APPENDIX B

Air Quality and Greenhouse Gas Analysis Technical Memorandum

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Technical Memorandum

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CC	Fareeha Kibriya, AECOM		
Subject	Rancho Cienega Celes King III Pool Demolition Project Air Quality and Greenhouse Gas Analysis Technical Memorandum		
From	Greg Tonkovich, Paola Peña, AECOM		
Date	March 15, 2019		

AECOM has prepared this technical memorandum to assess the potential air quality and greenhouse gas (GHG) impacts related to the demolition and construction of the Rancho Cienega Celes King III Pool Demolition Project. The analysis of the project's air quality impacts is consistent with guidance from the South Coast Air Quality Management District (SCAQMD) and City of Los Angeles California Environmental Quality Act (CEQA) Guidelines.

Project Description

The proposed Rancho Cienega Celes King III Pool Demolition Project (proposed project) is located within the Rancho Cienega Sports Complex in Los Angeles, California. The proposed project would conduct hazardous materials abatement, drain water from the existing Celes King III Pool, and demolish the Celes King III Pool building. Following demolition, construction activities would include infill of the pool pit, rough grading of the site, utility installations, landscaping and hardscaping, and installation of playground and shade structures. Following construction, the proposed project would operate similarly to existing conditions, and the community front lawn and playground area would be passive uses of the existing Rancho Cienega Sports Complex.

Air Quality Background

Air quality is defined by the concentration of pollutants in relation to their impact on human health. Concentrations of air pollutants are determined by the rate and location of pollutant emissions released by pollution sources, and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, and sunlight. Therefore, ambient air quality conditions within the local air basin are influenced by natural factors such as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

The project site is located within the South Coast Air Basin (SCAB) under the jurisdiction of the SCAQMD. The SCAQMD monitors air quality within the SCAB, which includes Orange County and portions of Los Angeles, Riverside, and San Bernardino counties. The SCAB is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east; and the San Diego County line to the south.

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the United States Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) as being of concern both on a nationwide and statewide level: ozone; carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide

(SO_2); lead; and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter (PM_{10}) and PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$). Because the air quality standards for these air pollutants are regulated using human health and environmentally based criteria, they are commonly referred to as "criteria air pollutants." Ozone is not directly emitted in the air, rather it is formed by chemical reactions between nitrogen oxides (NOx) and volatile organic compounds (VOC) in the presence of sunlight; therefore, air quality regulations focus on ozone's precursors. Descriptions of each criteria air pollutant and their health effects are included below, and are based on information provided by the SCAQMD.[1]

Ozone

Ozone, a colorless gas with a sharp odor, is a highly reactive form of oxygen. High ozone concentrations exist naturally in the stratosphere. However, it is also formed in the atmosphere when VOCs and nitrogen oxides (NO_X) react in the presence of ultraviolet sunlight (also known as smog). The primary sources of VOC and NO_X, the components of ozone, are automobile exhaust and industrial sources. Some mixing of stratospheric ozone downward through the troposphere to the earth's surface does occur; however, the extent of ozone transport is limited.

The propensity of ozone for reacting with organic materials causes it to be damaging to living cells and cause health effects. Short-term exposures (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Individuals exercising outdoors, children and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone.

Carbon Monoxide

CO is a colorless, odorless, relatively inert gas that, in urban areas, is associated primarily with the incomplete combustion of fossil fuels, mainly gasoline. Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin. Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes.

Nitrogen Dioxide

Nitric oxide (NO) is a colorless gas, formed from nitrogen (N_2) and oxygen (O_2) under conditions of high temperature and pressure, which are generally present during combustion of fuels (e.g., motor vehicles). NO reacts rapidly with the oxygen in air to form NO_2, which is responsible for the brownish tinge of polluted air. The two gases, NO and NO_2, are referred to collectively as NO_X. In the presence of sunlight, atmospheric NO_2 reacts and splits to form an NO molecule and an oxygen atom. The oxygen atom can react further to form ozone, via a complex series of chemical reactions involving hydrocarbons.

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[1] SCAQMD, 2017, Final Program Environmental Impact Report for the 2016 AQMP, available at: http://www.aqmd.gov/home/library/documents-support-material/lead-agency-scaqmd-projects.

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposures to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California (fewer or no stoves). Increases in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma and/or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

Sulfur Dioxide

SO_2 is a colorless gas with a sharp odor. It reacts in air to form sulfuric acid, which contributes to acid precipitation, and sulfates, which are components of particulate matter. Main sources of SO_2 include coal and oil used in power plants and industries. Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics. All asthmatics are sensitive to the effects of SO_2. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, is observed after acute higher exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses, even after exposure to higher concentrations of SO_2.

Lead

Pb in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of lead emitted into the air. Due to the phasing out of leaded gasoline, there was a dramatic reduction in atmospheric Pb over the past three decades. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death. There is no evidence to suggest that there are direct effects of Pb on the respiratory system.

Particulate Matter

PM is a complex mixture of extremely small particles and liquid droplets. PM is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Natural sources of particulate matter include windblown dust and ocean spray. The size of PM is directly linked to the potential for causing health problems. Particles small enough to be inhaled into the deepest parts of the lung are of great concern to public health. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Emissions of $PM_{2.5}$ result from fuel combustion (e.g., motor vehicles, power generation and industrial facilities), residential fireplaces and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOC.

Respirable particles (PM_{10}) can accumulate in the respiratory system and aggravate health problems such as asthma, bronchitis and other lung diseases. Children, the elderly, exercising adults, and those suffering from asthma are especially vulnerable to adverse health effects of PM. A consistent correlation between elevated ambient fine particulate matter ($PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. Studies have reported an association between long-term exposure to air pollution dominated by $PM_{2.5}$ and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use in children and adults with asthma. Studies have also shown lung function growth in children is reduced with long-term exposure to PM. In addition to children, the elderly, and people with pre-existing respiratory and/or cardiovascular disease appear to be more susceptible to the effects of PM_{10} and $PM_{2.5}$.

Areas are classified under the Federal Clean Air Act and California Clean Air Act as attainment, non-attainment, or maintenance (previously non-attainment and currently attainment) for each criteria pollutant based on whether the federal and state air quality standards have been achieved. With respect to National Ambient Air Quality Standards (NAAQS), the SCAB is designated nonattainment area for ozone and $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants. With respect to the California Ambient Air Quality Standards (CAAQS), the SCAB is designated as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, and as an attainment area for all other pollutants (SCAQMD 2016).

In addition to criteria air pollutants, EPA and ARB regulate hazardous air pollutants, also known as toxic air contaminants (TAC). TAC collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., long-duration) and acute (i.e., severe but short-term) adverse effects on human health, including carcinogenic effects. TACs can be separated into carcinogens and noncarcinogens based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Any exposure to a carcinogen poses some risk of contracting cancer. Noncarcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Greenhouse Gases and Climate Change Background

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters earth's atmosphere is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. Infrared radiation is absorbed by GHGs; as a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth.

