

APPENDIX A

Air Quality Study

Air Quality Study

for the

Crenshaw Crossing Project

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EXECUTIVE SUMMARY

This Air Quality Study assesses and discusses the potential air quality impacts that may occur with the Crenshaw Crossing Project (Project), located in the City of Los Angeles. The analysis estimates future emission levels at surrounding land uses resulting from construction and operation of the Project and identifies the potential for significant impacts. An evaluation of the Project's contribution to potential cumulative air quality impacts is also provided. Air quality worksheets are provided in **Attachment A: CalEEMod Air Quality Emission Output Files**.

This report summarizes the potential for the Project to conflict with an applicable air quality plan; violate an air quality standard or threshold; result in a cumulatively net increase of criteria pollutant emissions; expose sensitive receptors to substantial pollutant concentrations; or create objectionable odors affecting a substantial number of people. The findings of the analyses are as follows:

- The Project would be consistent with air quality policies set forth by the South Coast Air Quality Management District (SCAQMD) and the Air Quality Management Plan.
- Construction and operational emissions would not contribute to short- or long-term emissions that would increase the carcinogenic effects on sensitive receptors. Emissions associated with operation would not exceed the SCAQMD-recommended thresholds. Thus, the Project would not result in a regional violation of applicable air quality standards or jeopardize the timely attainment of such standards in the South Coast Air Basin.
- Operation of the Project will not employ toxic air contaminant-emitting processes. No substantial pollutant concentration would be generated.
- Project construction and operations would not result in significant levels of odors.
- The Project would result in less than significant cumulative air quality impacts during construction and operation of the Project.

INTRODUCTION

This Air Quality Study was prepared to evaluate the potential impacts during construction and operation of the Crenshaw Crossing (Project) in the City of Los Angeles, California. The report provides a summary of the Project components; describes the existing regulatory framework for air pollutants; discusses the environmental setting of the Project; and assesses the potential environmental impacts pertaining to air quality that may result from Project implementation. Determination of significance for Project impacts is based on analysis in accordance with the applicable regulatory thresholds.

PROJECT DESCRIPTION

The Project site is comprised of six parcels generally bounded by W. Exposition Boulevard to the north, W. Obama Boulevard to the south, S. Bronson Avenue to the east, and S. Victoria Avenue to the west, with Crenshaw Boulevard bisecting the two blocks.

Site A is west of Crenshaw Boulevard and is located at 3606 & 3633 W Exposition Boulevard and is comprised of one lot with the Assessor Parcel Number (APN) 5046-022-900. Site B is east of Crenshaw Boulevard located at 3630 S Crenshaw Boulevard; 3502 & 3510 W Exposition Boulevard and 3631 & 3633 S Bronson Avenue; 3515 & 3519 W Obama Boulevard and 3642, 3644, & 3646 S Crenshaw Boulevard; 3505 W Obama Boulevard; 3635, 3639, & 3645 S Bronson Ave and 3501 W Obama Boulevard. The Project Site is located within the Crenshaw Corridor Specific Plan, Subarea A, in the West Adams - Baldwin Hills – Leimert Area in the City, as shown in **Figure 1: Regional and Local Vicinity**. The Project site is located south of the Santa Monica (I-10) Freeway and west of the Harbor Freeway (Interstate-110/State Route 110).

The proposed Project includes a mixed-use development consisting of approximately 380,112 square feet of floor area, made up of approximately 339,116 square feet for the residential component within 401 residential units and approximately 40,996 square feet for the commercial and community spaces component. Of the total floor area, approximately 206,803 square feet would be provided on Site A, while 173,309 square feet would be provided on Site B. The residential component would be located above the commercial uses on floors four (4) through eight (8) on Site A, and on floors three (3) through eight (8) on Site B. Also, a low-rise, three-story residential portion of Site A would be located along Victoria Avenue that would provide a transitional buffer between the lower-density residential uses across the Project site and the Project's higher density and commercial uses.

REGULATORY SETTING

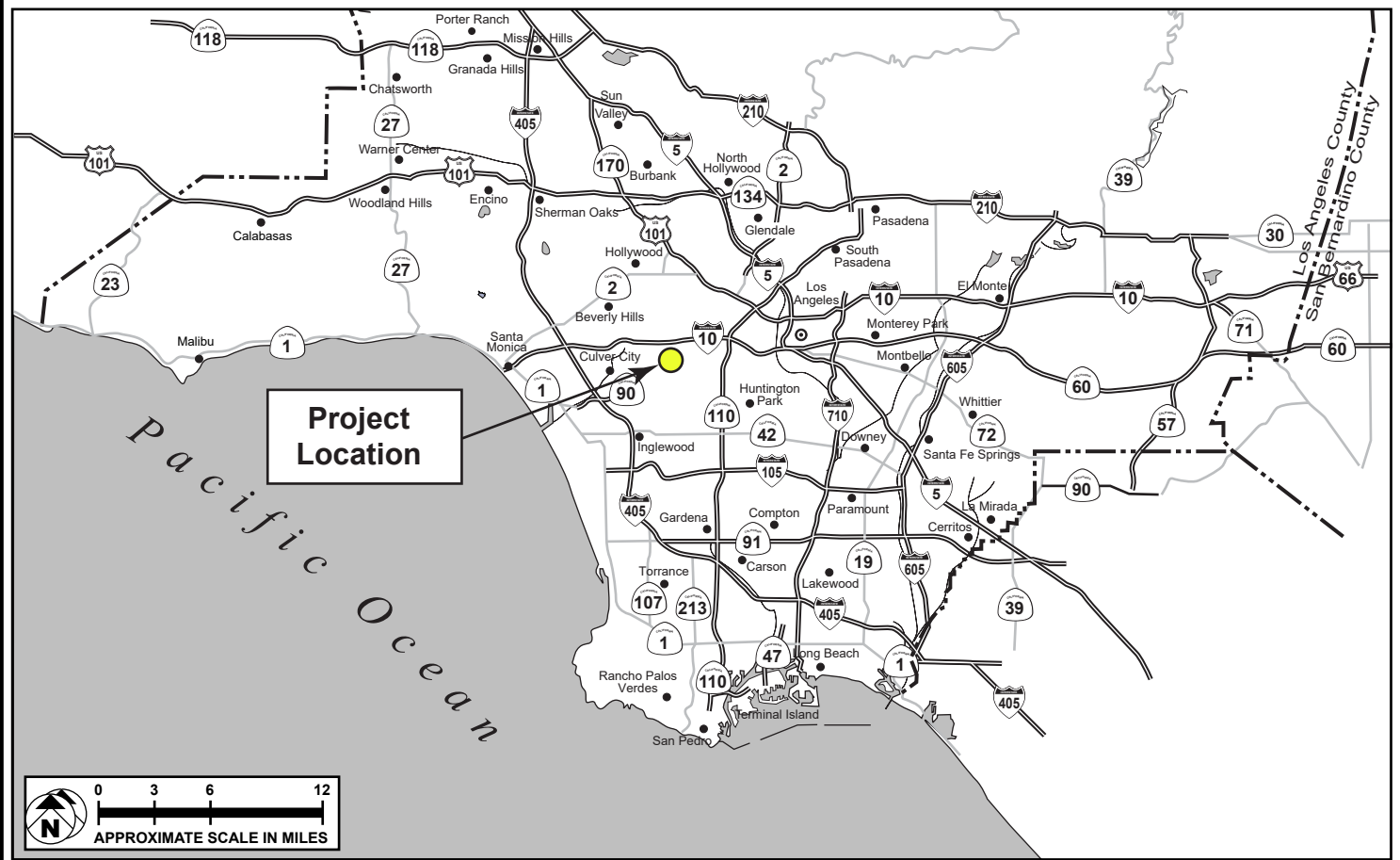
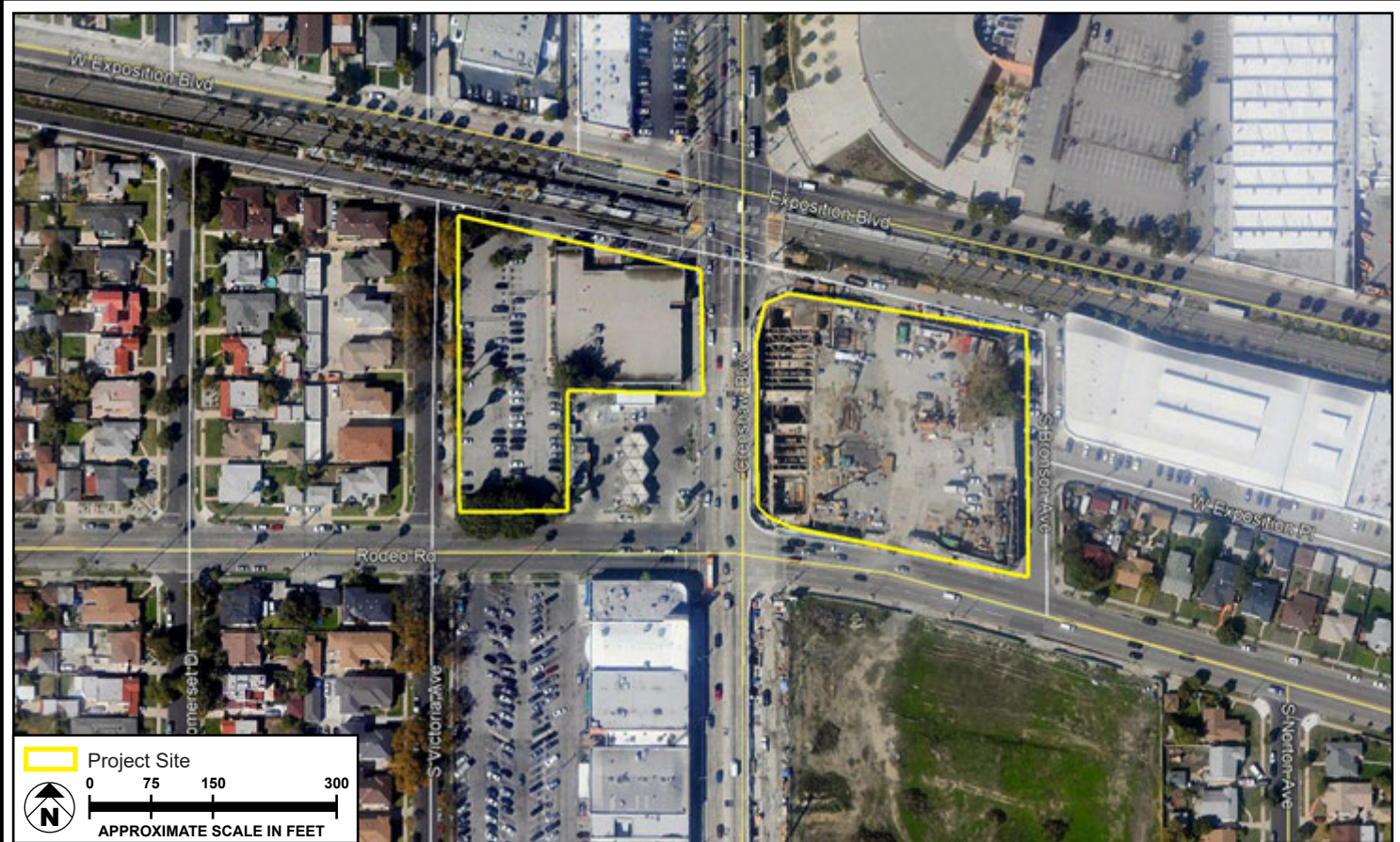
Ambient air quality emissions present complex environmental issues that require regulatory attention on both large and small scales. The cumulative nature of project-level and localized emissions contributing to greater regional conditions warrants that regulatory policies be instituted on national, state, and regional

levels to address air quality concerns. The following sections outline the applicable regulatory framework that exists at the national, state, and regional levels for air quality.

