AIR QUALITY AND GREENHOUSE GAS IMPACT ASSESSMENT REPORT

1.0 INTRODUCTION

This study describes the existing air quality and greenhouse gas (GHG) emissions of the proposed mixed-use development located between 501 and 601 East Compton Boulevard and evaluates the potential impacts to air quality and GHG pursuant to the California Environmental Quality Act (CEQA). This analysis considers both the temporary air quality and GHG impacts that would result from project construction and the long-term impacts associated with the operation of the project.

1.1 Project Location

The site is located in Compton, California in Los Angeles County at 501, 515, 517, 535, 545, 601, 607, and 625 E. Compton Boulevard; 112 N. Willow Avenue; and 107 N. Santa Fe Avenue. The site is bound to the south by E. Compton Boulevard, to the west by N. Spring Avenue, to the north by low- and medium-density residential units, and to the east by N. Santa Fe Avenue. The site is identified by the Assessor's Parcel Numbers (APNs) 6166-022-900, 6166-022-901, 6166-022-902, 6166-022-903, 6166-022-904, 6166-022-905, 6166-023-900, 6166-023-901, 6166-023-902, 6166-023-903, and 6166-023-904.

Regional access to the project site is provided by State Route 91 (Artesia Freeway West) 1.8 miles to the south, Interstate 105 (Glenn Anderson Freeway East) 2.4 miles to the north, Interstate 110 (Harbor Freeway South) 3.9 miles to the west, and Interstate 710 (Long Beach Freeway South) 1.7 miles to the east. Major arterials that provide access to the project site include E. Compton Boulevard directly to the south, Santa Fe Avenue directly east, and Alameda Street to the west.

Transit facilities operated by the Los Angeles County Metropolitan Transportation Authority (Metro) in the vicinity of the project site include the Compton & Willow bus stop for Metro Bus Lines 60, 125, 127, and 128 located 0.04 mile from the site. Along Compton Boulevard between Alameda Street and Santa Fe Avenue, there are three bus stops in the westbound direction and three bus stops in the eastbound direction. In addition, there is a bus stop in the northbound direction along Santa Fe Avenue north of Compton Boulevard. In addition to bus service, the project site is located approximately 0.42 miles from the Metro A Line (Blue) Compton Station, which provides light-rail service to Downtown Los Angeles and Downtown Long Beach.

1.2 Project Description

The 501 and 601 Compton Boulevard Development Project (project) is a 93,046 square-foot site comprised of eleven parcels in Compton, California in Los Angeles County. The proposed project is a seven-story, 266,792 square-foot mixed-use development comprised of 7,734 square feet of retail/commercial uses, 300 residential units (including 20 percent affordable units), a pedestrian plaza (Willow Plaza), the Compton Innovation Hub and Creative Studios, and two parking garages with up to 407 spaces. The building would have a maximum height of 85 feet along Compton Boulevard and lower heights on the north side of the project.

In addition, the project includes the creation of a public pedestrian plaza by closing Willow Avenue to non-emergency vehicular traffic and reconfiguration of E. Compton Boulevard between Alameda Street East and Santa Fe Avenue, from two lanes in each direction to one lane in each direction. The project also includes streetscape improvements and bicycle parking on-site to encourage pedestrian and bicycle travel. The anticipated floor area ratio (FAR) is 2.86.

The project site currently contains four one-story structures that are vacant and partially demolished. All structures on the site would be demolished proposed as part of the proposed project. The project site also includes vacant land and surface parking.

2.0 AIR QUALITY

2.1 Air Quality Setting

South Coast Air Basin

South Coast Air Basin Characteristics

The City of Compton is located within the South Coast Air Basin (SCAB), which encompasses approximately 12,000 square miles of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around the rest of its perimeters.

Temperature and Precipitation

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. It is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. This usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. The annual average temperature varies little throughout the SCAB region, ranging from the low 60s to the high 80s, in degrees Fahrenheit (F°). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rains fall between November and April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains.

Humidity

Although the SCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent, and low clouds, often referred to as high fog, are a characteristic climate feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is higher during the dry summer months than during the rainy winter.

Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentration of air pollutants during prolonged periods of stable atmospheric conditions.

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two similarly distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality in the summer and generally good air quality in the winter in Compton.

Air Pollutants of Concern

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards for outdoor concentrations. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons such as children, pregnant women, and the elderly, from illness or discomfort. Criteria air pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter (PM2.5), particulate matter ten microns or less in diameter (PM10), and lead (Pb). Note that reactive organic gases (ROGs), which are also known as reactive organic compounds (ROCs) or volatile organic compounds (VOCs), and nitrogen oxide (NOx) are not classified as criteria pollutants. However, ROGs and NOx are widely emitted from land development projects and participate in photochemical reactions in the

atmosphere to form O_3; therefore, NOx and ROGs are relevant to the proposed project and are of concern in the air basin and are listed below along with the criteria pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 1, Criteria Pollutants Summary of Common Sources and Effects**.

Table 1
Criteria Pollutants Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuels is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include moto vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM10 & PM2.5)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant; aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

Source: CAPCOA, 2013.

Ambient Air Quality

Criteria Air Pollutant Monitoring Data

Ambient air quality in Compton can be characterized by ambient air quality measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections in the vicinity of Compton are documented by measurements made by the South Coast Air Quality Management District (SCAQMD), the air pollution regulatory agency in the SCAB regions maintains air quality monitoring stations which process ambient air quality measurements.

The purpose of the monitoring station is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Ozone and particulate matter (PM10 and PM2.5) are pollutants of particular concern in the SCAB. The monitoring station located closest to the proposed project site and most representative of air quality near the project site is the Compton – 700 North Bullis Road Station located approximately 0.63 miles northeast of the project site. Ambient air emission concentrations vary due to localized variations in emissions sources and climate and should be considered "generally" representative of ambient concentrations in Compton. The Compton - 700 North Bullis Road station monitors O_3, PM2.5, and NO_2, see **Table 2, Compton – 700 North Bullis Road Air Monitoring Station Ambient Pollutant Concentrations**.

The attainment status for the SCAB region is included in **Table 3, Attainment Status of Criteria Pollutants in the South Coast Air Basin**. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The SCAB region is designated as a nonattainment area for federal ozone, PM2.5, and lead standards and are designated as nonattainment for state ozone, PM10, and PM2.5 standards.

Table 2
Compton - 700 North Bullis Road Air Monitoring Station Ambient Pollutant Concentrations

Pollutant	Standards[1]	Year		
		2017	2018	2019
OZONE (O_3)				
Maximum 1-hour concentration monitored (ppm)		0.092	0.075	0.100
Maximum 8-hour concentration monitored (ppm)		0.076	0.063	0.079
Number of days exceeding state 1-hour standard	0.09 ppm	0	0	1
Number of days exceeding federal/state 8-hour standard	0.070 ppm	5	0	1
NITROGEN DIOXIDE (NO_2)				
Maximum 1-hour concentration monitored (ppm)		0.099	0.068	0.070
Annual average concentration monitored (ppm)		0.016	0.015	0.014
Number of days exceeding state 1-hour standard	0.18 ppm	0	0	0
FINE PARTICULATE MATTER ($PM_{2.5}$)				
Maximum 24-hour concentration monitored ($\mu g/m^3$)		66.7	49.4	39.5
Annual average concentration monitored ($\mu g/m^3$)		13.2	13.2	10.9
Number of samples exceeding federal standard	35 $\mu g/m^3$	5	2	1

Source: California Air Resources Board, "Air Quality Data Statistics," http://www.arb.ca.gov/adam/. 2020.
SCAQMD. 2019. Air Quality South Coast Air Quality Management District, http://www.aqmd.gov/docs/default-source/air-quality/historical-data-by-year/2019-air-quality-data-tables.pdf?sfvrsn=8. 2020.
NA = not available
[1] Parts by volume per million of air (ppm), micrograms per cubic meter of air ($\mu g/m^3$), or annual arithmetic mean (aam).
[2] The 8-hour federal O_3 standard was revised from 0.075 ppm to 0.070 ppm in 2015. The statistics shown are based on the 2015 standard of 0.070 ppm.