GHGs are present in the atmosphere naturally, are released by natural sources and anthropogenic sources, and are formed from secondary reactions taking place in the atmosphere. The following are GHGs that are widely accepted as the principal contributors to human-induced global climate change that are relevant to the proposed project:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)

Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4 is the main component of natural gas and is associated with agricultural practices and landfills. N_2O is a colorless GHG that results from industrial processes, vehicle emissions, and agricultural practices.

Global warming potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to CO_2. The GWP of a GHG is based on several factors, including the

relative effectiveness of a gas to absorb infrared radiation and length of time (i.e., lifetime) that the gas remains in the atmosphere ("atmospheric lifetime"). The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of 1. The other main GHGs that have been attributed to human activity include CH_4, which has a GWP of 28, and N_2O, which has a GWP of 265 (IPCC 2013). For example, 1 ton of CH_4 has the same contribution to the greenhouse effect as approximately 28 tons of CO_2. GHGs with lower emissions rates than CO_2 may still contribute to climate change, because they are more effective at absorbing outgoing infrared radiation than CO_2 (i.e., high GWP). The concept of CO_2-equivalents (CO_2e) is used to account for the different GWP potentials of GHGs to absorb infrared radiation.

The primary effect of rising global concentrations of atmospheric GHG is a rise in the average global temperature of approximately 0.2 degrees Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using emission rates shows that further warming is likely to occur given the expected rise in global atmospheric GHG concentrations from innumerable sources of GHG emissions worldwide, which would induce further changes in the global climate system during the current century.[2] Adverse impacts from global climate change worldwide and in California include:

- Declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in atmospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;[3]
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets;[4]
- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;[5]
- Declining Sierra Mountains snowpack levels, which account for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years;[6]
- Increasing the number of days conducive to ozone formation (e.g., clear days with intense sun light) by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas located in Southern California and the San Joaquin Valley by 2100;[7] and
- Increasing the potential for erosion of California's coastlines and seawater intrusion into the Sacramento Delta and associated levee systems due to the rise in sea level.[8]

Scientific understanding of the fundamental processes responsible for global climate change has improved over the past decade. However, there remain significant scientific uncertainties. For

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2 USEPA, 2009, *Draft Endangerment Finding, 74 Fed. Reg. 18886, 18904*, available at: https://www.federalregister.gov/documents/2009/12/15/E9-29537/endangerment-and-cause-or-contribute-findings-for-greenhouse-gases-under-section-202a-of-the-clean.

3 Ibid.

4 IPCC, 2007, *Climate Change 2007 Synthesis Report*, available at: https://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm.

5 *Ibid*.

6 Cal/EPA, Climate Action Team, 2006, *Climate Action Team Report to Governor Schwarzenegger and the California Legislature*, available at: http://www.energy.ca.gov/2010publications/CAT-1000-2010-005/CAT-1000-2010-005.PDF.

7 Ibid.

8 Ibid.

example, uncertainties exist in predictions of local effects of climate change, occurrence of extreme weather events, and effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the climate system, the uncertainty surrounding the implications of climate change may never be completely eliminated. Due to these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or will cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change. In addition, it may not be possible to link specific development projects to future specific climate change impacts, though estimating project-specific impacts is possible.

Impacts

The following discussion summarizes the evaluation of air quality and GHGs with respect to construction and operation of the proposed project in response to City of Los Angeles CEQA guidelines.

Air Quality Impacts

(A) Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?

Air quality plans describe air pollution control strategies to be implemented by a city, county, or regional air district. The primary purpose of an air quality plan is to bring an area that does not attain NAAQS and CAAQS into compliance with those standards pursuant to the requirements of the Clean Air Act and California Clean Air Act. The applicable Air Quality Management Plan (AQMP) for the project site was prepared by SCAQMD in partnership with the ARB, EPA, and the Southern California Association of Governments (SCAG).

The most recent air quality plan developed by the SCAQMD is the 2016 AQMP. The 2016 AQMP is the legally enforceable blueprint for how the region will meet and maintain state and federal air quality standards. The 2016 AQMP identifies strategies and control measures needed to achieve attainment of the 8-hour ozone standard and federal annual and 24-hour standard for $PM_{2.5}$ in the SCAB.

Consistency with the AQMP is also determined through evaluation of whether the project would exceed the estimated emissions used as the basis of the AQMP, which are based, in part, on population projections developed by the SCAG. The SCAG forecasts are based on local general plans and other related documents, such as housing elements, that are used to develop population projections and traffic projections.

Construction of the proposed project would involve the use of off-road equipment, haul trucks, and worker commute trips. Assumptions for off-road equipment emissions in State Implementation Plan were developed based on hours of activity and equipment population reported to ARB for rule compliance. The use of construction equipment in the AQMP is estimated for the region on an annual basis, and construction-related emissions are estimated as an aggregate in the AQMP. The project would not increase the assumptions for off-road equipment use in the AQMP.

The proposed project is consistent with the existing zoning (OS-1XL, Open Space) for the site. In addition, there would be no significant net increase in emissions during operations as the proposed project is intended for passive uses. Therefore, the proposed project would not substantially increase population or employment in the planning area and would not generate vehicle trips that exceed the current assumptions used to develop the City of Los Angeles General Plan, Regional Transportation Plan, and AQMP.

Therefore, it is reasonable to assume that the intensity of construction and operational emissions have been accounted for in the 2016 AQMP. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. The impact would be less than significant and no mitigation measures would be required.

(B) Would the proposed project cause a violation of any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

Construction of the proposed project would result in the temporary generation of criteria pollutant emissions from demolition and construction of project components. VOC, NO_x, and CO emissions are primarily associated with mobile equipment exhaust, including off-road construction equipment and on-road motor vehicles. Fugitive PM dust emissions are primarily associated with site preparation and grading activities and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles on- and off-site.

Construction of the proposed project is anticipated to begin in December 2020 and would occur for approximately 12 months. The analysis assumed approximately 14,000 cubic yards of demolition debris would be exported from the project site. Demolition and construction activities would consist of a maximum of 10 truck trips per day. In addition, approximately 1,600 cubic yards of soil would be required for infill of the pool pit, resulting in approximately 160 haul truck soil import trips. Soil import would occur over approximately one month during the 12-month construction duration. It is anticipated that a total of approximately 20 construction workers would be on-site each day.

Construction-related emissions associated with typical construction activities were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. CalEEMod allows the user to enter project-specific construction information, such as types, number, and horsepower of construction equipment, and number and length of off-site motor vehicle trips. Construction-related exhaust emissions for the proposed project were estimated for construction worker commutes, haul trucks, and the use of off-road equipment. The anticipated equipment used for the demolition and construction of the proposed project is anticipated to be equipment that would already be on-site following construction activities of Phase 1 of the *Rancho Cienega Sports Complex Project*. Thus, this analysis includes the use of Tier 4 final equipment, consistent with the equipment required per Mitigation Measure AQ-1 for the *Rancho Cienega Sports Complex Project* (City of Los Angeles 2016).

