Appendix F
Greenhouse Gas Technical Report

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Draft

AVION BURBANK PROJECT

Greenhouse Gas Technical Report

Prepared for
City of Burbank
Community Development
150 North Third Street
Burbank, CA 91502-1264

May 2018

ESA

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
AB 32	California Global Warming Solutions Act of 2006
Basin	South Coast Air Basin
BAU	Business as Usual
BWP	Burbank Water and Power
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
CAPCOA	California Air Pollution Control Officer's Association
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	Commercial End-Use Survey
CH_4	Methane
City	City of Burbank
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalents
CPUC	California Public Utilities Commission
DPM	Diesel Particulate Matter
EMFAC	on-road vehicle emissions factor model
GHG	Greenhouse Gas
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
Hp	horsepower
HVAC	Heating, Ventilating and Air Conditioning
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard

Acronym	Description
LOS	Level of Service
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
$MTCO_2e$	Metric ton of carbon dioxide equivalent
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
OPR	California Office of Planning and Research
PFCs	Perfluorocarbons
ppm	parts per million
RPS	Renewable Portfolio Standard
RTIP	Regional Transportation Improvement Program
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur Hexafluoride
SIP	State Implementation Plan
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VMT	Vehicle miles traveled

EXECUTIVE SUMMARY

Overton Moore Properties (the project applicant) proposes to construct a mixed-use development (Project) in the City of Burbank (City). The project Site is located in the western portion of the City on approximately 61 acres of flat land. The project site is currently partially developed with surface parking lots and would be redeveloped with a mixed use campus consisting of creative office and industrial spaces, retail, and a hotel.

The project would incorporate features to encourage use of public transit and alternative modes of transportation by installing two bus stops, prewiring for 126 electric vehicle charging stations, four bike share stations, providing on-street bike lanes for surrounding streets, providing shuttle service for the Golden State District including service to the Metrolink stations, as well as providing a walkway and bike path connecting the project to the future Hollywood-Burbank Airport-Hollywood Way Metrolink Station. The project commercial components would also be designed to meet CALGreen Tier 1 energy efficiency criteria and as a public benefit would provide 40 parking stalls dedicated for use at the future Metrolink station mentioned above.

In accordance with the requirements under the California Environmental Quality Act (CEQA), this Greenhouse Gas (GHG) Technical Report estimates GHG emissions generated by the project and evaluates the potential GHG impacts. The report includes the categories and types of emission sources resulting from the project, the calculation procedures used in the analysis, and any assumptions or limitations. The proposed project would introduce short-term and temporary GHG emissions from construction, and long-term GHG emissions from operation. The following emission sources, associated with the project, have been evaluated:

- *Construction* – Activities associated with construction of the project, such as burning of fossil fuels for demolition, grading, building construction, paving and painting, would result in temporary and incremental increases in GHG emissions.
- *Operation* – Activities from the operation of the project, such as consumption of electricity, natural gas, and water, mobile, stationary, and area sources, and production of solid waste, treatment and conveyance of water would result in ongoing increases in GHG emissions.

Greenhouse gas emissions associated with the project would be consistent with applicable portions of Burbank's General Plan and Greenhouse Gas Reduction Plan. In addition, the project would be consistent with the applicable Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP)/ Sustainable Communities Strategy policies intended to meet the regions' GHG reduction targets as assigned by the California Air Resources Board (CARB). Thus the project's GHG emissions would be consistent with regulatory schemes intended to reduce GHG emissions. Therefore, the project would result in less than significant GHG emissions based on applicable thresholds of significance as evaluated in this GHG Technical Report.

Furthermore, the project would implement project Design Features (PDFs) which would reduce energy and water consumption. Additionally, mitigation measures from the Air Quality Technical Report and this report would result in GHG reductions. With the implementation of PDFs, mitigation measures, and consistency with applicable policies for reducing GHG emissions, the project would achieve GHG emission reductions as much as feasibly possible and would have a less than significant impact.

SECTION 1.0
Introduction

1.1 Existing Conditions

Overton Moore Properties (the project applicant) proposes to construct a mixed-use development (Project) in the City of Burbank (City). The project site would be located in the western portion of the City on approximately 61 acres of flat land. The Burbank Hollywood-Burbank Airport is located to the west and the south of the project site (the Replacement Terminal will be adjacent to the runway, and the proposed project will be adjacent to the terminal), North Hollywood Way is immediately east of the project site, and North San Fernando Blvd and Cohasset Street are north of the project Site as shown in **Figure 1**, project *Vicinity Map*. The surrounding land uses include the Hollywood-Burbank Airport, airport parking, industrial and storage uses, and vacant land. The project site is graded and partially developed with surface parking lots as shown in **Figure 2**, *Aerial Photograph of the Project Site and Vicinity*. A small portion of the parking lots is currently being used for vehicle storage.

1.2 Project Description

The project is a mixed-use development including offices, retail buildings, and a hotel. The project also includes an industrial component, parking, and street improvements, including widening. The project would include transit connectivity to the new Antelope Valley Metro station across the street from the project site at North San Fernando Blvd and the future replacement of Hollywood Burbank Airport terminal via auto, bike and walking paths. The project would also include auto, bike and walking paths that connect the creative industrial, hotel, and creative office to the on-site retail amenities and transit stops. Parking would be provided between the creative office, retail, and hotel uses. 40 parking spaces would be designated to the future metro station. The project would also include the construction and extension of North Kenwood Street and Tulare Avenue as public streets. North Kenwood Street would extend to Cohasset Street and Tulare Avenue would extend from proposed Hollywood-Burbank Airport Terminal to Hollywood Way.

The project would include a General Plan Amendment to change the General Plan land use designation from Airport to Golden State Commercial/Industrial for the western most 18-acre portion of the 60-acre project site. Additionally, the project would also include a Zoning Code Amendment to amend the existing zoning from the M-2 and Airport to Planned Development; a Development Agreement; Development Review for the warehouse, office, and retail/restaurant buildings; and a Tentative Parcel Map to subdivide the project site into separate legal lots for future sale, lease, or financing.

Creative Office Buildings

The creative office component would consist of nine two-story buildings, representing 142,500 square feet (sf), with each building ranging between 6,500 and 22,500 sf. The conceptual design for the creative office spaces would incorporate the past aviation history of the project site with an architecturally distinctive design that is clean and modern. The distinctive architectural design of the buildings would be reinforced in the building amenities, which would include two-story atrium lobbies, open truss/ceilings, extensive natural light, open and efficient floor plans, clear story glass on the second floor, concrete floors, roll-up doors to exterior meeting areas and operable windows. The creative office building component of the proposed project would be designed as office condominium units for lease or sale and would provide tenants the opportunity to design their interior space specific to their needs and aesthetic style. With the exception of the smallest (6,500 sf) building, all of the office condo buildings would be divisible to two units. The landscaped exterior public area within the buildings would be designed to be accommodate conversation areas, casual meeting and dining areas, exterior seating, and private patios for each of the office condos. Other amenities available in the exterior public areas may include but are not limited to, a fireplace, large-scale chess set, and ping pong table.

Retail Center

The proposed retail center component of the project would provide a total of 15,475 sf between two retail buildings, 9,175 sf and 6,300 sf, respectively. The two retail buildings would be divisible down to 1,500 sf spaces, and would accommodate business service retail and food and beverage tenants. The architectural design of the retail component would be complementary to the creative office buildings, with unique building shapes, tactile materials, and ample shaded dining patios. As shown on Figure 3, the retail component would be located on N. Hollywood Way and would serve people visiting Avion Burbank as well as passing commuters, as the retail component would be visible to the surrounding roadways.

Hotel

The proposed project would also be entitled to accommodate a six-story, 166-room hotel, which would be a maximum of 69 feet tall. The proposed hotel would be similar to a nationally branded upscale select service hotel. Proposed amenities would include a restaurant, meeting facilities, swimming pool, fitness center, business center and lounge area. The proposed hotel would service the airport, business and tourist industry and would be located adjacent to the Metro Link stop to allow for convenient access to alternative transportation.

Creative Industrial Buildings

The proposed project includes six creative industrial buildings totaling 1,014,887 sf. The building sizes range from approximately 93,500 to 282,500 sf and would be divisible down to approximately 27,200 sf. The proposed creative industrial buildings would provide large expansive spaces that could accommodate different types of businesses and operations, which would allow for flexibility in the types of tenants that could use the creative industrial buildings. Similar to the creative office buildings and retail center components, the creative industrial

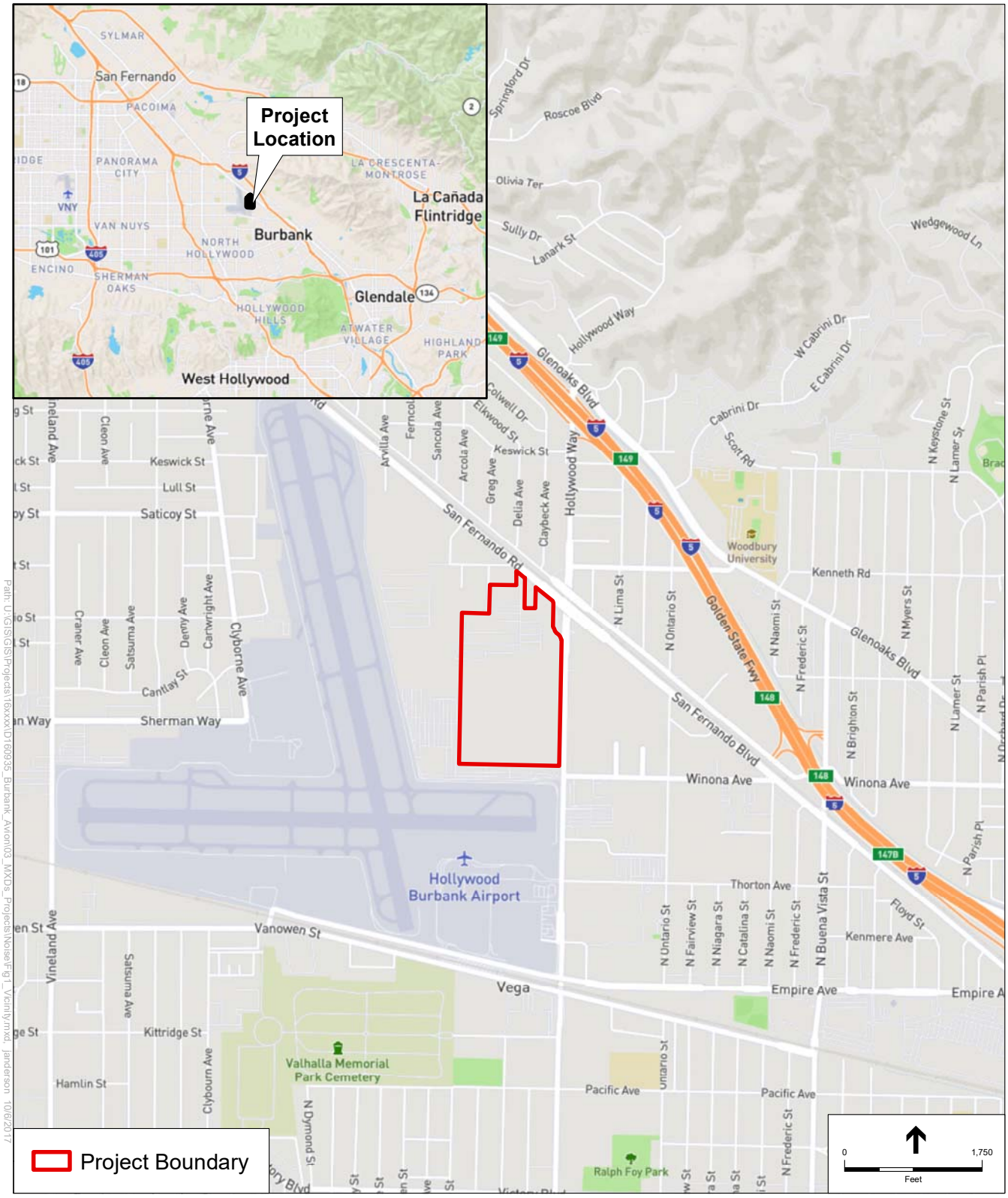
buildings would also be designed to incorporate aspects of the aviation history of the project site with a modern, clean architecturally style. Two story lanterns of glass would accentuate the office corners of the facility creating a play of solid and void in the massing of the 40-foot-tall facilities. Clearstories of glazing would be installed high on the concrete tilt up panels between the transparent corners providing natural light deep into the building footprint. Metal panel elements would be used as accents in a similar way the creative office buildings and multi-colored paint compositions would be used to break down the scale of the concrete tilt up walls. The office areas would also have an operable garage door that would open to a private patio. Setbacks with landscaping along Hollywood Way and Tulare Avenue would provide a consistent visual theme for Avion Burbank with setbacks ranging from 14 to 40 feet. The surrounding landscaping would consist of varied landscaped tree species and shrubs that are consistent with the remainder of the mixed-use campus. The creative industrial buildings would be approximately 40 feet tall to the top of the parapet and would include large truck dock yards to allow for interior maneuverability within the truck courts.

Parking

Parking for the proposed project would be provided in surface parking lots, located adjacent to the proposed creative industrial, creative office, retail and hotel buildings. A shared parking demand analysis was conducted for the creative office, retail center and hotel portions of the project. Shared parking is defined as a parking space that can be used to serve two or more individual land uses without conflict or encroachment. Shared parking works based upon variations in the peak demand for each use and the relationship among land use activities that are complimentary. Based upon a total of 1,014,887 sf of creative industrial, 142,250 sf of creative office, 15,475 sf of retail and 101,230 sf of hotel floor area, 1,884 parking spaces are required. The project would provide 2,390 parking spaces, which exceeds the City's parking requirements. In addition, as an added public benefit, the project would provide 40 parking stalls to the dedicated use of the future Antelope Valley Metro Link stop.

Land Use and Zoning Designation

The project site currently zoned AP Airport, is located adjacent to the Hollywood-Burbank Airport, including the project site of the future proposed Hollywood-Burbank Airport Replacement Terminal, to the west. The project site is bounded on the north by N. San Fernando Boulevard and Cohasset Street and two industrial/warehouse buildings, both zoned M-2; to the east by N. Hollywood Way and commercial uses, industrial uses, trucking/freight terminal and parking lots, which are zoned M-2; to the south by Winona Avenue and runway which is zoned AP. Additional surrounding land uses include airport parking, industrial and storage uses, and vacant land. According to the City of North Kenwood Street, these surrounding land uses are designated as Golden State Commercial/Industrial, Airport, and Regional Commercial uses.



SOURCE: ESRI

Avion Burbank Project

Figure 1

Vicinity Location Map

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SOURCE: ESRI

Avion Burbank Project

Figure 2

Aerial Photograph of Project Site and Vicinity

1.3 Project Design Features (PDFs)

The project incorporates many project design features (PDFs) that would reduce construction emissions, and target sustainable site development, water savings, energy efficiency, green-oriented materials selection, and improved indoor environmental quality. PDFs are part of the project design, and are not mitigation measures. The PDFs proposed for the project includethe following:

PDF GHG-1: Design Elements. Prior to the issuance of building permits, the project applicant shall demonstrate the project will have 7.34 acres of landscaping area.

PDF GHG -2: Design Elements. Prior to the issuance of building permits, the project applicant shall demonstrate the project will plant approximately 900 new trees.

PDF GHG -3: Design Elements. Prior to the issuance of building permits, the project applicant shall demonstrate the project will use water-saving plumbing fixtures (indoor) and drip irrigation and drought tolerant plants for landscaping.

PDF GHG -4: Design Elements. Prior to the issuance of building permits, the project applicant shall demonstrate the project will be designed to reduce building energy needs by installation of cool roofs in all buildings; install operable windows in the office areas; install skylights and clear story glass in the creative industrial and office to allow for natural lighting during the day; use Light-emitting diode (LED) lights in all outdoor areas; and Implement smart grid technology by installing “smart meters”

PDF GHG -6: Design Elements. Prior to the issuance of building permits, the project applicant shall demonstrate the project will provide users with the ability to use roof-mounted solar systems.

PDF GHG -7: Design Elements. Prior to the issuance of building permits, the project applicant r shall demonstrate the project will comply with the City of Burbank Sustainability Action Plan for 50 percent waste diversion by including solid waste disposal areas that can accommodate the collection and separation of recyclables and green waste.

PDF-AIR-1: Construction Features. Construction equipment operating at the project site shall be subject to the following requirements, which shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment:

- The project shall require all off-road diesel equipment greater than 50 horsepower (hp) used for this project to meet USEPA Tier 4 off-road emission standards or equivalent. Welders shall also meet USEPA Tier 4 off-road emission standards or shall be electric-powered. This PDF shall reduce diesel particulate matter (DPM) and nitrogen oxides (NOx) emissions during construction activities.

PDF-AIR-2: Design Elements. The project shall be designed to meet CAL Green Building Standards, commercial components shall meet CAL Green Tier 1 energy efficiency criteria. In addition, the project shall incorporate the following energy and emission saving features:

- CAL Green Tier 1 requires recycle and/or salvage at least 65 percent of non–hazardous construction and demolition debris. The project shall recycle and balance on-site all non–hazardous construction and demolition debris.
- The project shall use water efficient landscaping and native drought tolerant plants.
- The project shall include easily accessible recycling areas dedicated to the collection and storage of non-hazardous materials such as paper, corrugated cardboard, glass, plastics, metals, and landscaping debris (trimmings).
- The project shall include efficient heating, ventilation, and air conditioning (HVAC) systems.
- The project shall include shuttle service for the Golden State District including service to the Metrolink stations.
- The project shall include passive cooling/heating features.
- The project shall include pre-wiring for solar panels.
- The project shall encourage the use of alternative modes of transportation by installing the prewiring for 126 on-site electric vehicle charging stations, providing four bike share stations and increased access to the future Burbank Airport-North Metrolink station for the Antelope Valley Metrorail Link.
- As a public benefit, the project shall provide 40 parking stalls for dedicated use at the future Burbank Airport-North Metrolink station for the Antelope Valley Metrorail Link.

1.4 Existing Site Emissions

The project site is partially developed with surface parking lots. A small portion of the project site is currently used as long-term automobile storage and does not generate substantial GHG emissions. Therefore, this GHG analysis conservatively assumes the baseline emissions to be zero and focuses on emissions generated from construction and operations of the project.

1.5 Existing Greenhouse Gas Environment

Global Climate Change

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena;

however, data indicates that the current global conditions differ from past climate changes in rate and magnitude. The current increased changes in global climate have been attributed to anthropogenic activities by the Intergovernmental Panel on Climate Change (IPCC).[1] GHG trap long-wave radiation or heat in the atmosphere, which heats the surface of the Earth. Without human intervention, the Earth maintains an approximate balance between the GHG emissions in the atmosphere and the storage of GHGs in the oceans and terrestrial ecosystems. GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking, are the primary sources of GHG emissions.

The Federal government and State of California recognized that anthropogenic (i.e., human-caused) GHG emissions are contributing to changes in the global climate, and such changes are having and will have adverse effects on the environment, the economy, and public health. While worldwide contributions of GHG emissions are expected to have widespread consequences, it is not possible to link particular changes to the environment of California or elsewhere to GHGs emitted from a particular source or location. In other words, emissions of GHGs have the potential to cause global impacts rather than local impacts. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as, rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions. Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability. In addition, rising temperatures and shifts in microclimates associated with global climate change are expected to increase the frequency and intensity of wildfires. California law defines GHGs to include the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).[2]

The most common GHG that results from human activity is CO_2, which represents 76 percent of total anthropogenic GHG emissions in the atmosphere (as of 2010 data),[3] followed by CH_4 and N_2O. Scientists have established a Global Warming Potential (GWP) to gauge the potency of each GHG's ability to absorb and re-emit long-wave radiation. The GWP of a gas is determined using CO_2 as the reference gas with a GWP of 1 over 100 years. For example, a gas with a GWP of 10 is 10 times more potent than CO_2 over 100 years. The sum of each GHG multiplied by its associated GWP is referred to as carbon dioxide equivalents (CO_2e). The measurement unit of CO_2e is used to report the combined potency of GHG emissions. The IPCC updated the GWP values based on the latest science in its Fifth Assessment Report (AR5). Although GWPs have been updated in IPCC AR5, the California Air Resources Board (CARB) uses GWPs from IPCC

1 Intergovernmental Panel on Climate Change, Fifth Assessment Report: The Physical Science Basis, Summary for Policy Makers, (2013).

2 *CEQA Guidelines* Section 15364.5; Health and Safety Code, section 38505(g).

3 Intergovernmental Panel on Climate Change, Fifth Assessment Report: Synthesis Report, (2013).

AR4 for its most recent GHG emissions inventory.[4] Compounds that are regulated as GHGs are discussed below.[5, 6]

- **Carbon Dioxide (CO_2):** the most abundant GHG in the atmosphere, primarily generated from fossil fuel combustion from stationary and mobile sources. CO_2 has a GWP of 1, and therefore, is the reference gas for determining the GWPs of all other GHGs.
- **Methane (CH_4):** emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. CH_4 has a GWP of 25.
- **Nitrous Oxide (N_2O):** produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. N_2O has a GWP of 298.
- **Hydrofluorocarbons (HFCs):** fluorinated compounds consisting of hydrogen, carbon, and fluorine, typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. HFCs have GWPs ranging from 124 to 14,800.
- **Perfluorocarbons (PFCs):** fluorinated compounds consisting of carbon and fluorine, primarily created as a byproduct of aluminum production and semiconductor manufacturing. PFCs have GWPs ranging from 7,390 to 127,200.
- **Sulfur Hexafluoride (SF_6):** fluorinated compound consisting of sulfur and fluoride, a colorless, odorless, nontoxic, nonflammable gas most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF_6 has a GWP of 22,800.

Worldwide, man-made emissions of GHGs were approximately 49,000 million metric tons (MMT) CO_2e in 2010 including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation).[7] Emissions of CO_2 from fossil fuel use and industrial processes account for 65 percent of the total while CO_2 emissions from all sources accounts for 76 percent of the total GHG emissions. Methane emissions account for 16 percent

4 GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its Second Assessment Report (SAR) in, 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the science in its Fourth Assessment Report (AR4). CARB reports GHG emission inventories for California using the GWP values from the IPCC AR4.

5 Intergovernmental Panel on Climate Change, Second Assessment Report, Working Group I: The Science of Climate Change, (1995).

6 Intergovernmental Panel on Climate Change, Fourth Assessment Report, Working Group I Report: The Physical Science Basis, (2007).

7 Intergovernmental Panel on Climate Change, Fifth Assessment Report Synthesis Report, (2014).

and N_2O emissions for 6.2 percent. In 2015, the United States was the world's second largest emitter of CO_2 at 5,150 MMT; China was the largest emitter of CO_2 at 10,700 MMT.[8]

CARB compiles GHG inventories for the State of California. Based on the 2015 GHG inventory data (the latest year for which data are available from CARB), California emitted 440.4 million metric tons of CO_2e ($MMTCO_2e$) including emissions resulting from imported electrical power, and 405 $MMTCO_2e$ excluding emissions related to imported power. Since 2007, statewide GHG emissions have followed a declining trend and 2015 emissions were 1.5 $MMTCO_2e$ lower than 2014.[9] Between 1990 and 2015, the population of California grew by approximately 9.1 million (from 29.8 to 38.9 million), which represents an increase of approximately 30 percent from 1990 population levels.[10] In addition, the California economy, measured as gross State product, grew from $773 billion in 1990 to $2.5 trillion in 2015 representing an increase of approximately three times the 1990 gross State product.[11] Despite the population and economic growth, California's net GHG emissions only grew by approximately 2 percent between 1990 and 2015. According to CARB, the declining trend coupled with the state's GHG reduction programs (such as the Renewables Portfolio Standard, Low Carbon Fuel Standard (LCFS), vehicle efficiency standards, and declining caps under the Cap and Trade Program) demonstrate that California is on track to meet the 2020 GHG reduction target codified in California Health and Safety Code (HSC), Division 25.5, also known as The Global Warming Solutions Act of 2006 (AB 32).[12] **Table 1**, *State of California Greenhouse Gas Emissions*, identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., areas of carbon sequestration due to forest growth) in 1990 and 2015 (the most recent year for which data are available from CARB). As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at 37 percent in 2015.

