40.23	1.85	125.12	0.30		0.00	19.99		0.00	19.98	2,667.44	6,804.00		10.56	0.16	9,743.80
Landscaping	0.98	0.37	31.78	0.00		0.00	0.17		0.00	0.17		56.84		0.06		58.02
Total	**56.14**	**2.22**	**156.90**	**0.30**		**0.00**	**20.16**		**0.00**	**20.15**	**2,667.44**	**6,860.84**		**10.62**	**0.16**	**9,801.82**

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	1.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	13.47					0.00	0.00		0.00	0.00						0.00
Hearth	0.66	0.00	0.04	0.00		0.00	0.46		0.00	0.45	0.00	7,204.24		0.14	0.13	7,248.08
Landscaping	0.98	0.37	31.78	0.00		0.00	0.17		0.00	0.17		56.84		0.06		58.02
Total	**16.57**	**0.37**	**31.82**	**0.00**		**0.00**	**0.63**		**0.00**	**0.62**	**0.00**	**7,261.08**		**0.20**	**0.13**	**7,306.10**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Table HR-1
Risks and Hazards Construction-Related
Significance Thresholds

Pollutant	Construction-Related Thresholds
Risks and Hazards – TACs & $PM_{2.5}$ (Individual Project)	Increased cancer risk of >10.0 in a million Increased non-cancer risk of >1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase: >0.3 µg/m^3 annual average

Screening Level Construction-related Health Risk Analysis

Combustion emissions from construction equipment would be generated during project construction and could expose adjacent sensitive receptors to DPM and other TACs. DPM exhaust emissions for on-site project construction from off-road heavy equipment were calculated using the CalEEMod 2013.2.2 computer model. CalEEMod estimates construction activities to require approximately eight years with downtime for weekends and holidays.

The predicted maximum one-hour DPM concentration is 0.085 µg/m^3 resulting from on-site total project DPM emissions of 0.96 tons. The hourly to annual scaling factor is 0.1. AERSCREEN output thus indicates that project construction will produce a maximum annual DPM concentration of 0.0085 µg/m^3. This is less than the individual project PM-2.5 significance threshold of 0.3 µg/m^3.

The excess individual cancer risk factor for DPM exposure is approximately 300 in a million per 1 µg/m^3 of lifetime exposure. More recent research has determined that young children are substantially more sensitive to DPM exposure risk. If exposure occurs in the first several years of life, an age sensitivity factor (ASF) of 10 should be applied. For toddlers though mid-teens, the ASF is 3. The DPM exposure risk from construction exhaust thus depends upon the age of the receptor population as follows:

Age Group	Excess Cancer Risk*
Infants	3.0 in a million
Children	0.9 in a million
Adults	0.3 in a million

*DPM (µg/m^3) * ASF * 300 x 10^{-6} /70 years

The maximum individual cancer risk would be below the 10 in a million significance threshold.

CANCER RISK AND CHRONIC NON-CANCER HEALTH RISKS AT THE CLOSEST SENSITIVE RECEPTORS DUE TO DPM EXPOSURE DURING PROJECT CONSTRUCTION

	$PM_{2.5}$ Exposure, Excess Cancer Risk, and Non-Cancer Chronic Hazard Index from Project Construction Activities at Closest Receptors
Maximum One-Hour $PM_{2.5}$	0.0885 $\mu g/m^3$
Annual Average $PM_{2.5}$ (one-hour x 0.1)	0.0.009 $\mu g/m^3$
Annual Average $PM_{2.5}$ Significance Threshold	0.3 $\mu g/m^3$
Exceeds Significance Threshold?	No
Age-Weighted Excess Risk for Infants	3.0 in a million
Children	0.9 in a million
Adults	0.3 in a million
Cancer Risk Significance Threshold	Excess Cancer Risk >10 x 10^{-6}
Exceeds Threshold?	**No**
Chronic Non-Cancer Hazard Index	0.018
Chronic Non-Cancer Significance Threshold	Hazard Index >1.0
Exceeds Significance Threshold?	No

- The excess individual cancer risk factor for DPM exposure is approximately 300 in a million per 1 $\mu g/m^3$ of lifetime exposure (DPM ($\mu g/m^3$) x ASF x 300 x 10^{-6}) / 70 years. More recent research has determined that young children are substantially more sensitive to DPM exposure risk. If exposure occurs in the first several years of life, an age sensitivity factor (ASF) of 10 should be applied. For toddlers though mid-teens, the ASF is 3.