Background

The United States Environmental Protection Agency (USEPA) is responsible for federal oversight and enforcement of air quality management policies under the 1970 Clean Air Act (CAA). Each individual state is tasked with preparing and adhering to State Implementation Plans¹ (SIPs) for achieving the goals set forth within the CAA. California has some of the most stringent air quality policies in the country and, through the California Air Resources Board (CARB) branch of the California Environmental Protection Agency (CalEPA), has developed its own ambient air quality standards (AAQS).

1 A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain National Ambient Air Quality Standards.



SOURCE: Google Earth - 2019; Meridian Consultants, LLC - 2019

FIGURE 1

The state is divided into air quality jurisdictions; each jurisdiction is governed by a regional air district that oversees policy implementation, permitting of air pollution emission sources, and enforcement of regulatory requirements. Six criteria air pollutants (CAPs) are monitored at the federal, state, and regional levels. These six CAPs—ozone, particulate matter PM10 and PM2.5, nitrogen dioxide, carbon monoxide, lead, and sulfur dioxide—were identified based on a consensus of decades of research that concluded inhalation of each of the chemicals results in adverse health effects in humans. The six pollutants are identified below in **Table 1: Sources and Health Effects of Criteria Air Pollutants**, along with their common sources and primary health effects from inhalation exposure.

Table 1
Sources and Health Effects of Criteria Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O3)	Formed when VOCs and NOx react in the presence of sunlight; VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil), solvents, petroleum processing, and storage and pesticides	Breathing difficulties; lung tissue damage; damage to rubber and some plastics
Respirable particulate matter (PM10)	Road dust, windblown dust (agriculture) and construction (fireplaces); also formed from other pollutants (e.g., acid rain, NOx, oxides of sulfur [SOx], organics) and from incomplete combustion of any fuel	Increases respiratory disease, lung damage, cancer, premature death; reduced visibility; surface soiling
Fine particulate matter (PM2.5)	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; also formed from reaction of other pollutants (e.g., acid rain, NOx, SOx, organics)	Increases respiratory disease, lung damage, cancer, premature death; reduced visibility; surface soiling
Carbon monoxide (CO)	Any source that burns fuel, such as automobiles, trucks, heavy construction equipment, farming equipment, and residential heating	Chest pain in heart patients; headaches; reduced mental alertness
Nitrogen dioxide (NO2)	See carbon monoxide.	Lung irritation and damage
Lead (Pb)	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint	Learning disabilities; brain and kidney damage
Sulfur dioxide (SO2)	Coal- or oil-burning power plants and industries, refineries, diesel engines	Increases lung disease and breathing problems for asthmatics; reacts in the atmosphere to form acid rain

Source: California Air Resources Board, "ARB Fact Sheet: Air Pollution and Health" (2009), <http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm> (accessed October 2019).

Ozone

Ozone (O3) is a gas formed when volatile organic compounds (VOCs) and oxides of nitrogen (NOx), both byproducts of internal combustion engine exhaust and other sources, undergo slow photochemical

reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months, when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

Volatile Organic Compounds

VOCs are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Adverse effects on human health are not caused directly by VOCs, but rather by reactions of VOCs to form secondary air pollutants, including ozone. VOCs themselves are not criteria pollutants; however, they contribute to the formation of ozone and are regulated under state policies.

Respirable Particulate Matter

Respirable particulate matter (PM₁₀) consists of extremely small, suspended particles or droplets 10 micrometers (µm) or smaller in diameter. Some sources of PM₁₀, like pollen and windstorms, are naturally occurring. However, in populated areas, most PM₁₀ is caused by road dust, diesel soot, combustion products, the abrasion of tires and brakes, and construction activities.

Fine Particulate Matter

PM_{2.5} refers to fine particulate matter that is 2.5 µm or smaller in size. Sources of PM_{2.5} include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles, such as buses and trucks. These fine particles are also formed in the atmosphere when gases, such as sulfur dioxide (SO₂), NO_x, and VOCs are transformed in the air by chemical reactions.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and because motor vehicles operating at slow speeds are the primary source of CO in the South Coast Air Basin (Basin), the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). NO₂ is also a byproduct of fuel combustion. The principle form of NO₂ produced by combustion is NO, but NO reacts quickly to form NO₂, creating the mixture of NO and NO₂ referred to as NO_x. NO₂ acts as an acute irritant and, in equal concentrations, is more injurious than NO.

At atmospheric concentrations, however, NO_x is only potentially irritating. NO₂ absorbs blue light, the result of which is a brownish-red cast to the atmosphere and reduced visibility.

Lead

Lead (Pb) occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so most such combustion emissions are associated with off-road vehicles, such as race cars, that use leaded gasoline. Other sources of Pb include the manufacturing and recycling of batteries; sanding or removal of lead-based paint; ink; ceramics; ammunition; and secondary lead smelters.

Sulfur Dioxide

SO₂ is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of the burning of high-sulfur-content fuel oils and coal, as well as from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfates (SO₄).

Federal

The USEPA sets national vehicle and stationary source emission standards; oversees approval of all SIPs; provides research and guidance for air pollution programs; and sets National Ambient Air Quality Standards (NAAQS). The NAAQS for the six CAPs are shown in **Table 2: Ambient Air Quality Standards** and were identified from provisions of the 1970 CAA. The sections of the CAA that are most applicable to the Project include Title I: Nonattainment Provisions and Title II: Mobile Source Provisions.

The CAA and the promulgated standards have evolved as a living document over time as research into the effects of air pollution has enhanced regulatory understanding of the associated issues. The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. On the national level, the USEPA designates regions as achieving “attainment” or suffering from “nonattainment” of the NAAQS based on air quality monitoring data. Regions that are designated as being in nonattainment are responsible for devising localized strategies for reducing emissions of CAPs and achieving regional attainment within a predetermined timeframe set by the USEPA.

The NAAQS were further amended in July 1997 to include an 8-hour standard for ozone and to adopt an NAAQS for PM_{2.5}. The NAAQS were amended again in September 2006 to include an established methodology for calculating PM_{2.5}, as well as to revoke the annual PM₁₀ threshold. Additional revisions to the AAQS may be implemented in the future as the science of air quality progresses.

Table 2
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O3)	1 hour	0.09 ppm (180 µg/m ³)	Ultraviolet photometry	—	Same as primary standard	Ultraviolet photometry
	8 hours	0.07 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable particulate matter (PM10)	24 hours	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 hours	No separate state standard	Gravimetric or beta attenuation	35 µg/m ³	Same as primary standard	Inertial separation and gravimetric analysis
	Annual arithmetic mean	12 µg/m ³		15 µg/m ³		
Carbon monoxide (CO)	8 hours	9.0 ppm (10 mg/m ³)	Nondispersive infrared photometry (NDIR)	9 ppm (10 mg/m ³)	None	NDIR
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
Nitrogen dioxide (NO2)	Annual arithmetic mean	0.03 ppm (57 µg/m ³)	Gas phase chemiluminescence	0.053 ppm (100 µg/m ³)	Same as primary standard	Gas phase chemiluminescence
	1 hour	0.18 ppm (339 µg/m ³)		0.100 ppm (188 µg/m ³)		

Source: California Air Resources Board website at: <http://www.arb.ca.gov/research/aaqs/aaqs.htm> (accessed October 2019).

Note: ppm = parts per million.

State

The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. The CARB is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions and the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by

the state. The CAAQS are provided in **Table 2**; it should be noted that the CAAQS are generally more stringent than the NAAQS, reflecting California's diligent efforts toward reducing air pollution and improving air quality.

Regional

In California, jurisdiction over air quality management, enforcement, and planning divided into 35 geographic regions. Within each region, a local air district is responsible for oversight of air quality monitoring, modeling, permitting, and enforcement to ensure that regulatory violations are avoided wherever possible.

The Project site is located within the 6,700-square-mile Basin and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin includes the southern two-thirds of Los Angeles County, all of Orange County, and the western urbanized portions of Riverside and San Bernardino Counties.

South Coast Air Quality Management District

SCAQMD shares responsibility with CARB for ensuring that all state and federal AAQS are achieved and maintained over an area of approximately 10,743 square miles. This area includes the South Coast and Salton Sea Air Basins, all of Orange County, and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties. It does not include the Antelope Valley or the nondesert portion of western San Bernardino County.

SCAQMD is responsible for controlling emissions, primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the air basins. SCAQMD, in coordination with the Southern California Association of Governments (SCAG), is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the air basins. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as being in nonattainment of the NAAQS or CAAQS. The term "nonattainment area" is used to refer to an air basin in which one or more AAQS are exceeded. SCAQMD also prepares the SIP for its jurisdiction and promulgates rules and regulations. The SIP includes strategies and tactics to be used to attain the federal ozone standards in the South Coast Air Basin. The SIP elements are taken from the most recent AQMP.

SCAQMD approved a Final 2016 AQMP on March 3, 2017.² The 2016 AQMP includes transportation control measures developed by SCAG from its *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*, as well as the integrated strategies and measures needed to meet the NAAQS. The 2016 AQMP demonstrates attainment of the 1-hour and 8-hour ozone NAAQS, as well as the latest 24-hour and annual PM_{2.5} standards.

SCAQMD is responsible for limiting the amount of emissions that can be generated throughout the air basins by various stationary, area, and mobile sources. Specific rules and regulations have been adopted by the SCAQMD Governing Board that limit the emissions that can be generated by various uses/activities and identifying specific pollution-reduction measures that must be implemented in association with various uses and activities. These rules regulate not only the emissions of the federal and state criteria pollutants, but also toxic air contaminants (TACs) and acutely hazardous materials. The rules are also subject to ongoing refinement by SCAQMD.

Among the SCAQMD rules applicable to the Project are Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). Rule 403 requires the use of stringent best available control measures (BACMs) to minimize PM₁₀ emissions during grading and construction activities. Rule 1113 limits the VOC content of coatings, with a VOC content limit for flat coatings of 50 grams per liter (g/L).³ Additional details regarding these rules and other potentially applicable rules are presented as follows.

Rule 402 (Nuisance): This rule states that a “person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or to the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.”⁴

Rule 403 (Fugitive Dust). This rule requires fugitive dust sources to implement BACMs for all sources and prohibits all forms of visible particulate matter from crossing any property line. BACMs may include application of water or chemical stabilizers to disturbed soils covering haul vehicles; restricting vehicle speeds on unpaved roads to 15 miles per hour (mph); sweeping loose dirt from paved site-access roadways; cessation of construction activity when winds exceed 25 mph; and establishing a permanent

2 South Coast Air Quality Management District (SCAQMD), “Final 2016 Air Quality Management Plan” (2016), accessed October 2019, <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>.

3 SCAQMD, “Rule 1113 Architectural Coating” (amended September 6, 2013), accessed October 2019, <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf>.

4 SCAQMD, “Rule 402—Nuisance,” accessed October 2019, <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf>.

ground cover on finished sites. SCAQMD Rule 403 is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust (see also Rule 1186).

Rule 1113 (Architectural Coatings). This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Rule 1146.2 (Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters). This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NOx emissions from natural-gas-fired water heaters, boilers, and process heaters as defined in this rule.

Rule 1186 (PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations). This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Stationary emissions sources subject to these rules are regulated through SCAQMD's permitting process. Through this permitting process, SCAQMD also monitors the amount of stationary emissions being generated and uses this information in developing AQMPs.