TABLE 1
STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS

Category	Total 1990 Emissions using IPCC SAR ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2015 Emissions using IPCC AR4 ($MMTCO_2e$)	Percent of Total 2015 Emissions
Transportation	150.7	35%	162.9	37%
Electric Power	110.6	26%	83.7	19%

8 PBL Netherlands Environmental Assessment Agency and the European Commission Joint Research Center, Trends in Global CO_2 Emissions 2016 Report, (2016) 20, 23. Available: http://www.pbl.nl/en/publications/trends-in-global-co2-emissions-2016-report. Accessed August 2017.

9 California Air Resources Board, California Greenhouse Gas Emission Inventory-2017 Edition. Available at https://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed June 2017.

10 United States Census Bureau, 1990 Census Apportionment Results, https://www.census.gov/data/tables/1990/dec/1990-apportionment-data.html. Accessed June 2017; California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, January 1, 2011-2017, with 2010 Benchmark, http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/. Accessed June 2017.

11 California Department of Finance, Gross State Product. Available at: http://dof.ca.gov/Forecasting/Economics/Indicators/Gross_State_Product/. Accessed June 2017. Amounts are based on current dollars as of the date of the report (May 2017).

12 California Air Resources Board, Frequently Asked Questions for the 2016 Edition California Greenhouse Gas Emission Inventory, (2016). Available: https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_faq_20160617.pdf. Accessed May 2017.

Category	Total 1990 Emissions using IPCC SAR ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2015 Emissions using IPCC AR4 ($MMTCO_2e$)	Percent of Total 2015 Emissions
Commercial	14.4	3%	13.2	3%
Residential	29.7	7%	26.4	6%
Industrial	103.0	24%	92.5	21%
Recycling and Waste [b]	—	—	8.8	2%
High GWP/Non-Specified [c]	1.3	<1%	17.6	4%
Agriculture/Forestry	23.6	6%	35.2	8%
Forestry Sinks	-6.7	-2%	— [d]	— [d]
Net Total (IPCC SAR)	**426.6**	**100%**	—	—
Net Total (IPCC AR4) [e]	**431**	**100%**	**440.4**	**100%**

[a] Totals may not add up exactly due to rounding.
[b] Included in other categories for the 1990 emissions inventory.
[c] High GWP gases are not specifically called out in the 1990 emissions inventory.
[d] Revised methodology under development (not reported for 2014).
[e] CARB revised the State's 1990 level GHG emissions using GWPs from the IPCC AR4.
Sources: California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, (2015). Available: https://www.arb.ca.gov/cc/inventory/1990level/1990level.htm. Accessed October 2016; California Air Resources Board, California Greenhouse Gas Emission Inventory – 2017 Edition, Scoping Plan Categorization, (2017). Available: http://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed June 2017.

Effects of Global Climate Change

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, 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 Earth's climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC, in its Fifth Assessment Report, Summary for Policy Makers, stated that, "it is extremely likely that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forcings together."[13] A report from the National Academy of Sciences concluded that 97 to 98 percent of the climate researchers most actively publishing in the field support the tenets of the IPCC in that climate change is very likely caused by human (i.e., anthropogenic) activity.[14]

According to the California Environmental Protection Agency (CalEPA), the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more

13 Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, (2013) page 15.

14 Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, Expert Credibility in Climate Change, Proceedings of the National Academy of Sciences of the United States of America. 2010;107:12107-12109.

extreme heat days per year; more high ozone days; more large forest fires; more drought years; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation.[15] Data regarding potential future climate change impacts are available from the California Natural Resources Agency (CNRA), which in 2009 published the *California Climate Adaptation Strategy*[16] as a response to the Governor's Executive Order S-13-2008. In 2014, the CNRA rebranded the first update of the 2009 adaptation strategy as the *Safeguarding California Plan*.[17] In 2016, the CNRA released *Safeguarding California: Implementation Action Plans* in accordance with Executive Order B-30-15, identifying a lead agency to lead adaptation efforts in each sector. *Safeguarding California* lists specific recommendations for State and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the *California Climate Adaptation Strategy*, the California Energy Commission (CEC) was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers.[18] The website, known as Cal-Adapt, became operational in 2011.[19] The information provided by the Cal-Adapt website represents a projection of potential future climate scenarios. The data are comprised of the average values from a variety of scenarios and models, and are meant to illustrate how the climate may change based on a variety of different potential social and economic factors. Below is a summary of some of the potential climate change effects and relevant Cal-Adapt data, reported by an array of studies that could be experienced in California as a result of global warming and climate change.

Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.[20]

According to the Cal-Adapt website, the portion of the City of Burbank in which the project site is located could result in an average increase in temperature of approximately 6.0°F by 2070-

15 California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, (2006).

16 California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, (2009).

17 CNRA, 2014. Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy. (2014). Accessed September 2017.

18 California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, (2009).

19 The Cal-Adapt website address is: http://cal-adapt.org.

20 California Energy Commission, Scenarios of Climate Change in California: An Overview, February 2006. http://www.energy.ca.gov/2005publications/CEC-500-2005-186/CEC-500-2005-186-SF.PDF. Accessed April 2016.

2090, compared to the baseline 1961-1990 period. The data suggests that the predicted future increase in temperatures as a result of climate change could potentially interfere with efforts to control and reduce ground-level ozone in the region.

Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, "considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change."[21] For example, some studies identify little change in total annual precipitation in projections for California while others show significantly more precipitation. [22] Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full.[23] Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.[24]

The California Department of Water Resources report on climate change and effects on the State Water project, the Central Valley project, and the Sacramento-San Joaquin Delta, concludes that "climate change will likely have a significant effect on California's future water resources…[and] future water demand." It also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain." It also reports that the relationship between climate change and its potential effect on water demand is not well understood, but "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.[25] In its Fifth Assessment Report, the IPCC states

21 Pacific Institute for Studies in Development, Environment and Security, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, July 2003, p.5, http://www.esf.edu/glrc/library/documents/CaliforniaClimateChangeWaterResourcesLitReview_2003.pdf, Accessed June 2017.

22 Pacific Institute for Studies in Development, Environment and Security, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, July 2003, p.5, http://www.esf.edu/glrc/library/documents/CaliforniaClimateChangeWaterResourcesLitReview_2003.pdf, Accessed June 2017.

23 Pacific Institute for Studies in Development, Environment and Security, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, July 2003, p.17, http://www.esf.edu/glrc/library/documents/CaliforniaClimateChangeWaterResourcesLitReview_2003.pdf, Accessed June 2017.

24 Pacific Institute for Studies in Development, Environment and Security, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, July 2003, p.17, http://www.esf.edu/glrc/library/documents/CaliforniaClimateChangeWaterResourcesLitReview_2003.pdf, Accessed June 2017.

25 California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, July 2006. http://baydeltaoffice.water.ca.gov/climatechange/DWRClimateChangeJuly06.pdf. Accessed June 2017.

"Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions."[26]

Hydrology and Sea Level Rise

As discussed above, climate changes could potentially affect: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply, and increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a $30 billion agricultural industry that produces half the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.[27]

Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Scientists expect that the average global surface temperature could rise by 2-11.5°F (1.1-6.4°C) by 2100, with significant regional variation.28 Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as two feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage.[29, 30]

26 Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, (2013) 20.

27 California Climate Change Center, Our Changing Climate: Assessing the Risks to California, (2006).

28 National Research Council, Advancing the Science of Climate Change, (2010).

29 Parmesan, C., 2004. Ecological and Evolutionary Response to Recent Climate Change.

30 Parmesan, C and Galbraith, H, 2004. Observed Ecological Impacts of Climate Change in North America. Arlington, VA: Pew. Cent. Glob. Clim. Change.

SECTION 2.0
Regulatory Framework

2.1 Federal

The United States Environmental Protection Agency (USEPA) is responsible for implementing Federal policy to address GHGs. The Federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO_2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the Energy Star labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

On May 19, 2009, the President announced a national policy for fuel efficiency and emissions standards in the United States auto industry.[31] The adopted Federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.[32]

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Federal Clean Air Act. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) on December 7, 2009. The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the Clean Air Act consistent with the United States Supreme Court decision. The

31 On March 15, 2017, the Trump Administration announced its intention to direct the USEPA to reconsider the model year 2017-2025 cars and light truck emissions standards, but did not rescind California's waiver. Therefore, the standards remain in effect. See: The White House, Remarks by President Trump at American Center for Mobility | Detroit, MI, March 15, 2017. Available at: https://www.whitehouse.gov/the-press-office/2017/03/15/remarks-president-trump-american-center-mobility-detroit-mi. Accessed May 2017.

32 United States Environmental Protection Agency, "EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks," http://www.epa.gov/oms/climate/documents/420f12051.pdf. 2012.

USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not themselves impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

Standards for GHG emissions and fuel efficiency for medium- and heavy-duty trucks have been jointly developed by the USEPA and the National Highway Traffic Safety Administration (NHTSA). The Phase 1 standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type.[33] The USEPA and NHTSA are in the process of considering adoption of the Phase 2 standards, which would cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.[34]

2.2 State

The State of California has promulgated a number of regulations and policies to reduce statewide GHG emissions, including source-specific regulations focused on the energy-production sector, mobile sources, and buildings. Regulations that are relevant to the project are described below.

General

California's Involvement in International Climate Change Efforts

California is a member of the Under2 Coalition, which is an international coalition representing 39 percent of the global economy has signed a memorandum of understanding to limit greenhouse gas emissions to below 80 to 95 percent below 1990 levels and limit global warming to 2 degrees Celsius. In July 2017, California Governor Jerry Brown announced an international climate summit, scheduled for 2018 in San Francisco, California. The intent of this international climate summit is to position the State as an active partner in international climate change efforts. Between 2016 and 2017, the Paris Agreement was adopted by 196 countries within the United Nations Framework Convention on Climate Change, and sets a goal to limit temperature increases to below 2 degrees Celsius above pre-industrial levels. The Paris Agreement came into force for the United States on November 4, 2016, and agreed to reduce GHG emissions by 26 percent to 28 percent of 2005 levels by 2025.[35] However, on August 4, 2017, under President Donald Trump, the United States officially announced their intention to withdraw from the treaty. However, under the agreement's rules, parties may only begin withdrawal after three years of

33 United States Environmental Protection Agency, Fact Sheet: EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles, August 2011, https://nepis.epa.gov/Exe/ZyPDF.cgi/P100BOT1.PDF?Dockey=P100BOT1.PDF. Accessed August 2017.

34 United States Environmental Protection Agency, Federal Register/Vol. 81, No. 206/Tuesday, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, October 25, 2016, https://www.gpo.gov/fdsys/pkg/FR-2016-10-25/pdf/2016-21203.pdf. Accessed August 2017.

35 United Nations, Framework Convention on Climate Change, Paris Agreement – Status of Ratification, http://unfccc.int/paris_agreement/items/9444.php. Accessed August 2017.

participation, with one additional year required to fully withdraw.

California Air Resources Board

CARB, as part of the CalEPA, is responsible for the coordination and administration of both Federal and State air pollution control programs within California. In this capacity, CARB conducts research, sets California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. CARB also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan (SIP) for criteria pollutants designated as nonattainment of NAAQS in an air basin, in collaboration with the Federal government and local air districts. CARB also has primary responsibility for adopting regulations to meet the State's goal of reducing GHG emissions to 40 percent below 1990 levels by 2030.

California Executive and Legislative GHG Actions

Executive Order S-3-05 and Executive Order B-30-15

California Governor Arnold Schwarzenegger enacted Executive Order S-3-05 on June 1, 2005, establishing the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agency representatives involved in the GHG reduction plan include the Secretary of the California Business, Transportation, and Housing Agency, the Secretary of the California Department of Food and Agriculture, the Secretary of the California Natural Resources Agency, the Chairperson of CARB, the Chairperson of the CEC, and the President of the California Public Utilities Commission (CPUC). Representatives from these agencies comprise the California Climate Action Team (CCAT).

The CCAT provides biennial reports to the Governor and the California State Legislature on the State of GHG reductions in California as well as strategies for mitigating and adapting to climate change. The first CCAT Report to the Governor and the Legislature in 2006 contained recommendations and strategies to help meet the targets in Executive Order S 3-05.[36] The 2010 CCAT Report, finalized in December 2010, expands on the policy oriented 2006 assessment.[37] The new information detailed in the CCAT Report includes development of revised climate and

[36] California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, (2006).

[37] California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, (2010).

sea-level projections using new information and tools that have become available in the last two years; and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts.

On April 29, 2015, Governor Jerry Brown issued Executive Order B-30-15. Therein, Governor Brown:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

In response to the 2030 GHG reduction target, CARB released the 2017 Climate Change Scoping Plan Update in January 2017.[38] The Scoping Plan Update outlines the strategies the State will implement to achieve the 2030 GHG reduction target, which build on the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, improved vehicle, truck and freight movement emissions standards, increasing renewable energy, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet energy needs. The Scoping Plan Update also comprehensively addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The Scoping Plan Update considers the following scenarios:

- Proposed Scenario: Continuing the Cap-and-Trade Program combined with an additional 20 percent reduction of greenhouse gases in the refinery sector and boosting the LCFS to 18 percent.
- Alternative 1: Direct regulations on a wide variety of sectors, such as specific required reductions for all large GHG sources, more renewables, increased energy efficiency, and a higher LCFS.
- Alternative 2: A carbon tax to put a price on carbon, instead of the Cap-and-Trade Program.
- Alternative 3: All Cap-and-Trade. This would remove the refinery measure and keep the LCFS at 10 percent.
- Alternative 4: Cap-and-Tax. This would retain the 20% refinery reduction from the Proposed Scenario and place a declining cap on industry, and natural gas and fuel suppliers, while also requiring them to pay a tax on each ton of GHG emitted.

38 California Air Resources Board, The 2017 Climate Change Scoping Plan Update, (January 2017). Available: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed March 2017.

CARB was scheduled to consider the proposed scenario and alternatives and potential adoption of the 2017 Climate Change Scoping Plan Update in late June 2017; however, CARB has postponed this to an undetermined future date.[39]

California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California HSC, Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines regulated GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing State actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020. **Table 2**, *Estimated Greenhouse Gas Emissions Reductions Required by HSC Division 25.5*, shows the reduction goals according to the scoping plan year.

TABLE 2
ESTIMATED GREENHOUSE GAS EMISSIONS REDUCTIONS REQUIRED BY HSC DIVISION 25.5

Emissions Scenario	GHG Emissions ($MMTCO_2e$)
2008 Scoping Plan (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	427
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	**169 (28.4%) [a]**
2011 Scoping Plan (IPCC AR4)	
2020 BAU Forecast (CARB 2011 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	431
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	**78.4 (15.4%) [b]**
2017 Scoping Plan Update (Note: CARB will consider adoption of the Plan at a future undetermined date)	
2030 BAU Forecast ("Reference Scenario" which includes 2020 GHG reduction policies and programs)	392
2030 Emissions Target Set by HSC Divisno25.5 (i.e., 40 % below 1990 level)	260
Reduction below Business –As-Usual Necessary to Achieve 40% below 1990 Level by 2030	**132 (33.7%)**

$MMTCO_2e$ = million metric tons of carbon dioxide equivalents

[a] 596 – 427 = 169 / 596 = 28.4%
[b] 509.4 – 431 = 78.4 / 509.4 = 15.4%
[c] 392 – 260 = 132 / 392 = 33.7%

39 California Air Resources Board, Notice of Postponement - Public Meeting for the 2017 Climate Change Scoping Plan Update, June 13, 2017. Available: https://www.arb.ca.gov/lispub/rss/displaypost.php?pno=10383. Accessed July 2017.

Emissions Scenario	GHG Emissions ($MMTCO_2e$)

SOURCE: California Air Resources Board, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011; California Air Resources Board, 2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition. Available: http://www.arb.ca.gov/cc/inventory/data/bau.htm. Accessed May 2017; California Air Resources Board, The 2017 Climate Change Scoping Plan Update, (January 2017). Available: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed May 2017.

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions reduction target for 2020. The 2020 emissions reduction target was originally set at 427 million metric tons of CO_2 equivalent ($MMTCO_2e$) using the GWP values from the IPCC Second Assessment Report (SAR).[40] CARB has determined the updated target, based on GWP values from the IPCC AR4, for the 1990 GHG emissions inventory and 2020 GHG emissions target is now 431 $MMTCO_2e$.[41, 42] CARB also projected the state's 2020 GHG emissions under "business as usual" (BAU) conditions, also known as no action taken (NAT) conditions-that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). CARB also updated the State's projected 2020 emissions estimate to account for the effect of the 2007-2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulations that were recently adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPC AR4 is 509.4 $MMTCO_2e$.[43] In the 2017 Climate Change Scoping Plan Update, CARB provides the estimated projected statewide 2030 emissions and the level of reductions necessary to achieve the 2030 target of 40 percent below 1990 levels, taking into account 2020 GHG reduction policies and programs. A summary of the GHG emissions reductions required under HSC Division 25.5 is provided in Table 2.

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197; both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of State climate policies reach into disadvantaged communities.

40 California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, (2007).

41 GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its Second Assessment Report (SAR) in, 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.

42 California Air Resources Board, 2020 Business-as-Usual (BAU) Emissions Projection 2014 Edition, http://www.arb.ca.gov/cc/inventory/data/bau.htm. Accessed May 2017.

43 California Air Resources Board, 2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition. Available at: http://www.arb.ca.gov/cc/inventory/data/bau.htm. Accessed May 2017.

Continuation of the Cap-and-Trade regulation is expected to cover approximately 34 to 76 percent of the 2030 reduction obligation.[44] Under the Proposed Scenario, the short-lived climate pollutant (SLCP) strategy is expected to cover approximately 13 to 26 percent. The Renewables Portfolio Standard with 50 percent renewable electricity by 2030 is expected to cover approximately 10 to 11 percent. The mobile source strategy and sustainable freight action plan includes maintaining the existing vehicle GHG emissions standards, increasing the number of zero emission vehicles and improving the freight system efficiency, and is expected to cover approximately 9 to 11 percent. The doubling of the energy efficiency savings, including demand-response flexibility for 10 percent of residential and commercial electric space heating, water heating, air conditioning and refrigeration, requires the CEC in collaboration with the California Public Utilities Commission (CPUC) to establish the framework for the energy savings target setting. The CEC has proposed a schedule for establishing this framework and target setting by November 2017, which will outline the necessary actions that will need to occur in future years.[45] The CEC states that workforce education and training institutions will be required to engage the building industry, map industry priorities for efficiency to major occupations that will provide services, identify workforce competency gaps, and quantify the work needed to build a workforce to implement high-quality efficiency projects at scale.[46] Under the Proposed Scenario, CARB expects that the doubling of the energy efficiency savings by 2030 would cover approximately 7 to 8 percent of the 2030 reduction obligation. The other strategies would be expected to cover the remaining percentage of the 2030 reduction obligation.

Senate Bill 97

SB 97, enacted in 2007, amended CEQA to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directed the California Office of Planning and Research (OPR) to develop revisions to the State *CEQA Guidelines* "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the Resources Agency to certify and adopt these revised State *CEQA Guidelines* by January 2010. The revisions were completed March 2010 and codified into the California Code of Regulations and became effective within 120 days pursuant to CEQA. The amendments provide regulatory guidance for the analysis and mitigation of the potential effects of GHG emissions. The *State CEQA Guidelines* require:

- Inclusion of GHG analyses in CEQA documents;
- Determination of significance of GHG emissions; and,

44 California Air Resources Board, The 2017 Climate Change Scoping Plan Update, (January 2017). Available: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed May 2017.

45 California Energy Commission, 2016 Existing Buildings Energy Efficiency Plan Update, December 2016. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/16-EBP-01/TN214801_20161214T155117_Existing_Building_Energy_Efficency_Plan_Update_Deceber_2016_Thi.pdf. Accessed July 2017.

46 California Energy Commission, 2016 Existing Buildings Energy Efficiency Plan Update, December 2016. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/16-EBP-01/TN214801_20161214T155117_Existing_Building_Energy_Efficency_Plan_Update_Deceber_2016_Thi.pdf. Accessed July 2017.

- If significant GHG emissions would occur, adoption of mitigation to address significant emissions.

Energy Related Sources

Renewable Portfolio Standards

Senate Bill 1078 (SB 1078) (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewables Portfolios Standard (RPS) to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the RPS with a Renewable Energy Standard that will result in a total renewable energy requirement for utilities of 33 percent by 2020. But on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's RPS to 33 percent by 2020. Notably, unlike the prior 20 percent RPS, the current 33 percent RPS applies to Publicly Owned Utilities, such as Burbank Water and Power (BWP), which is the utility provider for the City of Burbank and the project.

California Senate Bill 1368

California SB 1368, a companion bill to AB 32, requires the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per megawatt-hour (see CEC Order No. 07-523-7).

Title 24, Building Standards Code and CAL Green Code

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[47] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.[48] The CALGreen Code was most recently updated in 2016 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2017.[49]

Cap-and-Trade Program

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as a key strategy CARB will employ to help California meet its GHG reduction targets for 2020 and 2030, and ultimately achieve an 80 percent reduction from 1990 levels by 2050. Pursuant to its authority under AB 32, CARB has designed and adopted a California Cap-and-Trade Program to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020.[50] Under Cap-and-Trade program, an overall limit is established for GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 metric tons CO_2e per year) and declines over time, and facilities subject to the cap can trade permits to emit GHGs. The statewide cap for GHG emissions from the capped sectors commenced in 2013 and declines over time, achieving GHG emission reductions throughout the Program's duration.[51] On July 17, 2017 the California legislature passed Assembly Bill 398, extending the Cap-and-Trade program through 2030.

The Cap-and-Trade Regulation provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis.

47 California Building Standards Commission, 2010 California Green Building Standards Code, (2010).

48 California Building Standards Commission, 2010 California Green Building Standards Code, (2010).

49 California Building Standards Commission, CALGreen (Part 11 of Title 24), http://www.bsc.ca.gov/Home/CALGreen.aspx. Accessed July 2017.

50 17 CCR §§ 95800 to 96023.

51 See generally 17 CCR §§ 95811, 95812.

If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. In other words, the Cap-and-Trade Program functions similarly to an insurance policy for meeting California 2020's GHG emissions reduction mandate.

Mobile Sources

California Assembly Bill 1493, Greenhouse Gas Emission Standards for Automobiles (Pavley)

In response to the transportation sector accounting for the largest portion of California's GHG emissions at approximately 37 percent in 2015 (see Table 1, above), AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers.[52]

As discussed previously, the USEPA and USDOT have adopted Federal standards for model year 2012 through 2016 light-duty vehicles. In light of the USEPA and USDOT standards, California—and states adopting California emissions standards—have agreed to defer to the proposed national standard through model year 2016. The 2016 endpoint of the Federal and State standards is similar, although the Federal standard ramps up slightly more slowly than required under the State standard. The State standards (called the Pavley standards) require additional reductions in CO_2 emissions beyond model year 2016 (referred to as Pavley Phase II standards).[53] As noted above, the USEPA and USDOT have adopted GHG emission standards for model year 2017 through 2025 vehicles.[54] These standards are slightly different from the Pavley Phase II standards, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly lower reductions in California, it would achieve greater reductions nationally and is stringent enough to meet State GHG emission reduction goals.[55] On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017-2025 national standards to meet State law.

52 California Air Resources Board, Regulations to Control Greenhouse Gas Emissions from Motor Vehicles, Final Statement of Reasons, (2005), https://www.arb.ca.gov/regact/grnhsgas/fsor.pdf. Accessed May 2017.