The SCAQMD significance thresholds were used to assess regional and localized emissions during construction and operation of the proposed project (SCAQMD 2015). Localized emissions of criteria air pollutants and precursors were assessed in accordance with SCAQMD's local significance thresholds (LST) guidance. For projects less than five acres, the SCAQMD has developed look-up tables showing the maximum mass emissions that would not cause an exceedance of any LST. Since the proposed project site is approximately 0.4 acres, peak daily localized emissions were estimated using the look-up tables for Source Receptor Area 1. Sensitive receptors within the vicinity of the proposed project site include Dorsey High School adjacent and to the east, Ira C. Massey Child Care Center adjacent and to the north, and residences approximately 38 meters south across Rodeo Road. For projects with boundaries located closer than 25 meters to the nearest receptor, the LST guidance recommends using the LST tables for receptors at 25 meters (SCAQMD 2015). Therefore, the analysis assumes a project site of 1 acre and a receptor distance of 25 meters for the LST tables. Although SCAQMD LSTs only consider the amount of on-site emissions generated by construction activities, this analysis conservatively compares the total construction-related emissions to the LSTs.

Emissions associated with vehicle trips to and from the project site during construction would be dispersed throughout the region and would have a nominal localized impact in the project site vicinity.

As shown in Table 1, construction emissions for the proposed project would result in maximum daily emissions of approximately 1 pound of VOC, 10 pounds of NOx, 16 pounds of CO, less than 1 pound of SO_x, 4 pounds of PM_{10} and 1 pound of $PM_{2.5}$. Additional modeling assumptions and details are provided in Attachment A.

Table 1
Maximum Daily Regional Construction Emissions

Year/Description	Estimated Emissions (lbs/day)					
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}[1]**	**$PM_{2.5}$[1]**
2020	0.55	9.17	9.15	0.03	4.04	0.81
2021	0.66	8.66	15.41	0.04	3.54	0.69
Maximum Daily Emissions	**0.66**	**9.17**	**15.41**	**0.04**	**4.04**	**0.81**
SCAQMD Regional Thresholds	75	100	550	150	150	55
SCAQMD Localized Thresholds [2,3]	--	74	680	--	5	3
Exceed Thresholds?	No	No	No	No	No	No

Source: SCAQMD 2008a, 2015. Emissions estimated by AECOM in 2019.
Notes: lbs/day = pounds per day; VOC = volatile organic compounds; NOx = nitrogen oxides; CO = carbon monoxide; SOx = sulfur oxides; PM10 = particulate matter less than 10 microngs in diameter; PM2.5 = particulate matter less than 2.5 microns in diameter
1. PM_{10} and $PM_{2.5}$ emissions include reductions associated with compliance with SCAQMD Rule 403 Fugitive Dust.
2. Assumes a 1-acre project site and a 25-meter receptor distance for Source Receptor Area 1.
3. The SCAQMD has not developed an LST for VOC or SO_X emissions.

As shown in Table 1, construction-generated emissions of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ would not exceed applicable LST or daily emission thresholds established by the SCAQMD. Therefore, construction emissions would not violate an ambient air quality standard or contribute substantially to an existing violation.

Operation

Following construction, the project site would be landscaped and include a playground area. The community front lawn and playground area would be passive uses, similar to the existing uses of the Rancho Cienega Sports Complex. Therefore, operational emissions are anticipated to remain similar to existing conditions and impacts related to the violation of air quality standards would be less than significant. No mitigation measures would be required.

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

The SCAQMD cumulative analysis focuses on whether a specific project would result in cumulatively considerable increase in emissions. By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development within the SCAB, and this regional impact is cumulative rather than being attributable to any one source. A

project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

The SCAQMD thresholds are designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards. Projects that would not exceed the thresholds of significance would not contribute a considerable amount of criteria air pollutant emissions to the region's emissions profile, and would not impede attainment and maintenance of ambient air quality standards.

As discussed above, the proposed project would result in the generation of criteria air pollutant emissions, but at levels that do not exceed any of the SCAQMD regional and localized thresholds. Therefore, impacts would be less than significant. No mitigation measures would be required.

(D) Would the project expose sensitive receptors to substantial pollutant concentrations?

Some members of the population are especially sensitive to air pollutant emissions and should be given special consideration when evaluating air quality impacts from projects. These people include children, older adults, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Sensitive receptors within the vicinity of the proposed project include Dorsey High School adjacent and to the east of the project site, Ira C. Massey Child Care Center adjacent and to the north of the project site, and multi-family residences approximately 38 meters south of the project site.

Construction

As shown in Table 1, demolition and construction activities would result in emissions of criteria air pollutants, but at levels that would not exceed the SCAQMD regional and localized thresholds of significance. The regional thresholds of significance were designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards, which were established using health-based criteria to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution. In addition, the LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards and are developed based on the ambient concentrations of that pollutant for each source receptor area. As such, the criteria air pollutant emissions associated with the proposed project would not expose sensitive receptors to substantial criteria pollutant concentrations.

The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate matter (diesel PM) emissions associated with heavy-duty construction equipment operations. Heavy-duty construction equipment would operate during the 12-month construction period and would cease following buildout of the proposed project. Construction emissions would occur intermittently throughout the day and would not occur as a constant plume of emissions from the project site. Additionally, construction of the proposed project would occur following the end of Phase 1 and prior to the commencement of Phase 2 of the approved *Rancho Cienega Sports Complex Project.* As discussed previously, the equipment used for the demolition and construction of the proposed project is anticipated to be equipment that would already be on-site following construction activities of Phase 1 of the *Rancho Cienega Sports Complex Project*. As such, due to the shorter construction schedule (12 months) and fewer construction activities and equipment use of the proposed project compared to *Rancho Cienega Sports Complex Project,* the health risk assessment (HRA) conducted for the *Rancho Cienega Sports Complex Project,* can be used to evaluate the impacts of construction of the proposed project to sensitive receptors.

The HRA for the *Rancho Cienega Sports Complex Project* was conducted by AECOM and prepared to evaluate the emissions of TACs during construction activities and their effects on nearby receptors, including the Ira C. Massey Child Care Center (occupied from 3PM to 6PM), Dorsey High School, and surrounding residential housing (City of Los Angeles 2016). The HRA was performed in accordance with the *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments* developed by the Office of Environmental Health Hazard Assessment (OEHHA) for conducting HRAs in California under the Air Toxics "Hot Spots" Program, as well as methodologies from the *Health Risk Assessments for Proposed Land Use Projects* (OEHHA 2015; CAPCOA 2009). Excess lifetime cancer risks, chronic noncancer hazard index (HI), and acute noncancer HI were estimated as part of the HRA. The results of the HRA concluded that the maximum cancer risk and hazard index due to the unmitigated construction emissions would be far below the SCAQMD cancer risk thresholds of 10 in a million and hazard indices of 1.0 (City of Los Angeles 2016).

Based on the shorter construction schedule, smaller project area, and fewer equipment required for the proposed project, it can be assumed that the construction of the proposed project would also not expose sensitive receptors to substantial pollutant concentrations that would result in a health risk. The impact would be less than significant. No mitigation measures would be required.