Table 3
Attainment Status of the South Coast Air Basin (SCAB)

Pollutant	State	Federal
Ozone (O_3)	Non-Attainment	Non-Attainment
Particulate Matter (PM10)	Non-Attainment	Attainment
Particulate Matter (PM2.5)	Non-Attainment	Non-Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Non-Attainment (Partial)[1]

Source: SCAQMD. 2016. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin.
[1] The Los Angeles County portion of the Basin is designated as a non-attainment area for the federal lead standard on the basis of source-specific monitoring at two locations as determined by U.S. EPA using 2007-2009 data. However, all stations in the Basin, including the near-source monitoring in Los Angeles County, have remained below the lead NAAQS for the 2012 through 2015 period. The SCAQMD will request that the U.S. EPA re-designated the Los Angeles County portion of the Basin as attainment for lead.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

To date, CARB has designated 244 compounds as TACs. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds.

CARB identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particulates and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM very between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

The SCAQMD's Multiple Air Toxics Exposure Study (MATES-IV) serves as the air toxics study for the SCAB. MATES-IV estimated the cancer risk from TACs by conducting a comprehensive monitoring

program, updated emissions inventory of TACs, and modeling that characterizes health risks for residents in the SCAB. The study concluded that the average carcinogenic risk from air pollution is approximately 420 in one million. Mobile sources (e.g., cars, trucks, trains, aircraft) are the greatest contributors. Approximately 75 percent of risk is attributable to diesel particulate emissions, with 20 percent to other toxic associates from mobile sources (e.g., benzene butadiene, formaldehyde), and five percent to stationary sources.

The MATES-IV study included maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions. The maps illustrate the number of potential cancers per million persons living a lifetime of breathing (24 hours per day for 70 years). The MATES-IV interactive map is a dynamic tool to depict such risk and illustrates that risk from air toxics can be greater near sources of diesel fuel combustion, such as freeways, airports, and water ports. Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases.

Residential areas are considered to be sensitive receptors to air pollutants because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children are considered more susceptible to health effects of air pollution due to their immature immune systems and developing organs (OEHHA 2007). As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation.

2.2 Regulatory Framework

Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the U.S. Environmental Protection Agency (EPA) to establish NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide is an air pollutant covered by the CAA; however, no NAAQS have been established for carbon dioxide.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designations. **Table 3** lists the federal attainment status of the SCAB for the criteria pollutants.

National Emissions Standards for Hazardous Air Pollutants Program

Under federal law, 187 substances are currently listed as hazardous air pollutants (HAPs). Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) program. The EPA is establishing regulatory schemes for specific source categories and requires implementation of the Maximum Achievable Control Technologies (MACT) for major sources of HAPs in each source category. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and is aimed at HAPs that are a problem is California. The state has formally identified 244 substances as TACs and is adopting appropriate control measures for each. Once adopted at the state level, each air district will be required to adopt a measure that is equally or more stringent.

National Ambient Air Quality Standards

The federal CAA required the U.S. EPA to establish NAAQS. The NAAQS set primary standards and secondary standards for specific air pollutants**.** Primary standards define limits for the intention of protecting public health, which include sensitive populations such as asthmatics, children, and the elderly. Secondary Standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation, and buildings. A summary of the federal ambient air quality standards is shown in **Table 4, National Ambient Air Quality Standards**.

Table 4
National Ambient Air Quality Standards

Pollutant		Primary/Secondary	Averaging Time	Level
Carbon Monoxide		Primary	8 hours	9 ppm
			1 hour	35 ppm
Lead		Primary and secondary	Rolling 3-month average	0.15 μg/m^3
Nitrogen dioxide		Primary	1 hour	100 ppb
		Primary and secondary	Annual	0.053 ppm
Ozone		Primary and secondary	8 hours	0.070 ppm
Particulate Matter	PM2.5	Primary	Annual	12 μg/m^3
		Secondary	Annual	15 μg/m^3
		Primary and secondary	24 hours	35 μg/m^3
	PM10	Primary and secondary	24 hours	150 μg/m^3
Sulfur dioxide		Primary	1 hour	75 ppb
		Secondary	3 hours	0.5 ppm

Source:
California Air Resources Board. May 2016. Ambient Air Quality Standards. Available online at:
https://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed October 13, 2020.

State

California Clean Air Act of 1988

The California CAA of 1988 (CCAA) allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. The CCAA, amended in 1992, requires all air quality management districts (AQMDs) in the state to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants and has also established state standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles, for which there are no national standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California Ambient Air Quality Standards

The federal CAA permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants, such as particulate matter and ozone, which are more protective of public health than respective federal standards. California has also set standards for some pollutants that are not addressed by federal standards. The state standards for ambient air quality are summarized in **Table 5, California Ambient Air Quality Standards**.

Table 5
California Ambient Air Quality Standards

Pollutant		Averaging Time	Level
Carbon monoxide		8 hours	9 ppm
		1 hour	20 ppm
Lead		30-day average	1.5 μg/m^3
Nitrogen dioxide		1 hour	0.180 ppm
		Annual	0.030 ppm
Ozone		8 hours	0.070 ppm
		1 hour	0.09 ppm
Particulate matter	PM2.5	Annual	12 μg/m^3
	PM10	24 hours	50 μg/m^3
		Annual	20 μg/m^3
Sulfur dioxide		1 hour	0.25 ppm
		24 hours	0.04 ppm
Sulfates		24 hours	25 μg/m^3
Hydrogen sulfide		1 hour	0.03 ppm
Vinyl chloride		24 hours	0.01 ppm

Source:
California Air Resources Board. 2016. Ambient Air Quality Standards. May. Available online at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed October 13, 2020.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as a SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the EPA for approval and publication in the Federal Register. The 2016 Air Quality Management Plan (2016 AQMP) is the SIP for SCAB. The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air in the SCAB and those portions of the Salton Sea Air Basin (SSAB) that are under the SCAQMD's jurisdictions. The 2016 AQMP represents a new approach, focusing on available, proven, and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnerships with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. The AQMP relies on regional and multi-level partnerships of governmental agencies at the federal, state, regional, and local level. Those agencies (EPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's 2016-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 2016 AQMP includes integrated strategies and measures to meet the NAAQS.

On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020-2045 RTP/SCS). However, the forecasts and measures in the plan have not yet been incorporated into any applicable air quality plan for the region.

California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)

The California Air Toxics Program is supplemented by the Air Toxics "Hot Spots" program, which became law (AB 2588, Statutes of 1987) in 1987. In 1992, the AB 2588 program was amended by Senate Bill 1731 to require facilities that pose a significant health risk to the community to perform a risk reduction audit and reduce their emissions through implementation of a risk management plan. Under this program, which is required under the Air Toxics "Hot Spots" Information and Assessment Act (Section 44363 of the California Health and Safety Code), facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks when present.

Typically, land development projects generate diesel emissions from construction vehicles during the construction phase, as well as some diesel emissions from small trucks during the operational phase. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances. Emissions from diesel engines currently include over 40 substances that are listed by EPA as hazardous air pollutants and by CARB as TACs. On August 27, 1998, CARB identified particulate matter

in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease.[1]

In March 2015, the OEHHA adopted "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" in accordance with the Health and Safety Code, Section 44300. The Final Guidance Manual incorporates the scientific basis from three earlier developed Technical Support Documents to assess risk from exposure to facility emissions. The 2015 OEHHA Final Guidance has key changes including greater age sensitivity in particular for children, decreased exposure durations, and higher breathing rate profiles. Because cancer risk could be up to three times greater using this new guidance, it may result in greater mitigation requirements, more agency backlog, and increased difficulty in getting air permits. Regardless of the change in calculation methodology, actual emissions and cancer risk within SCAB has declined by more than 50 percent since 2005.