53 On March 24, 2017, CARB voted unanimously to uphold the State's model year 2017-2025 cars and light truck emissions standards. See: California Air Resources Board, CARB finds vehicle standards are achievable and cost-effective, March 24, 2017, https://www.arb.ca.gov/newsrel/newsrelease.php?id=908. Accessed May 2017.

54 United States Environmental Protection Agency, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, (2020), https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZ7C.PDF?Dockey=P100EZ7C.PDF. Accessed May 2017.

55 California Air Resources Board, Advanced Clean Cars Summary, http://www.arb.ca.gov/msprog/clean_cars/acc%20summary-final.pdf. Accessed May 2017.

Executive Order S-01-07

Executive Order S-01-07 was enacted by the Governor on January 18, 2007. The order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a LCFS for transportation fuels be established in California. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In the proposed 2017 Climate Change Scoping Plan Update, CARB's preferred recommendation includes increasing the stringency of the LCFS by reducing the carbon intensity of transportation fuels by 18 percent by 2030, up from the current target of 10 percent by 2020.[56] In April 2017, the LCFS was brought before the Court of Appeal challenging the analysis of potential nitrogen dioxide impacts from biodiesel fuels. The Court directed CARB to conduct an analysis of nitrogen dioxide impacts from biodiesel fuels and froze the carbon intensity targets for diesel and biodiesel fuel provisions at 2017 levels until CARB has completed this analysis, which CARB has indicated is expected to occur in 2018.[57]

Senate Bill 375

Senate Bill 375 (SB 375) (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions, was adopted by the State on September 30, 2008. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. In February 2011, CARB adopted the final GHG emissions reduction targets for the Southern California Association of Governments (SCAG), which is the Metropolitan Planning Organization for the region in which the City of Burbank is located.[58]

Under SB 375, the reduction target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS. On April 7, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), which is an update to the previous 2012-2035 RTP/SCS.[59] Using growth forecasts and economic trends, the RTP/SCS provides a vision for transportation throughout the region for the next 25 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The 2016-2040 RTP/SCS successfully achieves and exceeds

56 California Air Resources Board, AB 32 Scoping Plan, (2017), https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm. Accessed May 2017.

57 Biodiesel Magazine, Court rules against CARB on LCFS, preserves 2017 status quo, April 17, 2017.

58 California Air Resources Board, Sustainable Communities, https://www.arb.ca.gov/cc/sb375/sb375.htm. Accessed May 2017.

59 Southern California Association of Governments, 2016-2040 RTP/SCS, http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. Accessed May 2017.

the GHG emission-reduction targets set by CARB by demonstrating an 8 percent reduction by 2020, 18 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level on a per capita basis.[60] Compliance with and implementation of 2016-2040 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions associated with reduced per capita VMT. Strategies for successful implementation of SCAG's 2016 RTP/SCS objectives are discussed below in the Regional subheading below.

CARB Anti-Idling Measure

In 2004, CARB adopted a control measure to limit commercial heavy duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter (DPM) and other air contaminants.[61] The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. In general, it prohibits idling for more than 5 minutes at any location. While this measure is aimed primarily at reducing air pollution, it has a co-benefit of limiting GHG emissions from unnecessary idling.

2.3 Regional

South Coast Air Quality Management District

The project is located in the South Coast Air Basin (Air Basin), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Gorgonio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) is responsible for air quality planning in the Air Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished though air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles.

The SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990.[62] The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;

60 Southern California Association of Governments, 2016-2040 RTP/SCS, http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. Accessed July 2017.

61 Calif. Code of Regulations, Title 13, Sec. 2485. See CARB, ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling, http://www.arb.ca.gov/regact/idling/idling.htm. Accessed May 2017.

62 South Coast Air Quality Management District, SCAQMD's Historical Activity on Climate Change, http://www.aqmd.gov/home/about/initiatives/climate-change. Accessed May 2017.

- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[63] Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 metric tons per year. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of for stationary source/industrial projects where the SCAQMD is lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., mixed-use/commercial projects) and has formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds.[64] The aforementioned Working Group has been inactive since 2011 and the SCAQMD has not formally adopted any GHG significance threshold for land use development projects.

Southern California Association of Governments

In February 2011, CARB adopted the GHG emissions reduction targets under SB 375 for the SCAG region. The target is a per capita reduction of 8 percent for 2020 and 13 percent for 2035 compared to the 2005 baseline. On April 7, 2016, SCAG adopted the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is an update to the previous 2012 RTP/SCS.[65] Using growth forecasts and economic trends, the 2016 RTP/SCS provides a vision for transportation throughout the region for the next 25 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The 2016 RTP/SCS successfully achieves and exceeds the GHG emission-reduction targets set by CARB by demonstrating an 8 percent reduction by 2020, 18 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level on a per capita basis.[66] Compliance with and implementation of 2016 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions associated with reduced per capita vehicle miles traveled (VMT).

63 South Coast Air Quality Management District, Board Meeting, Date: December 5, 2008, Agenda No. 31, https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/C39.pdf Accessed June 2017.

64 South Coast Air Quality Management District, Greenhouse Gases CEQA Significance Thresholds, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds Accessed June 2017.

65 Southern California Association of Governments, 2016 RTP/SCS, April 2016. Available: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf. Accessed June 2017.

66 Southern California Association of Governments, 2016 RTP/SCS, April 2016. p15. Available: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf. Accessed June 2017.

SCAG's 2016 RTP/SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and cultures and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles. In addition, the 2016 RTP/SCS includes new strategies to promote active transportation, supports local planning and projects that serve short trips, expand understanding and consideration of public health in the development of local plans and projects, and supports improvements in sidewalk quality, local bike networks, and neighborhood mobility areas. It also proposes increasing access to the California Coast Trail, light rail and bus stations, and promoting corridors that support biking and walking, such as through a regional greenway network and local bike networks. The 2016 RTP/SCS proposes to better align active transportation investments with land use and transportation strategies, increase competitiveness of local agencies for Federal and State funding, and to expand the potential for all people to use active transportation. CARB has accepted the SCAG GHG quantification determination in the 2016 RTP/SCS.[67]

2.4 Local

City of Burbank

The Burbank 2035 General Plan (General Plan) was adopted in 2013 and provides the fundamental basis for the City's land use and development policy, and addresses all aspects of development including public health, land use, transportation, housing, air quality, and other topics. The *General Plan* sets forth objectives, policies, standards, and programs for land use and new development. Measures related to GHG emissions that would be applicable to the project are contained in the General Plan Air Quality and Climate Change Element.

Burbank 2035 General Plan Greenhouse Gas Reduction Plan (GGRP)

In accordance with Assembly Bill 32 and Executive Order S-03-05, the City of Burbank has adopted the Greenhouse Gas Reduction Plan (GGRP) to implement the GHG policies found in the *General Plan*. The GGRP provides a baseline GHG inventory for Burbank, emission reduction measures, and actions that implement the policies of the *General Plan's* Air Quality and Climate Change Element. The GGRP was adopted by the City along with the *General Plan* to address GHG emissions at a programmatic level. The process for establishing this programmatic approach included:

1. Establishing a baseline emissions inventory and projecting future emissions;

67 California Air Resources Board, Southern California Association of Governments' (SCAG) 2016 Sustainable Communities Strategy (SCS) ARB Acceptance of GHG Quantification Determination, June 2016. Available: https://www.arb.ca.gov/cc/sb375/scag_executive_order_g_16_066.pdf. Accessed September 2016.

2. Identifying a citywide reduction target;

3. Preparing a plan to identify strategies and measures to meet the reduction target;

4. Identifying targets and reduction strategies in the *Burbank2035* General Plan;

5. Monitoring the effectiveness of reduction measures;

6. Adapting the plan to changing conditions; and

7. Adopting the emissions reduction plan in a public process following environmental review.

The GGRP discusses that environmental review documents for development projects may incorporate the existing programmatic review in their cumulative impacts analysis. Environmental review documents prepared for projects may rely on the GHG analysis from the EIR certified for the *General Plan* and the GGRP to show consistency with the plans. Projects may identify applicable GGRP measures and describe how the project incorporates the measures. Measures that are not required by regulations must be incorporated by the project as mitigation measures. The City has a 2020 reduction target of 15 percent below 2010 levels and a 2030 reduction goal of 30 % below 2010 levels. In order to reach these emissions targets, the City has implemented local actions and measures for: buildings and energy, transportation, water conservation, waste reduction, and municipal measures.

The City of Burbank has also adopted the CALGreen Code as the City's Green Building Code. The Green Building Code mandates new requirements for building planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, environmental quality, and installer and special inspector qualifications.

SECTION 3.0
Significance Criteria

3.1 Greenhouse Gas Emissions and Reduction Plan Considerations

The significance thresholds below are derived from the Environmental Checklist questions in Appendix G of the State *CEQA Guidelines*. Accordingly, a significant impact associated with GHGs would occur if the project were to:

- **GHG-1:** Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- **GHG-2:** Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Amendments to Section 15064.4 of the *State CEQA Guidelines* were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. If a qualitative analysis is used, in addition to quantification, this section recommends certain qualitative factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (see Section 15064.7(c)). The California Natural Resources Agency has also clarified that the *State CEQA Guidelines* amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see Section 15064[h][3]).[68]

Although GHG emissions can be quantified as discussed under Methodology below, CARB, SCAQMD, and the City of Burbank have not adopted project-level significance thresholds for GHG emissions that would be applicable to the project. The Governor's Office of Planning and

[68] See generally California Natural Resources Agency, Final Statement of Reasons for Regulatory Action (December 2009), pp. 11-13, 14, 16; see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, April 13, 2009. Available at https://www.opr.ca.gov/docs/Transmittal_Letter.pdf. Accessed May 2017.

Research (OPR) released a technical advisory on CEQA and climate change that provided some guidance on assessing the significance of GHG emissions, and states that "lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice," and that while "climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment."[69] Furthermore, the technical advisory states that "CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less-than-significant level as a means to avoid or substantially reduce the cumulative impact of a project."[70]

Per *CEQA Guidelines* Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project.[71] To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.[72] Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions."[73] Thus, *CEQA Guidelines* Section 15064(h)(3) allows a lead agency to make a finding of non-significance for GHG emissions if a project complies with a program and/or other regulatory schemes to reduce GHG emissions.[74]

In the absence of any adopted, quantitative threshold, the project would not have a significant effect on the environment if the project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, and the City's General Plan, Greenhouse Gas Reduction Plan and Green Building Code.

69 Governor's Office of Planning and Research, Technical Advisory – CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, (2008).

70 Governor's Office of Planning and Research, Technical Advisory – CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, (2008).

71 14 CCR Section 15064(h)(3).

72 14 CCR Section15064(h)(3).

73 14 CCR Section15064(h)(3).

74 See, for example, San Joaquin Valley Air Pollution Control District (SJVAPCD), CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation, APR-2025 (June 25, 2014), in which the SJVAPCD "determined that GHG emissions increases that are covered under ABR's Cap-and-Trade regulation cannot constitute significant increases under CEQA…" Furthermore, the SCAQMD has taken this position in CEQA documents it has produced as a lead agency. The SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact Report that demonstrate the SCAQMD has applied its 10,000 $MTCO_2e$/yr significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See SCAQMD, Final Negative Declaration for Ultramar Inc. Wilmington Refinery Cogeneration Project, SHC No. 2012041014 (October 2014); SCAQMD Final Negative Declaration for Phillips 99 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project, SCH No. 2013091029 (December 2014); SCAQMD Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA, SCH No. 2014101040 (December 2014); and SCAQMD Final Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project, SCH No. 2014121014 (August 2015).

3.2 Newhall Ranch Ruling

The California Supreme Court recently considered the CEQA issue of determining the significance of GHG emissions in its decision, Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming (CBD vs. CDFW). The Court questioned a common CEQA approach to GHG analyses for development projects that compares project emissions to the reductions from business as usual (BAU) that will be needed statewide to reduce emissions to 1990 levels by 2020, as required by AB 32. The court upheld the BAU method as valid in theory, but concluded that the BAU method was improperly applied in the case of the Newhall project because the target for the project was incorrectly deemed consistent with the statewide emission target of a percent below BAU for the year 2020 as specified in the AB 32 Scoping Plan. In other words, the court said that the percent below BAU target specified in the AB 32 Scoping Plan is intended as a measure of the GHG reduction effort required by the State as a whole, and it cannot necessarily be applied to the impacts of a specific project in a specific location. The Court provided some guidance to evaluating the cumulative significance of a proposed land use project's GHG emissions, but noted that none of the approaches could be guaranteed to satisfy CEQA for a particular project. The Court's suggested "pathways to compliance" include:

1. Use a geographically specific GHG emission reduction plan (e.g., climate action plan) that outlines how the jurisdiction will reduce emissions consistent with State reduction targets, to provide the basis for streamlining project-level CEQA analysis, as described in CEQA § 15183.5.

2. Utilize the Scoping Plan's business-as-usual reduction goal, but provide substantial evidence to bridge the gap between the statewide goal and the project's emissions reductions.

3. Assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities; as an example, the Court points out that projects consistent with an SB 375 Sustainable Communities Strategy (SCS) may need to re-evaluate GHG emissions from cars and light trucks.

4. Rely on existing numerical thresholds of significance for GHG emissions, such as those developed by an air district.

Among the pathways reference above, pathway #1 is the most viable compliance pathway for this project. As described earlier, the City has an adopted the Burbank 2035 Greenhouse Gas Reduction Plan (GGRP). In the Background section of the GRRP, it specifically said "…the GGRP enables development streamlining opportunities for future discretionary projects under CEQA". Therefore, this project could use the requirements of the GRRP, which is a CEQA-qualified climate action plan (CAP) for projects that are operational by 2020, as described in CEQA § 15183.5, for significance determination under CEQA.

As described in the Regulatory Setting section of this report, the City adopted the GGRP along with *General Plan* to address GHG emissions at a programmatic level. The GGRP provides a baseline GHG inventory for Burbank, emission reduction measures, and actions that implement the policies of the *General Plan's* Air Quality and Climate Change Element. The GGRP explains how

environmental review documents on development projects may incorporate the existing programmatic review in their cumulative impacts analysis. Environmental review documents prepared for projects may rely on the GHG analysis from the EIR certified for *General Plan* and the GGRP to show consistency with the plans. Projects may identify applicable GGRP measures and describe how the project incorporates the measures. Measures that are not required by regulations must be incorporated by the project as mitigation measures. The City has a 2020 reduction target of 15 percent below 2010 levels and a 2030 reduction goal of 30 percent below 2010 levels. In order to reach these emissions targets, the City has implemented local actions and measures for: buildings and energy, transportation, water conservation, waste reduction, and municipal measures. For example, the City has also adopted the CALGreen Code as the City's Green Building Code. The Green Building Code mandates new requirements for building planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, environmental quality, and installer and special inspector qualifications.

Given above, this analysis used consistency with the City's GGRP requirements as the criteria for project GHG significance determination. In addition, the project as a whole was also evaluated against the other relevant requirements in the General Plan and the City's municipal codes including the Green Building Code.

SECTION 4.0
Methodology

The analysis of the project's construction and operation GHG emissions has been conducted as follows. Additional details are provided in Appendix A of this report.

4.1 Emissions Estimates

To provide additional information to decision makers and the public, this GHG Technical Report estimated the GHG emissions from project construction and operation. The following project-related emission sources have been evaluated:

- Construction Activities – Fossil fueled on- and off-road vehicles and equipment needed for demolition, grading, building construction, paving, and architectural coating;
- Direct Emission Sources – Consumption of natural gas on-site for cooking, space heating and water heating, combustion of fossil fuels for lawn care and maintenance activities, and motor vehicles; and
- Indirect Emission Sources – Off-site emissions associated with purchased electricity or purchased steam, wastewater treatment and water conveyance, and solid waste disposal.

For purposes of this analysis, it was considered reasonable, and consistent with criteria pollutant calculations, to consider GHG emissions resulting from direct project-related activities, including, e.g., use of vehicles, electricity, and natural gas, to be new emissions. These emissions include project construction activities such as demolition, grading, and construction worker trips, as well as operational emissions. This analysis also considers indirect GHG emissions from water conveyance, wastewater generation, and solid waste handling. Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions were calculated on an annual basis. As previously discussed, except for a small portion of the land that are used as commercial long-term storage of automobiles and storage pods, the majority of project site is vacant land and does not generate GHG emissions, therefore the GHG analysis focused on construction emissions and operational emissions of the proposed project.

GHG emissions are estimated using the California Emissions Estimator Model (CalEEMod) (Version 2016.3.1), which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered to be an accurate and comprehensive tool for quantifying air quality and GHG impacts

from land use projects throughout California.[75] Emissions calculations for the project include credits or reductions for the project Design Features (PDFs) and GHG reducing measures which are required by regulation, such as reductions in energy and water demand.

Construction Emissions

Construction of the proposed project has the potential to generate GHG emissions through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the project site. Construction emissions can vary from day to day, depending on the level of activity, the specific type of operation, and the prevailing weather conditions. The number and types of construction equipment, vendor trips (e.g., transport of building materials), and worker trips were based on relatively conservative assumptions for a project of this type and scale as provided in the CalEEMod model. For construction emissions estimate, CalEEMod based on outputs from OFFROAD and EMFAC, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including off- and on-road vehicles.

Wherever project-specific data are available, the corresponding CALEEMod default values were replaced to be project-specific based on equipment types and the construction schedule and applied to the same construction subphasing assumptions used in the criteria pollutant analysis to generate GHG emissions values for each construction year. CalEEMod outputs construction-related GHG emissions of CO_2, CH_4, and CO_2e. A complete listing of the construction equipment by phase and construction phase duration assumptions used in this analysis is included within the CalEEMod printout sheets that are provided in Appendix A of this Technical Report. Construction emissions estimate incorporated PDF-AIR-1.

SCAQMD's *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, recognizes that construction-related GHG emissions from projects "occur over a relatively short-term period of time" and that "they contribute a relatively small portion of the overall lifetime project GHG emissions."[76] The guidance recommends that construction project GHG emissions should be "amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies."[77] In accordance with that SCAQMD guidance, GHG emissions from project construction have been amortized over the 30-year lifetime of the project.

75 See: http://www.caleemod.com.

76 South Coast Air Quality Management District, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008. Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2. Accessed June 2017.

77 South Coast Air Quality Management District, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008. Available at http://www.aqmd.gov/docs/default-ource/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2. Accessed June 2017.

Operations

CalEEMod was also used to estimate operational GHG emissions from energy use (electricity and natural gas consumption), area sources (architectural coatings, consumer products, and landscaping equipment), mobile (vehicular traffic) sources, embodied energy associated with water demand, wastewater treatment and solid waste generation.

With regard to energy demand, the consumption of fossil fuels to generate electricity and to provide heating and hot water generates GHG emissions. Energy demand rates were estimated based on specific square footage of the office, retail, and industrial spaces; and the total number of rooms at the hotel. The CALEEMOD default data are based on the California Energy Commission (CEC) California Commercial End Use Survey (CEUS) data set, which provides energy demand by building type and climate zone.[78] However, since the data from the CEUS is from 2002, correction factors were incorporated into CalEEMod to account for the current version of the Title 24 Building Energy Efficiency Standards in effect. The project electricity demands are supplied by Burbank Water and Power (BWP). Emission factors for CH_4 and N_2O due to electrical generation to serve the electrical demands of the project were CalEEMod default intensity factors for BWP. CO_2 emission factor was obtained from the BWP *2015 Integrated Resource Plan*, which accounts for the generation mix using renewable and non-renewable sources.[79] Based on the projections in the 2015 BWP Integrated Resource Plan, an estimated emission factor of 901.39 lbs/MWh was calculated for year 2020 and used for the proposed project scenario.

This analysis used the CalEEMod defaults to quantify GHG emissions from area sources including equipment used to maintain landscaping, such as lawnmowers and trimmers, consumer products such as degreasers/detergents, and architectural coatings.

To estimate mobile source emissions, CalEEMod generated the vehicle miles traveled (VMT) from project uses based on the trip rates in the Traffic Study.[80] The Traffic Study applied trip reduction credits for internal capture and transit trips to and from the project site. Internal capture refers to trips generated by mixed-use developments where trips to or from two land uses in the proposed project are made by just one vehicle trip entering or leaving the project site. For the industrial portion of the project, the trip counts in the Traffic Study did not differentiate the truck trips from the other vehicle trips. Compared to other land use types, the project's industrial portion of the land use could attract more truck trips and thus have more air emissions. Based on the Institute of Transportation Engineers (ITE, 9th edition), this analysis assumed truck trips account for 13 percent (the average value for industrial park, per ITE) of the total trips for the industrial land use portion, conservatively assumed that all trucks are heavy-heavy duty (HHD), and adjusted the CalEEMod's default fleet mix accordingly.

78 California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed March 2017.

79 Los Angeles Department of Water and Power, 2016 Power Integrated Resource Plan, December 2016, page C-12, https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=OPLADWPCCB562207&RevisionSelectionMethod=LatestReleased. Accessed August 2017.

80 Traffic Impact Study for the Avion Mixed Use Development project, Fehr & Peers, September 2017.

Emissions of GHGs from solid waste disposal were calculated using CalEEMod software with project-specific waste generation rates. The emissions are based on the waste disposal rate for the different land uses, the waste diversion rate, and the GHG emission factors for solid waste decomposition. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, were used in this assessment.

Emissions of GHGs from water and wastewater result from the required energy to supply and distribute the water and treat the wastewater. Wastewater also results in emissions of GHGs from wastewater treatment systems. Emissions were calculated using CalEEMod and were based on the project-specific water usage rate for the land use types, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider (BWP), and the emission factors for the wastewater treatment process.

Emissions calculations include credits or reductions for the Project Design Features and GHG reducing measures, some of which are required by regulation, such as compliance with SCAQMD rules and regulations and reductions in energy and water demand.

As previously stated, operational GHG impacts were assessed based on the project-related incremental increase in GHG emissions compared to baseline conditions. Under CEQA, the baseline environmental setting is established as the time the Notice of Preparation for the Project's EIR circulated. The NOP was submitted on June 6, 2017. For baseline, the project site is partially developed with surface parking lots, with only a small portion of it being used for vehicle storage, and therefore GHG emissions are not substantial. As a conservative approach, this analysis assumes the baseline emissions are zero. The maximum annual GHG emissions from operation of the project were used as the project-related incremental increase in GHG emissions. As discussed in Section 3.0 of this report, there is no numerical significance threshold applicable to this project; therefore, the estimated project GHG emissions quantities in this study are only presented for informational purposes as they will not be used for significance determination.

4.2 Consistency with Greenhouse Gas Reduction Plan, Policies, and Actions

The project's GHG emissions were evaluated by assessing the project's consistency with applicable GHG reduction strategies and actions adopted by the State and City. As discussed previously, the City has adopted strategies and polices to reduce GHG emissions in the City's General Plan and GGRP. The GGRP meets *State CEQA Guidelines* Section 15183.5 through the project's buildout year of 2020, which means that project-specific environmental documents that incorporate applicable GGRP actions may "tier off" the EIR certified for the Burbank 2035 General Plan and GGRP to meet project-level CEQA evaluation requirements for GHG emissions. Projects that demonstrate consistency with applicable GGRP actions can be determined to have a less-than-significant cumulative impact on GHG emissions and climate

change (notwithstanding substantial evidence that warrants a more detailed review of project-level GHG emissions).

In the latest *CEQA Guidelines* amendments and the newly released 2017 General Plan Guidelines, the Office and Planning and Research encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. The California CAT Report provides recommendations for specific strategies for reducing GHG emissions and reaching the targets established in AB 32 and Executive Order S-3-05. As previously stated, the City's GGRP has GHG reduction measures that are relevant to the project's GHG sources. Thus, if the project is designed in accordance with these policies and regulations, it would result in a less than significant impact, because it would be consistent with the overarching State regulations on GHG reduction (AB 32 and SB 32).