ENVIRONMENTAL SETTING

Regional Air Quality

The USEPA is the federal agency responsible for overseeing the country's air quality and setting the NAAQS for the CAPs. The NAAQS were devised based on extensive modeling and monitoring of air pollution across the country; they are designed to protect public health and prevent the formation of atmospheric ozone. Air quality of a region is considered to be in attainment of the NAAQS if the measured ambient air pollutant levels do not exceed the applicable concentration threshold. **Table 2** presents the federal and state AAQS.

As noted previously, the CARB is the state agency responsible for setting the CAAQS. Air quality of a region is considered to be in attainment of the CAAQS if the measured ambient air pollutant levels for O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and Pb are not exceeded, and all other standards are not equaled or exceeded at any time in any consecutive 3-year period. The CAAQS are also presented in **Table 2**.

For evaluation purposes, the SCAQMD territory is divided into 38 source receptor areas (SRAs). These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area.

The Project site is within SRA 1, Central Los Angeles County.⁵ The nearest air monitoring station SCAQMD operates is located at 1630 North Main Street.⁶ This station monitors O₃, NO₂, PM₁₀ and PM_{2.5}. **Table 3: Air Quality Monitoring Summary** summarizes published monitoring data from 2016 through 2018, the most recent 3-year period available. The data show that during the past few years, the region has exceeded the O₃, PM₁₀ and PM_{2.5} standards.

5 SCAQMD, *General Forecast Areas and Air Monitoring Areas*, map, accessed October 2019, <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.

6 South Coast Air Quality Management District, *Site Survey Report for Los Angeles (Central)–North Main Street*, AQS ID 060371103, accessed October 2019, <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/aaqmnp-losangeles.pdf?sfvrsn=16>.

Table 3
Air Quality Monitoring Summary

Air Pollutant	Average Time (Units)	2016	2017	2018
Ozone (O3)	State Max 1 hour (ppm)	0.103	0.116	0.098
	Days > CAAQS threshold (0.09 ppm)	2	6	2
	National Max 8 hour (ppm)	0.078	0.086	0.073
	Days > NAAQS threshold (0.075 ppm)	4	14	4
	State Max 8 hour (ppm)	0.078	0.086	0.074
	Days > CAAQS threshold (0.07 ppm)	4	16	4
Carbon monoxide (CO)		—	—	—
Nitrogen dioxide (NO2)	National Max 1 hour (ppm)	0.064	0.081	0.070
	Days > NAAQS threshold (0.100 ppm)	0	0	0
	State Max 1 hour (ppm)	0.064	0.080	0.070
	Days > CAAQS threshold (0.18 ppm)	0	0	0
Respirable particulate matter (PM10)	National Max (µg/m3)	64.0	64.6	68.2
	National Annual Average (µg/m3)	25.8	25.7	30.2
	Days > NAAQS threshold (150 µg/m3)	0	0	0
	State Max (µg/m3)	74.6	96.2	81.2
	State Annual Average (µg/m3)	—	—	34.0
	Days > CAAQS threshold (50 µg/m3)	21	40	31
Fine particulate matter (PM2.5)	National Max (µg/m3)	44.3	54.9	61.4
	National Annual Average (µg/m3)	11.7	12.0	12.8
	Days > NAAQS threshold (35 µg/m3)	2	6	6
	State Max (µg/m3)	49.4	61.7	65.3
	State Annual Average (µg/m3)	12.0	16.3	16.0

Source: CARB, iADAM: Air Quality Data Statistics.

Note: (—) = Data not available.

The USEPA and the CARB designate air basins where AAQS are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

The current attainment designations for the Basin are shown in **Table 4: South Coast Air Basin Attainment Status**. The Basin is currently designated as being in nonattainment at the federal level for O3 and PM2.5; and at the state level for O3, PM10, and PM2.5.

Table 4
South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone (O ₃)	Nonattainment	Nonattainment
Carbon monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen dioxide (NO ₂)	Attainment	Unclassified/Attainment
Sulfur dioxide (SO ₂)	Attainment	Attainment
Respirable particulate matter (PM ₁₀)	Nonattainment	Attainment
Fine particulate matter (PM _{2.5})	Nonattainment	Nonattainment

Source: California Air Resources Board (CARB) Area Designation Maps / State and National, accessed October 2019, <http://www.arb.ca.gov/design/adm/adm.htm>, last reviewed May 5, 2016.

Existing Air Quality Emissions

The Project site occupies a combined area of approximately 182,440-square-feet (4.19 acres); Site A is 72,260 sf and Site B is 76,540 sf. Site A is developed with a one-story 22,401 square-foot probation office owned and operated by the County and Site B is an undeveloped vacant lot owned and used by Metro as a construction staging area. However, according to the LADOT Transportation Assessment Memorandum of Understanding (MOU) approved by the City, the site is not an existing active land use. Conservatively, existing emissions generated from the site were not assumed for the analysis.

Sensitive Receptors

The SCAQMD considers a sensitive receptor to be a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Sensitive receptors are identified near sources of air pollution to determine the potential for health hazards. Locations evaluated for exposure to air pollution include but are not limited to residences, schools, hospitals, and convalescent facilities.

Multi-family residential neighborhoods lie directly adjacent to the north, south, and east and across Butler Avenue to west of the Project site. **Figure 2: Sensitive Receptor Map**, provides a detailed image of the proximal land uses and identifies the sensitive receptors closest to the Project site. These uses represent the nearest sensitive receptors who may be impacted by emissions of air pollutants from Project implementation.



SOURCE: Google Earth - 2019

FIGURE 2

METHODOLOGY

Construction

Construction of the Project has the potential to generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment and through vehicle trips generated from workers and haul trucks traveling to and from the Project site. In addition, fugitive dust emissions would result from various soil-handling activities. Mobile-source emissions, primarily NO_x, would result from the use of construction equipment. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The project would be required to comply with SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located with the SCAB. Therefore, the following conditions, which would be required to reduce fugitive dust in compliance with SCAQMD Rule 403, were included in CalEEMod:

- **Control Efficiency of PM₁₀.** During construction, methods and techniques should be applied to various operations or equipment when appropriate to reduce estimated emissions related to particulate matter. This includes replacing ground cover in disturbed areas as quick as possible, yielding to emission reduction efficiency of 15 – 49 percent.⁷

In addition, SCAQMD Staff recommends that the Lead Agency require the use of Tier 4 construction equipment of 50 horsepower or greater during construction. Alternative, applicable strategies. Such equipment should be outfitted with Best Available Control Technology (BACT) devices, but not limited to, a CARB certified Level 3 Diesel Particulate Filters (DPF). Level 3 DPFs are capable of achieving at least an 85 percent reduction in particulate matter emissions.⁸ Therefore, the following condition were included in CalEEMod as a regulatory compliance measure:

- **Construction Equipment Controls.** During construction, all off-road construction equipment greater than 50 horsepower shall meet U.S. EPA Tier 3 emission standards with Level 3 DPF to minimize emissions of NO_x associated with diesel construction equipment.

7 SCAQMD, CEQA Handbook, Tables 11-4, p. 11-15 and A11-9-A, page A11-77, accessed October 2019, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-sample-construction-scenario-report.pdf>

8 California Air Resources Board. *Diesel Off-Road Equipment Measure – Workshop*. Page 17, November 16 – 17, 2004, accessed October 2019, https://ww3.arb.ca.gov/msprog/ordiesel/presentations/nov16-04_workshop.pdf

The emissions are estimated using the CalEEMod (Version 2016.3.2) software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is based on outputs from the CARB off-road emissions model (OFFROAD) and the CARB on-road vehicle emissions model (EMFAC), which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on- and off-road vehicles. The input values used in this analysis are based on conservative assumptions in CalEEMod, with appropriate, Project-specific adjustments based on equipment types and expected construction activities. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values for each construction activity. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in **Attachment A**.

Operation

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle trips traveling to and from the Project site. In addition, emissions would result from area sources on site, such as natural gas combustion, landscaping equipment, and use of consumer products.

Operational emissions were estimated using the CalEEMod software, which was used to forecast the daily regional emissions from area sources that would occur during long-term Project operations. In calculating mobile-source emissions, trip-length values were based on the distances provided in CalEEMod.

Area-source emissions are based on natural gas (building heating and water heaters), landscaping equipment, and consumer product (including paint) usage rates provided in CalEEMod. Natural gas usage factors in CalEEMod are based on the California Energy Commission's California Commercial End Use Survey data set, which provides energy demand by building type and climate zone.

Operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline conditions. The maximum daily emissions from operation of the Project are compared to the SCAQMD daily regional numeric indicators.

SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Significance Criteria

The *L.A. CEQA Thresholds Guide* states that the determination of a project's significance on air quality shall be made considering the factors provided in the SCAQMD *CEQA Air Quality Handbook* (Handbook). The City of Los Angeles has not adopted specific Citywide significance thresholds for air quality impacts; rather,

the *L.A. CEQA Thresholds Guide* references the thresholds and methodologies contained in the SCAQMD Handbook evaluating projects in the City.⁹

The thresholds for determining the significance of impacts are set forth by the SCAQMD for both construction and operational emissions. These thresholds are described below.

Construction Emission Thresholds

The Project will have a significant impact if it exceeds the construction thresholds listed in **Table 5: Construction Thresholds**.

Table 5
Construction Thresholds

Pollutant	Construction Emissions (pounds/day)
Volatile organic compounds (VOCs)	75
Nitrogen dioxide (NO ₂)	100
Carbon monoxide (CO)	550
Sulfur dioxide (SO ₂)	150
Respirable particulate matter (PM ₁₀)	150
Fine particulate matter (PM _{2.5})	55

Construction and Operational Localized Significance Thresholds

The local significance thresholds are based on the SCAQMD's Final *Localized Significance Threshold (LST) Methodology* (LST Methodology)¹⁰ guidance document for short-duration construction activities. The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the Project site because of construction activities. The SCAQMD provides voluntary guidance on the evaluation of localized air quality impacts to public agencies conducting environmental review of projects located within its jurisdiction. Localized air quality impacts are evaluated by examining the on-site generation of pollutants and their resulting downwind concentrations. For construction, pollutant concentrations are compared to significance thresholds for particulates (PM₁₀ and PM_{2.5}), CO, and NO₂. The significance threshold for PM₁₀ represents compliance with SCAQMD Rule 403 (Fugitive Dust). The threshold for PM_{2.5} is designed to limit emissions and to allow progress toward attainment of

9 City of Los Angeles, *L.A. CEQA Thresholds Guide* (2006), p. B-1.

10 South Coast Air Quality Management District, *Final Localized Significance Threshold (LST) Methodology*, (June 2003, rev. July 2008).

the AAQS. Thresholds for CO and NO₂ represent the allowable increase in concentrations above background levels that would not cause or contribute to an exceedance of their respective AAQS.

The LST Methodology provides lookup tables of emissions that are based on construction projects of up to 5 acres in size. These LST lookup tables were developed to assist lead agencies with a simple tool for evaluating the impacts from small typical projects. Ambient conditions for Northwest Los Angeles County Coastal, as recorded in SRA 1 by the SCAQMD, were used for ambient conditions in determining appropriate threshold levels. Thresholds for each criteria pollutant for construction activity and Project operation of the 4.19-acre Project site are listed in **Table 6: Localized Significance Thresholds**.

Table 6
Localized Significance Thresholds

Pollutant	Construction	Operational
	pounds/day	
Nitrogen dioxide (NO ₂)	147	147
Carbon monoxide (CO)	1,641	1,641
Respirable particulate matter (PM ₁₀)	14	3.5
Fine particulate matter (PM _{2.5})	7	2

Notes:

Based on a distance to sensitive receptors of 25 meters (82 feet). SCAQMD's Localized Significance Threshold (LST) Methodology for CEQA Evaluations guidance document provides that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.