The CARB provides a computer program, the Hot Spots Analysis and Reporting Program (HARP), to assist in a coherent and consistent preparation of an HRA. HARP2, an update to HARP, was released in March 2015. HARP2 has a more refined risk characterization in HRA and CEQA documents and incorporates the 2015 OEHHA Final Guidance.

Regional

South Coast Air Quality Management District

The SCAQMD is the air pollution control district for Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that the SCAB region meets attainment for the federal and state standards. The SCAQMD is responsible for preparing an air quality management plan in order to meet federal attainment status. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

[1] Diesel exhaust is included within pollutants subject to the hotspot program. Please refer to OEHHA's Air Toxics Hot Spot Program Risk Assessment Guidelines. https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0

SCAQMD Rules and Regulations

The following is a list of noteworthy SCAQMD rules that are required of construction activities associated with the proposed project:

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM10 suppression techniques are summarized below.

  a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.

  b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.

  c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

  d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.

  e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

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

Local

City of Compton General Plan

The City of Compton's 2030 General Plan Air Quality Element includes a series of air quality goals aimed at reducing criteria air pollutant and GHG emissions. Goals and policies relevant to the proposed project include:

Goal 1 Reduce automobile use.

Policy 1.2 The City of Compton will implement programs that reduce automobiles use by City residents.

Policy 1.3 The City of Compton will ensure that new large-scale developments incorporate features that facilitate alternative forms of transportation.

Goal 2 Reduce peak-hour roadway congestion.

Policy 2.1 The City of Compton will encourage truck operations to divert peak hour travel, whenever feasible, to off-peak periods to reduce roadway congestions and associated emissions.

Policy 2.2 The City of Compton will encourage local facilities to receive truck deliveries in off-peak hours.

Goal 3 Reduce emissions associated with vehicle miles traveled by providing a balance of jobs and housing.

Policy 3.1 The City of Compton will support economic development policies which promote opportunities for business attraction within the City.

Policy 3.2 The City of Compton will support economic development policies which promote a balance of shopping and services necessary for the City's residential sector.

Goal 4 Reduce emissions associated with energy consumption.

Policy 4.2 The City of Compton will encourage incorporation of energy features, including passive solar, in the construction and rehabilitation of new and existing structures.

Goal 5 Reduce air pollution emissions and impacts through site planning and building design.

Policy 5.1 The City of Compton will support the use of low polluting construction materials and coatings.

Policy 5.3 The City of Compton will encourage the design of new commercial developments to emphasize access to walking, bicycling, and public transportation.

Policy 5.5 The City of Compton will reduce the exposure of sensitive receptors to dust and odors to the extent feasible.

2.3 Thresholds and Methodology

Thresholds of Significance

The impact analysis provided below is based on the application of the following California Environmental Quality Act (CEQA) Guidelines Appendix G, which indicates that a project would have a significant impact on air quality if it would:

1) Conflict with or obstruct implementation of any applicable air quality plan.

2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

3) Expose sensitive receptors to substantial pollutant concentrations.

4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The significance criteria established by the applicable air quality management or air pollution control district (SCAQMD) may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the proposed project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects, shown in **Table 6, South Coast AQMD Air Quality Significance Thresholds**.

Table 6
South Coast AQMD Air Quality Significance Thresholds

Mass Daily Thresholds [a]		
Pollutant	**Construction [b]**	**Operation [c]**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day

Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to South Coast AQMD Rule 402	
GHG	10,000 MT/yr CO_2eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants [d]		
NO_2	South coast AQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:	
1-hour average	0.18 ppm (state)	
annual arithmetic mean	0.03 ppm (state) and 0.0534 ppm (federal)	
PM10		
24-hour average	10.4 μg/m^3 (construction) [e] & 2.5 μg/m^3 (operation)	
annual average	1.0 μg/m3	
PM2.5		
24-hour average	10.4 μg/m^3 (construction) [e] & 2.5 μg/m^3 (operation)	
SO_2		
1-hour average	0.25 ppm (state) & 0.075 ppm (federal - 99th percentile)	
24-hour average	0.04 ppm (state)	
Sulfate		
24-hour average	25 μg/m^3 (state)	
CO	South Coast AQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:	
1-hour average	20 ppm (state) and 35 ppm (federal)	
8-hour average	9.0 ppm (state/federal)	
Lead		
30-day Average	1.5 μg/m^3 (state)	
Rolling 3-month average	0.15 μg/m^3 (federal)	

[a] *Source: South Coast AQMD CEQA Handbook (South Coast AQMD, 1993)*

[b] *Construction thresholds apply to both the SCAB and Coachella Valley (Salton Sea and Mojave Desert Air Basins).*

[c] *For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.*

[d] *Ambient air quality thresholds for criteria pollutants based on South Coast AQMD Rule 1303, Table A-2 unless otherwise stated.*

[e] *Ambient air quality threshold based on South Coast AQMD Rule 403.*

The significance of localized impacts depends on whether ambient CO levels are above state and federal CO standards in the vicinity of the project site. Carbon monoxide concentrations in Compton no longer exceed either the CAAQS or the NAAQS criteria. Additionally, the SCAB region is designated as attainment under the 1-hour and 8-hour standards (see **Table 3**).

Localized Significance Thresholds

In addition to regional emissions and the CO hotspot analysis, the SCAQMD has developed a set of mass emissions rate look-up tables that can be used to evaluate localized impacts that may result from construction and operational-period emissions called localized significance thresholds (LSTs). If the on-site emissions from proposed construction activities are below the emission levels found in the LST mass rate look-up tables for the project site receptor area (SRA), then emissions would not have the potential to cause

a significant localized air quality impact. When quantifying mass emissions for LST analysis, only emissions that occur on site are considered. Consistent with SCAQMD LST guidance, emissions from offsite delivery hauling trucks, or employee trips are not considered in the evaluation of localized impacts (SCAQMD 2008).

The City of Compton lies within SCAQMD SRA 12 and the project site is approximately 86,634 square-feet (2.13-acres). Therefore, **Table 7, Local Significance Thresholds – Pounds per Day**, shows the LST screening threshold for a 2-acre project site in SRA 12 with sensitive receptors located within 25 meters of the project site.

Table 7
Local Significance Thresholds – Pounds per Day

Phase	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM10)	Fine Particulate Matter (PM2.5)
Construction	65	346	7	4
Operation	65	346	2	1

Source: SCAQMD. 2009. Appendix C Mass Rate Look Up Table. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2.

Methodology

Air quality impacts were evaluated in accordance with the methodologies recommended by CARB and the SCAQMD. Where criteria air pollutant quantification was required, emissions modeled using the California Emissions Estimator Model version 2016.3.2 (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

2.4 Air Quality Project Impacts and Mitigation Measures

Impact 1 **Would implementation of the proposed project conflict with or obstruct implementation of any applicable air quality plan? *(Less than Significant).***

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to

be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the project site is located within the SCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the SCAB is in nonattainment. In order to reduce such emissions, the SCAQMD drafted the 2016 Air Quality Management Plan (AQMP). The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving California and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and the U.S. EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) While SCAG adopted the updated 2020-2045 RTP/SCS in September 2020, it has not been incorporated into an applicable air quality plan.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's 1993 CEQA Air Quality Handbook, and include the following:

- Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of an existing air quality violation, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP or increments based on the years of the project build-out phase.

The violations to which Consistency Criterion No. 1 refers are the CAAQS and the NAAQS. As evaluated under Impacts 2 and 3 below, the project would not exceed the short-term construction standards or long-term operational standards and in so doing would not violate any air quality standards (see **Table 8** and **Table 9**). Thus, no impact is expected, and the project would be consistent with first criterion.

Concerning Consistency Criterion No. 2, the 2016 AQMP contains air pollutant reduction strategies based on SCAG's growth forecasts from the 2016 RTP/SCS, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The proposed project would increase local population by approximately 858 persons and create 240 jobs and is consistent with the General Plan Amendment that will be adopted at the time of approval of the project and therefore would

not exceed the population or job growth projections used by the SCAMQD to develop the 2016 AQMP. [2] Impacts would be less than significant, as the project is also consistent with the second criterion.