SECTION 5.0
Environmental Impacts

Threshold GHG-1: A significant impact would occur if the project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact Statement GHG-1: The project would not create a significant impact that would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Less-than-Significant Impact with Mitigation).Construction Emissions

As explained above, the emissions of GHGs associated with construction of the project were calculated for each year of construction activity, taking into account PDF-AIR-1. Results of the project's construction phase GHG emissions calculations are presented in **Table 3**, *Unmitigated Project Construction Greenhouse Gas Emissions*. Although construction-related GHGs are one-time emissions, any assessment of project emissions should include construction emissions. The SCAQMD recommends that a project's construction-related GHG emissions be amortized over the project's 30-year lifetime in order to include these emissions as part of the project's annualized lifetime total emissions, so that GHG reduction measures will address construction GHG emissions as part of operational GHG reduction strategies. As indicated in Table 3, project construction emissions during the three-year construction period would generate an estimated 6,297 metric tons of CO_2e, or 210 metric tons of CO_2e amortized over a 30-year period. In accordance with this methodology, the estimated project's construction GHG emissions have been amortized over a 30-year period and are included in the annualized operational GHG emissions.

Due to the potential persistence of GHGs in the environment, impacts are based on annual emissions and, in accordance with SCAQMD methodology, construction-period impacts are not assessed independent of operational-period impacts. A complete listing of the equipment by phase, emission factors, and calculation parameters used in this analysis is included within the emissions calculation worksheets that are provided in Appendix A of this report.

TABLE 3
UNMITIGATED PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS

Emission Source	CO_2e (Metric Tons) [a,b]
2018	2,310
2019	3,317
2020	661
Total Construction Emissions	6,289
Amortized Construction Emissions (30-years)	210

TABLE 3
UNMITIGATED PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS

[a] Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix A.
[b] CO_2e emissions are calculated using the GWP values from the IPCC Fourth Assessment Report.

SOURCE: ESA, 2017

Operational Emissions

As explained above, the emissions of GHGs associated with operation of the project were calculated using CalEEMod. The project would not only meet the CAL Green Code mandatory requirements, but it would also meet CAL Green Tier 1 energy efficiency criteria for commercial components. Physical and operational project characteristics for which sufficient data is available to quantify the reductions from building energy and resource consumption have been included in the quantitative analysis. The project would also plant approximately 900 trees across the campus, absorbing GHGs, in a process known as carbon sequestration.

Maximum annual net GHG emissions resulting from motor vehicles, energy (i.e., electricity, natural gas), stationary sources, area sources, water conveyance, and waste sources were calculated for the expected first operating year, 2020. The maximum first operating year GHG emissions from operation of the project are shown in **Table 4**, *Unmitigated Annual Greenhouse Gas Emissions.*

TABLE 4
UNMITIGATED ANNUAL GREENHOUSE GAS EMISSIONS

Emissions Sources	CO_2e (Metric Tons per Year) a
Area	2
Electricity	6,919
Natural Gas	839
Mobile	14,253
Waste	642
Water	319
Stationary (Emergency Generator)	9
Construction	210
Annual Project Emissions	23,193

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A.
[b] CO2e emissions are calculated using the global warming potential values from the Intergovernmental Panel on Climate Change Fourth Assessment Report.

SOURCE: ESA, 2017

In reality, many future employees and visitors to the amenities provided by the project likely already travel within the Air Basin and generate mobile-source emissions there. For example, a

new mixed use campus development implemented pursuant to the project could redistribute existing vehicle trips from a similar existing mixed-use campus development. In such cases, regional mobile source emissions could be unchanged or even reduced if the new mixed use campus development is located closer to customers compared to the existing retail development. It is unknown at this time to what extent new developments implemented pursuant to the project would result in net new emissions or would relocate or redistribute existing sources of emissions.

Therefore, GHG emissions shown in Table 4 are based on the highly conservative assumption that operation of the land uses proposed under the project would result in all net new emissions from mobile sources. Project operational emissions would be regional in nature as they would occur over a relatively large area from multiple individual developments associated within the project's approximately 61-acre project site. As shown in Table 4, the majority of the emissions are from mobile sources; therefore, the majority of the emissions would occur from vehicles traveling over regional roadways. Using CARB's EMFAC2014 tool, for buildout year 2020, mobile source emissions for the Air Basin would result in 61,983,897 $MTCO_2$ annually. The project's GHG emissions from mobile sources would represent 0.02 percent of the Air Basin's annual mobile source GHG emissions. Additionally, the project's total GHG emissions would represent 0.04 percent of annual mobile source GHG emissions.

The City's GGRP has a community-wide baseline emissions inventory of 1,682,494 $MTCO_2e/yr$ for 2010. The project's GHG emissions would result in a 1.4% increase over the City's 2010 baseline emissions inventory, a 1.2% increase over the projected 2020 community-wide emissions (1,859,899 $MTCO_2e/yr$) and a 1.1% increase over the projected 2035 community-wide GHG emission for GHG (2,127,500 $MTCO_2e/yr$). The project's GHG emissions would represent 13.1 percent of the emissions increased from 2010 to 2020, and 1.1 percent of community-wide emissions in 2035.

Project operational-related GHG emissions would decline in future years as emissions reductions from the State's Cap-and-Trade program are fully realized. Emissions reductions from the project's two highest GHG-emitting sources, mobile and electricity, would occur over the next decade, and beyond, ensuring that the project's total GHG emissions would be further reduced. Emissions from electricity would decline as utility providers, including BWP, meet their Renewables Portfolio Standard obligations to provide 50 percent of their electricity from renewable electricity sources by 2030 consistent with SB 350, which would achieve additional reductions in emissions from electricity demand although the actual reduction will depend on the mix of fossil fuels that BWP will replace with renewables and the relative CO_2 intensities of those fossil fuels. Project emissions from mobile sources would also decline in future years as older vehicles are replaced with newer vehicles resulting in a greater percentage of the vehicle fleet meeting more stringent combustion emissions standards, such as the model year 2017-2025 Pavley Phase II standards.

As discussed previoulsy, MM-AIR-1 would require the commercial portion of the project participate in the citywide Transportation Management Organization. This mitigation measure could potentially reduce employee VMT by approximately 3percent and reduce associated GHG emissions from mobile sources. MM-AIR-2 and MM-AIR-3 would reduce GHG emissions from

delivery trucks idling on site. It should be noted that the scenario analyzed presented conservative, worst-case emissions. As shown in Table 4, mobile source emissions contribute the majority of GHG emissions from vehicle trips traveling to the project. The mitigation measures discussed above have the potential to reduce GHG emissions from single occupancy vehicle trips to the project site and idling emissions from delivery trucks. However, predictions on the extent to which these required mitigation measures would reduce operational GHG emissions would be speculative.

As stated above, this analysis is not presented as the sole method to analyze GHG impacts. Instead, it is for informational purposes, to quantify the project's potential GHG emissions and correlate to the Climate Change Scoping Plan and supplement the primary threshold of significance below that demonstrates consistency with plans and policies adopted for the purpose of reducing GHG emissions.

Threshold GHG-2: A significant impact would occur if the project would conflict with any applicable plan, policy, regulation, or recommendation of an agency adopted for the purpose of reducing the emissions of GHGs. (Less than Significant Impact with Mitigation).

Impact Statement GHG-2: The project would not conflict with any applicable plan, policy, regulation, or recommendation of an agency adopted for the purpose of reducing the emissions of GHGs. (Less-than-Significant Impact with Mitigation).

Consistency with Applicable State Plans, Policies, or Regulations

A significant impact would occur if the project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment by conflicting with applicable regulatory plans and policies to reduce GHG emissions as discussed within CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the City's Air Quality and Climate Change Program and GGRP, and CAL Green Code.

CARB's Climate Change Scoping Plan

In support of HSC Division 25.5, the State has promulgated specific laws aimed at GHG reductions applicable to the project. The primary focus of many of the statewide and regional mandates, plans, policies and regulations is to address worldwide climate change. Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the project's increase in annual GHG emissions would cause a measurable change in global GHG emissions necessary to influence global climate change. Newer construction materials and practices, energy efficiency requirements, and newer appliances tend to emit lower levels of air pollutant emissions, including GHGs, as compared to those built years ago; however, the net effect is difficult to quantify. The GHG emissions of the project alone would not likely cause a direct physical change in the environment. According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG

emission impacts from a climate change perspective."[81] It is global GHG emissions in their aggregate that contribute to climate change, not any single source of GHG emissions alone.

Table 5, *Consistency with Applicable Greenhouse Gas Reduction Strategies*, contains a list of GHG-reducing strategies potentially applicable to the project. The analysis describes the consistency of the project with these strategies that support the State's strategies in the Climate Change Scoping Plan to reduce GHG emissions. The Climate Change Scoping Plan relies on a broad array of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, incentives, voluntary actions, and market-based mechanisms such as the Cap-and-Trade program. As shown below, the project would implement Project Design Features and incorporate characteristics to reduce energy, conserve water, reduce waste generation, and reduce vehicle travel consistent with statewide strategies and regulations. As a result, the project would not conflict with applicable Climate Change Scoping Plan strategies and regulations to reduce GHG emissions.

TABLE 5
CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION STRATEGIES

Sector / Source	Category / Description	Consistency Analysis
Energy		
California Renewables Portfolio Standard	Increases the proportion of electricity from renewable sources to 33 percent renewable power by 2020.	**Consistent.** The project would use electricity provided by BWP, which is committed to achieving 33 percent renewables by 2020.
California Renewables Portfolio Standard and SB 350	Increases the proportion of electricity from renewable sources to 33 percent renewable power by 2020. SB 350 requires 50 percent by 2030. It also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	**Consistent.** The project would use electricity provided by BWP, which is required to meet the 2050 performance standard. The project would also meet or exceed the applicable requirements of the State of California Green Building Standards Code. The project would incorporate energy efficiency measures as outlined in the PDFs.
CCR, Title 24	Energy Efficiency Standards for Residential and Nonresidential Buildings	**Consistent.** The project will be designed to meet CALGreen Tier 1 energy efficiency criteria for commercial components, in addition to mandatory CALGreen Building Standards. The project would also incorporate energy efficiency measures as outlined in the PDFs, some of which include reduce building energy needs by installation of cool roofs in all buildings; install operable windows in the office areas; install skylights and clear story glass in the creative industrial and office to allow for natural lighting during the day; use LED lights in all outdoor areas; and Implement smart grid technology by installing "smart meters".

81 California Air Pollution Control Officers Association, CEQA & Climate change: Evaluating and Addressing Greenhous Gas Emissions from projects Subject to the California Environmental Quality Act, (2008).

Sector / Source	Category / Description	Consistency Analysis
Assembly Bill 1109	The Lighting Efficiency And Toxics Reduction Act (AB1109) prohibits manufacturing specified general purpose lights that contain levels of hazardous substances prohibited by the European Union. AB 1109 also requires a reduction in average statewide electrical energy consumption by not less than 50% from the 2007 levels for indoor residential lighting and not less than 25% from the 2007 levels for indoor commercial and outdoor lighting by 2018	**Consistent.** As discussed above, the project will be designed to meet CALGreen Tier 1 energy efficiency criteria for commercial components, in addition to mandatory CALGreen Building Standards. It would also incorporate energy efficiency measures as outlined in the PDFs, some of which include use reduce install skylights and clear story glass in the creative industrial and office to allow for natural lighting during the day; use LED lights in all outdoor areas.
SB 1368	Establishes an emissions performance standard for power plants within the State of California.	**Consistent.** The project would be consistent with this regulation and would not conflict with implementation of the emissions standards for power plants.
California Green Building Standards Code Requirements	All bathroom exhaust fans shall be Energy Star compliant.	**Consistent.** The project will be designed to meet CALGreen Tier 1 energy efficiency criteria for commercial components, in addition to mandatory CALGreen Building Standards. The project would meet or exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Energy Efficiency Standards.
	HVAC Systems will be designed to meet ASHRAE standards.	**Consistent.** The project would meet or exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Energy Efficiency Standards.
	Air filtration systems are required to meet a minimum of MERV 8 or higher.	**Consistent.** The project would meet or exceed this requirement as part of its compliance with the City's requirements, and the CALGreen Code.
	Refrigerants used in newly installed HVAC systems shall not contain any CFCs.	**Consistent.** The project would meet this requirement as part of its compliance with the City's requirements and the CALGreen Code.
	Parking spaces shall be designed for carpool or alternative fueled vehicles. Up to eight percent of total parking spaces will be designed for such vehicles.	**Consistent.** The project would meet this requirement as part of its compliance with the City's requirements and the CALGreen Code.
	Long-term and short-term bike parking shall be provided for up to five percent of vehicle trips.	**Consistent.** The project would meet this requirement as part of its compliance with the City's requirements and the CALGreen Code.
	Stormwater Pollution Prevention Plan (SWPPP) required.	**Consistent.** The project would meet this requirement as part of its compliance with the City's requirements and the CALGreen Code.
	Indoor water usage must be reduced by 20% compared to current California Building Code Standards for maximum flow.	**Consistent.** The project would meet this requirement as part of its compliance with the City's requirements and the CALGreen Code
	All irrigation controllers must be installed with weather sensing or soil moisture sensors.	**Consistent.** The project would meet this requirement as part of its compliance with the City's requirements and the CALGreen Code.
	Wastewater usage shall be reduced by 20 percent compared to current California Building Standards.	**Consistent.** The project would meet or exceed this requirement as part of its compliance with the City's requirements and the CALGreen Code.
	Requires a minimum of 50 percent recycle or reuse of nonhazardous construction and demolition debris.	**Consistent.** The project would meet or exceed this requirement as part of its compliance with the City's requirements and the CALGreen Code.
	Requires documentation of types of waste recycled, diverted or reused.	**Consistent.** The project would meet this requirement as part of its compliance with the City's requirements and the CALGreen Code.
	Requires use of low VOC coatings consistent with AQMD Rule 1168.	**Consistent.** The project would be consistent with this regulation and would meet or exceed the low VOC coating requirements.

Sector / Source	Category / Description	Consistency Analysis
	100 percent of vegetation, rocks, and soils from land clearing shall be recycled or stockpiled.	**Consistent.** The project would meet this requirement as part of its compliance with the City's requirements and the CALGreen Code.
Mobile Sources		
AB 1493 (Pavley Regulations)	Reduces GHG emissions in new passenger vehicles from model year 2012 through 2016 (Phase I) and model years 2017-2025 (Phase II). Also reduces gasoline consumption to a rate of 31 percent of 1990 gasoline consumption (and associated GHG emissions) by 2020.	**Consistent.** The project would be consistent with this regulation and would not conflict with implementation of the vehicle emissions standards.
Low Carbon Fuel Standard (Executive Order S-01-07)	Establishes protocols for measuring life-cycle carbon intensity of transportation fuels and helps to establish use of alternative fuels.	**Consistent.** The project would be consistent with this regulation and would not conflict with implementation of the transportation fuel standards.
Advanced Clean Cars Program	In 2012, CARB adopted the Advanced Clean Cars (ACC) program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC includes the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.	**Consistent.** The standards would apply to all vehicles used by employees, hotel residents, and restaurant customers associated with the project. The project would install the prewiring for 126 electric vehicle charging stations.
SB 375	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035.	**Consistent.** The project would be consistent with SCAG RTP/SCS goals and objectives under SB 375 to implement "smart growth." The project would provide employment opportunities in close proximity to off-site residential, the project site is served by a high level of public transit, the project would encourage use of non-motorized vehicles by installing the prewiring for 126 electric vehicle charging stations, four bike sharing stations, on-street bike lanes along North Hollywood Way and Tulare Avenue, and connectivity to the future Burbank Airport-North Metrolink Station. The project would incorporate Project Design Features that would meet the applicable requirements of CALGreen Code.
Water		
CCR, Title 24	Title 24 includes water efficiency requirements for new residential and non-residential uses.	**Consistent.** The project would meet this requirement as part of its compliance with the CALGreen Code.
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and Assembly Bill (AB) 341	The IWMA mandated that State agencies develop and implement an integrated waste management plan which outlines the steps to be taken to divert at least 50 percent of their solid waste from disposal facilities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020.	**Consistent.** The project would be served by the City's solid waste collection and recycling services. The project's commercial components (creative office, retail, and hotel) would likely generate more than 4 cubic yards of solid waste weekly and would be required to comply with AB 341. Additionally, industrial spaces are not required to recycle under AB 341, however, mitigation measure UTIL-2 of *Section 4-15, Utilities*, would require all tenants occupying creative industrial spaces to recycle to the maximum extent possible.
Other Sources		

Sector / Source	Category / Description	Consistency Analysis
Climate Action Team	Reduce diesel-fueled commercial motor vehicle idling.	**Consistent.** The project would be consistent with the CARB Air Toxics Control Measure to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time.
	Achieve California's 50 percent waste diversion mandate (Integrated Waste Management Act of 1989) to reduce GHG emissions associated with virgin material extraction.	**Consistent.** The project would meet this requirement as part of its compliance with the CALGreen Code.
	Plant five million trees in urban areas by 2020 to effect climate change emission reductions.	**Consistent.** The project would provide appropriate landscaping on the project site including drought-tolerant landscaping and plant approximately 900 trees.
	Implement efficient water management practices and incentives, as saving water saves energy and GHG emissions.	**Consistent.** The project would meet this requirement as part of its compliance with the CALGreen Code. The project would also use drought-tolerant plants in its landscaping.
	Apply strategies that integrate transportation and land-use decisions, including but not limited to promoting jobs/housing proximity, high-density residential/ commercial development along transit corridors, and implementing intelligent transportation systems.	**Consistent.** The project would incorporate physical and operational project characteristics that would reduce vehicle trips and VMT and encourage alternative modes of transportation for patrons and employees. The project would also provide a shuttle service for the Golden State District including Metrolink stations.
	Reduce energy use in private buildings.	**Consistent.** The project would meet or exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Energy Efficiency Standards.

SOURCE: ESA, 2017.

Furthermore, not only is the project consistent with currently applicable GHG emission reduction strategies described in Table 5, but the project also would not conflict with or impede the future statewide GHG emission reductions goals. CARB has outlined a number of potential strategies for achieving the 2030 reduction target of 40 percent below 1990 levels. These potential strategies include renewable resources for half of the State's electricity by 2030, increasing the fuel economy of vehicles and the number of zero-emission or hybrid vehicles, reducing the rate of growth in VMT, supporting other alternative transportation options, and use of high efficiency appliances, water heaters, and HVAC systems.[82] The project would benefit from statewide and utility-provider efforts toward increasing the portion of electricity provided from renewable resources. The project would also benefit from statewide efforts toward increasing the fuel economy standards of vehicles. The project would be consistent with reducing the rate of growth in VMT by providing on-site bicycle parking facilities, being located in area served by a high level of public transit including bus lines and Metro Link stations.

82 Energy + Environmental Economics, Summary of the California State Agencies' PATHWAYS project: Long-term Greenhouse Gas Reduction Scenarios, April 6, 2015. Available at: https://www.arb.ca.gov/html/fact_sheets/e3_2030scenarios.pdf. Accessed May 2017.

Project consistency with Regional and Local Trip and VMT Reduction Goals, Actions, and Recommendations

The significance of the project's GHG emissions was first evaluated based on whether the emissions would be generated in connection with development located and designed consistent with relevant regional and local goals, actions, and recommendations designed to encourage development to reduce trips and VMTs. Transportation-related GHG emissions are the largest source of GHG emissions from the project. This project characteristic is consistent with the assumption in many regional plans, such as the SCAG RTP/SCS, which recognizes that the transportation sector is the largest contributor to the State's GHG emissions.

Consistent with SCAG's RTP/SCS alignment of transportation, land use, and housing strategies, the project would accommodate projected increases in travel demand by implementing smart land use strategies. The project would redevelop the underutilized land into a mixed campus that would provide retail amenities to serve Avion Burbank and surrounding businesses, encourage alternative modes of transportation by installing the prewiring for 126 electric vehicle charging stations, providing four bike share stations, and numerous locations for bicycle parking. The project site is currently served by multiple bus routes provided by Los Angeles Metro and BurbankBus; and will provide two bus stops, one along North Hollywood Way and North San Fernando Blvd. Based on the high level of public transit, the Traffic Study applied a trip generation credit for the office, industrial, and hotel land uses, as well as an internal capture reduction for the retail portions of the project. The project would also include circulation improvements by widening and extending surrounding streets such as Hollywood Way, Tulare, Kenwood, Cohasset, and San Fernando. The project would provide safe access and connectivity for pedestrians and bicyclists to the future Burbank Airport-North Metrolink Station. Overall, these project characteristics have the potential to reduce single occupancy vehicle trips and vehicle miles traveled, thus reducing their associated GHG emissions.

SCAG's 2016 RTP/SCS states that 38 percent of all trips in the region are less than 3 miles.[83] The RTP/SCS intends to decrease these trips by extending local bikeway networks. The project would be consistent with this RTP/SCS goal by installing four on-site bike share stations, providing on-street bike lanes along North Hollywood Way and Tulare Avenue, multiple bike parking location throughout the project site, and a bike path that connects to the future Burbank Airport-North Metrolink Station. In addition, according to the Traffic Study,[84] the project would not conflict with the City's Bicycle Master Plan. Therefore, the project would be consistent with the SCAG 2016 RTP/SCS regional and local trip and VMT reduction goals.

83 The 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy, April 2016. http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf Accessed June 2017.

84 Traffic Impact Study for the Avion Mixed Use Development Project, Fehr & Peers, September 2017.

Consistency with Plans, Policies, Regulations, or Recommendations to Reduce GHG Emissions

The project would also be consistent with statewide, regional and local plan, policies, regulations, and recommendations to reduce GHG emissions from development. The primary focus of many of the statewide and regional mandates, plans, policies and regulations is to address worldwide climate change. According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."[85] Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the project's annual GHG emissions would cause a measurable change in global GHG emissions sufficient to create a significant project level impact on global climate change. Newer construction materials and practices, energy efficiency requirements, and newer appliances tend to emit lower levels of air pollutant emissions, including GHGs, as compared to those built years ago; however, the net effect is difficult to quantify. The GHG emissions of the project alone is not expected to cause a direct physical change in the environment. It is global GHG emissions in their aggregate that contribute to climate change, not any single source of GHG emissions alone. Because of the lack of evidence indicating that the project's GHG emissions would cause a measurable change in global GHG emissions sufficient to create a significant project-level impact on global climate change, and the fact that the project incorporates physical and operational project characteristics and project Design Features that would ensure its consistency with City actions and measures, project emissions are not anticipated to contribute considerably to global climate change. The project is also considered to be consistent with the GHG reduction goals of HSC Division 25.5 and associated GHG reduction plans such as SCAG's 2016 RTP/SCS, and it is not expected that project development would impede their goals. In fact, as discussed above, the project's location and development comply with the recommendations in these documents and would meet their goals.

As discussed previously, the City has a reduction target of 15 percent below 2010 levels by 2020 and a reduction goal of 30 percent below 2010 levels by 2035. In order to achieve these goals, the City has identified actions and measures to reduce GHG emissions stated in the City's General Plan Program: *Air Quality and Climate Change Element* and the City's *GGRP*. **Table 6,** *project Consistency with City of Burbank Greenhouse Gas Reduction Strategies,* summarizes how the project supports the actions and measures found in the City's General Plan and GGRP.