LST values for 4.19-acre site.

Operational Thresholds

Based on the SCAQMD Handbook, thresholds for each criteria pollutant for the operations of the Project are provided in **Table 7: Operational Thresholds**.

Table 7
Operational Thresholds

Pollutant	Operational Emissions (pounds/day)
Volatile organic compounds (VOCs)	55
Nitrogen dioxide (NO ₂)	55
Carbon monoxide (CO)	550
Sulfur dioxide (SO ₂)	150
Respirable particulate matter (PM ₁₀)	150

Pollutant	Operational Emissions (pounds/day)
Fine particulate matter (PM2.5)	55

Toxic Air Contaminants

As set forth in the *L.A. CEQA Thresholds Guide*, the determination of significance of a project with respect to TACs shall be made on a case-by-case basis, considering the following factors:

- Regulatory framework for toxic materials and process involved;
- Proximity of TACs to sensitive receptors;
- Quantity, volume, and toxicity of the contaminants expected to be emitted;
- Likelihood and potential level of exposure; and
- Degree to which project design will reduce risk of exposure.

Consistency with Applicable Air Quality Plans

Section 15125 of the State CEQA Guidelines requires an analysis of project consistency with applicable governmental plans and policies. In accordance with the SCAQMD Handbook, the following criteria were used to evaluate the Project's consistency with SCAQMD and SCAG regional plans and policies, including the AQMP:

- Will the Project result in any of the following:
 - Increase the frequency or severity of existing air quality violations?
 - Cause or contribute to new air quality violations?
 - Delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP?
- Will the Project exceed the assumptions utilized in preparing the AQMP?
 - Is the Project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based?
 - Does the Project include air quality mitigation measures?
 - To what extent is Project development consistent with the AQMP land use policies?

Cumulative Threshold

SCAQMD recommends that a project be considered to result in a cumulatively considerable impact to air quality if any construction-related emissions and operational emissions from individual development projects exceed the mass daily emissions thresholds for individual projects.¹¹

The SCAQMD neither recommends quantified analyses of the emissions generated by a set of cumulative development projects nor provides thresholds of significance to be used to assess the impacts associated with these emissions.

A project is also considered to result in a cumulatively considerable contribution to significant impacts if the population and employment projections for the project exceed the rate of growth defined in SCAQMD's AQMP.

IMPACT ANALYSIS

Construction

As noted previously, emissions of air pollutants were estimated for construction and operation of the Project using CalEEMod. Information needed to parameterize the Project in CalEEMod was obtained from the construction engineer and the Project architect. As mentioned previously, construction of the Project would begin second quarter of 2021 and is expected to be completed by second quarter of 2023.

Table 8: Project Construction Schedule provides the dates and durations of each of the activities will take place during construction, as well as a brief description of the scope of work. Future dates represent approximations based on the general Project timeline and are subject to change pending unpredictable circumstances that may arise.

Table 8 Project Construction Schedule				
Construction Activity	Start Date	End Date	Duration (Days)	Description
Demolition	3/1/2021	4/30/2021	45	Removal of 12,000 tons of building debris and 6,500 tons of pavement debris
Grading	5/1/2021	6/25/2021	40	Import of 6,500 tons of debris and export of 34,000 tons of debris
Building Construction	6/26/2021	2/16/2021	429	Foundation concrete pour assumed to take place prior to construction of mixed-use development

11 SCAQMD, *White Paper on Regulatory Options for Addressing Cumulative Impacts from Air Pollution Emissions*, board meeting, Agenda No. 29 (September 5, 2003), Appendix D, p. D-3.

Construction Activity	Start Date	End Date	Duration (Days)	Description
Architectural Coating	10/16/2022	2/16/2023	89	Application of architectural coatings to building materials
Paving	2/17/2023	6/1/2023	75	Paving of asphalt surfaces

Note: Refer to **Attachment A.1: Proposed Summer** and **Attachment A.2: Proposed Winter**, Section 3.0: Construction Detail.

An assessment of air pollutant emissions was prepared utilizing the construction schedule in **Table 8**. Construction equipment inventory for each phase of construction was provided by the Applicant. Maximum daily emissions of air pollutants during construction and operation of the Project were calculated using CalEEMod. **Table 9: Maximum Construction Emissions** identifies both unmitigated and mitigated daily emissions that are estimated for peak construction days for each construction year. Based on the modeling, construction of the Project would exceed regional NO_x concentration thresholds without mitigation. With implementation of **Mitigation Measure MM AQ-1**, heavy construction equipment type would include 40 percent Tier 1, 25 percent Tier 2, 25 percent Tier 3, and 10 percent Tier 4. Consequently, as shown in **Table 9**, all criteria air pollutants would be below SCAQMD construction thresholds with implementation of **MM AQ-1**. Construction impacts would be less than significant with mitigation incorporated.

Table 9
Maximum Construction Emissions

Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	pounds/day					
Unmitigated Maximum	35	120	60	<1	14	4
SCAQMD Mass Daily Threshold	75	100	550	150	150	55
Threshold exceeded?	No	Yes	No	No	No	No
Mitigated Maximum	38	84	81	<1	10	5
SCAQMD Mass Daily Threshold	75	100	550	150	150	55
Threshold exceeded?	No	No	No	No	No	No

Source: CalEEMod.

Notes:

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ = particulate matter less than 10 microns; PM_{2.5} = particulate matter less than 2.5 microns; SO_x = sulfur oxides; VOC = volatile organic compounds.

Refer to **Attachments A.1 and A.2**, Sections 3.2 through 3.7, for maximum on-site plus off-site emissions during both the summer and winter seasons.

Operation

The results presented in **Table 10: Maximum Operational Emissions** are compared to the SCAQMD-established operational significance thresholds. Operational emissions will result primarily from passenger vehicles traveling to and from the Project site. As shown in **Table 10**, the operational emissions would not exceed the regional VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} concentration thresholds.

Table 10
Maximum Operational Emissions

Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM 2.5
pounds/day						
Area	9	<1	33	<1	<1	<1
Energy	<1	1	<1	<1	<1	<1
Mobile	7	29	79	<1	27	7
Total	16	30	112	<1	27	8
SCAQMD Mass Daily Threshold	55	55	550	150	150	55
Threshold exceeded?	No	No	No	No	No	No

Source: CalEEMod.

Notes: Totals in table may not appear to add exactly due to rounding in the computer model calculations.

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ = particulate matter less than 10 microns; PM_{2.5} = particulate matter less than 2.5 microns; SO_x = sulfur oxides; VOC = volatile organic compounds.

Refer to **Attachments A.1 and A.2**, Section 2.2, for maximum operational emissions during both the summer and winter seasons.

Localized Significance Thresholds

The result of the LST analysis are provided in **Table 11: Localized Construction and Operational Emissions**. These estimates assume the maximum area that would be disturbed during construction on any given day during Project buildout. Construction would comply with the SCAQMD's Rule 403 (Fugitive Dust), which requires watering of the site during dust-generating construction activities, stabilizing disturbed areas with water or chemical stabilizers, and preventing track-out dust from construction vehicles. As shown in **Table 11**, emissions would not exceed the localized significance construction and operational thresholds.

Table 11
Localized Construction and Operational Emissions

Source	NO _x	CO	PM ₁₀	PM _{2.5}
On-Site Emissions (pounds/day)				
Construction				
Total maximum emissions	47	45	10	3
LST threshold	147	1,641	14	7
Threshold Exceeded?	No	No	No	No

	NOx	CO	PM10	PM2.5
Source	On-Site Emissions (pounds/day)			
Operational				
Project area/energy emissions	1	33	<1	<1
LST threshold	147	1,641	3	2
Threshold Exceeded?	No	No	No	No

Notes:

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

CO = carbon monoxide; NO_x = nitrogen oxide; PM₁₀ = particulate matter less than 10 microns; PM_{2.5} = particulate matter less than 2.5 microns.

*Refer to **Attachments A.1 and A.2**, Sections 3.2 through 3.7, for maximum on-site emissions during both the summer and winter seasons.*

Toxic Air Contaminants

Project construction would result in short-term emissions of diesel particulate matter, which is a TAC. Off-road heavy-duty diesel equipment would emit diesel particulate matter over the course of the construction period. Sensitive receptors are located adjacent to the Project, as shown in **Figure 2**. Localized diesel particulate emissions (strongly correlated with PM_{2.5} emissions) would be minimal and would be substantially below localized thresholds, as shown in **Table 11**. Project compliance with the CARB anti-idling measure, which limits idling to no more than 5 minutes at any location for diesel-fueled commercial vehicles, would further minimize diesel particulate matter emissions in the Project area.

Project operations would generate only minor amounts of diesel emissions from residential delivery trucks and incidental maintenance activities. Trucks would comply with the applicable provisions of the CARB Truck and Bus regulation to minimize and reduce emission from existing diesel trucks. In addition, Project operations would only result in minimal emissions of air toxics from maintenance or other ongoing activities, such as from the use of architectural coatings or household cleaning products. As a result, toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed residential uses within the Project site. Based on the uses expected on the Project site, potential long-term operational impacts associated with the release of TACs would be minimal and would not be expected to exceed the SCAQMD thresholds of significance.

Odors

As shown in **Table 11**, the construction of the Project would result in emissions below the localized significance thresholds. Mandatory compliance with SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. According to the SCAQMD, while almost any source may emit objectionable odors, some land uses are more likely to produce odors because of their operation. Land uses more likely to produce odors include agriculture, chemical plants, composting operations, dairies,

fiberglass molding manufacturing, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants. The Project does not contain any active manufacturing activities and would not convert current agricultural land to residential land uses. Therefore, objectionable odors would not be emitted by the residential uses.

Any unforeseen odors generated by the Project will be controlled in accordance with SCAQMD Rule 402. As previously noted, Rule 402 prohibits the discharge of air contaminants that harm, endanger, or annoy individuals or the public; endanger the comfort, health or safety of individuals or the public; or cause injury or damage to business or property. Failure to comply with Rule 402 could subject the offending facility to possible fines and/or operational limitations in an approved odor control or odor abatement plan.

Consistency with AQMP

The Basin is designated nonattainment at the federal and State level for ozone and PM_{2.5}. SCAQMD developed regional emissions thresholds, as shown in **Table 5** and **Table 7**, to determine whether a project would contribute to air pollutant violations. If a project exceeds the regional air pollutant thresholds, then it would significantly contribute to air quality violations in the Basin.

As shown in **Table 9**, temporary emissions associated with construction of the Project would fall below SCAQMD thresholds for VOCs, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}.

As shown in **Table 10**, long-term emissions associated with operation of the Project would not exceed SCAQMD thresholds for VOCs, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}.

The Project's maximum potential NO_x, CO, PM₁₀, and PM_{2.5} daily emissions during construction and operation were analyzed to determine potential effects on localized concentrations and to determine if the potential exists for such emissions to cause or affect a violation of an applicable AAQS. As shown in **Table 11**, NO_x, CO, PM₁₀, and PM_{2.5} emissions would not exceed the SCAQMD localized significance thresholds.

The Project is also located in an urban area, which would reduce vehicle trips and vehicle miles traveled due to the Project's urban infill characteristic and proximity to public transit stops. These measures and features are consistent with existing recommendations to reduce air emissions.

Cumulative

Development of the Project in conjunction with the related projects near the Project would result in an increase in construction and operational emissions in an already urbanized area of the City. However, cumulative air quality impacts from construction, based on SCAQMD guidelines, are not analyzed in a

manner similar to project-specific air quality impacts. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project-specific impacts. According to the SCAQMD, individual development projects that generate construction or operational emissions that exceed the SCAQMD recommended daily regional or localized thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.