SOURCES: A screening-level individual cancer analysis was conducted to determine the maximum PM2.5 concentration from diesel exhaust. This concentration was combined with the DPM exposure unit risk factor to calculate the inhalation cancer risk from project-related construction activities at the closest sensitive receptor. The EPA AERSCREEN air dispersion model was used to evaluate concentrations of DPM and PM2.5 from diesel exhaust. The AERSCREEN model was developed to provide an easy to use method of obtaining pollutant concentration estimates and is a single source Gaussian plume model which provides a maximum one-hour ground-level concentration. The model output for this analysis is included in this report.

TITLE: Esperanza Option 1

********** AREA PARAMETERS **********

SOURCE EMISSION RATE:	0.340E-02	g/s	0.270E-01	lb/hr
AREA EMISSION RATE:	0.481E-08	g/(s-m2)	0.382E-07	lb/(hr-m2)
AREA HEIGHT:	4.57	meters	15.00	feet
AREA SOURCE LONG SIDE:	841.25	meters	2760.00	feet
AREA SOURCE SHORT SIDE:	841.25	meters	2760.00	feet
INITIAL VERTICAL DIMENSION:	4.57	meters	15.00	feet
RURAL OR URBAN:	URBAN			
POPULATION:	67000			
INITIAL PROBE DISTANCE =	5000.	meters	16404.	feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********

25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

SECTOR	Zo SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	0.8851E-01	45	575.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 249.8 / 310.9 (K)

MINIMUM WIND SPEED: 2.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	01	1	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-37.34	0.346	-9.000	0.020	-999.	468.	85.2	1.000	1.50	0.35	2.50

HT	REF TA	HT
10.0	249.8	2.0

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR	MO	DY	JDY	HR
10	01	01	1	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-37.34	0.346	-9.000	0.020	-999.	468.	85.2	1.000	1.50	0.35	2.50

HT	REF TA	HT
10.0	249.8	2.0

********** AERSCREEN AUTOMATED DISTANCES **********

OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.6456E-01	2524.99	0.9976E-02
25.00	0.6583E-01	2550.00	0.9849E-02
50.01	0.6712E-01	2575.00	0.9726E-02
75.00	0.6837E-01	2600.00	0.9605E-02
100.00	0.6960E-01	2625.01	0.9486E-02
125.00	0.7079E-01	2650.00	0.9370E-02
150.01	0.7195E-01	2675.00	0.9256E-02
174.99	0.7308E-01	2700.00	0.9145E-02
200.00	0.7419E-01	2725.01	0.9036E-02
225.00	0.7527E-01	2749.99	0.8929E-02
250.00	0.7632E-01	2775.00	0.8825E-02
275.00	0.7736E-01	2800.00	0.8723E-02
300.00	0.7838E-01	2825.00	0.8623E-02
325.00	0.7938E-01	2849.99	0.8526E-02
350.00	0.8042E-01	2875.00	0.8429E-02
375.00	0.8148E-01	2900.00	0.8334E-02
400.00	0.8251E-01	2925.00	0.8241E-02
425.00	0.8360E-01	2950.01	0.8149E-02
450.00	0.8461E-01	2975.00	0.8060E-02
475.01	0.8552E-01	3000.00	0.7973E-02
500.00	0.8628E-01	3025.00	0.7887E-02
525.00	0.8738E-01	3050.01	0.7802E-02
550.00	0.8822E-01	3075.00	0.7720E-02
575.01	0.8851E-01	3100.00	0.7639E-02
599.99	0.8381E-01	3125.00	0.7560E-02
625.00	0.7215E-01	3150.00	0.7482E-02
650.00	0.6494E-01	3174.99	0.7405E-02
675.00	0.5950E-01	3200.00	0.7329E-02
699.99	0.5543E-01	3225.00	0.7255E-02
725.00	0.5471E-01	3250.00	0.7182E-02
750.00	0.5145E-01	3274.99	0.7110E-02
775.00	0.4860E-01	3300.00	0.7040E-02
800.01	0.4609E-01	3325.00	0.6970E-02
825.00	0.4384E-01	3350.00	0.6902E-02
850.00	0.4185E-01	3375.01	0.6836E-02
875.00	0.4002E-01	3400.00	0.6770E-02
900.01	0.3838E-01	3425.00	0.6705E-02
924.99	0.3687E-01	3450.00	0.6641E-02
950.00	0.3548E-01	3475.01	0.6578E-02
975.00	0.3420E-01	3499.99	0.6516E-02
1000.00	0.3302E-01	3525.00	0.6455E-02
1024.99	0.3191E-01	3550.00	0.6395E-02
1050.00	0.3087E-01	3575.00	0.6336E-02
1075.00	0.2991E-01	3599.99	0.6278E-02
1100.00	0.2901E-01	3625.00	0.6221E-02
1125.01	0.2816E-01	3650.00	0.6165E-02
1150.00	0.2735E-01	3675.00	0.6110E-02
1175.00	0.2659E-01	3700.01	0.6055E-02