TABLE 6
PROJECT CONSISTENCY WITH CITY OF BURBANK GREENHOUSE GAS REDUCTION STRATEGIES

Policies	Consistency
Air Quality and Climate Change Element	
Policy 1.5: Require projects that generate potentially significant levels of air pollutants, such as landfill operations or large construction projects, to incorporate best available air	**Consistent:** The project would meet the CALGreen criteria, and CALGreen Tier 1 energy efficiency criterial for commercial components, which would reduce energy and water consumption. During construction, the project will recycle and balance all

85 California Air Pollution Control Officers Association, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, (2008).

quality and greenhouse gas mitigation in project design.	demolition debris and excavated soil, so there will be no haul truck trips. During construction and operations, trucks on-site would be limited to five minutes of idling, consistent with the ATCM.
Policy 1.9: Encourage the use of zero-emission vehicles, low-emission vehicles, bicycles, and other non-motorized vehicles, and car-sharing programs. Consider requiring sufficient and convenient infrastructure and parking facilities in residential developments and employment centers to accommodate these vehicles.	**Consistent:** The project would encourage the use of non-motorized vehicles by installing the prewiring for providing 126 electric vehicle charging stations, four bike sharing stations, on-street bicycle lanes along North Hollywood Way and Tulare Avenue, and numerous bike parking locations throughout the mixed use campus.
Policy 3.4: Reduce greenhouse gas emissions from new development by promoting water conservation and recycling; promoting development that is compact, mixed-use, pedestrian-friendly, and transit-oriented; promoting energy-efficient building design and site planning; and improving the jobs/housing ratio.	**Consistent:** The project would achieve energy and water consumption reductions by meeting CALGreen criterial, and CALGreen Tier 1 energy efficiency level criteria for commercial projects. The project is a mixed used campus with creative office and industrial spaces, retail, and a hotel. The project would have sufficient and safe pathways for bicyclists and pedestrians to navigate the campus The project is served by a high level of transit with multiple bus stops and routes, as well being 0.9 miles from the current Burbank Airport-North Metrolink Station and will be adjacent to the future Burbank Airport-North Metrolink Station. The project would result in approximately 2,119 full-time employment jobs.
Policy 2.4: Require new projects to contribute to the City's transit and/or non-motorized transportation network in proportion to its expected traffic generation.	**Consistent:** The project would provide two bus stops adjacent to the project along North Hollywood Way and San Fernando. The project would encourage the use of non-motorized travel to the project Site by installing prewiring for 126 electric vehicle charging stations, providing four bike share stations, numerous bicycle parking locations, on-street bike lanes along North Hollywood Way and Tulare Avenue, and would provide 40 parking spots for the dedicated use of the future Burbank Airport-North Metrolink Station. The project would also provide a shuttle service for the Golden State District including Metrolink stations.
Burbank 2035 Greenhouse Gas Reduction Plan	
Buildings and Energy:	
Energy Efficiency in New Construction: The City will require new commercial projects to be constructed to Title 24 Tier 1 levels	**Consistent:** The project would meet the CALGreen Tier 1 level criteria for commercial components.
Cool Roofs: 'Cool roofs' are made of materials with higher solar reflectivity, which mitigate the urban heat island effect and reduce cooling loads during hot days.	**Consistent:** The project would be designed to have cool roofs, reducing the heat island effect, thus reducing the energy required for air conditioning in buildings.
Building Shade Trees	**Consistent:** The project would plant approximately 900 trees within the parking lot, which would provide shading for over 50 percent of the parking area within 15 years. The trees would also absorb carbon dioxide.
Transportation:	
Pedestrian Enhancements: Attractive pedestrian environments encourage walking, which can lead to increased foot traffic for stores and restaurants and decreased automobile trips.	**Consistent:** The project would provide multiple pedestrian walkways on the project Site, as well as a walkway to the future Burbank Airport-North Metrolink Station. The project is served my multiple bus lines within reasonable walking distance, in addition to the two bust stops the it will provide along North Hollywood Way and

	North San Fernando BlvdSan Fernando Blvd. The project would also provide a shuttle service for the Golden State District including Metrolink stations.
Bicycle Infrastructure Expansion: The City will continue to expand bicycle infrastructure within public rights-of-way, including on-street bicycle lanes and routes, bicycle parking, and directional signage.	**Consistent:** The project would encourage traveling to the project site via bicycles by providing on-street bike lanes along North Hollywood Way and Tulare Avenue, a bike path with connectivity to the Burbank Airport-North Metrolink Station, installing four bike share stations, as well as multiple on-site bike parking locations.
Water Efficiency:	
The City will implement water conservation programs described in the Urban Water Management Plan (UWMP) in support of BWP's goal to reduce water consumption by 1% annually.	**Consistent:** The project would comply with the City requirements for water efficiency.

Consistency with Executive Orders S-3-05 and B-30-15

Executive Orders S-3-05 and B-30-15 establish goals for reducing GHG emissions. Executive Order S-3-05's goal to reduce GHG emissions to 1990 levels by 2020 was codified by the Legislature as AB 32. As analyzed above, the project would be consistent with AB 32. Therefore, the project does not conflict with the 2020 component of Executive Orders S-3-05 and B-30-15.

Executive Orders S-3-05 and B-30-15 also establish goals to reduce GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. SB 32 established the 2030 goal as law but the 2050 goal has not yet been codified by the Legislature. However, studies have shown that, to meet the 2030 and 2050 targets, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 goal are too far in the future to define in detail."[86] In the First Update, however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately."[87] Due to the technological shifts required and the unknown parameters of the regulatory framework in 2030 and 2050, quantitatively analyzing the project's impacts further relative to the 2030 and 2050 goals currently is speculative for purposes of CEQA.

Although the project's emissions levels in 2030 and 2050 cannot yet be reliably quantified, statewide efforts are underway to facilitate the State's achievement of those goals and it is reasonable to expect the project's emissions level to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the project's emissions total at build-out year of 2020, represents the maximum emissions inventory for the project as California's emissions sources are being regulated (and

[86] CARB, Climate Change Scoping Plan, p. 117, December 2008
[87] CARB, First Update, p. 32, May 2014

foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. Given the reasonably anticipated decline in project emissions once fully constructed and operational, the project would be consistent with the Executive Orders' goals.

Because the project's location, land use characteristics, and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations, and with the City's GGRP and CAL Green Code, the project would be consistent with and would not conflict with any applicable plan, policy, regulation or recommendation to reduce GHG emissions. Therefore, impacts would be less than significant.

SECTION 6.0
Cumulative Impacts

Worldwide, anthropogenic emissions of GHGs were approximately 49,000 million metric tons (MMT) CO_2e in 2010 including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation).[88] Emissions of CO_2 from fossil fuel use and industrial processes account for 65 percent of the total while CO_2 emissions from all sources accounts for 76 percent of the total GHG emissions. Methane emissions account for 16 percent and N_2O emissions for 6.2 percent. In 2015, the United States was the world's second largest emitter of CO_2 at 5,150 MMT; China was the largest emitter of CO_2 at 10,700 MMT.[89]

As previously discussed in Section 1.5, Existing Greenhouse Gas Environment, CARB compiles GHG inventories for the State of California. Based on the 2015 GHG inventory data California emitted 1.5 $MMTCO_2e$ less GHG emissions compared to 2014 and has been on a declining trend since 2007. Also, the population and economic activities have increased substantially between 1990 and 2015. Despite the population and economic growth, California's net GHG emissions only grew by approximately 2 percent. According to CARB, the declining trend coupled with the state's GHG reduction programs (such as the Renewables Portfolio Standard, LCFS, vehicle efficiency standards, and declining caps under the Cap and Trade Program) demonstrate that California is on track to meet the 2020 GHG reduction target in California HSC, Division 25.5, also known as The Global Warming Solutions Act of 2006 (AB 32).[90] As indicated previously, Table 1 identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2015 (i.e., the most recent year in which data are available from CARB). As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at 37 percent in 2015.

CEQA requires that lead agencies consider the cumulative impacts of GHG emissions from even relatively small (on a global basis) increases in GHG emissions. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and therefore significant. In the case of global climate change, the proximity of the project to other GHG emissions generating activities is not directly relevant to the determination of a cumulative impact because climate change is a global

88 Intergovernmental Panel on Climate Change, Fifth Assessment Report Synthesis Report, (2014).

89 PBL Netherlands Environmental Assessment Agency and the European Commission Joint Research Center, Trends in Global CO_2 Emissions 2016 Report, (2016) 20, 23. Available: http://www.pbl.nl/en/publications/trends-in-global-co2-emissions-2016-report. Accessed August 2017.

90 California Air Resources Board, Frequently Asked Questions for the 2016 Edition California Greenhouse Gas Emission Inventory, (2016). Available: https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_faq_20160617.pdf. Accessed June 2017.

condition. As stated above, GHG emission impacts are, by their very nature cumulative, as both the California Natural Resources Agency and CAPCOA have recognized.[91] Therefore, an analysis of a project's GHG emission impacts also serves as a cumulative impact assessment.

Although HSC Division 25.5 sets a statewide target for statewide 2020 and 2030 GHG emission levels, its implementing tools (e.g., CARB's *Climate Change Scoping Plan*) make clear that the reductions are not expected to occur uniformly from all sources or sectors. CARB has set targets specific to the transportation sector (land use-related transportation emissions), for example, and under SB 375, SCAG must incorporate these GHG-reduction goals into its Regional Transportation Plan and demonstrate that its Sustainable Communities Strategy is consistent with the Regional Housing Needs Assessment. One of the goals of this process is to ensure that the efforts of State, regional and local planning agencies accommodate the contemporaneous increase in population and employment with a decrease in overall GHG emissions. For example, adopting zoning designations that reduce density in areas which are expected to experience growth in population and housing needs, is seen as inconsistent with anti-sprawl goals of sustainable planning. Although development under a reduced density scenario would result in lower GHG emissions from the use of that individual parcel of land compared to what is currently or hypothetically allowed (by creating fewer units and fewer attributable vehicle trips), total regional GHG emissions would likely fail to decrease at the desired rate or, worse, would increase if regional housing and employment needs of an area were then met with a larger number of less-intensive development projects. Therefore, it is not simply a cumulative increase in regional development or the resultant GHG emissions that potentially threatens GHG reduction goals, but the configuration and design of that development.

With implementation of good planning policies, the land use sector can accommodate growth and still be consistent with statewide plans to reduce GHG emissions. To that end, various agencies are required to develop programs to guide future building and transportation development toward minimizing resource consumption and reducing resultant pollution. As discussed above, the City has adopted a Greenhouse Gas Reduction Plan that includes actions and measures to meet GHG reductions targets for 2020 and 2035.

As discussed in the tables above, the project's design and location would be consistent with applicable GHG reduction strategies recommended by the State, region, and City. In addition, implementation of PDFs would meet or exceed minimum regulatory requirements, and the project would support and be consistent with relevant and applicable GHG emission reduction strategies in SCAG's 2016 RTP/SCS. The project is a compact infill location and within a relatively short distance of existing transit stops; providing employment near current transit stops, and supports the use of alternative modes of transportation, such as installation of prewiring for 126 electric vehicle charging stations, providing four bike share stations, and providing two bus stops in addition to shuttle system for the project area. As a result, the project would be consistent with SCAG's 2016 RTP/SCS policies for the concentration of growth in proximity to transit.

91 California Air Pollution Control Officers Association, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from projects Subject to the California Environmental Quality Act, (2008).

Furthermore, the overwhelming majority of the project-related GHG emissions are from two highly regulated source sectors, electricity generation and transportation. These sectors are already covered entities under the Renewables Portfolio Standard and the Cap-and-Trade Program and as such would be reduced sector-wide in accordance with the GHG reduction targets of HSC Division 25.5, in addition to the previously discussed GHG emissions reductions from the project-specific energy efficiency design features, and substantial VMT-reducing land use characteristics of the project. Air quality mitigation measures AIR-1, AIR-2, and AIR-3 focus on GHG emissions from mobile sources and have the potential to reduce operational GHG emissions.

As indicated above, the *State CEQA Guidelines* were amended in response to SB 97. In particular, the *State CEQA Guidelines* were amended to specify that compliance with a GHG emissions reduction program renders a cumulative impact insignificant. Per *State CEQA Guidelines* Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project.[92] To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.[93] Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] **plans or regulations for the reduction of greenhouse gas emissions**" (emphasis added).[94] Put another way, *CEQA Guidelines* Section 15064(h)(3) allows a lead agency to make a finding of non-significance for GHG emissions if a project complies with the California Cap-and-Trade Program or other regulatory schemes to reduce GHG emissions.

Given that the project would generate GHG emissions consistent with applicable reduction plans and policies, and given that GHG emission impacts are cumulative in nature, the project's incremental contribution to cumulatively significant GHG emissions would be less than cumulatively considerable, and impacts would be less than significant.

[92] 14 CCR § 15064(h)(3).
[93] 14 CCR § 15064(h)(3).
[94] 14 CCR § 15064(h)(3).

SECTION 7.0
Mitigation Measures

7.1 Construction

Mitigation measures for project construction are not required.

7.2 Operation

Even though the project impact is less than significant, per the GGRP, the following measures that are not required by regulations must be incorporated by the project as mitigation measures:

> **MM GHG-1:** Prior to the issuance of building permits, project applicant shall demonstrate that the project shall be constructed such that it incorporates on-site renewable energy or purchase of green power (including pre-wiring for solar photovoltaic) such that 10 percent of the project's energy use is from renewable sources.
>
> **MM GHG-2:** The project shall participate in the food scraps and compostable paper diversion so that 100 percent of commercial businesses divert 90 percent of food scraps and compostable paper.
>
> **MM GHG-3:** Property management shall ensure that all yard waste disposed of on-site is disposed of in a proper yard waste collection bin. No yard waste is to be disposed of in trash bins.

SECTION 8
Level of Significance After Mitigation

8.1 Construction

Not applicable to project construction.

8.2 Operation

Project mitigation measures discussed above have the potential to further reduce GHG emission from project operations. Implementation of MM GHG-1 would reduce GHG emissions from consumption of electricity, natural gas, and water. MM-GHG-2 and MM-GHG-3 would reduce GHG emissions from solid waste production by diverting project waste from landfills. Additionally, mitigation measures MM-AIR-1, MM-AIR-2, and MM-AIR-3 would also reduce GHG emissions from mobile sources, the largest contributor of operational GHG emissions. These mitigation measures are also consistent with the City's GGRP policies.

SECTION 9.0
Summary of Results

GHG emissions associated with the project have been evaluated to determine the level of impact from construction activities and future operations of the project. The project would be consistent with the requirements of State and Regional GHG policies, as well as with applicable actions and measures in City's General Plan and Greenhouse Gas Reduction Plan.

Construction of the project would result in temporary and incremental increases to GHG emissions through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the project Site. GHG emissions associated with project operations would be generated by mobile, stationary, and area sources, consumption of electricity, natural gas, and water, and solid waste production.

The project would be consistent with applicable GHG reduction strategies recommended by the State. The project would be designed to meet the CALGreen mandatory requirements and CALGreen Tier 1 energy efficiency criteria for commercial components, and incorporate features to reduce resource consumption. In addition, the project would support and be consistent with relevant and applicable GHG emission reduction strategies in SCAG's Sustainable Communities Strategy, including providing commuters four bike sharing stations, reducing single occupancy vehicle transit by being located in an area with a high level of public transit, installing the prewiring for 126 electric vehicle charging stations, providing connectivity to the existing and future Metro Link stations, and providing safe and accessible bike lines and paths around the project site. These features have the potential to reduce VMT and their associated GHG emissions. In addition to design features, mitigation measures described in the Air Quality Technical Report and in Section 8.2 of this report have the potential to reduce overall project operational GHG emissions.

In summary, construction and operation of the proposed project would result in GHG emissions that would not result in a significant impact on the environment. The project would be consistent with local, regional, and State's plans and programs adopted for the purpose of reducing the emissions of GHGs. Accordingly, the project would not result in a cumulatively considerable impact to global climate change.

APPENDIX A

Greenhouse Gas Emissions Worksheets

I. Project Construction Emissions

- **Construction CalEEMod Output (Annual)**
- **Construction GHG Summary**

II. Project Operations Emissions

- **Operations CalEEMod Output (Annual)**
- **Operations GHG Summary**

I. Project Construction Emissions

- **Construction CalEEMod Output (Annual)**
- **Construction GHG Summary**

Burbank Avion Project

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	142.25	1000sqft	3.27	142,250.00	0
General Light Industry	1,014.89	1000sqft	23.30	1,014,887.00	0
Other Asphalt Surfaces	5.14	Acre	5.14	223,723.00	0
Parking Lot	2,390.00	Space	20.71	901,975.00	0
City Park	7.34	Acre	7.34	319,646.00	0
High Turnover (Sit Down Restaurant)	7.70	1000sqft	0.18	7,700.00	0
Hotel	166.00	Room	1.45	101,230.00	0
Regional Shopping Center	7.70	1000sqft	0.18	7,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	12			**Operational Year**	2020
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	1096.12	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - see construction assumptions

Construction Phase - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Off-road Equipment - see construction assumptions

Trips and VMT - See construction assumptions

On-road Fugitive Dust -

Demolition -

Grading - see construction assumptions - concrete debris and excavated soils will be balanced onsite. To capture all emissions using CALEEMOD, assume the material imported is the combination of the two

Architectural Coating - Comply with SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - see construction assumptions

Area Mitigation - see construction assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	636885	636923
tblAreaCoating	Area_Nonresidential_Interior	1910655	1910768
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblFleetMix	FleetMixLandUseSubType	General Office Building	City Park
tblFleetMix	FleetMixLandUseSubType	Other Asphalt Surfaces	General Office Building
tblFleetMix	FleetMixLandUseSubType	Parking Lot	High Turnover (Sit Down Restaurant)
tblFleetMix	FleetMixLandUseSubType	City Park	Hotel
tblFleetMix	FleetMixLandUseSubType	High Turnover (Sit Down Restaurant)	Other Asphalt Surfaces
tblFleetMix	FleetMixLandUseSubType	Hotel	Parking Lot
tblGrading	AcresOfGrading	510.00	61.55
tblGrading	MaterialExported	0.00	261,000.00
tblGrading	MaterialImported	0.00	296,029.00
tblLandUse	BuildingSpaceSquareFeet	1,014,890.00	1,014,887.00
tblLandUse	BuildingSpaceSquareFeet	223,898.40	223,723.00
tblLandUse	BuildingSpaceSquareFeet	956,000.00	901,975.00
tblLandUse	BuildingSpaceSquareFeet	241,032.00	101,230.00
tblLandUse	GreenSpaceSquareFeet	319,730.40	319,646.00
tblLandUse	LandUseSquareFeet	1,014,890.00	1,014,887.00
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tblLandUse	LandUseSquareFeet	956,000.00	901,975.00
tblLandUse	LandUseSquareFeet	319,730.40	319,646.00
tblLandUse	LandUseSquareFeet	241,032.00	101,230.00
tblLandUse	LotAcreage	21.51	20.71

tblLandUse	LotAcreage	5.53	1.45
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
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tblOffRoadEquipment	PhaseName		Grading-Phase 1
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tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
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tblProjectCharacteristics	OperationalYear	2018	2020

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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.5550	16.5141	11.8126	0.0253	1.1006	0.7374	1.8380	0.3422	0.6900	1.0323	0.0000	2,296.2222	2,296.2222	0.5652	0.0000	2,310.3534
2019	5.3118	17.7926	18.7782	0.0375	1.0230	0.9611	1.9840	0.2721	0.9244	1.1965	0.0000	3,304.8518	3,304.8518	0.4971	0.0000	3,317.2789
2020	0.7657	3.6089	3.8700	7.5900e-003	0.1546	0.1945	0.3491	0.0412	0.1883	0.2295	0.0000	658.4478	658.4478	0.0975	0.0000	660.8862
Maximum	**5.3118**	**17.7926**	**18.7782**	**0.0375**	**1.1006**	**0.9611**	**1.9840**	**0.3422**	**0.9244**	**1.1965**	**0.0000**	**3,304.8518**	**3,304.8518**	**0.5652**	**0.0000**	**3,317.2789**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3983	2.3710	13.4550	0.0253	0.5529	0.0457	0.5986	0.1669	0.0453	0.2122	0.0000	2,296.2199	2,296.2199	0.5652	0.0000	2,310.3510
2019	3.9000	3.6051	20.3921	0.0375	1.0230	0.1256	1.1486	0.2721	0.1249	0.3970	0.0000	3,304.8491	3,304.8491	0.4971	0.0000	3,317.2761
2020	0.4756	0.8909	4.1871	7.5900e-003	0.1546	0.0285	0.1831	0.0412	0.0284	0.0696	0.0000	658.4472	658.4472	0.0975	0.0000	660.8856
Maximum	**3.9000**	**3.6051**	**20.3921**	**0.0375**	**1.0230**	**0.1256**	**1.1486**	**0.2721**	**0.1249**	**0.3970**	**0.0000**	**3,304.8491**	**3,304.8491**	**0.5652**	**0.0000**	**3,317.2761**

	ROG	NOx	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	**37.45**	**81.89**	**-10.37**	**0.00**	**24.04**	**89.44**	**53.72**	**26.75**	**88.98**	**72.39**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

1	**4-1-2018**	**6-30-2018**	7.6830	0.5914
2	**7-1-2018**	**9-30-2018**	0.2872	0.0315
3	**10-1-2018**	**12-31-2018**	2.1950	0.3832
4	**1-1-2019**	**3-31-2019**	5.9986	1.2375
5	**4-1-2019**	**6-30-2019**	7.4604	2.1660
6	**7-1-2019**	**9-30-2019**	6.8406	3.3856
7	**10-1-2019**	**12-31-2019**	2.3078	0.5713
8	**1-1-2020**	**3-31-2020**	2.0587	0.5153
9	**4-1-2020**	**6-30-2020**	1.2645	0.4022
10	**7-1-2020**	**9-30-2020**	0.9321	0.3893
		Highest	7.6830	3.3856

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 (Remove pavement)-Phase 1	Demolition	4/1/2018	4/20/2018	6	17	
2	Grading-Phase 1	Grading	4/5/2018	6/2/2018	6	51	
3	Drainage/Utilities/Trenching-Phase 1	Building Construction	5/7/2018	6/5/2018	6	26	
4	Foundation-Phase 1	Building Construction	6/11/2018	11/15/2018	6	136	
5	Drainage/Utilities/Trenching-Phase 2	Building Construction	9/1/2018	9/27/2018	6	23	
6	Foundation-Phase 2	Building Construction	10/1/2018	1/10/2019	6	88	
7	Paving-Phase 1	Paving	10/23/2018	8/3/2019	6	245	
8	Building Construction-Phase 1	Building Construction	11/30/2018	8/7/2019	6	215	
9	Building Construction-Phase 2	Building Construction	1/21/2019	5/15/2020	6	413	
10	Architectural Coating-Phase 1	Architectural Coating	6/1/2019	10/1/2019	6	105	
11	Landscaping-Phase 1	Building Construction	9/3/2019	9/27/2019	6	22	
12	Architectural Coating-Phase 2	Architectural Coating	6/1/2020	8/28/2020	6	77	
13	Paving-Phase 2	Paving	7/1/2020	8/26/2020	6	49	
14	Landscaping-Phase 2	Building Construction	8/1/2020	8/28/2020	6	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 25.85

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,758,806; Non-Residential Outdoor: 586,269; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition (Remove pavement)-Phase 1	Off-Highway Trucks	3	6.00	402	0.38
Demolition (Remove pavement)-Phase 1	Rubber Tired Dozers	2	10.00	247	0.40
Demolition (Remove pavement)-Phase 1	Sweepers/Scrubbers	2	6.00	64	0.46
Demolition (Remove pavement)-Phase 1	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Grading-Phase 1	Graders	4	10.00	187	0.41
Grading-Phase 1	Off-Highway Trucks	10	6.00	402	0.38
Grading-Phase 1	Rubber Tired Dozers	2	10.00	247	0.40
Grading-Phase 1	Scrapers	6	10.00	367	0.48
Grading-Phase 1	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Drainage/Utilities/Trenching-Phase 1	Cranes	1	10.00	231	0.29
Drainage/Utilities/Trenching-Phase 1	Excavators	2	10.00	158	0.38
Drainage/Utilities/Trenching-Phase 1	Off-Highway Trucks	1	6.00	402	0.38
Drainage/Utilities/Trenching-Phase 1	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Foundation-Phase 1	Aerial Lifts	3	10.00	63	0.31
Foundation-Phase 1	Bore/Drill Rigs	3	10.00	221	0.50
Foundation-Phase 1	Excavators	3	10.00	158	0.38
Foundation-Phase 1	Pumps	3	10.00	84	0.74
Foundation-Phase 1	Rough Terrain Forklifts	3	10.00	100	0.40
Foundation-Phase 1	Tractors/Loaders/Backhoes	3	10.00	97	0.37
Drainage/Utilities/Trenching-Phase 2	Excavators	1	10.00	158	0.38
Drainage/Utilities/Trenching-Phase 2	Off-Highway Trucks	1	6.00	402	0.38
Drainage/Utilities/Trenching-Phase 2	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Drainage/Utilities/Trenching-Phase 2	Trenchers	1	10.00	78	0.50