With the implementation of regulatory compliance measures such as Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coating), the Project's construction and operational emissions are not expected to significantly contribute to cumulative emissions for CO, NOx, PM10, and PM2.5. As such, the Project's contribution to cumulative air quality emissions in combination with the related projects would not be cumulatively considerable.

As discussed previously, the Project would not jeopardize the attainment of air quality standards in the 2016 AQMP for the South Coast Air Basin and the Los Angeles County portion of the South Coast Air Basin. As such, the Project would not have a cumulatively considerable contribution to a potential conflict with or obstruction of the implementation of the AQMP regional reduction plans.

MITIGATION MEASURES

Construction emissions have the potential to result in a potentially significant air quality impact related to NOx, thus the following mitigation measure would reduce construction-related NOx impacts:

MM AQ-1 Off-road diesel-fueled heavy-duty construction equipment greater than 50 horsepower (hp) used for this Project shall meet at a minimum the United States Environmental Protection Agency (USEPA) Tier 3 emissions standards and the equipment shall be outfitted with Best Available Control Technology (BACT) devices including a CARB certified Level 3 Diesel Particulate Filter or equivalent control device.

If a minimum of Tier 3 emissions standards cannot be met, the following tier mix is recommended: 40 percent Tier 1, 25 percent Tier 2, 25 percent Tier 3, and 10 percent Tier 4.

With implementation of **MM AQ-1**, construction impacts would remain less than significant.

ATTACHMENT A

CalEEMod Air Quality Emission Output Files

Crenshaw Crossing - Los Angeles-South Coast County, Summer

Crenshaw Crossing

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	401.00	Dwelling Unit	3.40	339,116.00	1147
Regional Shopping Center	41.00	1000sqft	0.00	40,996.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Shopping Center includes restaurant, retail & supermarket uses on the ground floor for both Site A & B
Acreage includes both Site A and B

Construction Phase - Based on construction schedule to take place Start of 2nd Quarter 2021 to 2nd Quarter 2023

Off-road Equipment -

Off-road Equipment - Includes equipment used for foundation concrete pours

Off-road Equipment - Construction equipment to be used

Off-road Equipment - Includes equipment sued for foundation concrete pours

Off-road Equipment - 20 pieces of construction equipment during paving

Trips and VMT - Landfill location to Chiquita Canyon Landfill

Demolition - Includes building and pavement debris

Grading -

Vehicle Trips - Based on net daily trip value of 5,192

Woodstoves - No woodstoves, no fireplace

Construction Off-road Equipment Mitigation - Based on average breakdown of typical fleet per stage:

Tier 1: 40%, Tier 2: 25%, Tier 3: 25%, Tier 4: 10%

SCAQMD Fugitive Dust Rule 403

Mobile Land Use Mitigation - Located at Crenshaw/Expo line

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
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tblConstructionPhase	NumDays	18.00	75.00
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tblFireplaces	NumberGas	340.85	0.00
tblFireplaces	NumberNoFireplace	40.10	0.00
tblFireplaces	NumberWood	20.05	0.00
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tblOffRoadEquipment	PhaseName		Demolition

tblOffRoadEquipment	PhaseName		Building Construction
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tblTripsAndVMT	HaulingTripLength	20.00	86.20
tblTripsAndVMT	HaulingTripLength	20.00	86.20
tblVehicleTrips	ST_TR	6.39	3.02
tblVehicleTrips	ST_TR	49.97	94.10
tblVehicleTrips	SU_TR	5.86	3.02
tblVehicleTrips	SU_TR	25.24	94.10
tblVehicleTrips	WD_TR	6.65	3.02
tblVehicleTrips	WD_TR	42.70	94.10
tblWoodstoves	NumberCatalytic	20.05	0.00
tblWoodstoves	NumberNoncatalytic	20.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	6.9608	103.4652	58.1447	0.3079	12.1705	2.5667	13.7482	2.2536	2.4691	3.7705	0.0000	32,757.89 94	32,757.899 4	3.1890	0.0000	32,837.623 8
2022	34.9689	49.2923	60.7699	0.1418	4.3664	2.2928	6.6592	1.1653	2.2111	3.3764	0.0000	13,713.08 39	13,713.083 9	1.7012	0.0000	13,755.613 0
2023	34.5222	44.7767	59.3739	0.1399	4.3664	2.0141	6.3806	1.1653	1.9426	3.1078	0.0000	13,527.80 83	13,527.808 3	1.6628	0.0000	13,569.377 8
Maximum	34.9689	103.4652	60.7699	0.3079	12.1705	2.5667	13.7482	2.2536	2.4691	3.7705	0.0000	32,757.89 94	32,757.899 4	3.1890	0.0000	32,837.623 8

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.4970	82.7636	77.5041	0.3079	7.1345	4.0243	8.9358	1.8928	4.0217	5.0091	0.0000	32,757.89 94	32,757.899 4	3.1890	0.0000	32,837.623 8
2022	37.3479	79.9784	82.1412	0.1418	4.3664	4.3008	8.6672	1.1653	4.2979	5.4632	0.0000	13,713.08 39	13,713.083 9	1.7012	0.0000	13,755.612 9
2023	37.2225	78.7729	80.9610	0.1399	4.3664	4.2953	8.6617	1.1653	4.2927	5.4579	0.0000	13,527.80 83	13,527.808 3	1.6628	0.0000	13,569.377 8
Maximum	37.3479	82.7636	82.1412	0.3079	7.1345	4.3008	8.9358	1.8928	4.2979	5.4632	0.0000	32,757.89 94	32,757.899 4	3.1890	0.0000	32,837.623 8

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-8.65	-22.26	-34.95	0.00	24.09	-83.61	1.95	7.87	-90.44	-55.35	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079
Energy	0.1112	0.9512	0.4123	6.0600e-003		0.0768	0.0768		0.0768	0.0768		1,212.9658	1,212.9658	0.0233	0.0222	1,220.1738
Mobile	6.9214	28.7556	82.2622	0.3143	26.5415	0.2338	26.7753	7.1021	0.2173	7.3194		32,052.7279	32,052.7279	1.5228		32,090.7971
Total	16.2390	30.0879	115.7478	0.3221	26.5415	0.4939	27.0354	7.1021	0.4774	7.5795	0.0000	33,325.2721	33,325.2721	1.6032	0.0222	33,371.9788

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	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079
Energy	0.1059	0.9056	0.3923	5.7700e-003		0.0731	0.0731		0.0731	0.0731		1,154.7577	1,154.7577	0.0221	0.0212	1,161.6198
Mobile	6.6928	27.6358	76.3334	0.2888	24.2163	0.2157	24.4320	6.4799	0.2005	6.6804		29,454.0967	29,454.0967	1.4124		29,489.4059
Total	16.0050	28.9224	109.7990	0.2963	24.2163	0.4722	24.6884	6.4799	0.4569	6.9368	0.0000	30,668.4329	30,668.4329	1.4917	0.0212	30,712.0336

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	1.44	3.87	5.14	8.02	8.76	4.41	8.68	8.76	4.29	8.48	0.00	7.97	7.97	6.96	4.81	7.97

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
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1	Demolition	Demolition	3/1/2021	4/30/2021	5	45
2	Grading	Grading	5/1/2021	6/25/2021	5	40
3	Building Construction	Building Construction	6/26/2021	2/16/2023	5	429
4	Architectural Coating	Architectural Coating	10/16/2022	2/16/2023	5	89
5	Paving	Paving	2/17/2023	6/1/2023	5	75

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 40

Acres of Paving: 0

Residential Indoor: 686,710; Residential Outdoor: 228,903; Non-Residential Indoor: 61,494; Non-Residential Outdoor: 20,498; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	1	8.00	78	0.48
Demolition	Bore/Drill Rigs	2	6.00	221	0.50
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	6.00	85	0.78
Demolition	Excavators	1	8.00	158	0.38
Demolition	Generator Sets	1	6.00	84	0.74
Demolition	Other Construction Equipment	2	6.00	172	0.42
Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Dumpers/Tenders	2	6.00	16	0.38
Grading	Excavators	4	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Plate Compactors	2	6.00	8	0.43
Grading	Skid Steer Loaders	2	6.00	65	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Trenchers	2	6.00	78	0.50
Building Construction	Air Compressors	8	7.00	78	0.48
Building Construction	Bore/Drill Rigs	2	6.00	221	0.50

Building Construction	Cement and Mortar Mixers	12	6.00	9	0.56
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Other General Industrial Equipment	2	6.00	88	0.34
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Air Compressors	2	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Concrete/Industrial Saws	2	6.00	81	0.73
Paving	Forklifts	2	6.00	89	0.20
Paving	Other General Industrial Equipment	2	6.00	88	0.34
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Surfacing Equipment	1	6.00	263	0.30
Paving	Sweepers/Scrubbers	1	6.00	64	0.46
Paving	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Trenchers	2	6.00	78	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	28.00	0.00	1,829.00	14.70	6.90	86.20	LD_Mix	HDT_Mix	HHDT
Grading	16	40.00	0.00	3,362.00	14.70	6.90	86.20	LD_Mix	HDT_Mix	HHDT
Building Construction	34	302.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	60.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	20	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7974	0.0000	8.7974	1.3320	0.0000	1.3320			0.0000			0.0000
Off-Road	3.2172	29.2643	29.4540	0.0599		1.4358	1.4358		1.3812	1.3812		5,746.2588	5,746.2588	1.1940		5,776.1098
Total	3.2172	29.2643	29.4540	0.0599	8.7974	1.4358	10.2331	1.3320	1.3812	2.7132		5,746.2588	5,746.2588	1.1940		5,776.1098

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	1.2477	34.4526	9.4748	0.1224	3.0602	0.1394	3.1996	0.8386	0.1334	0.9720		13,289.9085	13,289.9085	0.7969		13,309.8301
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1200	0.0825	1.1278	3.2000e-003	0.3130	2.5300e-003	0.3155	0.0830	2.3300e-003	0.0853		318.8556	318.8556	9.4000e-003		319.0904
Total	1.3677	34.5351	10.6026	0.1256	3.3732	0.1419	3.5151	0.9216	0.1357	1.0573		13,608.7640	13,608.7640	0.8063		13,628.9206

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					2.7448	0.0000	2.7448	0.4156	0.0000	0.4156			0.0000			0.0000
Off-Road	5.3360	48.2285	48.7581	0.0599		2.6759	2.6759		2.6759	2.6759	0.0000	5,746.2588	5,746.2588	1.1940		5,776.1098
Total	5.3360	48.2285	48.7581	0.0599	2.7448	2.6759	5.4207	0.4156	2.6759	3.0915	0.0000	5,746.2588	5,746.2588	1.1940		5,776.1098

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	1.2477	34.4526	9.4748	0.1224	3.0602	0.1394	3.1996	0.8386	0.1334	0.9720		13,289.9085	13,289.9085	0.7969		13,309.8301
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1200	0.0825	1.1278	3.2000e-003	0.3130	2.5300e-003	0.3155	0.0830	2.3300e-003	0.0853		318.8556	318.8556	9.4000e-003		319.0904
Total	1.3677	34.5351	10.6026	0.1256	3.3732	0.1419	3.5151	0.9216	0.1357	1.0573		13,608.7640	13,608.7640	0.8063		13,628.9206

3.3 Grading - 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
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Category	lb/day										lb/day				
Fugitive Dust					1.1511	0.0000	1.1511	0.1282	0.0000	0.1282			0.0000		0.0000
Off-Road	3.0545	32.1017	27.8284	0.0502		1.5013	1.5013		1.3845	1.3845		4,819.7471	4,819.7471	1.5277	4,857.9395
Total	3.0545	32.1017	27.8284	0.0502	1.1511	1.5013	2.6524	0.1282	1.3845	1.5127		4,819.7471	4,819.7471	1.5277	4,857.9395