1200.00	0.2586E-01
1225.01	0.2518E-01
1250.00	0.2454E-01
1275.00	0.2392E-01
1300.00	0.2332E-01
1325.01	0.2276E-01
1349.99	0.2222E-01
1375.00	0.2170E-01
1400.00	0.2121E-01
1425.00	0.2073E-01
1449.99	0.2028E-01
1475.00	0.1984E-01
1500.00	0.1942E-01
1525.00	0.1902E-01
1550.01	0.1863E-01
1575.00	0.1825E-01
1600.00	0.1789E-01
1625.00	0.1755E-01
1650.01	0.1721E-01
1674.99	0.1688E-01
1700.00	0.1656E-01
1725.00	0.1625E-01
1750.00	0.1596E-01
1774.99	0.1567E-01
1800.00	0.1540E-01
1825.00	0.1513E-01
1850.00	0.1487E-01
1875.01	0.1462E-01
1900.00	0.1437E-01
1925.00	0.1413E-01
1950.00	0.1390E-01
1975.01	0.1368E-01
1999.99	0.1346E-01
2025.00	0.1325E-01
2050.00	0.1304E-01
2075.00	0.1284E-01
2099.99	0.1265E-01
2125.00	0.1246E-01
2150.00	0.1227E-01
2175.00	0.1209E-01
2199.99	0.1192E-01
2225.00	0.1174E-01
2250.00	0.1157E-01
2275.00	0.1141E-01
2300.01	0.1125E-01
2325.00	0.1110E-01
2350.00	0.1094E-01
2375.00	0.1080E-01
2400.01	0.1065E-01
2424.99	0.1051E-01
2450.00	0.1037E-01
2475.00	0.1024E-01
2500.00	0.1010E-01
3725.00	0.6002E-02
3750.00	0.5949E-02
3775.00	0.5898E-02
3800.01	0.5847E-02
3825.00	0.5797E-02
3850.00	0.5747E-02
3875.00	0.5699E-02
3900.00	0.5651E-02
3924.99	0.5603E-02
3950.00	0.5557E-02
3975.00	0.5511E-02
4000.00	0.5465E-02
4024.99	0.5420E-02
4050.00	0.5376E-02
4075.00	0.5333E-02
4100.00	0.5290E-02
4125.00	0.5248E-02
4150.00	0.5206E-02
4175.00	0.5164E-02
4200.00	0.5124E-02
4225.01	0.5084E-02
4250.00	0.5044E-02
4275.00	0.5005E-02
4300.00	0.4966E-02
4325.00	0.4928E-02
4350.00	0.4890E-02
4375.00	0.4853E-02
4400.01	0.4816E-02
4425.00	0.4780E-02
4450.00	0.4744E-02
4475.00	0.4709E-02
4500.00	0.4674E-02
4525.00	0.4640E-02
4550.00	0.4606E-02
4575.00	0.4572E-02
4599.99	0.4539E-02
4625.00	0.4507E-02
4650.00	0.4475E-02
4675.00	0.4443E-02
4700.00	0.4411E-02
4725.00	0.4381E-02
4750.00	0.4350E-02
4775.00	0.4320E-02
4800.00	0.4290E-02
4825.00	0.4260E-02
4850.00	0.4231E-02
4875.00	0.4203E-02
4900.00	0.4174E-02
4925.00	0.4146E-02
4950.00	0.4118E-02
4975.00	0.4091E-02
5000.00	0.4064E-02

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.8856E-01	0.8856E-01	0.8856E-01	0.8856E-01	N/A
DISTANCE FROM SOURCE	568.99 meters				
IMPACT AT THE AMBIENT BOUNDARY	0.6456E-01	0.6456E-01	0.6456E-01	0.6456E-01	N/A
DISTANCE FROM SOURCE	1.00 meters				