Foundation-Phase 2	Aerial Lifts	2	10.00	63	0.31
Foundation-Phase 2	Bore/Drill Rigs	2	10.00	221	0.50
Foundation-Phase 2	Cranes	1	10.00	231	0.29
Foundation-Phase 2	Excavators	2	10.00	158	0.38
Foundation-Phase 2	Pumps	3	10.00	84	0.74
Foundation-Phase 2	Rough Terrain Forklifts	2	10.00	100	0.40
Foundation-Phase 2	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Paving-Phase 1	Pavers	2	10.00	130	0.42
Paving-Phase 1	Paving Equipment	5	10.00	132	0.36
Building Construction-Phase 1	Cranes	2	10.00	231	0.29
Building Construction-Phase 1	Forklifts	2	10.00	89	0.20
Building Construction-Phase 1	Generator Sets	4	10.00	84	0.74
Building Construction-Phase 1	Off-Highway Trucks	2	6.00	402	0.38
Building Construction-Phase 1	Pumps	2	10.00	84	0.74
Building Construction-Phase 1	Tractors/Loaders/Backhoes	3	10.00	97	0.37
Building Construction-Phase 1	Welders	2	10.00	46	0.45
Building Construction-Phase 2	Air Compressors	3	10.00	78	0.48
Building Construction-Phase 2	Cranes	1	10.00	231	0.29
Building Construction-Phase 2	Forklifts	2	10.00	89	0.20
Building Construction-Phase 2	Generator Sets	2	10.00	84	0.74
Building Construction-Phase 2	Off-Highway Trucks	1	6.00	402	0.38
Building Construction-Phase 2	Pumps	1	10.00	84	0.74
Building Construction-Phase 2	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Building Construction-Phase 2	Welders	3	10.00	46	0.45
Architectural Coating-Phase 1	Aerial Lifts	6	10.00	63	0.31
Architectural Coating-Phase 1	Air Compressors	3	10.00	78	0.48
Landscaping-Phase 1	Skid Steer Loaders	3	10.00	65	0.37
Landscaping-Phase 1	Sweepers/Scrubbers	2	6.00	64	0.46
Landscaping-Phase 1	Tractors/Loaders/Backhoes	3	10.00	97	0.37
Architectural Coating-Phase 2	Aerial Lifts	3	10.00	63	0.31

Architectural Coating-Phase 2	Air Compressors	3	10.00	78	0.48
Paving-Phase 2	Pavers	1	10.00	130	0.42
Paving-Phase 2	Paving Equipment	1	10.00	132	0.36
Paving-Phase 2	Rollers	2	10.00	80	0.38
Paving-Phase 2	Surfacing Equipment	1	10.00	263	0.30
Landscaping-Phase 2	Skid Steer Loaders	1	10.00	65	0.37
Landscaping-Phase 2	Sweepers/Scrubbers	1	10.00	64	0.46
Landscaping-Phase 2	Tractors/Loaders/Backhoes	1	10.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition (Remove pavement)-Phase 1	9	23.00	6.00	0.00	14.70	6.90	0.25	LD_Mix	HDT_Mix	HHDT
Grading-Phase 1	24	60.00	6.00	0.00	14.70	6.90	0.25	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Trenching-Phase 1	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Foundation-Phase 1	18	45.00	72.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Trenching-Phase 2	5	13.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Foundation-Phase 2	14	35.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving-Phase 1	7	18.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction-Phase 1	17	572.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction-Phase 2	14	200.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating-Phase 1	9	114.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping-Phase 1	8	20.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating-Phase 2	6	40.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving-Phase 2	5	13.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping-Phase 2	3	6.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition (Remove pavement)-Phase 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4498	0.0000	0.4498	0.0681	0.0000	0.0681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0492	0.5160	0.2487	5.3000e-004		0.0256	0.0256		0.0235	0.0235	0.0000	48.6386	48.6386	0.0151	0.0000	49.0172
Total	**0.0492**	**0.5160**	**0.2487**	**5.3000e-004**	**0.4498**	**0.0256**	**0.4753**	**0.0681**	**0.0235**	**0.0916**	**0.0000**	**48.6386**	**48.6386**	**0.0151**	**0.0000**	**49.0172**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2000e-004	6.3300e-003	1.6600e-003	1.0000e-005	3.2000e-004	5.0000e-005	3.7000e-004	9.0000e-005	4.0000e-005	1.4000e-004	0.0000	1.2673	1.2673	9.0000e-005	0.0000	1.2696
Worker	1.0400e-003	8.5000e-004	9.1400e-003	2.0000e-005	2.1400e-003	2.0000e-005	2.1600e-003	5.7000e-004	2.0000e-005	5.9000e-004	0.0000	2.0596	2.0596	7.0000e-005	0.0000	2.0613
Total	**1.2600e-003**	**7.1800e-003**	**0.0108**	**3.0000e-005**	**2.4600e-003**	**7.0000e-005**	**2.5300e-003**	**6.6000e-004**	**6.0000e-005**	**7.3000e-004**	**0.0000**	**3.3269**	**3.3269**	**1.6000e-004**	**0.0000**	**3.3309**

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					0.1754	0.0000	0.1754	0.0266	0.0000	0.0266	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9100e-003	0.0447	0.2691	5.3000e-004		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	48.6386	48.6386	0.0151	0.0000	49.0171
Total	**6.9100e-003**	**0.0447**	**0.2691**	**5.3000e-004**	**0.1754**	**8.7000e-004**	**0.1763**	**0.0266**	**8.7000e-004**	**0.0274**	**0.0000**	**48.6386**	**48.6386**	**0.0151**	**0.0000**	**49.0171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2000e-004	6.3300e-003	1.6600e-003	1.0000e-005	3.2000e-004	5.0000e-005	3.7000e-004	9.0000e-005	4.0000e-005	1.4000e-004	0.0000	1.2673	1.2673	9.0000e-005	0.0000	1.2696
Worker	1.0400e-003	8.5000e-004	9.1400e-003	2.0000e-005	2.1400e-003	2.0000e-005	2.1600e-003	5.7000e-004	2.0000e-005	5.9000e-004	0.0000	2.0596	2.0596	7.0000e-005	0.0000	2.0613
Total	**1.2600e-003**	**7.1800e-003**	**0.0108**	**3.0000e-005**	**2.4600e-003**	**7.0000e-005**	**2.5300e-003**	**6.6000e-004**	**6.0000e-005**	**7.3000e-004**	**0.0000**	**3.3269**	**3.3269**	**1.6000e-004**	**0.0000**	**3.3309**

3.3 Grading-Phase 1 - 2018

Unmitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.4480	0.0000	0.4480	0.2193	0.0000	0.2193	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5248	6.1834	3.1561	7.0200e-003		0.2454	0.2454		0.2258	0.2258	0.0000	640.5624	640.5624	0.1994	0.0000	645.5478
Total	**0.5248**	**6.1834**	**3.1561**	**7.0200e-003**	**0.4480**	**0.2454**	**0.6935**	**0.2193**	**0.2258**	**0.4451**	**0.0000**	**640.5624**	**640.5624**	**0.1994**	**0.0000**	**645.5478**

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	6.7000e-004	0.0190	4.9700e-003	4.0000e-005	9.6000e-004	1.4000e-004	1.1000e-003	2.8000e-004	1.3000e-004	4.1000e-004	0.0000	3.8019	3.8019	2.7000e-004	0.0000	3.8088
Worker	8.1100e-003	6.6600e-003	0.0715	1.8000e-004	0.0168	1.4000e-004	0.0169	4.4600e-003	1.3000e-004	4.5800e-003	0.0000	16.1184	16.1184	5.5000e-004	0.0000	16.1322
Total	**8.7800e-003**	**0.0256**	**0.0765**	**2.2000e-004**	**0.0178**	**2.8000e-004**	**0.0180**	**4.7400e-003**	**2.6000e-004**	**4.9900e-003**	**0.0000**	**19.9203**	**19.9203**	**8.2000e-004**	**0.0000**	**19.9409**

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					0.1747	0.0000	0.1747	0.0855	0.0000	0.0855	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0860	0.3727	3.2138	7.0200e-003		0.0115	0.0115		0.0115	0.0115	0.0000	640.5616	640.5616	0.1994	0.0000	645.5470

Total	**0.0860**	**0.3727**	**3.2138**	**7.0200e-003**	**0.1747**	**0.0115**	**0.1862**	**0.0855**	**0.0115**	**0.0970**	**0.0000**	**640.5616**	**640.5616**	**0.1994**	**0.0000**	**645.5470**

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	6.7000e-004	0.0190	4.9700e-003	4.0000e-005	9.6000e-004	1.4000e-004	1.1000e-003	2.8000e-004	1.3000e-004	4.1000e-004	0.0000	3.8019	3.8019	2.7000e-004	0.0000	3.8088
Worker	8.1100e-003	6.6600e-003	0.0715	1.8000e-004	0.0168	1.4000e-004	0.0169	4.4600e-003	1.3000e-004	4.5800e-003	0.0000	16.1184	16.1184	5.5000e-004	0.0000	16.1322
Total	**8.7800e-003**	**0.0256**	**0.0765**	**2.2000e-004**	**0.0178**	**2.8000e-004**	**0.0180**	**4.7400e-003**	**2.6000e-004**	**4.9900e-003**	**0.0000**	**19.9203**	**19.9203**	**8.2000e-004**	**0.0000**	**19.9409**

3.4 Drainage/Utilities/Trenching-Phase 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0349	0.3781	0.2644	4.9000e-004		0.0187	0.0187		0.0172	0.0172	0.0000	44.8605	44.8605	0.0140	0.0000	45.2096
Total	**0.0349**	**0.3781**	**0.2644**	**4.9000e-004**		**0.0187**	**0.0187**		**0.0172**	**0.0172**	**0.0000**	**44.8605**	**44.8605**	**0.0140**	**0.0000**	**45.2096**

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	3.4000e-004	9.6800e-003	2.5300e-003	2.0000e-005	4.9000e-004	7.0000e-005	5.6000e-004	1.4000e-004	7.0000e-005	2.1000e-004	0.0000	1.9382	1.9382	1.4000e-004	0.0000	1.9417
Worker	1.0300e-003	8.5000e-004	9.1200e-003	2.0000e-005	2.1400e-003	2.0000e-005	2.1600e-003	5.7000e-004	2.0000e-005	5.8000e-004	0.0000	2.0543	2.0543	7.0000e-005	0.0000	2.0561
Total	**1.3700e-003**	**0.0105**	**0.0117**	**4.0000e-005**	**2.6300e-003**	**9.0000e-005**	**2.7200e-003**	**7.1000e-004**	**9.0000e-005**	**7.9000e-004**	**0.0000**	**3.9925**	**3.9925**	**2.1000e-004**	**0.0000**	**3.9978**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.0300e-003	0.0261	0.3035	4.9000e-004		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	44.8604	44.8604	0.0140	0.0000	45.2096
Total	**6.0300e-003**	**0.0261**	**0.3035**	**4.9000e-004**		**8.0000e-004**	**8.0000e-004**		**8.0000e-004**	**8.0000e-004**	**0.0000**	**44.8604**	**44.8604**	**0.0140**	**0.0000**	**45.2096**

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	3.4000e-004	9.6800e-003	2.5300e-003	2.0000e-005	4.9000e-004	7.0000e-005	5.6000e-004	1.4000e-004	7.0000e-005	2.1000e-004	0.0000	1.9382	1.9382	1.4000e-004	0.0000	1.9417
Worker	1.0300e-003	8.5000e-004	9.1200e-003	2.0000e-005	2.1400e-003	2.0000e-005	2.1600e-003	5.7000e-004	2.0000e-005	5.8000e-004	0.0000	2.0543	2.0543	7.0000e-005	0.0000	2.0561
Total	**1.3700e-003**	**0.0105**	**0.0117**	**4.0000e-005**	**2.6300e-003**	**9.0000e-005**	**2.7200e-003**	**7.1000e-004**	**9.0000e-005**	**7.9000e-004**	**0.0000**	**3.9925**	**3.9925**	**2.1000e-004**	**0.0000**	**3.9978**

3.5 Foundation-Phase 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4047	4.2877	3.8013	7.4900e-003		0.2160	0.2160		0.2043	0.2043	0.0000	674.3868	674.3868	0.1760	0.0000	678.7863
Total	**0.4047**	**4.2877**	**3.8013**	**7.4900e-003**		**0.2160**	**0.2160**		**0.2043**	**0.2043**	**0.0000**	**674.3868**	**674.3868**	**0.1760**	**0.0000**	**678.7863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0214	0.6075	0.1591	1.2600e-003	0.0309	4.3800e-003	0.0352	8.9000e-003	4.1900e-003	0.0131	0.0000	121.6613	121.6613	8.7600e-003	0.0000	121.8805
Worker	0.0162	0.0133	0.1431	3.6000e-004	0.0336	2.7000e-004	0.0339	8.9200e-003	2.5000e-004	9.1700e-003	0.0000	32.2368	32.2368	1.1000e-003	0.0000	32.2644
Total	**0.0377**	**0.6208**	**0.3021**	**1.6200e-003**	**0.0644**	**4.6500e-003**	**0.0691**	**0.0178**	**4.4400e-003**	**0.0223**	**0.0000**	**153.8981**	**153.8981**	**9.8600e-003**	**0.0000**	**154.1448**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0938	0.6015	4.7146	7.4900e-003		0.0118	0.0118		0.0118	0.0118	0.0000	674.3860	674.3860	0.1760	0.0000	678.7855
Total	**0.0938**	**0.6015**	**4.7146**	**7.4900e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**674.3860**	**674.3860**	**0.1760**	**0.0000**	**678.7855**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0214	0.6075	0.1591	1.2600e-003	0.0309	4.3800e-003	0.0352	8.9000e-003	4.1900e-003	0.0131	0.0000	121.6613	121.6613	8.7600e-003	0.0000	121.8805
Worker	0.0162	0.0133	0.1431	3.6000e-004	0.0336	2.7000e-004	0.0339	8.9200e-003	2.5000e-004	9.1700e-003	0.0000	32.2368	32.2368	1.1000e-003	0.0000	32.2644
Total	**0.0377**	**0.6208**	**0.3021**	**1.6200e-003**	**0.0644**	**4.6500e-003**	**0.0691**	**0.0178**	**4.4400e-003**	**0.0223**	**0.0000**	**153.8981**	**153.8981**	**9.8600e-003**	**0.0000**	**154.1448**

3.6 Drainage/Utilities/Trenching-Phase 2 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0250	0.2504	0.1886	3.3000e-004		0.0146	0.0146		0.0134	0.0134	0.0000	29.7656	29.7656	9.2700e-003	0.0000	29.9973
Total	**0.0250**	**0.2504**	**0.1886**	**3.3000e-004**		**0.0146**	**0.0146**		**0.0134**	**0.0134**	**0.0000**	**29.7656**	**29.7656**	**9.2700e-003**	**0.0000**	**29.9973**

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	3.0000e-004	8.5600e-003	2.2400e-003	2.0000e-005	4.3000e-004	6.0000e-005	5.0000e-004	1.3000e-004	6.0000e-005	1.8000e-004	0.0000	1.7146	1.7146	1.2000e-004	0.0000	1.7177
Worker	7.9000e-004	6.5000e-004	6.9900e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5750	1.5750	5.0000e-005	0.0000	1.5763
Total	**1.0900e-003**	**9.2100e-003**	**9.2300e-003**	**4.0000e-005**	**2.0700e-003**	**7.0000e-005**	**2.1500e-003**	**5.7000e-004**	**7.0000e-005**	**6.3000e-004**	**0.0000**	**3.2896**	**3.2896**	**1.7000e-004**	**0.0000**	**3.2940**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9900e-003	0.0173	0.2114	3.3000e-004		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	29.7656	29.7656	9.2700e-003	0.0000	29.9973

Total	**3.9900e-003**	**0.0173**	**0.2114**	**3.3000e-004**		**5.3000e-004**	**5.3000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**29.7656**	**29.7656**	**9.2700e-003**	**0.0000**	**29.9973**

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	3.0000e-004	8.5600e-003	2.2400e-003	2.0000e-005	4.3000e-004	6.0000e-005	5.0000e-004	1.3000e-004	6.0000e-005	1.8000e-004	0.0000	1.7146	1.7146	1.2000e-004	0.0000	1.7177
Worker	7.9000e-004	6.5000e-004	6.9900e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5750	1.5750	5.0000e-005	0.0000	1.5763
Total	**1.0900e-003**	**9.2100e-003**	**9.2300e-003**	**4.0000e-005**	**2.0700e-003**	**7.0000e-005**	**2.1500e-003**	**5.7000e-004**	**7.0000e-005**	**6.3000e-004**	**0.0000**	**3.2896**	**3.2896**	**1.7000e-004**	**0.0000**	**3.2940**

3.7 Foundation-Phase 2 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2111	2.2033	1.7845	3.5100e-003		0.1119	0.1119		0.1062	0.1062	0.0000	315.0730	315.0730	0.0784	0.0000	317.0319
Total	**0.2111**	**2.2033**	**1.7845**	**3.5100e-003**		**0.1119**	**0.1119**		**0.1062**	**0.1062**	**0.0000**	**315.0730**	**315.0730**	**0.0784**	**0.0000**	**317.0319**

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	3.1100e-003	0.0882	0.0231	1.8000e-004	4.4800e-003	6.4000e-004	5.1200e-003	1.2900e-003	6.1000e-004	1.9000e-003	0.0000	17.6677	17.6677	1.2700e-003	0.0000	17.6996
Worker	7.3300e-003	6.0200e-003	0.0646	1.6000e-004	0.0152	1.2000e-004	0.0153	4.0300e-003	1.1000e-004	4.1400e-003	0.0000	14.5645	14.5645	5.0000e-004	0.0000	14.5770
Total	**0.0104**	**0.0942**	**0.0877**	**3.4000e-004**	**0.0197**	**7.6000e-004**	**0.0204**	**5.3200e-003**	**7.2000e-004**	**6.0400e-003**	**0.0000**	**32.2322**	**32.2322**	**1.7700e-003**	**0.0000**	**32.2765**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0431	0.2622	2.1544	3.5100e-003		5.4700e-003	5.4700e-003		5.4700e-003	5.4700e-003	0.0000	315.0726	315.0726	0.0784	0.0000	317.0315
Total	**0.0431**	**0.2622**	**2.1544**	**3.5100e-003**		**5.4700e-003**	**5.4700e-003**		**5.4700e-003**	**5.4700e-003**	**0.0000**	**315.0726**	**315.0726**	**0.0784**	**0.0000**	**317.0315**

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	3.1100e-003	0.0882	0.0231	1.8000e-004	4.4800e-003	6.4000e-004	5.1200e-003	1.2900e-003	6.1000e-004	1.9000e-003	0.0000	17.6677	17.6677	1.2700e-003	0.0000	17.6996
Worker	7.3300e-003	6.0200e-003	0.0646	1.6000e-004	0.0152	1.2000e-004	0.0153	4.0300e-003	1.1000e-004	4.1400e-003	0.0000	14.5645	14.5645	5.0000e-004	0.0000	14.5770
Total	**0.0104**	**0.0942**	**0.0877**	**3.4000e-004**	**0.0197**	**7.6000e-004**	**0.0204**	**5.3200e-003**	**7.2000e-004**	**6.0400e-003**	**0.0000**	**32.2322**	**32.2322**	**1.7700e-003**	**0.0000**	**32.2765**

3.7 Foundation-Phase 2 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0215	0.2250	0.2007	4.0000e-004		0.0110	0.0110		0.0104	0.0104	0.0000	35.4477	35.4477	8.8400e-003	0.0000	35.6686
Total	**0.0215**	**0.2250**	**0.2007**	**4.0000e-004**		**0.0110**	**0.0110**		**0.0104**	**0.0104**	**0.0000**	**35.4477**	**35.4477**	**8.8400e-003**	**0.0000**	**35.6686**

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	3.2000e-004	9.4800e-003	2.4200e-003	2.0000e-005	5.1000e-004	6.0000e-005	5.7000e-004	1.5000e-004	6.0000e-005	2.1000e-004	0.0000	1.9944	1.9944	1.4000e-004	0.0000	1.9979
Worker	7.6000e-004	6.0000e-004	6.5800e-003	2.0000e-005	1.7300e-003	1.0000e-005	1.7400e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.6069	1.6069	5.0000e-005	0.0000	1.6082
Total	**1.0800e-003**	**0.0101**	**9.0000e-003**	**4.0000e-005**	**2.2400e-003**	**7.0000e-005**	**2.3100e-003**	**6.1000e-004**	**7.0000e-005**	**6.8000e-004**	**0.0000**	**3.6013**	**3.6013**	**1.9000e-004**	**0.0000**	**3.6061**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9100e-003	0.0299	0.2454	4.0000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	35.4477	35.4477	8.8400e-003	0.0000	35.6686
Total	**4.9100e-003**	**0.0299**	**0.2454**	**4.0000e-004**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**	**0.0000**	**35.4477**	**35.4477**	**8.8400e-003**	**0.0000**	**35.6686**

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	3.2000e-004	9.4800e-003	2.4200e-003	2.0000e-005	5.1000e-004	6.0000e-005	5.7000e-004	1.5000e-004	6.0000e-005	2.1000e-004	0.0000	1.9944	1.9944	1.4000e-004	0.0000	1.9979
Worker	7.6000e-004	6.0000e-004	6.5800e-003	2.0000e-005	1.7300e-003	1.0000e-005	1.7400e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.6069	1.6069	5.0000e-005	0.0000	1.6082
Total	**1.0800e-003**	**0.0101**	**9.0000e-003**	**4.0000e-005**	**2.2400e-003**	**7.0000e-005**	**2.3100e-003**	**6.1000e-004**	**7.0000e-005**	**6.8000e-004**	**0.0000**	**3.6013**	**3.6013**	**1.9000e-004**	**0.0000**	**3.6061**

3.8 Paving-Phase 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0690	0.7691	0.6950	1.1200e-003		0.0376	0.0376		0.0346	0.0346	0.0000	101.9321	101.9321	0.0317	0.0000	102.7254
Paving	8.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0773**	**0.7691**	**0.6950**	**1.1200e-003**		**0.0376**	**0.0376**		**0.0346**	**0.0346**	**0.0000**	**101.9321**	**101.9321**	**0.0317**	**0.0000**	**102.7254**

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	1.8400e-003	0.0521	0.0136	1.1000e-004	2.6500e-003	3.8000e-004	3.0200e-003	7.6000e-004	3.6000e-004	1.1200e-003	0.0000	10.4366	10.4366	7.5000e-004	0.0000	10.4554
Worker	2.8600e-003	2.3500e-003	0.0253	6.0000e-005	5.9200e-003	5.0000e-005	5.9700e-003	1.5700e-003	4.0000e-005	1.6200e-003	0.0000	5.6888	5.6888	1.9000e-004	0.0000	5.6937
Total	**4.7000e-003**	**0.0545**	**0.0389**	**1.7000e-004**	**8.5700e-003**	**4.3000e-004**	**8.9900e-003**	**2.3300e-003**	**4.0000e-004**	**2.7400e-003**	**0.0000**	**16.1255**	**16.1255**	**9.4000e-004**	**0.0000**	**16.1491**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0138	0.0596	0.8487	1.1200e-003		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	101.9320	101.9320	0.0317	0.0000	102.7253

Paving	8.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0221**	**0.0596**	**0.8487**	**1.1200e-003**		**1.8300e-003**	**1.8300e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**101.9320**	**101.9320**	**0.0317**	**0.0000**	**102.7253**