Operation

The land uses associated with the proposed project would be recreational and would be consistent with the existing conditions, which are not typically sources of TAC emissions. Additionally, the lawn and playground area would be passive uses. Therefore, the proposed project's long-term operational activities would not generate substantial TAC emissions and would not expose sensitive receptors to substantial operational TAC concentrations. The impact would be less than significant.

(E) Would the project create objectionable odors affecting a substantial number of people?

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

Potential sources that may emit odors during construction activities include exhaust from diesel construction equipment. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature.

Operation of the proposed project would not add any new odor sources. The project would not have any significant odor sources, and any odors generated would be similar to odors associated with the existing land uses. As a result, the proposed project's construction and operational activities would not create objectionable odors affecting a substantial number of people. The impact would be less than significant.

Greenhouse Gas Emissions Impacts

(A) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Heavy-duty off-road equipment, materials transport, and worker commutes during construction of the proposed project would result in exhaust-related GHG emissions. Total construction-related GHG

emissions were estimated using the same methodology to estimate criteria pollutant emissions discussed under Air Quality Impacts.

As the City of Los Angeles has not established screening thresholds for GHG emissions, the analysis uses the applicable significance thresholds developed by the SCAQMD. The SCAQMD has adopted a significance threshold of 10,000 metric tons (MT) of carbon dioxide equivalents (CO_2e) per year for industrial (stationary source) projects. The GHG CEQA Significance Threshold Stakeholder Working Group also recommended options for evaluating non-industrial projects, including thresholds for residential, commercial, and mixed use projects. These draft thresholds include a threshold of 3,500 MT CO_2e per year for residential projects, 1,400 MT CO_2e per year for commercial projects, and 3,000 MT CO_2e per year for mixed use projects (SCAQMD 2008b, 2009).

Total GHG emissions associated with construction of the proposed project would be approximately 373 MT CO_2e, with the maximum of 339 MT CO_2e occurring in 2021. SCAQMD recommends that construction emissions be amortized over 30 years, which is assumed to be the average lifetime of a project's operations, and added to the operational emissions of the project. When this total is amortized over the 30-year life of the project, annual construction emissions would be approximately 12 MT CO_2e per year. Since the proposed project recreational land uses would be most similar to a commercial land use, the proposed SCAQMD threshold of 1,400 MT CO_2e per year will be used for this analysis.

As discussed previously, the community front lawn and playground area would consist of passive uses. Therefore, GHG emissions from area sources (including landscaping equipment), mobile sources, and energy consumption associated with operations would be anticipated to be remain similar to existing conditions. Operational GHG emissions would be limited to indirect emissions associated with nominal water use for landscaping. For the purposes of the GHG analysis, water consumption was assumed to occur over the 0.4-acre site. Based on the default CalEEMod rates for water consumption for a park land use, indirect water-related GHG emissions would be approximately 3 MT CO_2e per year. As such, the amortized emissions of 15 MT CO_2e associated with construction and landscaping would be less than the proposed SCAQMD threshold of 1,400 MT CO_2e per year. Therefore, this impact would be less than significant and no mitigation measures would be required.

Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG?

In September 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. It requires that statewide GHG emissions be reduced to 1990 levels by 2020. In 2016, the state legislature passed Senate Bill SB 32, which established a 2030 GHG emissions reduction target of 40 percent below 1990 levels.

In 2008 and 2014, ARB approved the Scoping Plan and the first update to the Scoping Plan, respectively (ARB 2008, 2014). ARB's Scoping Plan is the state's plan to achieve the GHG reductions in California required by AB 32 and also reiterates the state's role in the long-term goal established in Executive Order S-3-05, which is to reduce GHG emissions to 80% below 1990 levels by 2050. In response to SB 32 and the companion legislation of AB 197, ARB approved the Final Proposed 2017 Scoping Plan Update: The Strategy for Achieving California's 2030 GHG Target in November 2017 (ARB 2017). The 2017 Scoping Plan draws from the previous plans to present strategies to reaching California's 2030 GHG reduction target. None of these statewide plans or policies constitutes a regulation to adopt or implement a regional or local plan for reduction or

mitigation of GHG emissions. In addition, it is assumed that any requirements formulated under the mandate of AB 32 and SB 32 would be implemented consistent with statewide policies and laws.

In May 2007, Los Angeles released “Green LA: An Action Plan to Lead the Nation in Fighting Global Warming” (Climate Action Plan) with a goal to reduce the City’s GHG emissions to 35 percent below 1990 levels by the year 2030. The Climate Action Plan focuses on reducing GHG emissions by increasing the use of renewable energy sources, implementing green building policies, diverting waste from landfills, greening the Port of Los Angeles, and changing land use and transportation patterns to reduce dependence on automobiles. In April 2015, the City of Los Angeles released the City’s Sustainable City pLAn, which lays out strategies and priority initiatives to reduce Los Angeles’s GHG emissions by 45 percent by 2025, 60 percent by 2035, and 80 percent by 2050, all against a 1990 baseline (City of Los Angeles 2015). Neither the Green LA Climate Action Plan nor the City’s Sustainable City pLAn include any specific GHG emission reduction requirements for construction activities that would be directly applicable to the proposed project.

Therefore, the proposed project would not conflict with the AB 32 Scoping Plan or Scoping Plan updates, GreenLA Climate Action Plan, or Sustainable City pLAn. As discussed above, the proposed project would not generate GHG emissions that would have a significant impact on the environment. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation for the purpose of reducing GHG emissions. This impact would be less than significant. No mitigation measures would be required.

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Rancho Cienega Celes King III Pool Demo

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.40	Acre	0.40	17,424.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Rancho Cienega Celes King III Pool Demo - Los Angeles-South Coast County, Winter

Project Characteristics -

Land Use - No building square footage associated with park land use. Project consists of lawn and playground area.

Construction Phase - Project specific schedule: December 2019 - December 2020. Additional grading phase added to include soil import trips.

Off-road Equipment - Project specific equipment.

Off-road Equipment - Project specific equipment. Off-highway truck to account for concrete truck.

Off-road Equipment - Phase for additional truck trips associated with soil import.

Grading - Project specific information - based on approximately 1,519 cy needed as fill.

Demolition - Demolition debris calculated assuming 14,000 cy of demo debris exported from the site based on CalRecyle Debris Tool for loose concrete.

Trips and VMT - Haul trips during fill based on approx. 1,519 cy at 10 cy of material per load. Approx 20 construction workers onsite each day and max of 10 truck trips per day.

Vehicle Trips - Passive use - no new trips.

Water And Wastewater - Default water consumption.

Solid Waste - Default solid waste generation.