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	2.5801	71.2457	19.5933	0.2532	6.3283	0.2883	6.6166	1.7342	0.2758	2.0100		27,482.6443	27,482.6443	1.6479		27,523.8409
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1715	0.1179	1.6111	4.5700e-003	0.4471	3.6100e-003	0.4507	0.1186	3.3300e-003	0.1219		455.5079	455.5079	0.0134		455.8435
Total	2.7516	71.3636	21.2044	0.2578	6.7754	0.2919	7.0673	1.8527	0.2791	2.1319		27,938.1522	27,938.1522	1.6613		27,979.6844

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3591	0.0000	0.3591	0.0400	0.0000	0.0400			0.0000			0.0000
Off-Road	0.7685	9.8436	32.4777	0.0502		0.6189	0.6189		0.6189	0.6189	0.0000	4,819.7471	4,819.7471	1.5277		4,857.9395

Total	0.7685	9.8436	32.4777	0.0502	0.3591	0.6189	0.9780	0.0400	0.6189	0.6589	0.0000	4,819.7471	4,819.7471	1.5277		4,857.9395
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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	2.5801	71.2457	19.5933	0.2532	6.3283	0.2883	6.6166	1.7342	0.2758	2.0100		27,482.6443	27,482.6443	1.6479		27,523.8409
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1715	0.1179	1.6111	4.5700e-003	0.4471	3.6100e-003	0.4507	0.1186	3.3300e-003	0.1219		455.5079	455.5079	0.0134		455.8435
Total	2.7516	71.3636	21.2044	0.2578	6.7754	0.2919	7.0673	1.8527	0.2791	2.1319		27,938.1522	27,938.1522	1.6613		27,979.6844

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.5142	47.4200	44.7118	0.0861		2.5295	2.5295		2.4345	2.4345		8,088.9516	8,088.9516	1.5076		8,126.6407
Total	5.5142	47.4200	44.7118	0.0861		2.5295	2.5295		2.4345	2.4345		8,088.9516	8,088.9516	1.5076		8,126.6407

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1520	4.8545	1.2691	0.0129	0.3201	9.9300e-003	0.3300	0.0922	9.4900e-003	0.1017		1,374.4032	1,374.4032	0.0810		4,376.4274
Worker	1.2945	0.8898	12.1638	0.0345	3.3757	0.0273	3.4029	0.8952	0.0251	0.9204		3,439.0850	3,439.0850	0.1013		3,441.6183
Total	1.4465	5.7443	13.4329	0.0474	3.6958	0.0372	3.7330	0.9874	0.0346	1.0220		4,813.4881	4,813.4881	0.1823		4,818.0457

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	7.0504	71.1595	64.0712	0.0861		3.9871	3.9871		3.9871	3.9871	0.0000	8,088.9516	8,088.9516	1.5076		8,126.6407
Total	7.0504	71.1595	64.0712	0.0861		3.9871	3.9871		3.9871	3.9871	0.0000	8,088.9516	8,088.9516	1.5076		8,126.6407

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1520	4.8545	1.2691	0.0129	0.3201	9.9300e-003	0.3300	0.0922	9.4900e-003	0.1017		1,374.4032	1,374.4032	0.0810		1,376.4274
Worker	1.2945	0.8898	12.1638	0.0345	3.3757	0.0273	3.4029	0.8952	0.0251	0.9204		3,439.0850	3,439.0850	0.1013		3,441.6183
Total	1.4465	5.7443	13.4329	0.0474	3.6958	0.0372	3.7330	0.9874	0.0346	1.0220		4,813.4881	4,813.4881	0.1823		4,818.0457

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.0562	42.3039	44.3036	0.0862		2.1707	2.1707		2.0919	2.0919		8,091.8678	8,091.8678	1.4949		8,129.2398
Total	5.0562	42.3039	44.3036	0.0862		2.1707	2.1707		2.0919	2.0919		8,091.8678	8,091.8678	1.4949		8,129.2398

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1426	4.6165	1.2008	0.0127	0.3201	8.6800e-003	0.3288	0.0922	8.3000e-003	0.1005		1,362.4294	1,362.4294	0.0782		1,364.3841
Worker	1.2126	0.8038	11.2224	0.0333	3.3757	0.0264	3.4021	0.8952	0.0243	0.9196		3,318.1112	3,318.1112	0.0916		3,320.4007

Total	1.3552	5.4203	12.4232	0.0460	3.6958	0.0351	3.7309	0.9874	0.0326	1.0201		4,680.5406	4,680.5406	0.1698		4,684.7848
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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	7.0504	71.1595	64.0712	0.0862		3.9871	3.9871		3.9871	3.9871	0.0000	8,091.8678	8,091.8678	1.4949		8,129.2397
Total	7.0504	71.1595	64.0712	0.0862		3.9871	3.9871		3.9871	3.9871	0.0000	8,091.8678	8,091.8678	1.4949		8,129.2397

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1426	4.6165	1.2008	0.0127	0.3201	8.6800e-003	0.3288	0.0922	8.3000e-003	0.1005		1,362.4294	1,362.4294	0.0782		1,364.3841
Worker	1.2126	0.8038	11.2224	0.0333	3.3757	0.0264	3.4021	0.8952	0.0243	0.9196		3,318.1112	3,318.1112	0.0916		3,320.4007
Total	1.3552	5.4203	12.4232	0.0460	3.6958	0.0351	3.7309	0.9874	0.0326	1.0201		4,680.5406	4,680.5406	0.1698		4,684.7848

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.7477	39.0992	44.0902	0.0862		1.9085	1.9085		1.8395	1.8395		8,095.1183	8,095.1183	1.4777		8,132.0603
Total	4.7477	39.0992	44.0902	0.0862		1.9085	1.9085		1.8395	1.8395		8,095.1183	8,095.1183	1.4777		8,132.0603

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1058	3.5028	1.0844	0.0123	0.3201	4.0500e-003	0.3242	0.0922	3.8700e-003	0.0960		1,319.5371	1,319.5371	0.0693		1,321.2692
Worker	1.1387	0.7272	10.3349	0.0321	3.3757	0.0257	3.4013	0.8952	0.0236	0.9189		3,196.6156	3,196.6156	0.0826		3,198.6799
Total	1.2445	4.2300	11.4193	0.0444	3.6958	0.0297	3.7255	0.9874	0.0275	1.0149		4,516.1528	4,516.1528	0.1519		4,519.9492

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	7.0504	71.1595	64.0712	0.0862		3.9871	3.9871		3.9871	3.9871	0.0000	8,095.1183	8,095.1183	1.4777		8,132.0603
Total	7.0504	71.1595	64.0712	0.0862		3.9871	3.9871		3.9871	3.9871	0.0000	8,095.1183	8,095.1183	1.4777		8,132.0603

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1058	3.5028	1.0844	0.0123	0.3201	4.0500e-003	0.3242	0.0922	3.8700e-003	0.0960		1,319.5371	1,319.5371	0.0693		1,321.2692
Worker	1.1387	0.7272	10.3349	0.0321	3.3757	0.0257	3.4013	0.8952	0.0236	0.9189		3,196.6156	3,196.6156	0.0826		3,198.6799
Total	1.2445	4.2300	11.4193	0.0444	3.6958	0.0297	3.7255	0.9874	0.0275	1.0149		4,516.1528	4,516.1528	0.1519		4,519.9492

3.5 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.1120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	28.3165	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2409	0.1597	2.2296	6.6200e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		659.2274	659.2274	0.0182		659.6823
Total	0.2409	0.1597	2.2296	6.6200e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		659.2274	659.2274	0.0182		659.6823

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	28.1120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0183		281.9062
Total	28.7013	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0183		281.9062

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2409	0.1597	2.2296	6.6200e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		659.2274	659.2274	0.0182		659.6823
Total	0.2409	0.1597	2.2296	6.6200e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		659.2274	659.2274	0.0182		659.6823

3.5 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.1120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	28.3036	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2262	0.1445	2.0533	6.3700e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		635.0892	635.0892	0.0164		635.4993
Total	0.2262	0.1445	2.0533	6.3700e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		635.0892	635.0892	0.0164		635.4993

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	28.1120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0168		281.8690
Total	28.7013	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0168		281.8690

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2262	0.1445	2.0533	6.3700e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		635.0892	635.0892	0.0164		635.4993
Total	0.2262	0.1445	2.0533	6.3700e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		635.0892	635.0892	0.0164		635.4993

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7344	23.7179	28.3605	0.0464		1.3060	1.3060		1.2317	1.2317		4,407.9296	4,407.9296	1.0002		4,432.9355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.7344	23.7179	28.3605	0.0464		1.3060	1.3060		1.2317	1.2317		4,407.9296	4,407.9296	1.0002		4,432.9355

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1885	0.1204	1.7111	5.3100e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		529.2410	529.2410	0.0137		529.5828
Total	0.1885	0.1204	1.7111	5.3100e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		529.2410	529.2410	0.0137		529.5828

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	3.9274	35.9179	38.4358	0.0464		2.3606	2.3606		2.3606	2.3606	0.0000	4,407.9296	4,407.9296	1.0002		4,432.9355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.9274	35.9179	38.4358	0.0464		2.3606	2.3606		2.3606	2.3606	0.0000	4,407.9296	4,407.9296	1.0002		4,432.9355

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1885	0.1204	1.7111	5.3100e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		529.2410	529.2410	0.0137		529.5828
Total	0.1885	0.1204	1.7111	5.3100e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		529.2410	529.2410	0.0137		529.5828

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Transit Accessibility
- Integrate Below Market Rate Housing

	ROG	NOx	CO	SO2	Fugitive 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	6.6928	27.6358	76.3334	0.2888	24.2163	0.2157	24.4320	6.4799	0.2005	6.6804		29,454.0967	29,454.0967	1.4124		29,489.4059
Unmitigated	6.9214	28.7556	82.2622	0.3143	26.5415	0.2338	26.7753	7.1021	0.2173	7.3194		32,052.7279	32,052.7279	1.5228		32,090.7971

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,211.02	1,211.02	1211.02	4,138,239	3,775,704
Regional Shopping Center	3,858.10	3,858.10	3858.10	8,344,468	7,613,442
Total	5,069.12	5,069.12	5,069.12	12,482,708	11,389,146

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Regional Shopping Center	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1059	0.9056	0.3923	5.7700e-003		0.0731	0.0731		0.0731	0.0731		1,154.7577	1,154.7577	0.0221	0.0212	1,161.6198
NaturalGas Unmitigated	0.1112	0.9512	0.4123	6.0600e-003		0.0768	0.0768		0.0768	0.0768		1,212.9658	1,212.9658	0.0233	0.0222	1,220.1738

5.2 Energy by Land Use - NaturalGas
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	10126	0.1092	0.9332	0.3971	5.9600e-003		0.0755	0.0755		0.0755	0.0755		1,191.2951	1,191.2951	0.0228	0.0218	1,198.3743
Regional Shopping Center	184.201	1.9900e-003	0.0181	0.0152	1.1000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003		21.6707	21.6707	4.2000e-004	4.0000e-004	21.7995
Total		0.1112	0.9512	0.4123	6.0700e-003		0.0768	0.0768		0.0768	0.0768		1,212.9658	1,212.9658	0.0233	0.0222	1,220.1739