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	1.8400e-003	0.0521	0.0136	1.1000e-004	2.6500e-003	3.8000e-004	3.0200e-003	7.6000e-004	3.6000e-004	1.1200e-003	0.0000	10.4366	10.4366	7.5000e-004	0.0000	10.4554
Worker	2.8600e-003	2.3500e-003	0.0253	6.0000e-005	5.9200e-003	5.0000e-005	5.9700e-003	1.5700e-003	4.0000e-005	1.6200e-003	0.0000	5.6888	5.6888	1.9000e-004	0.0000	5.6937
Total	**4.7000e-003**	**0.0545**	**0.0389**	**1.7000e-004**	**8.5700e-003**	**4.3000e-004**	**8.9900e-003**	**2.3300e-003**	**4.0000e-004**	**2.7400e-003**	**0.0000**	**16.1255**	**16.1255**	**9.4000e-004**	**0.0000**	**16.1491**

3.8 Paving-Phase 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1897	2.0271	2.1299	3.4400e-003		0.1001	0.1001		0.0921	0.0921	0.0000	309.1826	309.1826	0.0978	0.0000	311.6281
Paving	0.0256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2152**	**2.0271**	**2.1299**	**3.4400e-003**		**0.1001**	**0.1001**		**0.0921**	**0.0921**	**0.0000**	**309.1826**	**309.1826**	**0.0978**	**0.0000**	**311.6281**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1400e-003	0.1516	0.0387	3.3000e-004	8.1600e-003	9.9000e-004	9.1500e-003	2.3500e-003	9.5000e-004	3.3000e-003	0.0000	31.8860	31.8860	2.2400e-003	0.0000	31.9419
Worker	8.0200e-003	6.3900e-003	0.0695	1.9000e-004	0.0183	1.5000e-004	0.0184	4.8500e-003	1.3000e-004	4.9900e-003	0.0000	16.9872	16.9872	5.3000e-004	0.0000	17.0005
Total	**0.0132**	**0.1580**	**0.1082**	**5.2000e-004**	**0.0264**	**1.1400e-003**	**0.0276**	**7.2000e-003**	**1.0800e-003**	**8.2900e-003**	**0.0000**	**48.8732**	**48.8732**	**2.7700e-003**	**0.0000**	**48.9424**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0424	0.1839	2.6167	3.4400e-003		5.6600e-003	5.6600e-003		5.6600e-003	5.6600e-003	0.0000	309.1822	309.1822	0.0978	0.0000	311.6277
Paving	0.0256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0680**	**0.1839**	**2.6167**	**3.4400e-003**		**5.6600e-003**	**5.6600e-003**		**5.6600e-003**	**5.6600e-003**	**0.0000**	**309.1822**	**309.1822**	**0.0978**	**0.0000**	**311.6277**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1400e-003	0.1516	0.0387	3.3000e-004	8.1600e-003	9.9000e-004	9.1500e-003	2.3500e-003	9.5000e-004	3.3000e-003	0.0000	31.8860	31.8860	2.2400e-003	0.0000	31.9419
Worker	8.0200e-003	6.3900e-003	0.0695	1.9000e-004	0.0183	1.5000e-004	0.0184	4.8500e-003	1.3000e-004	4.9900e-003	0.0000	16.9872	16.9872	5.3000e-004	0.0000	17.0005
Total	**0.0132**	**0.1580**	**0.1082**	**5.2000e-004**	**0.0264**	**1.1400e-003**	**0.0276**	**7.2000e-003**	**1.0800e-003**	**8.2900e-003**	**0.0000**	**48.8732**	**48.8732**	**2.7700e-003**	**0.0000**	**48.9424**

3.9 Building Construction-Phase 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1214	1.0604	0.7735	1.4200e-003		0.0606	0.0606		0.0583	0.0583	0.0000	124.8551	124.8551	0.0245	0.0000	125.4673
Total	**0.1214**	**1.0604**	**0.7735**	**1.4200e-003**		**0.0606**	**0.0606**		**0.0583**	**0.0583**	**0.0000**	**124.8551**	**124.8551**	**0.0245**	**0.0000**	**125.4673**

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	3.5000e-004	0.0101	2.6300e-003	2.0000e-005	5.1000e-004	7.0000e-005	5.8000e-004	1.5000e-004	7.0000e-005	2.2000e-004	0.0000	2.0128	2.0128	1.5000e-004	0.0000	2.0164
Worker	0.0409	0.0336	0.3610	9.0000e-004	0.0847	6.9000e-004	0.0854	0.0225	6.4000e-004	0.0231	0.0000	81.3504	81.3504	2.7900e-003	0.0000	81.4201
Total	**0.0413**	**0.0437**	**0.3637**	**9.2000e-004**	**0.0852**	**7.6000e-004**	**0.0860**	**0.0227**	**7.1000e-004**	**0.0234**	**0.0000**	**83.3632**	**83.3632**	**2.9400e-003**	**0.0000**	**83.4365**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0298	0.1213	0.8390	1.4200e-003		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	124.8549	124.8549	0.0245	0.0000	125.4672
Total	**0.0298**	**0.1213**	**0.8390**	**1.4200e-003**		**5.8200e-003**	**5.8200e-003**		**5.8200e-003**	**5.8200e-003**	**0.0000**	**124.8549**	**124.8549**	**0.0245**	**0.0000**	**125.4672**

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	3.5000e-004	0.0101	2.6300e-003	2.0000e-005	5.1000e-004	7.0000e-005	5.8000e-004	1.5000e-004	7.0000e-005	2.2000e-004	0.0000	2.0128	2.0128	1.5000e-004	0.0000	2.0164
Worker	0.0409	0.0336	0.3610	9.0000e-004	0.0847	6.9000e-004	0.0854	0.0225	6.4000e-004	0.0231	0.0000	81.3504	81.3504	2.7900e-003	0.0000	81.4201
Total	**0.0413**	**0.0437**	**0.3637**	**9.2000e-004**	**0.0852**	**7.6000e-004**	**0.0860**	**0.0227**	**7.1000e-004**	**0.0234**	**0.0000**	**83.3632**	**83.3632**	**2.9400e-003**	**0.0000**	**83.4365**

3.9 Building Construction-Phase 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.7479	6.6432	5.2579	9.9100e-003		0.3632	0.3632		0.3490	0.3490	0.0000	862.3608	862.3608	0.1659	0.0000	866.5078
Total	**0.7479**	**6.6432**	**5.2579**	**9.9100e-003**		**0.3632**	**0.3632**		**0.3490**	**0.3490**	**0.0000**	**862.3608**	**862.3608**	**0.1659**	**0.0000**	**866.5078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2400e-003	0.0660	0.0168	1.4000e-004	3.5500e-003	4.3000e-004	3.9900e-003	1.0300e-003	4.1000e-004	1.4400e-003	0.0000	13.8870	13.8870	9.7000e-004	0.0000	13.9114
Worker	0.2589	0.2065	2.2453	6.0700e-003	0.5899	4.7000e-003	0.5946	0.1567	4.3300e-003	0.1610	0.0000	548.5677	548.5677	0.0172	0.0000	548.9977
Total	**0.2612**	**0.2725**	**2.2622**	**6.2100e-003**	**0.5935**	**5.1300e-003**	**0.5986**	**0.1577**	**4.7400e-003**	**0.1624**	**0.0000**	**562.4547**	**562.4547**	**0.0182**	**0.0000**	**562.9091**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	0.8308	5.8296	9.9100e-003		0.0372	0.0372		0.0372	0.0372	0.0000	862.3598	862.3598	0.1659	0.0000	866.5067

Total	**0.1942**	**0.8308**	**5.8296**	**9.9100e-003**		**0.0372**	**0.0372**		**0.0372**	**0.0372**	**0.0000**	**862.3598**	**862.3598**	**0.1659**	**0.0000**	**866.5067**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2400e-003	0.0660	0.0168	1.4000e-004	3.5500e-003	4.3000e-004	3.9900e-003	1.0300e-003	4.1000e-004	1.4400e-003	0.0000	13.8870	13.8870	9.7000e-004	0.0000	13.9114
Worker	0.2589	0.2065	2.2453	6.0700e-003	0.5899	4.7000e-003	0.5946	0.1567	4.3300e-003	0.1610	0.0000	548.5677	548.5677	0.0172	0.0000	548.9977
Total	**0.2612**	**0.2725**	**2.2622**	**6.2100e-003**	**0.5935**	**5.1300e-003**	**0.5986**	**0.1577**	**4.7400e-003**	**0.1624**	**0.0000**	**562.4547**	**562.4547**	**0.0182**	**0.0000**	**562.9091**

3.10 Building Construction-Phase 2 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9365	7.2370	6.1783	0.0109		0.4241	0.4241		0.4124	0.4124	0.0000	937.0509	937.0509	0.1581	0.0000	941.0023
Total	**0.9365**	**7.2370**	**6.1783**	**0.0109**		**0.4241**	**0.4241**		**0.4124**	**0.4124**	**0.0000**	**937.0509**	**937.0509**	**0.1581**	**0.0000**	**941.0023**

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	3.5300e-003	0.1040	0.0265	2.3000e-004	5.6000e-003	6.8000e-004	6.2800e-003	1.6100e-003	6.5000e-004	2.2700e-003	0.0000	21.8647	21.8647	1.5300e-003	0.0000	21.9031
Worker	0.1425	0.1137	1.2361	3.3400e-003	0.3248	2.5900e-003	0.3273	0.0863	2.3900e-003	0.0886	0.0000	301.9938	301.9938	9.4700e-003	0.0000	302.2306
Total	**0.1461**	**0.2177**	**1.2626**	**3.5700e-003**	**0.3304**	**3.2700e-003**	**0.3336**	**0.0879**	**3.0400e-003**	**0.0909**	**0.0000**	**323.8585**	**323.8585**	**0.0110**	**0.0000**	**324.1336**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3173	1.3502	6.6121	0.0109		0.0691	0.0691		0.0691	0.0691	0.0000	937.0498	937.0498	0.1581	0.0000	941.0012
Total	**0.3173**	**1.3502**	**6.6121**	**0.0109**		**0.0691**	**0.0691**		**0.0691**	**0.0691**	**0.0000**	**937.0498**	**937.0498**	**0.1581**	**0.0000**	**941.0012**

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	3.5300e-003	0.1040	0.0265	2.3000e-004	5.6000e-003	6.8000e-004	6.2800e-003	1.6100e-003	6.5000e-004	2.2700e-003	0.0000	21.8647	21.8647	1.5300e-003	0.0000	21.9031
Worker	0.1425	0.1137	1.2361	3.3400e-003	0.3248	2.5900e-003	0.3273	0.0863	2.3900e-003	0.0886	0.0000	301.9938	301.9938	9.4700e-003	0.0000	302.2306
Total	**0.1461**	**0.2177**	**1.2626**	**3.5700e-003**	**0.3304**	**3.2700e-003**	**0.3336**	**0.0879**	**3.0400e-003**	**0.0909**	**0.0000**	**323.8585**	**323.8585**	**0.0110**	**0.0000**	**324.1336**

3.10 Building Construction-Phase 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3338	2.6194	2.4016	4.3200e-003		0.1456	0.1456		0.1416	0.1416	0.0000	367.5200	367.5200	0.0603	0.0000	369.0266
Total	**0.3338**	**2.6194**	**2.4016**	**4.3200e-003**		**0.1456**	**0.1456**		**0.1416**	**0.1416**	**0.0000**	**367.5200**	**367.5200**	**0.0603**	**0.0000**	**369.0266**

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	1.1900e-003	0.0376	9.4900e-003	9.0000e-005	2.2100e-003	1.8000e-004	2.4000e-003	6.4000e-004	1.8000e-004	8.1000e-004	0.0000	8.5871	8.5871	5.7000e-004	0.0000	8.6015
Worker	0.0521	0.0401	0.4439	1.2800e-003	0.1284	1.0000e-003	0.1294	0.0341	9.2000e-004	0.0350	0.0000	115.6697	115.6697	3.3300e-003	0.0000	115.7529
Total	**0.0533**	**0.0777**	**0.4534**	**1.3700e-003**	**0.1306**	**1.1800e-003**	**0.1318**	**0.0347**	**1.1000e-003**	**0.0358**	**0.0000**	**124.2568**	**124.2568**	**3.9000e-003**	**0.0000**	**124.3544**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1160	0.5221	2.6048	4.3200e-003		0.0245	0.0245		0.0245	0.0245	0.0000	367.5195	367.5195	0.0603	0.0000	369.0262
Total	**0.1160**	**0.5221**	**2.6048**	**4.3200e-003**		**0.0245**	**0.0245**		**0.0245**	**0.0245**	**0.0000**	**367.5195**	**367.5195**	**0.0603**	**0.0000**	**369.0262**

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	1.1900e-003	0.0376	9.4900e-003	9.0000e-005	2.2100e-003	1.8000e-004	2.4000e-003	6.4000e-004	1.8000e-004	8.1000e-004	0.0000	8.5871	8.5871	5.7000e-004	0.0000	8.6015
Worker	0.0521	0.0401	0.4439	1.2800e-003	0.1284	1.0000e-003	0.1294	0.0341	9.2000e-004	0.0350	0.0000	115.6697	115.6697	3.3300e-003	0.0000	115.7529
Total	**0.0533**	**0.0777**	**0.4534**	**1.3700e-003**	**0.1306**	**1.1800e-003**	**0.1318**	**0.0347**	**1.1000e-003**	**0.0358**	**0.0000**	**124.2568**	**124.2568**	**3.9000e-003**	**0.0000**	**124.3544**

3.11 Architectural Coating-Phase 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.8340					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0860	0.7499	0.9136	1.4400e-003		0.0404	0.0404		0.0399	0.0399	0.0000	126.4022	126.4022	0.0245	0.0000	127.0134
Total	**2.9200**	**0.7499**	**0.9136**	**1.4400e-003**		**0.0404**	**0.0404**		**0.0399**	**0.0399**	**0.0000**	**126.4022**	**126.4022**	**0.0245**	**0.0000**	**127.0134**

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	1.2500e-003	0.0369	9.4100e-003	8.0000e-005	1.9900e-003	2.4000e-004	2.2300e-003	5.7000e-004	2.3000e-004	8.0000e-004	0.0000	7.7561	7.7561	5.4000e-004	0.0000	7.7697
Worker	0.0288	0.0230	0.2499	6.8000e-004	0.0657	5.2000e-004	0.0662	0.0174	4.8000e-004	0.0179	0.0000	61.0619	61.0619	1.9100e-003	0.0000	61.1098
Total	**0.0301**	**0.0599**	**0.2593**	**7.6000e-004**	**0.0677**	**7.6000e-004**	**0.0684**	**0.0180**	**7.1000e-004**	**0.0187**	**0.0000**	**68.8180**	**68.8180**	**2.4500e-003**	**0.0000**	**68.8795**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.8340					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0241	0.4054	0.9828	1.4400e-003		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	126.4021	126.4021	0.0245	0.0000	127.0133
Total	**2.8581**	**0.4054**	**0.9828**	**1.4400e-003**		**2.1300e-003**	**2.1300e-003**		**2.1300e-003**	**2.1300e-003**	**0.0000**	**126.4021**	**126.4021**	**0.0245**	**0.0000**	**127.0133**

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	1.2500e-003	0.0369	9.4100e-003	8.0000e-005	1.9900e-003	2.4000e-004	2.2300e-003	5.7000e-004	2.3000e-004	8.0000e-004	0.0000	7.7561	7.7561	5.4000e-004	0.0000	7.7697
Worker	0.0288	0.0230	0.2499	6.8000e-004	0.0657	5.2000e-004	0.0662	0.0174	4.8000e-004	0.0179	0.0000	61.0619	61.0619	1.9100e-003	0.0000	61.1098
Total	**0.0301**	**0.0599**	**0.2593**	**7.6000e-004**	**0.0677**	**7.6000e-004**	**0.0684**	**0.0180**	**7.1000e-004**	**0.0187**	**0.0000**	**68.8180**	**68.8180**	**2.4500e-003**	**0.0000**	**68.8795**

3.12 Landscaping-Phase 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0178	0.1838	0.1853	2.6000e-004		0.0119	0.0119		0.0109	0.0109	0.0000	22.9323	22.9323	7.2600e-003	0.0000	23.1137
Total	**0.0178**	**0.1838**	**0.1853**	**2.6000e-004**		**0.0119**	**0.0119**		**0.0109**	**0.0109**	**0.0000**	**22.9323**	**22.9323**	**7.2600e-003**	**0.0000**	**23.1137**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6000e-004	7.7300e-003	1.9700e-003	2.0000e-005	4.2000e-004	5.0000e-005	4.7000e-004	1.2000e-004	5.0000e-005	1.7000e-004	0.0000	1.6251	1.6251	1.1000e-004	0.0000	1.6279
Worker	1.0600e-003	8.4000e-004	9.1900e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2446	2.2446	7.0000e-005	0.0000	2.2463
Total	**1.3200e-003**	**8.5700e-003**	**0.0112**	**4.0000e-005**	**2.8300e-003**	**7.0000e-005**	**2.9000e-003**	**7.6000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**3.8696**	**3.8696**	**1.8000e-004**	**0.0000**	**3.8742**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.6900e-003	0.0782	0.1931	2.6000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	22.9323	22.9323	7.2600e-003	0.0000	23.1137
Total	**4.6900e-003**	**0.0782**	**0.1931**	**2.6000e-004**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**22.9323**	**22.9323**	**7.2600e-003**	**0.0000**	**23.1137**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6000e-004	7.7300e-003	1.9700e-003	2.0000e-005	4.2000e-004	5.0000e-005	4.7000e-004	1.2000e-004	5.0000e-005	1.7000e-004	0.0000	1.6251	1.6251	1.1000e-004	0.0000	1.6279
Worker	1.0600e-003	8.4000e-004	9.1900e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2446	2.2446	7.0000e-005	0.0000	2.2463
Total	**1.3200e-003**	**8.5700e-003**	**0.0112**	**4.0000e-005**	**2.8300e-003**	**7.0000e-005**	**2.9000e-003**	**7.6000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**3.8696**	**3.8696**	**1.8000e-004**	**0.0000**	**3.8742**

3.13 Architectural Coating-Phase 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2406					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0523	0.4171	0.5105	8.1000e-004		0.0234	0.0234		0.0233	0.0233	0.0000	70.4492	70.4492	0.0107	0.0000	70.7166
Total	**0.2929**	**0.4171**	**0.5105**	**8.1000e-004**		**0.0234**	**0.0234**		**0.0233**	**0.0233**	**0.0000**	**70.4492**	**70.4492**	**0.0107**	**0.0000**	**70.7166**

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	7.8000e-004	0.0248	6.2500e-003	6.0000e-005	1.4600e-003	1.2000e-004	1.5800e-003	4.2000e-004	1.2000e-004	5.4000e-004	0.0000	5.6514	5.6514	3.8000e-004	0.0000	5.6608
Worker	6.8500e-003	5.2800e-003	0.0584	1.7000e-004	0.0169	1.3000e-004	0.0170	4.4900e-003	1.2000e-004	4.6100e-003	0.0000	15.2249	15.2249	4.4000e-004	0.0000	15.2359
Total	**7.6300e-003**	**0.0301**	**0.0647**	**2.3000e-004**	**0.0184**	**2.5000e-004**	**0.0186**	**4.9100e-003**	**2.4000e-004**	**5.1500e-003**	**0.0000**	**20.8762**	**20.8762**	**8.2000e-004**	**0.0000**	**20.8966**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2406					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0117	0.1611	0.5367	8.1000e-004		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	70.4492	70.4492	0.0107	0.0000	70.7165
Total	**0.2522**	**0.1611**	**0.5367**	**8.1000e-004**		**1.1600e-003**	**1.1600e-003**		**1.1600e-003**	**1.1600e-003**	**0.0000**	**70.4492**	**70.4492**	**0.0107**	**0.0000**	**70.7165**

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	7.8000e-004	0.0248	6.2500e-003	6.0000e-005	1.4600e-003	1.2000e-004	1.5800e-003	4.2000e-004	1.2000e-004	5.4000e-004	0.0000	5.6514	5.6514	3.8000e-004	0.0000	5.6608
Worker	6.8500e-003	5.2800e-003	0.0584	1.7000e-004	0.0169	1.3000e-004	0.0170	4.4900e-003	1.2000e-004	4.6100e-003	0.0000	15.2249	15.2249	4.4000e-004	0.0000	15.2359
Total	**7.6300e-003**	**0.0301**	**0.0647**	**2.3000e-004**	**0.0184**	**2.5000e-004**	**0.0186**	**4.9100e-003**	**2.4000e-004**	**5.1500e-003**	**0.0000**	**20.8762**	**20.8762**	**8.2000e-004**	**0.0000**	**20.8966**

3.14 Paving-Phase 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0334	0.3574	0.3343	6.4000e-004		0.0184	0.0184		0.0170	0.0170	0.0000	55.9606	55.9606	0.0181	0.0000	56.4131
Paving	0.0339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0672**	**0.3574**	**0.3343**	**6.4000e-004**		**0.0184**	**0.0184**		**0.0170**	**0.0170**	**0.0000**	**55.9606**	**55.9606**	**0.0181**	**0.0000**	**56.4131**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-004	0.0158	3.9700e-003	4.0000e-005	9.3000e-004	8.0000e-005	1.0000e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.5963	3.5963	2.4000e-004	0.0000	3.6023
Worker	1.4200e-003	1.0900e-003	0.0121	3.0000e-005	3.4900e-003	3.0000e-005	3.5200e-003	9.3000e-004	3.0000e-005	9.5000e-004	0.0000	3.1488	3.1488	9.0000e-005	0.0000	3.1511
Total	**1.9200e-003**	**0.0169**	**0.0161**	**7.0000e-005**	**4.4200e-003**	**1.1000e-004**	**4.5200e-003**	**1.2000e-003**	**1.0000e-004**	**1.2900e-003**	**0.0000**	**6.7451**	**6.7451**	**3.3000e-004**	**0.0000**	**6.7534**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.8400e-003	0.0340	0.4194	6.4000e-004		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	55.9606	55.9606	0.0181	0.0000	56.4130

Paving	0.0339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0417**	**0.0340**	**0.4194**	**6.4000e-004**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**55.9606**	**55.9606**	**0.0181**	**0.0000**	**56.4130**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-004	0.0158	3.9700e-003	4.0000e-005	9.3000e-004	8.0000e-005	1.0000e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.5963	3.5963	2.4000e-004	0.0000	3.6023
Worker	1.4200e-003	1.0900e-003	0.0121	3.0000e-005	3.4900e-003	3.0000e-005	3.5200e-003	9.3000e-004	3.0000e-005	9.5000e-004	0.0000	3.1488	3.1488	9.0000e-005	0.0000	3.1511
Total	**1.9200e-003**	**0.0169**	**0.0161**	**7.0000e-005**	**4.4200e-003**	**1.1000e-004**	**4.5200e-003**	**1.2000e-003**	**1.0000e-004**	**1.2900e-003**	**0.0000**	**6.7451**	**6.7451**	**3.3000e-004**	**0.0000**	**6.7534**

3.15 Landscaping-Phase 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.3900e-003	0.0824	0.0849	1.2000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	10.1666	10.1666	3.2900e-003	0.0000	10.2488
Total	**8.3900e-003**	**0.0824**	**0.0849**	**1.2000e-004**		**5.4900e-003**	**5.4900e-003**		**5.0500e-003**	**5.0500e-003**	**0.0000**	**10.1666**	**10.1666**	**3.2900e-003**	**0.0000**	**10.2488**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4000e-004	7.7200e-003	1.9500e-003	2.0000e-005	4.5000e-004	4.0000e-005	4.9000e-004	1.3000e-004	4.0000e-005	1.7000e-004	0.0000	1.7615	1.7615	1.2000e-004	0.0000	1.7644
Worker	3.2000e-004	2.5000e-004	2.7300e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7118	0.7118	2.0000e-005	0.0000	0.7123
Total	**5.6000e-004**	**7.9700e-003**	**4.6800e-003**	**3.0000e-005**	**1.2400e-003**	**5.0000e-005**	**1.2900e-003**	**3.4000e-004**	**5.0000e-005**	**3.9000e-004**	**0.0000**	**2.4733**	**2.4733**	**1.4000e-004**	**0.0000**	**2.4767**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2700e-003	0.0412	0.0875	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.1665	10.1665	3.2900e-003	0.0000	10.2487
Total	**2.2700e-003**	**0.0412**	**0.0875**	**1.2000e-004**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**10.1665**	**10.1665**	**3.2900e-003**	**0.0000**	**10.2487**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4000e-004	7.7200e-003	1.9500e-003	2.0000e-005	4.5000e-004	4.0000e-005	4.9000e-004	1.3000e-004	4.0000e-005	1.7000e-004	0.0000	1.7615	1.7615	1.2000e-004	0.0000	1.7644
Worker	3.2000e-004	2.5000e-004	2.7300e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7118	0.7118	2.0000e-005	0.0000	0.7123
Total	**5.6000e-004**	**7.9700e-003**	**4.6800e-003**	**3.0000e-005**	**1.2400e-003**	**5.0000e-005**	**1.2900e-003**	**3.4000e-004**	**5.0000e-005**	**3.9000e-004**	**0.0000**	**2.4733**	**2.4733**	**1.4000e-004**	**0.0000**	**2.4767**