Construction Off-road Equipment Mitigation - Watering consistent with SCAQMD Rule 403. Tier 4F mitigation consistent with Rancho Cienega Sports Complex analysis.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Rancho Cienega Celes King III Pool Demo - Los Angeles-South Coast County, Winter

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	66.00
tblConstructionPhase	NumDays	2.00	198.00
tblConstructionPhase	NumDays	2.00	24.00
tblConstructionPhase	PhaseEndDate	12/15/2020	3/3/2021
tblConstructionPhase	PhaseEndDate	12/18/2020	12/6/2021
tblConstructionPhase	PhaseStartDate	12/17/2020	3/4/2021
tblGrading	AcresOfGrading	0.00	0.40
tblGrading	MaterialImported	0.00	1,519.00
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	HaulingTripNumber	190.00	304.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	40.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	40.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	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					
2020	1.0180	12.6800	8.8142	0.0324	6.9996	0.3487	7.3483	1.2273	0.3231	1.5504	0.0000	3,366.9567	3,366.9567	0.4138	0.0000	3,377.3018
2021	1.6118	16.8711	13.1656	0.0415	6.5005	0.5960	6.7984	1.1048	0.5496	1.3810	0.0000	4,178.1623	4,178.1623	0.8138	0.0000	4,198.5073
Maximum	**1.6118**	**16.8711**	**13.1656**	**0.0415**	**6.9996**	**0.5960**	**7.3483**	**1.2273**	**0.5496**	**1.5504**	**0.0000**	**4,178.1623**	**4,178.1623**	**0.8138**	**0.0000**	**4,198.5073**

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					
2020	0.5554	9.1731	9.1474	0.0324	4.0038	0.0398	4.0436	0.7737	0.0385	0.8122	0.0000	3,366.9567	3,366.9567	0.4138	0.0000	3,377.3018
2021	0.6626	8.6620	15.4119	0.0415	3.5047	0.0541	3.5420	0.6512	0.0532	0.6872	0.0000	4,178.1623	4,178.1623	0.8138	0.0000	4,198.5073
Maximum	**0.6626**	**9.1731**	**15.4119**	**0.0415**	**4.0038**	**0.0541**	**4.0436**	**0.7737**	**0.0532**	**0.8122**	**0.0000**	**4,178.1623**	**4,178.1623**	**0.8138**	**0.0000**	**4,198.5073**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**53.68**	**39.65**	**-11.74**	**0.00**	**44.38**	**90.06**	**46.38**	**38.90**	**89.49**	**48.85**	**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	9.0000e-004	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**9.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

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	9.0000e-004	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**9.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/2/2020	3/3/2021	5	66	
2	Grading Soil Import	Grading	3/4/2021	4/6/2021	5	24	
3	Grading	Grading	3/4/2021	12/6/2021	5	198	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading Soil Import	Concrete/Industrial Saws	0	0.00	81	0.73
Grading Soil Import	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading Soil Import	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Dumpers/Tenders	1	8.00	16	0.38
Demolition	Excavators	1	8.00	158	0.38
Demolition	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Plate Compactors	1	8.00	8	0.43
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Off-Highway Trucks	1	8.00	402	0.38

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	3	40.00	0.00	1,661.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Soil Import	1	0.00	0.00	304.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	40.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4470	0.0000	5.4470	0.8247	0.0000	0.8247			0.0000			0.0000
Off-Road	0.5884	5.2049	5.5060	8.4600e-003		0.3215	0.3215		0.2972	0.2972		807.2351	807.2351	0.2479		813.4329
Total	**0.5884**	**5.2049**	**5.5060**	**8.4600e-003**	**5.4470**	**0.3215**	**5.7685**	**0.8247**	**0.2972**	**1.1219**		**807.2351**	**807.2351**	**0.2479**		**813.4329**

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	0.2252	7.3301	1.7042	0.0195	1.1055	0.0235	1.1289	0.2840	0.0224	0.3064		2,116.7534	2,116.7534	0.1519		2,120.5518
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2044	0.1450	1.6040	4.4500e-003	0.4471	3.7400e-003	0.4508	0.1186	3.4400e-003	0.1220		442.9682	442.9682	0.0140		443.3172
Total	**0.4296**	**7.4751**	**3.3082**	**0.0240**	**1.5526**	**0.0272**	**1.5798**	**0.4025**	**0.0259**	**0.4284**		**2,559.7216**	**2,559.7216**	**0.1659**		**2,563.8690**

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4512	0.0000	2.4512	0.3711	0.0000	0.3711			0.0000			0.0000
Off-Road	0.1258	1.6980	5.8392	8.4600e-003		0.0126	0.0126		0.0126	0.0126	0.0000	807.2351	807.2351	0.2479		813.4328
Total	**0.1258**	**1.6980**	**5.8392**	**8.4600e-003**	**2.4512**	**0.0126**	**2.4638**	**0.3711**	**0.0126**	**0.3838**	**0.0000**	**807.2351**	**807.2351**	**0.2479**		**813.4328**

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	0.2252	7.3301	1.7042	0.0195	1.1055	0.0235	1.1289	0.2840	0.0224	0.3064		2,116.7534	2,116.7534	0.1519		2,120.5518
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2044	0.1450	1.6040	4.4500e-003	0.4471	3.7400e-003	0.4508	0.1186	3.4400e-003	0.1220		442.9682	442.9682	0.0140		443.3172
Total	**0.4296**	**7.4751**	**3.3082**	**0.0240**	**1.5526**	**0.0272**	**1.5798**	**0.4025**	**0.0259**	**0.4284**		**2,559.7216**	**2,559.7216**	**0.1659**		**2,563.8690**

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					5.4470	0.0000	5.4470	0.8247	0.0000	0.8247			0.0000			0.0000
Off-Road	0.5312	4.6752	5.4736	8.4600e-003		0.2732	0.2732		0.2528	0.2528		807.3087	807.3087	0.2479		813.5070
Total	**0.5312**	**4.6752**	**5.4736**	**8.4600e-003**	**5.4470**	**0.2732**	**5.7202**	**0.8247**	**0.2528**	**1.0775**		**807.3087**	**807.3087**	**0.2479**		**813.5070**

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	0.2149	6.8335	1.6785	0.0193	0.6064	0.0210	0.6275	0.1615	0.0201	0.1816		2,093.3208	2,093.3208	0.1497		2,097.0623
Vendor	0.0000	0.0000	0.0000	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	**0.4056**	**6.9640**	**3.1515**	**0.0236**	**1.0535**	**0.0246**	**1.0782**	**0.2800**	**0.0235**	**0.3035**		**2,522.2212**	**2,522.2212**	**0.1623**		**2,526.2783**

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4512	0.0000	2.4512	0.3711	0.0000	0.3711			0.0000			0.0000
Off-Road	0.1258	1.6980	5.8392	8.4600e-003		0.0126	0.0126		0.0126	0.0126	0.0000	807.3087	807.3087	0.2479		813.5070
Total	**0.1258**	**1.6980**	**5.8392**	**8.4600e-003**	**2.4512**	**0.0126**	**2.4638**	**0.3711**	**0.0126**	**0.3838**	**0.0000**	**807.3087**	**807.3087**	**0.2479**		**813.5070**

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	0.2149	6.8335	1.6785	0.0193	0.6064	0.0210	0.6275	0.1615	0.0201	0.1816		2,093.3208	2,093.3208	0.1497		2,097.0623
Vendor	0.0000	0.0000	0.0000	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	**0.4056**	**6.9640**	**3.1515**	**0.0236**	**1.0535**	**0.0246**	**1.0782**	**0.2800**	**0.0235**	**0.3035**		**2,522.2212**	**2,522.2212**	**0.1623**		**2,526.2783**