Impact 2 **Would implementation of the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard? *(Less than Significant).***

A project may have a significant impact if project-related emissions would exceed federal, state, or regional standards or thresholds, or if project-related emissions would substantially contribute to an existing or projected air quality violation. In order to determine project significance, emissions were compared to the SCAQMD construction and operational air quality thresholds.

Regional Construction Significance Analysis

Construction associated with the proposed project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include ozone-precursor pollutants (i.e., ROG and NOx), PM10, and PM2.5. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from site grading and excavation, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the proposed project is estimated to last approximately 2.5 years, beginning in November 2022. Construction-generated emissions associated with the proposed project were calculated using the SCAQMD- and CARB-approved CalEEMod model. CalEEMod is designed to model construction and operational emissions for land use development projects. The model incorporates typical construction requirements such as construction equipment, demolition debris, and hauling trips. The assumptions used in the CalEEMod model were refined based on information provided by the project applicant. The proposed project includes the demolition of all existing

[2] Estimated population provided by CalEEMod. Estimated employment numbers based on the Los Angeles Unified School District 2020 Developer Fee Justification Study for Standard Commercial Office and Neighborhood Shopping Center which estimates 4.79 and 2.71 employees per 1,000 square feet, respectively.

buildings on the project site, resulting in an estimated 18,406 cubic yards of exported material. In addition, grading of the existing surface parking would contribute to an additional 3,121 tons of debris exported from the project site. **Table 8, Proposed Construction Equipment**, summarizes the proposed construction equipment list that was used to model air quality impacts.

Table 8
Proposed Construction Equipment

Phase	Proposed Equipment	Pieces of Equipment	Daily Hours of Operation[1]
Demolition	Concrete/Industrial Saws	4	2.8
	Crawler Tractors	2	6.4
	Excavators	4	2.8
	Rubber Tired Dozers	4	6.4
	Rubber Tired Loaders	4	6.4
	Signal Boards	4	6.4
	Tractors/Loaders/Backhoes	2	6.4
Grading	Concrete/Industrial Saws	4	8
	Crushing/Processing Equipment	2	8
	Excavators	2	8
	Signal Boards	6	8
	Tractors/Loaders/Backhoes	2	8
Construction	Bore/Drill Rigs	2	8
	Crane	3	7
	Rough Terrain Forklifts	2	8
	Skid Steer Loaders	3	8
	Surfacing Equipment	4	8
	Tractors/Loaders	2	7
	Trenchers	1	8
Paving	Paving Equipment	3	8
	Rollers	3	8
	Signal Boards	6	8
Architectural Coating	Air Compressor	1	6

Source: Impact Sciences, 2020.
[1] Demolition is expected to occur over a 1.5 month period. Not all construction equipment is expected to be used every day for eight hours a day. Estimates of hours of operation were refined based on project specific information. Demolition equipment is expected to be used approximately 80% of time during an 8-hour day, resulting in 6.4 hours of use per day. Concrete/industrial saws and excavators are expected to be used 35% of the day, resulting in 2.8 hours of use per day. The daily hours of operation reflect the anticipated use of the equipment over the demolition phase.

During construction, contractors are required to comply with SCAQMD Rule 402 (Nuisance), Rule 403 (Fugitive Dust), and Rule 1113 (Architectural Coating), among others, which assist in reducing short-term construction-related air pollutant emissions. Rule 402 prohibits emissions that would cause a public nuisance and Rule 403 requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. Rule

1113 requires the use of architectural coatings with a determined ROG-emission limit. These rules are described above.

Predicted maximum daily construction-generated emissions for the proposed project are summarized in **Table 9, Construction-Related Criteria Pollutant and Precursor Emissions – Maximum Pounds per Day.**

Table 9
Construction-Related Criteria Pollutant and Precursor Emissions – Maximum Pounds per Day

Construction Year	ROG	NOx	CO	SO2	PM10	PM2.5
2022	5.99	61.22	38.83	0.10	6.69	2.77
2023	7.90	66.59	80.90	0.21	7.28	3.75
2024	19.76	37.44	41.48	0.13	5.14	2.25
2025	1.30	10.34	15.87	0.03	0.83	0.55
Regional Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Exceed?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Impact Sciences, CalEEMod modeling, 2020. See Appendix A.

Regional Operational Significance Analysis

The proposed project would generate air emissions as a result of motor vehicle use and area sources, such as the use of natural-gas-fired appliances, landscape maintenance equipment, and architectural coatings associated with the operation of a 300-unit apartment building, Innovation Hub, and retail center. Long-term operational emissions attributable to the proposed project are summarized in **Table 10, Long-Term Operational Emissions – Maximum Pounds per Day**.

As shown in **Table 9** and **Table 10**, neither the project's construction nor operational emissions would exceed the SCAQMD's thresholds for any criteria air pollutants. Therefore, regional construction and operational emissions would not result in significant long-term regional air quality impacts.

Air Quality Health Impacts

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, O_3 precursors, VOCs,

Table 10
Long-Term Operational Emissions – Maximum Pounds per Day

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Area Source	14.60	5.71	100.1	0.27	12.47	12.47
Energy Use	0.13	1.14	0.54	0.01	0.09	0.09
Mobile Source	1.80	7.75	23.0	0.09	8.22	2.24
Total	16.54	14.61	123.6	0.37	20.78	14.81
Regional Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceed?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Impact Sciences, CalEEMod modeling, 2020. See Appendix A.

and NOx affect air quality on a regional scale. Health effects related to O_3 are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the project's less than significant increases in regional air pollution from criteria air pollutants would not have measurable effect on the human health implications of the SCAB's ambient air quality.

As noted in the Brief of Amicus Curiae by the SCAQMD (April 6, 2015) for the *Sierra Club vs. County of Fresno*, the SCAMQD acknowledged it would be extremely difficult, if not impossible to quantify health impact of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. Further, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD) (April 13, 2015) for the *Sierra Club vs. County of Fresno*, SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that quantifying the health impacts from O_3 is difficult. The health impacts an individual may face from O_3 depends on the ambient levels of O_3 that an individual person breathes. However, measuring changes in ambient levels of O_3 presents a challenge. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient O_3 levels over the entire region. The SCAQMD states that based on their own modeling in the SCAQMD's *2012 Air Quality Management Plan*, a reduction of 432 tons (864,000 pounds) per day of NOx and a reduction of 187 tons (374,000 pounds) per day of VOC would reduce O_3 levels at the highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently

possible to accurately quantify O_3-related health impacts caused by NOx or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. Thus, as the project would not exceed SCAQMD thresholds for construction and operational air emissions, the project would not have a measurable effect on the human health implications of the SCAB's ambient air quality and have a less than significant impact for air quality health impacts.

Impact 3 **Would implementation of the proposed project expose sensitive receptors to substantial pollutant concentrations? *(Less than Significant).***

Localized Significance Thresholds

Localized Construction Significance Analysis

The nearest receptors to the project site are residents located immediately north of the project site along North Springs Avenue, North Willow Avenue, and North Santa Fe Avenue. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction.

LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAMQD provided the *Final Localized Significance Threshold Methodology* for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific analysis.

As detailed above, the SRA for the LST is the South-Central LA County area (SRA 12) since this area includes the project site. LSTs apply to CO, NOx, PM10, and PM2.5. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. The project site is approximately 2.13-acres, therefore, the LST threshold for two acres was used for the construction LST analysis.

The SCAQMD's methodology clearly states that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors to the project site are the residents approximately 10 feet north. LST screening thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. According to SCAQMD methodology, "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters." Therefore, LSTs for receptors located at 25 meters were used in this analysis.

Table 11, Localized Significance of Construction Emissions – Maximum Pounds per Day, presents the results of the localized emissions during construction activity of the proposed project. As shown in

Table 11, the on-site air pollutant emissions on the peak day of construction would not exceed the applicable LSTs. Therefore, localized air quality impacts would be less than significant.

Table 11
Localized Construction Emissions – Maximum Pounds per Day

Construction Year	NOx	CO	PM10	PM2.5
2022	57.67	36.11	4.57	2.67
2023	33.62	36.07	1.39	1.28
2024	32.1	30.47	1.32	1.21
2025	10.28	14.99	0.49	0.46
LST Screening Threshold	**65**	**346**	**7**	**4**
Exceed?	***No***	***No***	***No***	***No***

Source: Impact Science, CalEEMod modeling, 2020. See Appendix A.

Localized Operational Significance Analysis

According to the SCAQMD LST methodology, LSTs would apply to operational phase of a proposed project only if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The project is proposing a residential and commercial development and, therefore, does not include such land uses. Thus, due to the lack of queuing and idling emissions, no long-term localized comparison against LSTs is needed. Localized operational impacts would be less than significant in this regard.

Localized Air Quality Health Impacts

As evaluated above, the project's air emissions would not exceed the SCAQMD's LST thresholds. Therefore, the project would not cause or contribute to an exceedance of the most stringent applicable NAAQS or CAAQS for emissions of CO, NOx, PM10, or PM2.5. It should be noted that the ambient air quality standards are developed and represent levels at which the most susceptible persons are protected. In other words, the ambient air quality standards are purposely set in a stringent manner to protect children, elderly, and those with existing and respiratory problems. Thus, air quality health impacts would be less than significant in this regard.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadways or intersection

may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SCAB is designated as an attainment/maintenance area for the federal CO standards and attainment area for state standards. There has been a decline in CO emissions even though vehicle miles traveled (VMT) on U.S. urban and rural roads have increased nationwide estimated anthropogenic CO emissions have decreased 68 percent between 1990 and 2014. In 2014, mobile sources accounted for 82 percent of the nation's total anthropogenic CO emissions (EPA 2018). Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burner fuels, and motor vehicle inspection/maintenance programs.

According to the SCAQMD CEQA Air Quality Handbook, a potential CO hotspot may occur at any location where the background CO concentration already exceeds 9.0 ppm, the CAAQS for 8-hour ozone. The SCAQMD prepared a detailed CO analysis in the *Federal Attainment Plan for Carbon Monoxide* as part of the 2003 AQMP. The 2003 AQMP is the most recent AQMP that addresses CO concentrations. The CO analysis included microscale modeling of CO at the worst-case intersections in SCAB. Of these locations, the Wilshire Boulevard and Veteran Avenue intersection in Los Angeles experienced the highest CO concentration of 4.6 ppm. At the time of analysis, the Wilshire Boulevard and Veteran Avenue intersection was the most congested intersection in Los Angeles County with an average daily traffic volume of approximately 100,000 vehicles per day. As CO impacts at the Wilshire Boulevard and Veteran Avenue intersection did not exceed the 8-hour CAAQS, it can be inferred that the intersections near the project site would not create any CO hotspots. Furthermore, as previously discussed, the site is located in SRA 12, South-Central LA County area. Communities within SRAs are expected to have similar climatology and ambient air pollutant concentrations. The monitoring station representative of SRA 12 is the Compton – 700 North Bullis Road air quality monitoring station located approximately 0.63 miles northeast of the site. According to data obtained from the EPA's AirData database for CO pollutants, the highest eight-hour concentration reported for the Compton station in 2019 was 3.2 ppm. As such, the background CO concentration in combination with the CO concentration at worst-case scenario intersection in SCAB do not exceed 9.0 ppm and a CO hotspot would not occur. Therefore, CO hotspot impacts would be less than significant in this regard.

Diesel Particulate Matter

Project Construction

Construction would result in the generation of diesel particulate matter (diesel PM) emissions from the use of off-road diesel equipment required for grading and excavation, paving, and other construction activities.

The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current methodology for conducting health risk assessments are associated with long term exposure periods (9, 30, and 70 years). Therefore, short-term construction activities would not generate a significant health risk.

Additionally, the project site is approximately 2.13-acres and, as a result, construction activities would occur in an area of less than 5 acres. CARB generally considers construction projects contained in a site of such size to represent less than significant health risk impacts due to limitations of the off-road diesel equipment able to operate and this a reduced amount of generated diesel particulate matter (DPM), the reduce amount of dust-generating ground-disturbance possible compared to larger construction sites, and the reduced duration of construction activities compared to the development of larger sites. Furthermore, construction would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. For these reasons, DPM generated by construction activities, in and of itself, would not be expected to expose sensitive receptors to substantial amounts of air toxics and the project would have a less than significant impact.

Project Operation

The greatest potential during long-term operations for exposure to TACs is from the use of heavy-duty diesel trucks and stationary generators that use diesel fuel. The proposed project is a 300-unit residential development and Innovation Hub with retail uses. Once operational, the majority of vehicle trips to the project site will be from residents, employees, and visitors and, as a result, the proposed project would attract very few diesel truck trips. Additionally, the project does not propose any stationary generators on-site. For these reasons, once operational, the proposed project would not be expected to expose nearby sensitive receptors to substantial amounts of air toxics and the project would have a less than significant impact.

Impact 4 **Would implementation of the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (*Less than Significant).***

The SCAQMD *CEQA Air Quality Handbook* (1993) identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed project would not include any of the land uses that have been identified by the SCAQMD as odor sources.

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon project completion. In addition, the project would be required to comply with the California Code of Regulations, Title 13, sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would reduce the detectable odors from heavy-duty equipment exhaust. The project would also be required to comply with the SCAQMD Rule 1113 – Architectural Coating, which would minimize odor impacts from ROG emissions during architectural coating. Any odor impacts to existing adjacent land uses would be short-term and not substantial. As such, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Impacts would be less than significant in this regard.

2.5 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The cumulative setting for air quality includes Compton and SCAB. SCAB is designated as nonattainment area for state standards of ozone, PM2.5, and PM10. SCAB is designated as a nonattainment area for federal standards of ozone and PM2.5. SCAB is designated as being unclassified and/or attainment for all other pollutants. Cumulative growth in population and vehicle use could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

Cumulative Impacts and Mitigation Measures

Impact 5 **Would implementation of the proposed project result in a cumulatively considerable net increase of criteria air pollutants for which the SCAB is designated nonattainment? *(Less than significant).***

The SCAQMD's approach to assessing cumulative impacts is based on the 2016 AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the CAA and the CCAA. The SCAQMD neither recommends quantified analyses of cumulative construction or operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed using the same significance criteria as those for project-specific impacts. Therefore, individual development projects that generate construction-related or operational emissions that exceed the SCAQMD recommended daily thresholds for project-specific impacts would also cause a cumulative considerable increase in emissions for those pollutants for which the SCAB is nonattainment.

As discussed in **Impact 1**, the proposed project would be consistent with the 2016 AQMP, which is intended to bring the SCAB into attainment for all criteria pollutants. Furthermore, the operational and construction emissions calculated for the proposed project do not exceed the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable ambient air quality standards (see **Table 9, Construction-Related Criteria Pollutant and Precursor Emissions**, and **Table 10, Long-Term Operational Emissions**).

Additionally, with respect to the proposed project's construction-related air quality emissions and cumulative SCAB-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to federal CAA mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements and with adopted 2016 AQMP emissions control measures. Per SCAQMD rules and mandates, these same requirements (i.e., Rule 403 compliance and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the SCAB, which would include related projects.

The proposed project would also not result in cumulative operational air quality impacts because emissions would not exceed the SCAQMD-adopted operational thresholds and the project's contribution is not a significant proportion of the cumulative total emissions. Cumulative projects would likewise be required to reduce their emissions per SCAQMD rules and mandates. The project's cumulative emissions would not considerably contribute to an exceedance of the NAAQS or CAAQS and would, therefore, comply with the goals of the 2016 AQMP. Therefore, the project's contribution to regional pollutant concentrations would not be cumulatively considerable and cumulative impacts would not be significant.

3.0 GREENHOUSE GAS

3.1 Greenhouse Gas Setting

Global climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, lasting for an extended period (i.e., decades or longer).[3] Climate change may result from:

- Natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun;
- Natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions); and
- Human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. Impacts are due to observed climate change, irrespective of its cause, indicating the sensitivity of natural and human systems to changing climate.[4] Continuing changes to the global climate system and ecosystems, and to California, are projected to include:

- Rapidly diminishing sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures5;
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and ice sheets;
- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;
- Changing levels in snowpack, river flow and sea levels indicating that climate change is already affecting California's water resources6;

3 US EPA. 2013. Overview of Greenhouse Gases. Available online at: https://www.epa.gov/ghgemissions/overview-greenhouse-gases. Accessed on August 11, 2018.

4 Intergovernmental Panel on Climate Change. 2013. "Climate Change 2013: The Physical Science Basis." Available online at: http://www.climatechange2013.org/. Accessed August 13, 2018.

5 Ibid·

6 California Environmental Protection Agency (Cal EPA). 2010. Climate Action Team Report to Governor Schwarzenegger and the Legislature.

- Dry seasons that start earlier and end later, evoking more frequent and intense wildland fires7; and
- Increasing demand for electricity due to rising temperatures.8

The natural process through which heat is retained in the troposphere[9] is called the "greenhouse effect." Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere as short wave radiation. It travels through the atmosphere without warming it and is absorbed by the Earth's surface. When the Earth re-emits this radiation back toward space, the radiation changes to long wave radiation. GHGs are transparent to incoming short wave solar radiation but absorb outgoing long wave radiation. As a result, radiation that otherwise would escape back into space is now retained, warming the atmosphere. This phenomenon is known as the greenhouse effect.

Greenhouse Gas Compounds

California State law defines GHGs to include the following six compounds:

- **Carbon Dioxide** (CO_2) is released to the atmosphere when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned. CO_2 emissions from motor vehicles occur during operation of vehicles and operation of air conditioning systems.
- **Methane** (CH_4) is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from the decomposition of organic waste in solid waste landfills, raising livestock, natural gas and petroleum systems, stationary and mobile combustion, and wastewater treatment.
- **Nitrous Oxide** (N_2O) is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels. N_2O emissions from motor vehicles generally occur directly from operation of vehicles.
- **Hydrofluorocarbons** (HFCs) are one of several high global warning potential (GWP) gases that are not naturally occurring and are generated from industrial processes. HFC (refrigerant) emissions from vehicle air conditioning systems occur due to leakage, losses during recharging, or release from scrapping vehicles at end of their useful life.
- **Perfluorocarbons** (PFCs) are another high GWP gas that are not naturally occurring and are generated in a variety of industrial processes. Emissions of PFCs are generally negligible from motor vehicles.

---

7 Ibid.

8 California Environmental Protection Agency (Cal EPA). 2010. Climate Action Team Report to Governor Schwarzenegger and the Legislature.

9 The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface from 6 to 7 miles).

- **Sulfur Hexafluoride** (SF_6) is another high GWP gas that is not naturally occurring and is generated in a variety of industrial processes. Emissions of SF_6 are generally negligible from motor vehicles.

3.2 Regulatory Framework

State

The state of California has implemented a series of greenhouse gas plans and policies aimed at reducing state greenhouse gas emissions. Measures applicable to the project are summarized below:

Executive Order (EO) S-03-05

On June 1, 2005 EO S-03-05 was issued by Governor Schwarzenegger in order to set statewide emissions reduction standards. The order required the state to reduce GHG emissions to 1990 levels by 2020 and reduce GHG emissions to 80% below 1990 levels by 2050. EO S-3-05 also calls for the Secretary of California Environmental Protection Agency (Cal/EPA) to be responsible for coordination of state agencies and progress reporting.

Assembly Bill (AB) 32

AB 32 (California Global Warming Solutions Act of 2006) was codified into law in 2006 and codified into law the 2020 GHG emissions targets set by EO S-03-05. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major sectors with penalties for noncompliance.

Senate Bill (SB) 32

SB 32 was signed into law in 2015 and sets into law the mandated reduction targets set in EO B-30-15, which required a reduction in GHG emissions to 40% below the 1990 levels by 2030.

CARB's 2017 Final Scoping Plan

The California Air Resources Board (CARB) in collaboration with over twenty state agencies issued a Final Scoping Plan in 2017 in order to set a framework for the state to meet the overall reduction goals set in SB 32. The 2017 Scoping Plan identified key sectors of the implementation strategy, which includes improvements in low carbon energy, industry, transportation sustainability, natural and working lands, waste management, and water. Through a combination of data synthesis and modeling, CARB determined that the target statewide 2030 emissions limit is 260 $MMTCO_2e$, and that further commitments will need to be made to achieve an additional reduction of 50 $MMTCO_2e$ beyond current policies and programs. Key elements of the 2017 Update include a proposed 20 percent reduction in GHG emissions from refineries and an expansion of the Cap-and-Trade program to meet the aggressive 2030 GHG emissions goal.

Regional

SCAQMD Draft Guidance Regarding Interim CEQA GHG Significance Thresholds

SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds. In its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target (e.g., 30 percent) 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 for stationary source/industrial projects where the SCAQMD is lead agency. has Although SCAQMD formed a GHG Significance Threshold Working Group to evaluate potential GHG significance thresholds, SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects). The draft tier thresholds recommended by the SCAQMD Working Group were developed more than a decade ago and were never authorized as guidance for GHG analyses. As a result, the SCAQMD draft thresholds are not used in this analysis.

SCAG 2020 Connect SoCal Plan RTP/SCS

On September 3, 2020, the Southern California Association of Governments (SCAG) Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020-2045 Regional Transportation Plan/Sustainable Communities Strategy [RTP/SCS]).

Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. It charts a path toward a more mobile, sustainable and prosperous region by making connections between transportation networks, between planning strategies and between the people whole collaboration can improve the quality of life for Southern Californians. In addition, Connect SoCal is supported by a combination of transportation and land use strategies that outline how the region can achieve California's greenhouse gas emission reduction goals and federal CAA requirements. The plan also strives to achieve broader regional objectives, such as the preservation of natural lands, improvement of public health, increased roadway safety, support for the region's vital goods movement industries and more efficient use of resources.

3.3 Thresholds and Methodology

Thresholds of Significance

The impact analysis provided below is based on the application of the following California Environmental Quality Act (CEQA) Guidelines Appendix G, which indicates that a project would have a significant impact on GHG emissions if it would:

1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with an applicable plan, policy or regulations adopted for the purpose of reducing the emissions of greenhouse gas emissions.

Methodology

GHG emissions and climate change were evaluated in accordance with Appendix G of the *CEQA Guidelines*. *CEQA Guidelines* Section 15064.4 states that, when making a determination with respect to the significance of a project's GHG emissions, a lead agency shall have discretion to determine whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; and/or (2) Rely on a qualitative analysis or performance-based standards. Section 15064.4 also states that a lead agency should consider the following factors when assessing the significance of the impact of GHG emissions on the environment: (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting; (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

GHG emissions were calculated in the same CalEEMod model used to determine the proposed project's criteria air pollutant emissions. Consistent with SCAQMD recommendations, construction emissions were amortized over a thirty-year period and added to the annual operational emissions to determine annual GHG emissions. Consistent with *CEQA Guidelines* Section 15064(h)(3), Project significance was determined based on the proposed project's consistency 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. CARB's 2017 Scoping Plan and SCAG's 2020 Connect SoCal Plan apply to the project and are intended to reduce GHG emissions to meet the statewide targets set in Senate Bill (SB) 32. Thus, the project would not have a significant effect on the environment if it is found to be consistent with CARB's 2017 Scoping Plan and SCAG's 2020 Connect SoCal Plan.

3.4 Greenhouse Gas Project Impacts and Mitigation Measures

Impact 1 **Would implementation of the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? *(Less than Significant).***

Both construction period and operational period activities would have the potential to generate GHG emissions.

Construction Emissions

The proposed project would generate GHG emissions during temporary, short-term construction activities such as demolition, site preparation and grading, running of construction equipment engines, movement of on-site heavy-duty construction vehicles, hauling of materials to and from the site, asphalt paving, and construction worker motor vehicle trips.

Through CalEEMod, project GHG emissions throughout project construction were calculated from off-road equipment usage, hauling vehicles, delivery, and worker trips to and from the site. The total GHG construction emissions over the approximately 2.5-year construction period of the proposed project would be approximately 2,630 MT CO2e. As GHG emissions from construction activities would occur over a relatively short time span, these emissions would contribute a relatively small portion of the lifetime GHG emissions of the proposed project. The total construction GHG emissions were divided by 30 to determine an annual construction emission rate to be amortized over the proposed project's first 30 years of operational life, consistent with CEQA analysis across the state. Amortized over a 30-year period, the proposed project is anticipated to emit approximately 87.7 MT CO2e/year.

Operational Emissions

The proposed project includes an Innovation Hub, retail uses, residential uses, and on-site parking. GHG emissions would be generated from area, energy, and mobile-sources as the site will generate vehicle trips from residents, employees, and visitors. Area source emissions are based on project's land uses and land use sizes, GHG emission factors for fuel combustion, and the global warming potential (GWP) values for the GHGs emitted. Electricity usage emissions are based on the land uses, default demand factors for the land use, GHG emission factors for the utility provider, and the GWP values of the GHGs emitted. Mobile-source GHG emissions are determined based on the project's estimated annual VMT, which is calculated in CalEEMod based on the daily trip generation rates provided in the project's traffic report. Waste and water emissions are derived from the anticipated water usage and wastewater generated based on the project's proposed land uses and the associated water demand factors.

The estimated total net annual project emissions, including operation emissions and amortized construction emissions, are detailed in **Table 12, Proposed Project Greenhouse Gas Emissions**.

Table 12
Proposed Project Greenhouse Gas Emissions

Emissions Source	Metric Tons of Carbon Dioxide Equivalent (per year)
Amortized Construction	87.7
Area Sources	89.2
Energy Sources	1,158
Mobile Sources	1,505
Waste Sources	95
Water Sources	218
Total GHG Emissions	**3,153**

Source: Impact Sciences, 2020.

As shown in **Table 12**, the project's combined long-term net operational emissions and amortized construction emissions would be approximately 3,153 MT CO2e/year. The quantification of GHG emissions is provided for informational purposes while significance is based on the project's consistency with statewide and regional policies and plans to meet the state reduction goals set in SB 32, including CARB's 2017 Scoping Plan and SCAG's 2020 Connect SoCal RTP/SCS, see **Impact 2**.

Impact 2 **Would implementation of the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? *(Less than Significant).***

The proposed project would have a significant impact with respect to GHG emissions and global climate change if it would substantially conflict with the provisions of Section 15064.4(b) of the *CEQA Guidelines.*

Pursuant to Appendix G of the *CEQA Guidelines*, a significant GHG impact is identified if the project could conflict with applicable GHG reduction plans, policies, or regulations. Development projects would be subject to complying with SB 32, and SCAG's Connect SoCal Plan. SB 32 is a statewide reduction goal aimed at reducing emissions to 40% below 1990 levels by 2030. CARB's 2017 Scoping Plan sets a framework for the State to meet the reduction targets of SB 32.

Consistency with the Final 2017 Scoping Plan Update

CARB issued the Final 2017 Scoping Plan Update in November 2017 and establishes emissions reduction strategies necessary to meet SB 32's 2030 reduction goals. **Table 13, Project Consistency with Applicable 2017 Scoping Plan Greenhouse Gas Emission Reduction Strategies**, identifies the Scoping Plan policies that are applicable to the proposed project. As shown, the proposed project would be consistent with the Scoping Plan.

Table 13
Project Consistency with CARB 2017 Scoping Plan
Greenhouse Gas Emission Reduction Strategies

Strategy	Project Consistency
Implement SB 350 by 2030: • Increase the Renewables Portfolio Standard to 50 percent of retail sales by 2030 and grid reliability • Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030. • Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in the IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly-owned utilities meet GHG emissions planning targets through a combination of measures as described in IRPs.	**Not Applicable.** The measure is not related to development projects but intended for energy providers. **Not Applicable.** This measure is directed towards policymakers, not development projects. However, the proposed project is designed to meet CALGreen building standards by including measures designed to reduce energy consumption. **Consistent.** The proposed project will be required to adhere to the latest CALGreen building Codes and Title 24, which will result in a more efficient project site.
Implement Mobile Source Strategy (Cleaner Technology and Fuels): Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."	**Not Applicable.** This measure is directed towards policymakers, not development projects.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road use, parking pricing, transit discounts).	**Not Applicable.** This measure is directed towards policymakers, not development projects.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	**Not Applicable.** This measure is directed towards CARB, CalRecycle, CDFA, SWRCB, and local air districts. However, the statewide policy goals of 75 percent of solid waste generated be source reduce, recycled, or composted by 2020 under AB 341. Since the project will be operational after this year, the project's waste collection service will be required to be compliant with this waste reduction.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	**Consistent**. The proposed project will be required to adhere to the latest CALGreen Building Standards and Title 24.

Source: Impact Sciences, 2020.

CARB. California's 2017 Climate Change Scoping Plan. Available online at: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, *accessed February 20, 2020.*

Based on this evaluation, this analysis finds the project would be consistent with all feasible and applicable strategies recommended in the 2017 Scoping Plan Update.

Consistency with SCAG's Connect SoCal Plan

At the regional level, the Connect SoCal RTP and SCS represent the region's Climate Action Plan that defines strategies for reducing GHGs. In order to assess the project's potential to conflict with Connect SoCal, this section analyzes the project's land use profile for consistency with those in the SCS. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as SCAG's SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals.

Table 14, **Project Consistency with SCAG Connect SoCal**, demonstrates the project's consistency with the strategies set forth in the Connect SoCal Plan. The project would also be consistent with the applicable strategies set forth in Connect SoCal's "A Path to Greater Access, Mobility, & Sustainability" chapter. Therefore, the project would be consistent with the GHG reduction related actions and strategies contained in Connect SoCal.

Table 14
Project Consistency with SCAG Connect SoCal Plan

Actions and Strategies	Consistency Analysis
Focus Growth Near Destinations & Mobility Options	
Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations	**Consistent:** The proposed project would construct 300 residential units and retail space approximately 0.43 miles from the Metro A (Blue) line Compton station.
Focus on job/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets	**Consistent:** The proposed project includes a mix of jobs and housing located within 0.43 miles of the Metro A (Blue) line Compton station.
Plan for growth near transit investments and support implementation of first/last mile strategies	**Consistent:** The proposed project would construct 300 residential units and commercial space approximately 0.43 miles from the Metro A (Blue) line Compton station. The proposed project will include on-site bicycle parking that will promote active transportation and storage.
Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses	**Consistent:** The proposed project would redevelop a portion Compton Boulevard. The site currently sits empty but was previously developed with vacant commercial space.
Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods	**Consistent:** The proposed project will develop an underutilized property in the City with a mixed-use development with residential units, job opportunities, and retail located near major transit and an existing residential neighborhood.