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	9.64416	0.1040	0.8888	0.3782	5.6700e-003		0.0719	0.0719		0.0719	0.0719		1,134.6065	1,134.6065	0.0218	0.0208	1,141.3489
Regional Shopping Center	0.171285	1.8500e-003	0.0168	0.0141	1.0000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003		20.1511	20.1511	3.9000e-004	3.7000e-004	20.2709
Total		0.1059	0.9056	0.3923	5.7700e-003		0.0731	0.0731		0.0731	0.0731		1,154.7577	1,154.7577	0.0221	0.0212	1,161.6198

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079
Unmitigated	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079

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	0.6855					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.5262					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.9947	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833		59.5785	59.5785	0.0572		61.0079
Total	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079

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	0.6855					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.5262					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.9947	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833		59.5785	59.5785	0.0572		61.0079
Total	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Crenshaw Crossing - Los Angeles-South Coast County, Winter

Crenshaw Crossing

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	401.00	Dwelling Unit	3.40	339,116.00	1147
Regional Shopping Center	41.00	1000sqft	0.00	40,996.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Shopping Center includes restaurant, retail & supermarket uses on the ground floor for both Site A & B
Acreage includes both Site A and B

Construction Phase - Based on construction schedule to take place Start of 2nd Quarter 2021 to 2nd Quarter 2023

Off-road Equipment -

Off-road Equipment - Includes equipment used for foundation concrete pours

Off-road Equipment - Construction equipment to be used

Off-road Equipment - Includes equipment used for foundation concrete pours

Off-road Equipment - 20 pieces of construction equipment during paving

Trips and VMT - Landfill location to Chiquita Canyon Landfill

Demolition - Includes building and pavement debris

Grading -

Vehicle Trips - Based on net daily trip value of 5,192

Woodstoves - No woodstoves, no fireplace

Construction Off-road Equipment Mitigation - Based on average breakdown of typical fleet per stage:

Tier 1: 40%, Tier 2: 25%, Tier 3: 25%, Tier 4: 10%

SCAQMD Fugitive Dust Rule 403

Mobile Land Use Mitigation - Located at Crenshaw/Expo line

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 2
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tblConstEquipMitigation	Tier	No Change	Tier 2
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	18.00	89.00

tblConstructionPhase	NumDays	230.00	429.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	8.00	40.00
tblConstructionPhase	NumDays	18.00	75.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	340.85	0.00
tblFireplaces	NumberNoFireplace	40.10	0.00
tblFireplaces	NumberWood	20.05	0.00
tblGrading	MaterialExported	0.00	34,000.00
tblGrading	MaterialImported	0.00	6,500.00
tblLandUse	LandUseSquareFeet	401,000.00	339,116.00
tblLandUse	LandUseSquareFeet	41,000.00	40,996.00
tblLandUse	LotAcreage	10.55	3.40
tblLandUse	LotAcreage	0.94	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
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tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Grading
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tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	HaulingTripLength	20.00	86.20
tblTripsAndVMT	HaulingTripLength	20.00	86.20
tblVehicleTrips	ST_TR	6.39	3.02
tblVehicleTrips	ST_TR	49.97	94.10
tblVehicleTrips	SU_TR	5.86	3.02
tblVehicleTrips	SU_TR	25.24	94.10
tblVehicleTrips	WD_TR	6.65	3.02
tblVehicleTrips	WD_TR	42.70	94.10
tblWoodstoves	NumberCatalytic	20.05	0.00
tblWoodstoves	NumberNoncatalytic	20.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.1138	105.6589	57.2370	0.3065	12.1705	2.5670	13.7488	2.2536	2.4695	3.7710	0.0000	32,608.0479	32,608.0479	3.2046	0.0000	32,688.1634
2022	35.1437	49.3825	59.7242	0.1391	4.3664	2.2931	6.6595	1.1653	2.2114	3.3766	0.0000	13,443.3087	13,443.3087	1.6996	0.0000	13,485.7984
2023	34.6900	44.8535	58.3681	0.1374	4.3664	2.0144	6.3808	1.1653	1.9428	3.1080	0.0000	13,268.4014	13,268.4014	1.6607	0.0000	13,309.9181
Maximum	35.1437	105.6589	59.7242	0.3065	12.1705	2.5670	13.7488	2.2536	2.4695	3.7710	0.0000	32,608.0479	32,608.0479	3.2046	0.0000	32,688.1634

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.6500	83.8271	76.5964	0.3065	7.1345	4.0246	8.9363	1.8928	4.0220	5.0094	0.0000	32,608.0479	32,608.0479	3.2046	0.0000	32,688.1634
2022	37.5227	80.0686	81.0954	0.1391	4.3664	4.3011	8.6675	1.1653	4.2982	5.4635	0.0000	13,443.3086	13,443.3086	1.6996	0.0000	13,485.7983
2023	37.3904	78.8497	79.9552	0.1374	4.3664	4.2955	8.6619	1.1653	4.2929	5.4581	0.0000	13,268.4014	13,268.4014	1.6607	0.0000	13,309.9181
Maximum	37.5227	83.8271	81.0954	0.3065	7.1345	4.3011	8.9363	1.8928	4.2982	5.4635	0.0000	32,608.0479	32,608.0479	3.2046	0.0000	32,688.1634

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-8.60	-21.44	-35.54	0.00	24.09	-83.60	1.95	7.87	-90.43	-55.34	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079
Energy	0.1112	0.9512	0.4123	6.0600e-003		0.0768	0.0768		0.0768	0.0768		1,212.9658	1,212.9658	0.0233	0.0222	1,220.1738
Mobile	6.6959	29.2628	78.7834	0.2989	26.5415	0.2350	26.7765	7.1021	0.2184	7.3206		30,495.9389	30,495.9389	1.5265		30,534.1017
Total	16.0135	30.5951	112.2690	0.3067	26.5415	0.4951	27.0366	7.1021	0.4786	7.5807	0.0000	31,768.4832	31,768.4832	1.6069	0.0222	31,815.2835

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	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079
Energy	0.1059	0.9056	0.3923	5.7700e-003		0.0731	0.0731		0.0731	0.0731		1,154.7577	1,154.7577	0.0221	0.0212	1,161.6198
Mobile	6.4725	28.0731	73.4099	0.2745	24.2163	0.2169	24.4332	6.4799	0.2016	6.6816		28,013.7880	28,013.7880	1.4188		28,049.2566
Total	15.7848	29.3597	106.8755	0.2820	24.2163	0.4734	24.6896	6.4799	0.4581	6.9380	0.0000	29,228.1241	29,228.1241	1.4981	0.0212	29,271.8844

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	1.43	4.04	4.80	8.04	8.76	4.40	8.68	8.76	4.28	8.48	0.00	8.00	8.00	6.78	4.81	7.99

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
--------------	------------	------------	------------	----------	---------------	----------	-------------------

1	Demolition	Demolition	3/1/2021	4/30/2021	5	45
2	Grading	Grading	5/1/2021	6/25/2021	5	40
3	Building Construction	Building Construction	6/26/2021	2/16/2023	5	429
4	Architectural Coating	Architectural Coating	10/16/2022	2/16/2023	5	89
5	Paving	Paving	2/17/2023	6/1/2023	5	75

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 40

Acres of Paving: 0

Residential Indoor: 686,710; Residential Outdoor: 228,903; Non-Residential Indoor: 61,494; Non-Residential Outdoor: 20,498; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	1	8.00	78	0.48
Demolition	Bore/Drill Rigs	2	6.00	221	0.50
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	6.00	85	0.78
Demolition	Excavators	1	8.00	158	0.38
Demolition	Generator Sets	1	6.00	84	0.74
Demolition	Other Construction Equipment	2	6.00	172	0.42
Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Dumpers/Tenders	2	6.00	16	0.38
Grading	Excavators	4	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Plate Compactors	2	6.00	8	0.43
Grading	Skid Steer Loaders	2	6.00	65	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Trenchers	2	6.00	78	0.50
Building Construction	Air Compressors	8	7.00	78	0.48
Building Construction	Bore/Drill Rigs	2	6.00	221	0.50

Building Construction	Cement and Mortar Mixers	12	6.00	9	0.56
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Other General Industrial Equipment	2	6.00	88	0.34
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Air Compressors	2	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Concrete/Industrial Saws	2	6.00	81	0.73
Paving	Forklifts	2	6.00	89	0.20
Paving	Other General Industrial Equipment	2	6.00	88	0.34
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Surfacing Equipment	1	6.00	263	0.30
Paving	Sweepers/Scrubbers	1	6.00	64	0.46
Paving	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Trenchers	2	6.00	78	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	28.00	0.00	1,829.00	14.70	6.90	86.20	LD_Mix	HDT_Mix	HHDT
Grading	16	40.00	0.00	3,362.00	14.70	6.90	86.20	LD_Mix	HDT_Mix	HHDT
Building Construction	34	302.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	60.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	20	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7974	0.0000	8.7974	1.3320	0.0000	1.3320			0.0000			0.0000
Off-Road	3.2172	29.2643	29.4540	0.0599		1.4358	1.4358		1.3812	1.3812		5,746.2588	5,746.2588	1.1940		5,776.1098
Total	3.2172	29.2643	29.4540	0.0599	8.7974	1.4358	10.2331	1.3320	1.3812	2.7132		5,746.2588	5,746.2588	1.1940		5,776.1098

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	1.2554	35.5073	9.5800	0.1219	3.0602	0.1399	3.2001	0.8386	0.1339	0.9725		13,230.3108	13,230.3108	0.8048		13,250.4313
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1335	0.0913	1.0311	3.0100e-003	0.3130	2.5300e-003	0.3155	0.0830	2.3300e-003	0.0853		300.2303	300.2303	8.8300e-003		300.4512
Total	1.3889	35.5986	10.6111	0.1249	3.3732	0.1425	3.5156	0.9216	0.1362	1.0578		13,530.5411	13,530.5411	0.8137		13,550.8824

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					2.7448	0.0000	2.7448	0.4156	0.0000	0.4156			0.0000			0.0000
Off-Road	5.3360	48.2285	48.7581	0.0599		2.6759	2.6759		2.6759	2.6759	0.0000	5,746.2588	5,746.2588	1.1940		5,776.1098
Total	5.3360	48.2285	48.7581	0.0599	2.7448	2.6759	5.4207	0.4156	2.6759	3.0915	0.0000	5,746.2588	5,746.2588	1.1940		5,776.1098

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	1.2554	35.5073	9.5800	0.1219	3.0602	0.1399	3.2001	0.8386	0.1339	0.9725		13,230.3108	13,230.3108	0.8048		13,250.4313
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1335	0.0913	1.0311	3.0100e-003	0.3130	2.5300e-003	0.3155	0.0830	2.3300e-003	0.0853		300.2303	300.2303	8.8300e-003		300.4512
Total	1.3889	35.5986	10.6111	0.1249	3.3732	0.1425	3.5156	0.9216	0.1362	1.0578		13,530.5411	13,530.5411	0.8137		13,550.8824

3.3 Grading - 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
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Category	lb/day										lb/day				
Fugitive Dust					1.1511	0.0000	1.1511	0.1282	0.0000	0.1282			0.0000		0.0000
Off-Road	3.0545	32.1017	27.8284	0.0502		1.5013	1.5013		1.3845	1.3845		4,819.7471	4,819.7471	1.5277	4,857.9395
Total	3.0545	32.1017	27.8284	0.0502	1.1511	1.5013	2.6524	0.1282	1.3845	1.5127		4,819.7471	4,819.7471	1.5277	4,857.9395

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	2.5962	73.4267	19.8107	0.2521	6.3283	0.2893	6.6176	1.7342	0.2768	2.0110		27,359.4003	27,359.4003	1.6643		27,401.0080
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1907	0.1305	1.4730	4.3000e-003	0.4471	3.6100e-003	0.4507	0.1186	3.3300e-003	0.1219		428.9004	428.9004	0.0126		429.2160
Total	2.7869	73.5572	21.2837	0.2564	6.7754	0.2930	7.0683	1.8527	0.2801	2.1329		27,788.3007	27,788.3007	1.6769		27,830.2239

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3591	0.0000	0.3591	0.0400	0.0000	0.0400			0.0000			0.0000
Off-Road	0.7685	9.8436	32.4777	0.0502		0.6189	0.6189		0.6189	0.6189	0.0000	4,819.7471	4,819.7471	1.5277		4,857.9395

Total	0.7685	9.8436	32.4777	0.0502	0.3591	0.6189	0.9780	0.0400	0.6189	0.6589	0.0000	4,819.7471	4,819.7471	1.5277		4,857.9395
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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	2.5962	73.4267	19.8107	0.2521	6.3283	0.2893	6.6176	1.7342	0.2768	2.0110		27,359.4003	27,359.4003	1.6643		27,401.0080
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1907	0.1305	1.4730	4.3000e-003	0.4471	3.6100e-003	0.4507	0.1186	3.3300e-003	0.1219		428.9004	428.9004	0.0126		429.2160
Total	2.7869	73.5572	21.2837	0.2564	6.7754	0.2930	7.0683	1.8527	0.2801	2.1329		27,788.3007	27,788.3007	1.6769		27,830.2239

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.5142	47.4200	44.7118	0.0861		2.5295	2.5295		2.4345	2.4345		8,088.9516	8,088.9516	1.5076		8,126.6407
Total	5.5142	47.4200	44.7118	0.0861		2.5295	2.5295		2.4345	2.4345		8,088.9516	8,088.9516	1.5076		8,126.6407

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1596	4.8444	1.4038	0.0125	0.3201	0.0102	0.3304	0.0922	9.8000e-003	0.1020		1,336.7276	1,336.7276	0.0863		1,338.8850
Worker	1.4400	0.9850	11.1213	0.0325	3.3757	0.0273	3.4029	0.8952	0.0251	0.9204		3,238.1983	3,238.1983	0.0953		3,240.5805
Total	1.5996	5.8294	12.5252	0.0450	3.6958	0.0375	3.7333	0.9874	0.0349	1.0223		4,574.9259	4,574.9259	0.1816		4,579.4655

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	7.0504	71.1595	64.0712	0.0861		3.9871	3.9871		3.9871	3.9871	0.0000	8,088.9516	8,088.9516	1.5076		8,126.6407
Total	7.0504	71.1595	64.0712	0.0861		3.9871	3.9871		3.9871	3.9871	0.0000	8,088.9516	8,088.9516	1.5076		8,126.6407

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1596	4.8444	1.4038	0.0125	0.3201	0.0102	0.3304	0.0922	9.8000e-003	0.1020		1,336.7276	1,336.7276	0.0863		1,338.8850
Worker	1.4400	0.9850	11.1213	0.0325	3.3757	0.0273	3.4029	0.8952	0.0251	0.9204		3,238.1983	3,238.1983	0.0953		3,240.5805
Total	1.5996	5.8294	12.5252	0.0450	3.6958	0.0375	3.7333	0.9874	0.0349	1.0223		4,574.9259	4,574.9259	0.1816		4,579.4655

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.0562	42.3039	44.3036	0.0862		2.1707	2.1707		2.0919	2.0919		8,091.8678	8,091.8678	1.4949		8,129.2398
Total	5.0562	42.3039	44.3036	0.0862		2.1707	2.1707		2.0919	2.0919		8,091.8678	8,091.8678	1.4949		8,129.2398

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1498	4.6040	1.3289	0.0124	0.3201	8.9600e-003	0.3291	0.0922	8.5700e-003	0.1007		1,324.8514	1,324.8514	0.0833		1,326.9330
Worker	1.3525	0.8895	10.2431	0.0314	3.3757	0.0264	3.4021	0.8952	0.0243	0.9196		3,124.3998	3,124.3998	0.0860		3,126.5505

Total	1.5023	5.4935	11.5720	0.0437	3.6958	0.0354	3.7312	0.9874	0.0329	1.0203		4,449.2512	4,449.2512	0.1693		4,453.4835
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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	7.0504	71.1595	64.0712	0.0862		3.9871	3.9871		3.9871	3.9871	0.0000	8,091.8678	8,091.8678	1.4949		8,129.2397
Total	7.0504	71.1595	64.0712	0.0862		3.9871	3.9871		3.9871	3.9871	0.0000	8,091.8678	8,091.8678	1.4949		8,129.2397

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1498	4.6040	1.3289	0.0124	0.3201	8.9600e-003	0.3291	0.0922	8.5700e-003	0.1007		1,324.8514	1,324.8514	0.0833		1,326.9330
Worker	1.3525	0.8895	10.2431	0.0314	3.3757	0.0264	3.4021	0.8952	0.0243	0.9196		3,124.3998	3,124.3998	0.0860		3,126.5505
Total	1.5023	5.4935	11.5720	0.0437	3.6958	0.0354	3.7312	0.9874	0.0329	1.0203		4,449.2512	4,449.2512	0.1693		4,453.4835

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.7477	39.0992	44.0902	0.0862		1.9085	1.9085		1.8395	1.8395		8,095.1183	8,095.1183	1.4777		8,132.0603
Total	4.7477	39.0992	44.0902	0.0862		1.9085	1.9085		1.8395	1.8395		8,095.1183	8,095.1183	1.4777		8,132.0603

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1113	3.4869	1.1808	0.0120	0.3201	4.2600e-003	0.3244	0.0922	4.0700e-003	0.0962		1,283.7065	1,283.7065	0.0733		1,285.5390
Worker	1.2742	0.8045	9.4154	0.0302	3.3757	0.0257	3.4013	0.8952	0.0236	0.9189		3,010.0961	3,010.0961	0.0775		3,012.0327
Total	1.3855	4.2915	10.5962	0.0422	3.6958	0.0299	3.7257	0.9874	0.0277	1.0151		4,293.8027	4,293.8027	0.1508		4,297.5718

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	7.0504	71.1595	64.0712	0.0862		3.9871	3.9871		3.9871	3.9871	0.0000	8,095.1183	8,095.1183	1.4777		8,132.0603
Total	7.0504	71.1595	64.0712	0.0862		3.9871	3.9871		3.9871	3.9871	0.0000	8,095.1183	8,095.1183	1.4777		8,132.0603

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1113	3.4869	1.1808	0.0120	0.3201	4.2600e-003	0.3244	0.0922	4.0700e-003	0.0962		1,283.7065	1,283.7065	0.0733		1,285.5390
Worker	1.2742	0.8045	9.4154	0.0302	3.3757	0.0257	3.4013	0.8952	0.0236	0.9189		3,010.0961	3,010.0961	0.0775		3,012.0327
Total	1.3855	4.2915	10.5962	0.0422	3.6958	0.0299	3.7257	0.9874	0.0277	1.0151		4,293.8027	4,293.8027	0.1508		4,297.5718

3.5 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.1120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	28.3165	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2687	0.1767	2.0351	6.2300e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		620.7417	620.7417	0.0171		621.1690
Total	0.2687	0.1767	2.0351	6.2300e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		620.7417	620.7417	0.0171		621.1690

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	28.1120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0183		281.9062
Total	28.7013	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0183		281.9062

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2687	0.1767	2.0351	6.2300e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		620.7417	620.7417	0.0171		621.1690
Total	0.2687	0.1767	2.0351	6.2300e-003	0.6707	5.2500e-003	0.6759	0.1779	4.8400e-003	0.1827		620.7417	620.7417	0.0171		621.1690

3.5 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.1120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	28.3036	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2532	0.1598	1.8706	6.0000e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		598.0323	598.0323	0.0154		598.4171
Total	0.2532	0.1598	1.8706	6.0000e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		598.0323	598.0323	0.0154		598.4171

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	28.1120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0168		281.8690
Total	28.7013	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0168		281.8690

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2532	0.1598	1.8706	6.0000e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		598.0323	598.0323	0.0154		598.4171
Total	0.2532	0.1598	1.8706	6.0000e-003	0.6707	5.1000e-003	0.6758	0.1779	4.7000e-003	0.1826		598.0323	598.0323	0.0154		598.4171

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7344	23.7179	28.3605	0.0464		1.3060	1.3060		1.2317	1.2317		4,407.9296	4,407.9296	1.0002		4,432.9355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.7344	23.7179	28.3605	0.0464		1.3060	1.3060		1.2317	1.2317		4,407.9296	4,407.9296	1.0002		4,432.9355

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809
Total	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809

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	3.9274	35.9179	38.4358	0.0464		2.3606	2.3606		2.3606	2.3606	0.0000	4,407.9296	4,407.9296	1.0002		4,432.9355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.9274	35.9179	38.4358	0.0464		2.3606	2.3606		2.3606	2.3606	0.0000	4,407.9296	4,407.9296	1.0002		4,432.9355

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809
Total	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Transit Accessibility
- Integrate Below Market Rate Housing

	ROG	NOx	CO	SO2	Fugitive 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	6.4725	28.0731	73.4099	0.2745	24.2163	0.2169	24.4332	6.4799	0.2016	6.6816		28,013.7880	28,013.7880	1.4188		28,049.2566
Unmitigated	6.6959	29.2628	78.7834	0.2989	26.5415	0.2350	26.7765	7.1021	0.2184	7.3206		30,495.9389	30,495.9389	1.5265		30,534.1017

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,211.02	1,211.02	1211.02	4,138,239	3,775,704
Regional Shopping Center	3,858.10	3,858.10	3858.10	8,344,468	7,613,442
Total	5,069.12	5,069.12	5,069.12	12,482,708	11,389,146

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Regional Shopping Center	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1059	0.9056	0.3923	5.7700e-003		0.0731	0.0731		0.0731	0.0731		1,154.7577	1,154.7577	0.0221	0.0212	1,161.6198
NaturalGas Unmitigated	0.1112	0.9512	0.4123	6.0600e-003		0.0768	0.0768		0.0768	0.0768		1,212.9658	1,212.9658	0.0233	0.0222	1,220.1738

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	10126	0.1092	0.9332	0.3971	5.9600e-003		0.0755	0.0755		0.0755	0.0755		1,191.2951	1,191.2951	0.0228	0.0218	1,198.3743
Regional Shopping Center	184.201	1.9900e-003	0.0181	0.0152	1.1000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003		21.6707	21.6707	4.2000e-004	4.0000e-004	21.7995
Total		0.1112	0.9512	0.4123	6.0700e-003		0.0768	0.0768		0.0768	0.0768		1,212.9658	1,212.9658	0.0233	0.0222	1,220.1739

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	9.64416	0.1040	0.8888	0.3782	5.6700e-003		0.0719	0.0719		0.0719	0.0719		1,134.6065	1,134.6065	0.0218	0.0208	1,141.3489
Regional Shopping Center	0.171285	1.8500e-003	0.0168	0.0141	1.0000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003		20.1511	20.1511	3.9000e-004	3.7000e-004	20.2709
Total		0.1059	0.9056	0.3923	5.7700e-003		0.0731	0.0731		0.0731	0.0731		1,154.7577	1,154.7577	0.0221	0.0212	1,161.6198

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079
Unmitigated	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079

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	0.6855					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.5262					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.9947	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833		59.5785	59.5785	0.0572		61.0079
Total	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079

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	0.6855					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.5262					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.9947	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833		59.5785	59.5785	0.0572		61.0079
Total	9.2064	0.3811	33.0733	1.7500e-003		0.1833	0.1833		0.1833	0.1833	0.0000	59.5785	59.5785	0.0572	0.0000	61.0079

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