3.3 Grading Soil Import - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0248	0.0000	0.0248	2.9900e-003	0.0000	2.9900e-003			0.0000			0.0000
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028		300.9001	300.9001	0.0973		303.3330
Total	**0.1873**	**1.8958**	**2.2602**	**3.1100e-003**	**0.0248**	**0.1118**	**0.1366**	**2.9900e-003**	**0.1028**	**0.1058**		**300.9001**	**300.9001**	**0.0973**		**303.3330**

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	0.1082	3.4394	0.8448	9.7100e-003	0.2215	0.0106	0.2321	0.0607	0.0101	0.0708		1,053.5919	1,053.5919	0.0753		1,055.4751
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1082**	**3.4394**	**0.8448**	**9.7100e-003**	**0.2215**	**0.0106**	**0.2321**	**0.0607**	**0.0101**	**0.0708**		**1,053.5919**	**1,053.5919**	**0.0753**		**1,055.4751**

3.3 Grading Soil Import - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0112	0.0000	0.0112	1.3500e-003	0.0000	1.3500e-003			0.0000			0.0000
Off-Road	0.0380	0.1646	2.3421	3.1100e-003		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003	0.0000	300.9001	300.9001	0.0973		303.3330
Total	**0.0380**	**0.1646**	**2.3421**	**3.1100e-003**	**0.0112**	**5.0600e-003**	**0.0162**	**1.3500e-003**	**5.0600e-003**	**6.4100e-003**	**0.0000**	**300.9001**	**300.9001**	**0.0973**		**303.3330**

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	0.1082	3.4394	0.8448	9.7100e-003	0.2215	0.0106	0.2321	0.0607	0.0101	0.0708		1,053.5919	1,053.5919	0.0753		1,055.4751
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1082**	**3.4394**	**0.8448**	**9.7100e-003**	**0.2215**	**0.0106**	**0.2321**	**0.0607**	**0.0101**	**0.0708**		**1,053.5919**	**1,053.5919**	**0.0753**		**1,055.4751**

3.4 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
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0618	9.4676	8.0261	0.0193		0.4659	0.4659		0.4294	0.4294		1,860.0789	1,860.0789	0.5940		1,874.9293
Total	**1.0618**	**9.4676**	**8.0261**	**0.0193**	**0.0000**	**0.4659**	**0.4659**	**0.0000**	**0.4294**	**0.4294**		**1,860.0789**	**1,860.0789**	**0.5940**		**1,874.9293**

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	0.0638	1.9378	0.5615	5.0000e-003	0.1280	4.1000e-003	0.1321	0.0369	3.9200e-003	0.0408		534.6911	534.6911	0.0345		535.5540
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	**0.2546**	**2.0682**	**2.0346**	**9.3000e-003**	**0.5752**	**7.7100e-003**	**0.5829**	**0.1554**	**7.2500e-003**	**0.1627**		**963.5915**	**963.5915**	**0.0471**		**964.7700**

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2619	2.2878	10.1905	0.0193		0.0308	0.0308		0.0308	0.0308	0.0000	1,860.0789	1,860.0789	0.5940		1,874.9293
Total	**0.2619**	**2.2878**	**10.1905**	**0.0193**	**0.0000**	**0.0308**	**0.0308**	**0.0000**	**0.0308**	**0.0308**	**0.0000**	**1,860.0789**	**1,860.0789**	**0.5940**		**1,874.9293**

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	0.0638	1.9378	0.5615	5.0000e-003	0.1280	4.1000e-003	0.1321	0.0369	3.9200e-003	0.0408		534.6911	534.6911	0.0345		535.5540
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	**0.2546**	**2.0682**	**2.0346**	**9.3000e-003**	**0.5752**	**7.7100e-003**	**0.5829**	**0.1554**	**7.2500e-003**	**0.1627**		**963.5915**	**963.5915**	**0.0471**		**964.7700**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.0000e-004	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		9.0000e-005
Unmitigated	9.0000e-004	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		9.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.0000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		9.0000e-005
Total	**9.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**9.0000e-005**	**9.0000e-005**	**0.0000**		**9.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.0000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		9.0000e-005	9.0000e-005	0.0000		9.0000e-005
Total	**9.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**9.0000e-005**	**9.0000e-005**	**0.0000**		**9.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Rancho Cienega Celes King III Pool Demo

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.40	Acre	0.40	17,424.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Rancho Cienega Celes King III Pool Demo - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - No building square footage associated with park land use. Project consists of lawn and playground area.

Construction Phase - Project specific schedule: December 2019 - December 2020. Additional grading phase added to include soil import trips.

Off-road Equipment - Project specific equipment.

Off-road Equipment - Project specific equipment. Off-highway truck to account for concrete truck.

Off-road Equipment - Phase for additional truck trips associated with soil import.

Grading - Project specific information - based on approximately 1,519 cy needed as fill.

Demolition - Demolition debris calculated assuming 14,000 cy of demo debris exported from the site based on CalRecyle Debris Tool for loose concrete.

Trips and VMT - Haul trips during fill based on approx. 1,519 cy at 10 cy of material per load. Approx 20 construction workers onsite each day and max of 10 truck trips per day.

Vehicle Trips - Passive use - no new trips.

Water And Wastewater - Default water consumption.

Solid Waste - Default solid waste generation.

Construction Off-road Equipment Mitigation - Watering consistent with SCAQMD Rule 403. Tier 4F mitigation consistent with Rancho Cienega Sports Complex analysis.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Rancho Cienega Celes King III Pool Demo - Los Angeles-South Coast County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	66.00
tblConstructionPhase	NumDays	2.00	198.00
tblConstructionPhase	NumDays	2.00	24.00
tblConstructionPhase	PhaseEndDate	12/15/2020	3/3/2021
tblConstructionPhase	PhaseEndDate	12/18/2020	12/6/2021
tblConstructionPhase	PhaseStartDate	12/17/2020	3/4/2021
tblGrading	AcresOfGrading	0.00	0.40
tblGrading	MaterialImported	0.00	1,519.00
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	HaulingTripNumber	190.00	304.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	40.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	40.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0110	0.1411	0.0968	3.6000e-004	0.0767	3.8300e-003	0.0805	0.0134	3.5500e-003	0.0170	0.0000	33.8872	33.8872	4.1000e-003	0.0000	33.9897
2021	0.1520	1.4699	1.2237	3.7200e-003	0.2014	0.0549	0.2562	0.0401	0.0507	0.0907	0.0000	336.9067	336.9067	0.0675	0.0000	338.5940
Maximum	**0.1520**	**1.4699**	**1.2237**	**3.7200e-003**	**0.2014**	**0.0549**	**0.2562**	**0.0401**	**0.0507**	**0.0907**	**0.0000**	**336.9067**	**336.9067**	**0.0675**	**0.0000**	**338.5940**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	5.8600e-003	0.1025	0.1005	3.6000e-004	0.0437	4.4000e-004	0.0441	8.4300e-003	4.2000e-004	8.8500e-003	0.0000	33.8872	33.8872	4.1000e-003	0.0000	33.9897
2021	0.0621	0.6728	1.4470	3.7200e-003	0.1353	4.8100e-003	0.1401	0.0301	4.7300e-003	0.0348	0.0000	336.9065	336.9065	0.0675	0.0000	338.5938
Maximum	**0.0621**	**0.6728**	**1.4470**	**3.7200e-003**	**0.1353**	**4.8100e-003**	**0.1401**	**0.0301**	**4.7300e-003**	**0.0348**	**0.0000**	**336.9065**	**336.9065**	**0.0675**	**0.0000**	**338.5938**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**58.30**	**51.87**	**-17.19**	**0.00**	**35.62**	**91.06**	**45.29**	**28.01**	**90.50**	**59.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-2-2020	3-1-2021	0.4162	0.3012
2	3-2-2021	6-1-2021	0.6697	0.3275
3	6-2-2021	9-1-2021	0.6048	0.2808
4	9-2-2021	9-30-2021	0.1907	0.0885
		Highest	0.6697	0.3275