Avion Burbank Project
Consruction GHG Summary

ConstructionYear	MT CO2e/yr
2018	2,310.35
2019	3,317.28
2020	660.89
Total	**6,288.51**
Ammortized over 30 years	**209.62**

II. Project Operations Emissions

- **Operations CalEEMod Output (Annual)**
- **Operations GHG Summary**

Avion-Operational

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	142.25	1000sqft	3.27	142,250.00	0
Industrial Park	1,014.89	1000sqft	23.30	1,014,887.00	0
Other Asphalt Surfaces	5.14	Acre	5.14	223,723.00	0
Parking Lot	2,390.00	Space	20.71	902,050.00	0
City Park	7.34	Acre	7.34	319,646.00	0
High Turnover (Sit Down Restaurant)	7.70	1000sqft	0.18	7,700.00	0
Hotel	166.00	Room	1.45	101,230.00	0
Regional Shopping Center	7.70	1000sqft	0.18	7,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2020
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	901.391	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjust to BWP's 2020 Prediction

Land Use - Project Specific

Off-road Equipment -

Vehicle Trips - Project Specific

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - Comply with Rule 1113

Energy Use - 2016 Title 24 standards

Water And Wastewater - Water Supply Assessment

Solid Waste - Utility Study

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - California Standard

Fleet Mix - Project Specific for Industrial Park

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	67,546.00	0.00
tblArchitecturalCoating	ConstArea_Parking	67,546.00	0.00
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_Nonresidential_Exterior	636885	636884
tblAreaCoating	Area_Nonresidential_Interior	1910655	1910651
tblAreaCoating	Area_Parking	67546	52911
tblConstructionPhase	NumDays	75.00	105.00
tblConstructionPhase	NumDays	75.00	77.00
tblConstructionPhase	NumDays	1,110.00	22.00
tblConstructionPhase	NumDays	1,110.00	24.00
tblConstructionPhase	NumDays	1,110.00	26.00

tblConstructionPhase	NumDays	1,110.00	136.00
tblConstructionPhase	NumDays	1,110.00	23.00
tblConstructionPhase	NumDays	1,110.00	88.00
tblConstructionPhase	NumDays	1,110.00	215.00
tblConstructionPhase	NumDays	1,110.00	413.00
tblConstructionPhase	NumDays	70.00	17.00
tblConstructionPhase	NumDays	110.00	51.00
tblConstructionPhase	NumDays	75.00	49.00
tblConstructionPhase	NumDays	75.00	245.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
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tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	LightingElect	3.88	3.69
tblEnergyUse	LightingElect	8.13	7.72
tblEnergyUse	LightingElect	2.20	2.09
tblEnergyUse	LightingElect	3.88	3.69
tblEnergyUse	LightingElect	0.88	0.84
tblEnergyUse	LightingElect	6.43	6.11
tblEnergyUse	T24E	4.82	4.58

tblEnergyUse	T24E	8.50	8.08
tblEnergyUse	T24E	2.68	2.55
tblEnergyUse	T24E	4.82	4.58
tblEnergyUse	T24E	4.20	3.99
tblEnergyUse	T24NG	10.07	9.57
tblEnergyUse	T24NG	43.19	41.03
tblEnergyUse	T24NG	20.02	19.02
tblEnergyUse	T24NG	10.07	9.57
tblEnergyUse	T24NG	1.16	1.10
tblFleetMix	FleetMixLandUseSubType	General Office Building	City Park
tblFleetMix	FleetMixLandUseSubType	Industrial Park	General Office Building
tblFleetMix	FleetMixLandUseSubType	Other Asphalt Surfaces	High Turnover (Sit Down Restaurant)
tblFleetMix	FleetMixLandUseSubType	Parking Lot	Hotel
tblFleetMix	FleetMixLandUseSubType	City Park	Industrial Park
tblFleetMix	FleetMixLandUseSubType	High Turnover (Sit Down Restaurant)	Other Asphalt Surfaces
tblFleetMix	FleetMixLandUseSubType	Hotel	Parking Lot
tblFleetMix	HHD	0.03	0.05
tblFleetMix	LDA	0.55	0.53
tblFleetMix	LDT1	0.05	0.04
tblFleetMix	LDT2	0.20	0.20
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	6.0900e-003	5.9470e-003
tblFleetMix	MCY	5.0050e-003	4.8870e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	9.0700e-004	8.8600e-004
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	2.4380e-003	2.3810e-003
tblFleetMix	SBUS	6.7700e-004	6.6100e-004
tblFleetMix	UBUS	2.3590e-003	2.3030e-003
tblGrading	AcresOfGrading	510.00	61.55

tblGrading	MaterialExported	0.00	261,000.00
tblGrading	MaterialImported	0.00	296,029.00
tblLandUse	BuildingSpaceSquareFeet	1,014,890.00	1,014,887.00
tblLandUse	BuildingSpaceSquareFeet	223,898.40	223,723.00
tblLandUse	BuildingSpaceSquareFeet	956,000.00	902,050.00
tblLandUse	BuildingSpaceSquareFeet	241,032.00	101,230.00
tblLandUse	GreenSpaceSquareFeet	319,730.40	319,646.00
tblLandUse	LandUseSquareFeet	1,014,890.00	1,014,887.00
tblLandUse	LandUseSquareFeet	223,898.40	223,723.00
tblLandUse	LandUseSquareFeet	956,000.00	902,050.00
tblLandUse	LandUseSquareFeet	319,730.40	319,646.00
tblLandUse	LandUseSquareFeet	241,032.00	101,230.00
tblLandUse	LotAcreage	21.51	20.71
tblLandUse	LotAcreage	5.53	1.45
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
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tblOffRoadEquipment	UsageHours	6.00	10.00
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tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00

tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	CO2IntensityFactor	1096.12	901.391
tblProjectCharacteristics	OperationalYear	2018	2020
tblSequestration	NumberOfNewTrees	0.00	919.00
tblSolidWaste	SolidWasteGenerationRate	132.29	112.01
tblSolidWaste	SolidWasteGenerationRate	91.63	64.97
tblSolidWaste	SolidWasteGenerationRate	90.88	60.59
tblSolidWaste	SolidWasteGenerationRate	1,258.46	2,248.12
tblSolidWaste	SolidWasteGenerationRate	8.09	64.97
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	10.85
tblVehicleTrips	ST_TR	158.37	102.21
tblVehicleTrips	ST_TR	8.19	7.35
tblVehicleTrips	ST_TR	2.49	5.09
tblVehicleTrips	ST_TR	49.97	34.29
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	10.85
tblVehicleTrips	SU_TR	131.84	102.21
tblVehicleTrips	SU_TR	5.95	7.35
tblVehicleTrips	SU_TR	0.73	5.09
tblVehicleTrips	SU_TR	25.24	34.29
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	10.85
tblVehicleTrips	WD_TR	127.15	102.21
tblVehicleTrips	WD_TR	8.17	7.35
tblVehicleTrips	WD_TR	6.83	5.09
tblVehicleTrips	WD_TR	42.70	34.29

tblWater	IndoorWaterUseRate	25,282,625.65	7,820,400.00
tblWater	IndoorWaterUseRate	2,337,209.59	162,925.00
tblWater	IndoorWaterUseRate	4,210,883.82	18,573,450.00
tblWater	IndoorWaterUseRate	234,693,312.50	29,652,350.00
tblWater	IndoorWaterUseRate	570,358.42	162,925.00
tblWater	OutdoorWaterUseRate	8,745,473.11	3,900,663.00
tblWater	OutdoorWaterUseRate	15,495,802.82	0.00
tblWater	OutdoorWaterUseRate	149,183.59	0.00
tblWater	OutdoorWaterUseRate	467,875.98	0.00
tblWater	OutdoorWaterUseRate	349,574.51	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.9905	4.4000e-004	0.0481	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.5000e-004	0.0000	0.0991
Energy	0.0843	0.7665	0.6438	4.6000e-003		0.0583	0.0583		0.0583	0.0583	0.0000	7,734.6134	7,734.6134	0.2380	0.0612	7,758.8090
Mobile	3.3134	20.9726	45.0417	0.1537	11.4373	0.1598	11.5971	3.0675	0.1500	3.2175	0.0000	14,232.4502	14,232.4502	0.8179	0.0000	14,252.8982
Waste						0.0000	0.0000		0.0000	0.0000	517.8888	0.0000	517.8888	30.6064	0.0000	1,283.0476
Water						0.0000	0.0000		0.0000	0.0000	17.8843	317.8333	335.7175	1.8471	0.0455	395.4508
Total	**8.3882**	**21.7395**	**45.7336**	**0.1583**	**11.4373**	**0.2182**	**11.6555**	**3.0675**	**0.2085**	**3.2759**	**535.7731**	**22,284.9898**	**22,820.7628**	**33.5096**	**0.1067**	**23,690.3047**

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	4.9905	4.4000e-004	0.0481	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.5000e-004	0.0000	0.0991
Energy	0.0843	0.7665	0.6438	4.6000e-003		0.0583	0.0583		0.0583	0.0583	0.0000	7,734.6134	7,734.6134	0.2380	0.0612	7,758.8090
Mobile	3.3134	20.9726	45.0417	0.1537	11.4373	0.1598	11.5971	3.0675	0.1500	3.2175	0.0000	14,232.45 02	14,232.4502	0.8179	0.0000	14,252.8982
Waste						0.0000	0.0000		0.0000	0.0000	258.9444	0.0000	258.9444	15.3032	0.0000	641.5238
Water						0.0000	0.0000		0.0000	0.0000	14.3074	256.7295	271.0369	1.4778	0.0364	318.8304
Total	**8.3882**	**21.7395**	**45.7336**	**0.1583**	**11.4373**	**0.2182**	**11.6555**	**3.0675**	**0.2085**	**3.2759**	**273.2518**	**22,223.88 60**	**22,497.137 8**	**17.8371**	**0.0976**	**22,972.16 05**

	ROG	NOx	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**	**49.00**	**0.27**	**1.42**	**46.77**	**8.51**	**3.03**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	650.6520
Vegetation Land Change	31.6354
Total	**682.2874**

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	3.3134	20.9726	45.0417	0.1537	11.4373	0.1598	11.5971	3.0675	0.1500	3.2175	0.0000	14,232.4502	14,232.4502	0.8179	0.0000	14,252.8982
Unmitigated	3.3134	20.9726	45.0417	0.1537	11.4373	0.1598	11.5971	3.0675	0.1500	3.2175	0.0000	14,232.4502	14,232.4502	0.8179	0.0000	14,252.8982

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		
General Office Building	1,543.41	1,543.41	1543.41	4,972,043	4,972,043
High Turnover (Sit Down Restaurant)	787.02	787.02	787.02	1,072,571	1,072,571
Hotel	1,220.10	1,220.10	1220.10	2,911,367	2,911,367
Industrial Park	5,165.79	5,165.79	5165.79	20,543,761	20,543,761
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	264.03	264.03	264.03	571,062	571,062
Total	8,980.35	8,980.35	8,980.35	30,070,805	30,070,805

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down [illegible])	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
General Office Building	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
High Turnover (Sit Down Restaurant)	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Hotel	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Industrial Park	0.534825	0.044367	0.196734	0.119876	0.016223	0.005947	0.018871	0.052041	0.002381	0.002303	0.004887	0.000661	0.000886
Other Asphalt Surfaces	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Parking Lot	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Regional Shopping Center	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

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	6,900.2408	6,900.2408	0.2220	0.0459	6,919.4781
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,900.2408	6,900.2408	0.2220	0.0459	6,919.4781
NaturalGas Mitigated	0.0843	0.7665	0.6438	4.6000e-003		0.0583	0.0583		0.0583	0.0583	0.0000	834.3727	834.3727	0.0160	0.0153	839.3309
NaturalGas Unmitigated	0.0843	0.7665	0.6438	4.6000e-003		0.0583	0.0583		0.0583	0.0583	0.0000	834.3727	834.3727	0.0160	0.0153	839.3309

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
General Office Building	1.41681e+006	7.6400e-003	0.0695	0.0583	4.2000e-004		5.2800e-003	5.2800e-003		5.2800e-003	5.2800e-003	0.0000	75.6064	75.6064	1.4500e-003	1.3900e-003	76.0557
High Turnover (Sit Down Restaurant)	1.76184e+006	9.5000e-003	0.0864	0.0726	5.2000e-004		6.5600e-003	6.5600e-003		6.5600e-003	6.5600e-003	0.0000	94.0183	94.0183	1.8000e-003	1.7200e-003	94.5770
Hotel	2.33639e+006	0.0126	0.1145	0.0962	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.6786	124.6786	2.3900e-003	2.2900e-003	125.4195
Industrial Park	1.01083e+007	0.0545	0.4955	0.4162	2.9700e-003		0.0377	0.0377		0.0377	0.0377	0.0000	539.4160	539.4160	0.0103	9.8900e-003	542.6215
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	12243	7.0000e-005	6.0000e-004	5.0000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6533	0.6533	1.0000e-005	1.0000e-005	0.6572
Total		**0.0843**	**0.7664**	**0.6438**	**4.6000e-003**		**0.0583**	**0.0583**		**0.0583**	**0.0583**	**0.0000**	**834.3726**	**834.3726**	**0.0160**	**0.0153**	**839.3309**

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
General Office Building	1.41681e+006	7.6400e-003	0.0695	0.0583	4.2000e-004		5.2800e-003	5.2800e-003		5.2800e-003	5.2800e-003	0.0000	75.6064	75.6064	1.4500e-003	1.3900e-003	76.0557
High Turnover (Sit Down Restaurant)	1.76184e+006	9.5000e-003	0.0864	0.0726	5.2000e-004		6.5600e-003	6.5600e-003		6.5600e-003	6.5600e-003	0.0000	94.0183	94.0183	1.8000e-003	1.7200e-003	94.5770
Hotel	2.33639e+006	0.0126	0.1145	0.0962	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.6786	124.6786	2.3900e-003	2.2900e-003	125.4195

Industrial Park	1.01083e+007	0.0545	0.4955	0.4162	2.9700e-003		0.0377	0.0377		0.0377	0.0377	0.0000	539.4160	539.4160	0.0103	9.8900e-003	542.6215
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	12243	7.0000e-005	6.0000e-004	5.0000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6533	0.6533	1.0000e-005	1.0000e-005	0.6572
Total		**0.0843**	**0.7664**	**0.6438**	**4.6000e-003**		**0.0583**	**0.0583**		**0.0583**	**0.0583**	**0.0000**	**834.3726**	**834.3726**	**0.0160**	**0.0153**	**839.3309**

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
General Office Building	1.8336e+006	749.6942	0.0241	4.9900e-003	751.7843
High Turnover (Sit Down Restaurant)	338492	138.3972	4.4500e-003	9.2000e-004	138.7831
Hotel	762262	311.6615	0.0100	2.0700e-003	312.5304
Industrial Park	1.30819e+007	5,348.7163	0.1721	0.0356	5,363.6281
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	757722	309.8053	9.9700e-003	2.0600e-003	310.6690
Regional Shopping Center	102641	41.9662	1.3500e-003	2.8000e-004	42.0832
Total		**6,900.2408**	**0.2220**	**0.0459**	**6,919.4781**

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
General Office Building	1.8336e+006	749.6942	0.0241	4.9900e-003	751.7843
High Turnover (Sit Down Restaurant)	338492	138.3972	4.4500e-003	9.2000e-004	138.7831
Hotel	762262	311.6615	0.0100	2.0700e-003	312.5304
Industrial Park	1.30819e+007	5,348.7163	0.1721	0.0356	5,363.6281
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	757722	309.8053	9.9700e-003	2.0600e-003	310.6690
Regional Shopping Center	102641	41.9662	1.3500e-003	2.8000e-004	42.0832
Total		**6,900.2408**	**0.2220**	**0.0459**	**6,919.4781**

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	4.9905	4.4000e-004	0.0481	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.5000e-004	0.0000	0.0991

Unmitigated	4.9905	4.4000e-004	0.0481	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.5000e-004	0.0000	0.0991

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	0.3075					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.6785					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.5200e-003	4.4000e-004	0.0481	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.5000e-004	0.0000	0.0991
Total	**4.9905**	**4.4000e-004**	**0.0481**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**0.0928**	**0.0928**	**2.5000e-004**	**0.0000**	**0.0991**

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	0.3075					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.6785					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.5200e-003	4.4000e-004	0.0481	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.5000e-004	0.0000	0.0991
Total	**4.9905**	**4.4000e-004**	**0.0481**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**0.0928**	**0.0928**	**2.5000e-004**	**0.0000**	**0.0991**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	271.0369	1.4778	0.0364	318.8304
Unmitigated	335.7175	1.8471	0.0455	395.4508

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.90066	17.7187	5.7000e-004	1.2000e-004	17.7681
General Office Building	7.8204 / 0	44.1155	0.2562	6.2900e-003	52.3953
High Turnover (Sit Down Restaurant)	0.162925 / 0	0.9191	5.3400e-003	1.3000e-004	1.0916

Hotel	18.5735 / 0	104.7742	0.6084	0.0150	124.4388
Industrial Park	29.6523 / 0	167.2711	0.9713	0.0239	198.6655
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.162925 / 0	0.9191	5.3400e-003	1.3000e-004	1.0916
Total		**335.7175**	**1.8471**	**0.0455**	**395.4508**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.66272	16.6378	5.4000e-004	1.1000e-004	16.6842
General Office Building	6.25632 / 0	35.2924	0.2049	5.0400e-003	41.9162
High Turnover (Sit Down Restaurant)	0.13034 / 0	0.7353	4.2700e-003	1.0000e-004	0.8733
Hotel	14.8588 / 0	83.8194	0.4867	0.0120	99.5511
Industrial Park	23.7219 / 0	133.8169	0.7770	0.0191	158.9324
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.13034 / 0	0.7353	4.2700e-003	1.0000e-004	0.8733
Total		**271.0369**	**1.4778**	**0.0364**	**318.8304**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	258.9444	15.3032	0.0000	641.5238
Unmitigated	517.8888	30.6064	0.0000	1,283.0476

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.63	0.1279	7.5600e-003	0.0000	0.3168
General Office Building	112.01	22.7370	1.3437	0.0000	56.3300
High Turnover (Sit Down Restaurant)	64.97	13.1883	0.7794	0.0000	32.6735
Hotel	60.59	12.2992	0.7269	0.0000	30.4708
Industrial Park	2248.12	456.3480	26.9694	0.0000	1,130.5830
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Regional Shopping Center	64.97	13.1883	0.7794	0.0000	32.6735
Total		**517.8888**	**30.6064**	**0.0000**	**1,283.0476**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.315	0.0639	3.7800e-003	0.0000	0.1584
General Office Building	56.005	11.3685	0.6719	0.0000	28.1650
High Turnover (Sit Down Restaurant)	32.485	6.5942	0.3897	0.0000	16.3368
Hotel	30.295	6.1496	0.3634	0.0000	15.2354
Industrial Park	1124.06	228.1740	13.4847	0.0000	565.2915
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	32.485	6.5942	0.3897	0.0000	16.3368
Total		**258.9444**	**15.3032**	**0.0000**	**641.5238**

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

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	682.2874	0.0000	0.0000	682.2874

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	0 / 7.34	31.6354	0.0000	0.0000	31.6354
Total		**31.6354**	**0.0000**	**0.0000**	**31.6354**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	919	650.6520	0.0000	0.0000	650.6520
Total		**650.6520**	**0.0000**	**0.0000**	**650.6520**

Operational GHG Emissions Summary

Source	MT CO2e /yr
Area	0.10
Electricity	6,919.48
Natural Gas	839.33
Mobile	14,252.89
Waste	641.52
Water	318.83
Fireplace	1.74
Emergency Generator	9.21
Construction	209.62
Project Total	23,192.72

Emergency Generator Emissions

updated:	9/5/2017	
Conversion Factors		
HP/kW	1.341022	
PM10 Fraction of Total PM	0.960	Table A - Updated CEIDARS Table with PM2.5 Fractions, INTERNAL COMBUSTION - DISTILLATE AND DIESEL-ELECTRIC GENERATION
PM2.5 Fraction of Total PM	0.937	Table A - Updated CEIDARS Table with PM2.5 Fractions, INTERNAL COMBUSTION - DISTILLATE AND DIESEL-ELECTRIC GENERATION
CO2 g/gal	10.21	Climate Registry, Table 13.1: https://www.theclimateregistry.org/wp-content/uploads/2014/11/2016-Climate-Registry-Default-Emission-Factors.pdf
CH4 g/gal	0.58	Climate Registry, Table 13.7: https://www.theclimateregistry.org/wp-content/uploads/2014/11/2016-Climate-Registry-Default-Emission-Factors.pdf
N2O g/gal	0.26	Climate Registry, Table 13.7: https://www.theclimateregistry.org/wp-content/uploads/2014/11/2016-Climate-Registry-Default-Emission-Factors.pdf
GWP CH4	25	AR4
GWP N2O	298	AR4
CO2e g/gal	10302	
CO2 g/gal	10210	
CO2/CO2e	0.991071619	

Standby Emergency Generator

Ratings:	Hotel	350	kW	*(Assumed power rating based on number of hotel rooms)*
		469	HP	*(conversion from kW to hp)*
Load Factor:		0.74		*(based on CalEEMod Generator Set Load Factor)*
Engine Emissions Tier:		Tier 4		*(compliance with CARB diesel regulations)*
Operating Hours per Unit:		2	hours/day	*(testing/maintenance)*
		50	hours/year	*(testing/maintenance, Regulatory Limit per SCAQMD Rule 1470)*

Emergency Generator Emissions

	Units	Greenhouse Gases [1]	
		CO_2	CO_2e
	g/kW-hr	—	—
	g/HP-hr	526.17	530.91
	lbs/hr	402.59	406.22
	lbs/day	805.18	812.43
	lbs/yr	20,129.48	20,310.82
	tons/yr	10.06	10.16
	metric tons/yr	9.13	9.21

Notes:

1. Emission factor for CO_2: U.S. Environmental Protection Agency, *AP-42 Compilation of Air Pollutant Emission Factors* , Fifth Edition, Section 3.4, Table 3.4-1. Emissions of GHGs assume 99% of the CO^2e emissions occur as CO_2, which is typical for off-road diesel engines.

Source: ESA 2017.

Natural Gas Fueled Outdoor Fireplace

60000 BTU/hr - CALEEMOD default
3 hrs/day - CALEEMOD default
180 days/yr
0.18 MMBTU/day
32.4 MMBTU/yr
1020 mmBTU/mmscf - CALEEMOD default
0.0001765 mmscf/day
0.0317647 mmscf/yr

	CO2	N2O	CH4	
lbs/mmscf	120000	2.2	2.3	AP42 Chapter 1.4
lbs/day	21.18	3.88E-04	4.06E-04	
lbs/yr	3811.76	0.07	0.07	
Metric Tons/yr	1.73	9.45E-03	8.28E-04	
Metric Tons CO2e/yr	1.74			