Actions and Strategies	Consistency Analysis
Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations)	**Consistent:** The proposed project would construct 300 residential units and commercial space approximately 0.43 miles from the Metro A (Blue) line Compton station. The proposed project will include on-site bicycle parking that will promote active transportation.
Promote Diverse Housing Choices	
Preserve and rehabilitate affordable housing and prevent displacement	**Consistent:** The proposed project would be constructed on an underutilized site and would not displace any affordable housing units. Instead, the proposed project will construct housing in the area and is exploring funding options for affordable housing units.
Identify opportunities for new workforce and affordable housing development	**Consistent:** The proposed project is a mixed-use development with 300 residential units, some of which will likely be occupied by employees of the proposed Innovation Hub and retail. The proposed project is exploring funding options for affordable housing units.
Leverage Technology Innovations	
Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space	**Not Applicable:** This strategy is aimed at local government to promote shared bikes and scooters, electric vehicles, ride sharing and provide safe infrastructure such dedicated lanes, charging and parking/ drop-off space, the proposed project would not interfere with such policymaking.
Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation	**Not Applicable:** The proposed project would not interfere with this goal.
Support Implementation of Sustainability Policies	
Pursue funding opportunities to support local sustainable development implementation projects that reduce GHG emissions	**Consistent:** The proposed project is planning to apply for grants that would construct active public transportation projects that reduce GHG.
Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations	**Not Applicable:** While this strategy calls on the state to adopt policies to new construction near transit corridors and stations, the proposed project would not interfere with such policymaking and would construct a mixed-use development within a half mile of a major transit stop.
Support cities in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects	**Not Applicable:** While this strategy calls on cities to establish tax incentive or other value capture tools to finance sustainable infrastructure, the proposed project would not interfere with such policymaking.
Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies	**Not Applicable:** While this strategy calls on SCAG to work with local jurisdictions to identify ways to implement sustainable strategies, the proposed project would not interfere with such policymaking.
Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region	**Not Applicable:** While this strategy calls on planning organizations to promote resources and best practices in SCAG, the proposed project would not interfere with such policymaking.
Continue to support long range planning efforts by local jurisdictions	**Not Applicable:** While this strategy calls on local jurisdictions to support long range planning, the proposed project would not interfere with such policymaking.
Provide educational opportunities to local decisions makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	**Not Applicable:** While this strategy calls on local jurisdictions to provide educational opportunities on new tools and practices to promote the Sustainable Communities Strategy, the proposed project would not interfere with such policymaking.

Actions and Strategies	Consistency Analysis
Promote a Green Region	
Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards.	**Not Applicable:** While this strategy calls on local jurisdictions to support the development of local climate adaptation and hazard mitigation plans, the project would not interfere with this goal.
Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration	**Not Applicable:** While this strategy calls on local governments to adopt policies for renewable energy production, the proposed project would not interfere with such policymaking.
Integrate local food production into the regional landscape	**Not Applicable:** While this strategy calls on local governments to integrate local food into the regional landscape, the proposed project would not interfere with such policymaking.
Promote more resource efficient development focused on conservation, recycling and reclamation	**Consistent.** The proposed project will be required to adhere to the latest CALGreen Building Codes and Title 24, which will result in a more efficient project site. Furthermore, during construction, the proposed project will be required to adhere to Compton Municipal Code §21-2 Diversion of construction and demolition waste, which requires the diversion of 75% of construction and demolition waste from landfills.
Preserve, enhance and restore regional wildlife connectivity	**Not Applicable:** The proposed project will be constructed in an existing urban setting. The project would not interfere with this goal.
Reduce consumption of resource areas, including agricultural land	**Consistent**. The proposed project will be constructed in an existing urban setting and, as a result, will not consume any resource areas or agricultural land.
Identify ways to improve access to public park space	**Not Applicable.** While this strategy calls on local governments to improve access to public park space, the Proposed Project would not interfere with this goal.

Source: Impact Sciences, 2020.
SCAG. 2019. Connect SoCal – The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy, Chapter 3: A Path to Greater Access, Mobility, & Sustainability. Available online at: https://www.connectsocal.org/Documents/Draft/dConnectSoCal-03_Draft-Plan.pdf*, accessed October 19, 2020.*

Conclusion

The proposed project places a mix of residences, amenities and jobs within walking distance of the Metro A Line (Blue). The proposed project also plans to implement streetscape improvements and provide bicycle parking on-site in order to promote pedestrians and bicycle travel. As a result, the project is consistent with CARB's 2017 Scoping Plan and SCAG's Connect SoCal 2020 RTP/SCS. Furthermore, the proposed project will be constructed consistent with CALGreen Building Code and Title 24 which will reduce on-site GHG emissions from area and energy sources. For these reasons, the proposed project would have a less than significant impact in regard to GHG emissions.

REFERENCES

California Air Resources Board. 2016. *Ambient Air Quality Standards*. Available online at: https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf.

CARB. *California's 2017 Climate Change Scoping Plan*. Available online at: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, accessed February 20, 2020.

California Air Resources Board. *Air Quality Data Statistics*. Available: http://www.arb.ca.gov/adam/.

Caltrans. *Traffic Census Program.* Available: https://dot.ca.gov/programs/traffic-operations/census.

City of Compton. 2011. Draft Compton General Plan. Available: http://www.comptoncity.org/civicax/filebank/blobdload.aspx?BlobID=24243.

Intergovernmental Panel on Climate Change. 2013. Climate Change 2013: The Physical Science Basis. Available online at: http://www.climatechange2013.org/.

Los Angeles Unified School District. 2020. 2020 Developer Fee Justification Study. Available online at: https://achieve.lausd.net/cms/lib/CA01000043/Centricity/Domain/921/LAUSD%20Dev%20Fee%20Study%202020_Final.pdf.

SCAG. 2019. *Connect SoCal – The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy, Chapter 3: A Path to Greater Access, Mobility, & Sustainability*. Available online at: https://www.connectsocal.org/Documents/Draft/dConnectSoCal-03_Draft-Plan.pdf, accessed February 20, 2020.

South Coast Air Quality Management District. 1976. *Rule 402. Nuisance*. Available: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf?sfvrsn=4.

South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook*.

South Coast Air Quality Management District. 2005. *Rule 403. Fugitive Dust*. Available: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf.

South Coast Air Quality Management District. 2008. *Final Localized Significance Threshold Methodology*. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2.

South Coast Air Quality Management District. 2009. *Appendix C – Mass Rate LST Look-Up Tables*. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2.

South Coast Air Quality Management District. 2014. *Application of the South Coast Air Quality Management District for Leave to File of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Clube, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.*

South Coast Air Quality Management District. 2016. *Rule 1113. Architectural Coatings*. Available: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf?sfvrsn=24.

South Coast Air Quality Management District. 2003. *Final 2003 AQMP Appendix V Modeling and Attainment Demonstrations*. Available: www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2003-air-quality-management-plan/2003-aqmp-appendix-v.pdf?sfvrsn=2.

South Coast Air Quality Management District. 2008. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plan. Available online at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2.

South Coast Air Quality Management District. 2017. *Final 2016 Air Quality Management Plan*. Available: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15.

South Coast Air Quality Management District. 2017. *Rule 1401. New Source Review of Toxic Air Contaminants*. Available: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1401.pdf?sfvrsn=4.

South Coast Air Quality Management District. 2019. *South Coast AQMD Air Quality Significance Thresholds*. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2.

South Coast Air Quality Management District. *Greenhouse Gases (GHG) CEQA Significance Thresholds.* Available online at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds/page/2.

South Coast Air Quality Management District. Chapter 3 – Interim GHG Significance Threshold Staff Proposal. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqasignificance-thresholds/ghgattachmente.pdf?sfvrsn=2

South Coast Air Quality Management District. *National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin*. Available: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf.

U.S. Environmental Protection Agency. 2018. *Monitor Values Report*. Available: https://www.epa.gov /outdoor-air-quality-data/monitor-values-report.

U.S. Environmental Protection Agency. *Carbon Monoxide Emissions*. Available: https://cfpub.epa.gov/roe /indicator.cfm?i=10.

U.S. Environmental Protection Agency. *What is a MERV rating?* 2020. Available: https://www.epa.gov /indoor-air-quality-iaq/what-merv-rating-1.

US Environmental Protection Agency. 2013. Overview of Greenhouse Gases. Available online at: https://www.epa.gov/ghgemissions/overview-greenhouse-gases. Accessed on August 11, 2018.

ATTACHMENT A

CalEEMod Output Files