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	6.0900e-003	0.0000	6.0900e-003	3.6000e-004	0.0000	0.0151
Water						0.0000	0.0000		0.0000	0.0000	0.0000	2.9491	2.9491	7.0000e-005	1.0000e-005	2.9551
Total	**1.6000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.0900e-003**	**2.9491**	**2.9552**	**4.3000e-004**	**1.0000e-005**	**2.9702**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	6.0900e-003	0.0000	6.0900e-003	3.6000e-004	0.0000	0.0151
Water						0.0000	0.0000		0.0000	0.0000	0.0000	2.9491	2.9491	7.0000e-005	1.0000e-005	2.9551
Total	**1.6000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.0900e-003**	**2.9491**	**2.9552**	**4.3000e-004**	**1.0000e-005**	**2.9702**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/2/2020	3/3/2021	5	66	
2	Grading Soil Import	Grading	3/4/2021	4/6/2021	5	24	
3	Grading	Grading	3/4/2021	12/6/2021	5	198	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading Soil Import	Concrete/Industrial Saws	0	0.00	81	0.73
Grading Soil Import	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading Soil Import	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Dumpers/Tenders	1	8.00	16	0.38
Demolition	Excavators	1	8.00	158	0.38
Demolition	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Plate Compactors	1	8.00	8	0.43
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Off-Highway Trucks	1	8.00	402	0.38

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	3	40.00	0.00	1,661.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Soil Import	1	0.00	0.00	304.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	40.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0599	0.0000	0.0599	9.0700e-003	0.0000	9.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4700e-003	0.0573	0.0606	9.0000e-005		3.5400e-003	3.5400e-003		3.2700e-003	3.2700e-003	0.0000	8.0554	8.0554	2.4700e-003	0.0000	8.1173
Total	**6.4700e-003**	**0.0573**	**0.0606**	**9.0000e-005**	**0.0599**	**3.5400e-003**	**0.0635**	**9.0700e-003**	**3.2700e-003**	**0.0123**	**0.0000**	**8.0554**	**8.0554**	**2.4700e-003**	**0.0000**	**8.1173**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4400e-003	0.0822	0.0181	2.2000e-004	0.0119	2.6000e-004	0.0122	3.0600e-003	2.4000e-004	3.3100e-003	0.0000	21.3378	21.3378	1.4900e-003	0.0000	21.3750
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0300e-003	1.6400e-003	0.0181	5.0000e-005	4.8200e-003	4.0000e-005	4.8600e-003	1.2800e-003	4.0000e-005	1.3200e-003	0.0000	4.4939	4.4939	1.4000e-004	0.0000	4.4975
Total	**4.4700e-003**	**0.0839**	**0.0362**	**2.7000e-004**	**0.0167**	**3.0000e-004**	**0.0170**	**4.3400e-003**	**2.8000e-004**	**4.6300e-003**	**0.0000**	**25.8318**	**25.8318**	**1.6300e-003**	**0.0000**	**25.8725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0270	0.0000	0.0270	4.0800e-003	0.0000	4.0800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3800e-003	0.0187	0.0642	9.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	8.0554	8.0554	2.4700e-003	0.0000	8.1173
Total	**1.3800e-003**	**0.0187**	**0.0642**	**9.0000e-005**	**0.0270**	**1.4000e-004**	**0.0271**	**4.0800e-003**	**1.4000e-004**	**4.2200e-003**	**0.0000**	**8.0554**	**8.0554**	**2.4700e-003**	**0.0000**	**8.1173**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4400e-003	0.0822	0.0181	2.2000e-004	0.0119	2.6000e-004	0.0122	3.0600e-003	2.4000e-004	3.3100e-003	0.0000	21.3378	21.3378	1.4900e-003	0.0000	21.3750
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0300e-003	1.6400e-003	0.0181	5.0000e-005	4.8200e-003	4.0000e-005	4.8600e-003	1.2800e-003	4.0000e-005	1.3200e-003	0.0000	4.4939	4.4939	1.4000e-004	0.0000	4.4975
Total	**4.4700e-003**	**0.0839**	**0.0362**	**2.7000e-004**	**0.0167**	**3.0000e-004**	**0.0170**	**4.3400e-003**	**2.8000e-004**	**4.6300e-003**	**0.0000**	**25.8318**	**25.8318**	**1.6300e-003**	**0.0000**	**25.8725**

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1198	0.0000	0.1198	0.0181	0.0000	0.0181	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0117	0.1029	0.1204	1.9000e-004		6.0100e-003	6.0100e-003		5.5600e-003	5.5600e-003	0.0000	16.1123	16.1123	4.9500e-003	0.0000	16.2360
Total	**0.0117**	**0.1029**	**0.1204**	**1.9000e-004**	**0.1198**	**6.0100e-003**	**0.1258**	**0.0181**	**5.5600e-003**	**0.0237**	**0.0000**	**16.1123**	**16.1123**	**4.9500e-003**	**0.0000**	**16.2360**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6600e-003	0.1533	0.0357	4.3000e-004	0.0131	4.6000e-004	0.0136	3.4900e-003	4.4000e-004	3.9300e-003	0.0000	42.2058	42.2058	2.9300e-003	0.0000	42.2790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7900e-003	2.9500e-003	0.0333	1.0000e-004	9.6400e-003	8.0000e-005	9.7200e-003	2.5600e-003	7.0000e-005	2.6300e-003	0.0000	8.7025	8.7025	2.6000e-004	0.0000	8.7089
Total	**8.4500e-003**	**0.1562**	**0.0690**	**5.3000e-004**	**0.0227**	**5.4000e-004**	**0.0233**	**6.0500e-003**	**5.1000e-004**	**6.5600e-003**	**0.0000**	**50.9083**	**50.9083**	**3.1900e-003**	**0.0000**	**50.9879**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0539	0.0000	0.0539	8.1600e-003	0.0000	8.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7700e-003	0.0374	0.1285	1.9000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	16.1123	16.1123	4.9500e-003	0.0000	16.2360
Total	**2.7700e-003**	**0.0374**	**0.1285**	**1.9000e-004**	**0.0539**	**2.8000e-004**	**0.0542**	**8.1600e-003**	**2.8000e-004**	**8.4400e-003**	**0.0000**	**16.1123**	**16.1123**	**4.9500e-003**	**0.0000**	**16.2360**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6600e-003	0.1533	0.0357	4.3000e-004	0.0131	4.6000e-004	0.0136	3.4900e-003	4.4000e-004	3.9300e-003	0.0000	42.2058	42.2058	2.9300e-003	0.0000	42.2790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7900e-003	2.9500e-003	0.0333	1.0000e-004	9.6400e-003	8.0000e-005	9.7200e-003	2.5600e-003	7.0000e-005	2.6300e-003	0.0000	8.7025	8.7025	2.6000e-004	0.0000	8.7089
Total	**8.4500e-003**	**0.1562**	**0.0690**	**5.3000e-004**	**0.0227**	**5.4000e-004**	**0.0233**	**6.0500e-003**	**5.1000e-004**	**6.5600e-003**	**0.0000**	**50.9083**	**50.9083**	**3.1900e-003**	**0.0000**	**50.9879**

3.3 Grading Soil Import - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.0000e-004	0.0000	3.0000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2500e-003	0.0228	0.0271	4.0000e-005		1.3400e-003	1.3400e-003		1.2300e-003	1.2300e-003	0.0000	3.2757	3.2757	1.0600e-003	0.0000	3.3022
Total	**2.2500e-003**	**0.0228**	**0.0271**	**4.0000e-005**	**3.0000e-004**	**1.3400e-003**	**1.6400e-003**	**4.0000e-005**	**1.2300e-003**	**1.2700e-003**	**0.0000**	**3.2757**	**3.2757**	**1.0600e-003**	**0.0000**	**3.3022**

3.3 Grading Soil Import - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2800e-003	0.0421	9.8100e-003	1.2000e-004	2.6100e-003	1.3000e-004	2.7400e-003	7.2000e-004	1.2000e-004	8.4000e-004	0.0000	11.5869	11.5869	8.0000e-004	0.0000	11.6070
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2800e-003**	**0.0421**	**9.8100e-003**	**1.2000e-004**	**2.6100e-003**	**1.3000e-004**	**2.7400e-003**	**7.2000e-004**	**1.2000e-004**	**8.4000e-004**	**0.0000**	**11.5869**	**11.5869**	**8.0000e-004**	**0.0000**	**11.6070**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3000e-004	0.0000	1.3000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	1.9700e-003	0.0281	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.2757	3.2757	1.0600e-003	0.0000	3.3021
Total	**4.6000e-004**	**1.9700e-003**	**0.0281**	**4.0000e-005**	**1.3000e-004**	**6.0000e-005**	**1.9000e-004**	**2.0000e-005**	**6.0000e-005**	**8.0000e-005**	**0.0000**	**3.2757**	**3.2757**	**1.0600e-003**	**0.0000**	**3.3021**

3.3 Grading Soil Import - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2800e-003	0.0421	9.8100e-003	1.2000e-004	2.6100e-003	1.3000e-004	2.7400e-003	7.2000e-004	1.2000e-004	8.4000e-004	0.0000	11.5869	11.5869	8.0000e-004	0.0000	11.6070
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2800e-003**	**0.0421**	**9.8100e-003**	**1.2000e-004**	**2.6100e-003**	**1.3000e-004**	**2.7400e-003**	**7.2000e-004**	**1.2000e-004**	**8.4000e-004**	**0.0000**	**11.5869**	**11.5869**	**8.0000e-004**	**0.0000**	**11.6070**

3.4 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
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1051	0.9373	0.7946	1.9100e-003		0.0461	0.0461		0.0425	0.0425	0.0000	167.0561	167.0561	0.0534	0.0000	168.3898
Total	**0.1051**	**0.9373**	**0.7946**	**1.9100e-003**	**0.0000**	**0.0461**	**0.0461**	**0.0000**	**0.0425**	**0.0425**	**0.0000**	**167.0561**	**167.0561**	**0.0534**	**0.0000**	**168.3898**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1500e-003	0.1954	0.0530	5.0000e-004	0.0125	4.0000e-004	0.0129	3.6000e-003	3.8000e-004	3.9800e-003	0.0000	48.8063	48.8063	2.9900e-003	0.0000	48.8812
Worker	0.0170	0.0133	0.1498	4.3000e-004	0.0434	3.6000e-004	0.0438	0.0115	3.3000e-004	0.0119	0.0000	39.1611	39.1611	1.1500e-003	0.0000	39.1899
Total	**0.0232**	**0.2087**	**0.2027**	**9.3000e-004**	**0.0559**	**7.6000e-004**	**0.0566**	**0.0151**	**7.1000e-004**	**0.0158**	**0.0000**	**87.9674**	**87.9674**	**4.1400e-003**	**0.0000**	**88.0711**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0259	0.2265	1.0089	1.9100e-003		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	167.0559	167.0559	0.0534	0.0000	168.3896
Total	**0.0259**	**0.2265**	**1.0089**	**1.9100e-003**	**0.0000**	**3.0500e-003**	**3.0500e-003**	**0.0000**	**3.0500e-003**	**3.0500e-003**	**0.0000**	**167.0559**	**167.0559**	**0.0534**	**0.0000**	**168.3896**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1500e-003	0.1954	0.0530	5.0000e-004	0.0125	4.0000e-004	0.0129	3.6000e-003	3.8000e-004	3.9800e-003	0.0000	48.8063	48.8063	2.9900e-003	0.0000	48.8812
Worker	0.0170	0.0133	0.1498	4.3000e-004	0.0434	3.6000e-004	0.0438	0.0115	3.3000e-004	0.0119	0.0000	39.1611	39.1611	1.1500e-003	0.0000	39.1899
Total	**0.0232**	**0.2087**	**0.2027**	**9.3000e-004**	**0.0559**	**7.6000e-004**	**0.0566**	**0.0151**	**7.1000e-004**	**0.0158**	**0.0000**	**87.9674**	**87.9674**	**4.1400e-003**	**0.0000**	**88.0711**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	1.6000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**1.6000e-004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**1.6000e-004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.9491	7.0000e-005	1.0000e-005	2.9551
Unmitigated	2.9491	7.0000e-005	1.0000e-005	2.9551

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.476593	2.9491	7.0000e-005	1.0000e-005	2.9551
Total		**2.9491**	**7.0000e-005**	**1.0000e-005**	**2.9551**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.476593	2.9491	7.0000e-005	1.0000e-005	2.9551
Total		**2.9491**	**7.0000e-005**	**1.0000e-005**	**2.9551**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.0900e-003	3.6000e-004	0.0000	0.0151
Unmitigated	6.0900e-003	3.6000e-004	0.0000	0.0151

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.03	6.0900e-003	3.6000e-004	0.0000	0.0151
Total		**6.0900e-003**	**3.6000e-004**	**0.0000**	**0.0151**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.03	6.0900e-003	3.6000e-004	0.0000	0.0151
Total		**6.0900e-003**	**3.6000e-004**	**0.0000**	**0.0151**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation