

## 4.2 Air Quality

This section evaluates the potential for construction and operational air quality impacts associated with the implementation of the Project and describes the affected environment and regulatory setting for air quality. Information in this section is based on the *Air Quality Emissions Assessment* prepared by Michael Baker International (Michael Baker International, 2017a). The report is summarized in this section and included as Appendix B to this EIR.

### 4.2.1 REGULATORY SETTING

#### **Federal**

##### ***Clean Air Act***

Federal air quality regulations were first established with the federal Clean Air Act of 1970. The U.S. Environmental Protection Agency (USEPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. Under the federal Clean Air Act, states retain the option to adopt more stringent standards or to include other specific pollutants. 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 USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether 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 designation. Federal criteria air pollutants are those identified by the USEPA to be of concern with respect to the health and welfare of the general public. As a part of its enforcement responsibilities, the USEPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain and maintain federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution by using a combination of performance standards and market-based programs within the SIP-identified timeframe.

##### ***National Emissions Standards for Hazardous Air Pollutants Program***

Under federal law, 188 substances are 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 USEPA is establishing regulatory schemes for specific source categories and requires implementation of Maximum Achievable Control Technologies (MACTs) 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 in California. The State has formally identified 244 substances as Toxic air contaminants (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.

## **State**

### ***California Clean Air Act***

The federal Clean Air Act (FCAA) allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. California Air Resources Board (CARB), a part of the California Environmental Protection Agency, is responsible for the coordination and administration of federal and State air pollution control programs within California, including setting the California ambient air quality standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts.

In addition to standards set for the six criteria pollutants, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Further, in addition to primary and secondary ambient air quality standards, the State has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health.

### ***California State Implementation Plan***

The federal Clean Air Act (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the 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 federal Clean Air Act Amendments dictate that states containing areas violating the national ambient air quality standards 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 Clean Air Act. The USEPA has the responsibility to review all State Implementation Plans to determine if they conform to the requirements of the Clean Air Act.

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 USEPA for approval and publication in the Federal Register. The *2016 Air Quality Management Plan* (2016 AQMP) is the SIP for the South Coast Air Basin (SCAB). The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air in the air basin and those portions of the Salton Sea Air Basin (SSAB) that are under the South Coast Air Quality Management District's (SCAQMD's) jurisdiction. 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 partnership 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 a regional and multi-level partnership of governmental agencies at the federal, State, regional, and local level. These agencies (USEPA, 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 latest *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.

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

The California Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) is a state-wide program enacted in 1987. AB 2588 requires facilities that exceed recommended Office of Environmental Health Hazard Assessment levels to reduce risks to acceptable levels.

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 USEPA as hazardous air pollutants and by CARB as toxic air contaminants. 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.

In September 2000, CARB adopted a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce diesel PM emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. As part of this plan, CARB identified Airborne Toxic Control Measures (ATCM) for mobile and stationary emissions sources. Each ATCM is codified in the California Code of Regulations (CCR), including the ATCM to limit diesel-fueled commercial motor vehicle idling, which puts limits on idling time for large diesel engines (13 CCR Chapter 10 Section 2485).

### **Regional and Local**

#### ***South Coast Air Quality Management District***

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that the federal and State ambient air quality standards are attained and maintained in the air basin. 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.

#### **General Plan**

The General Plan for the City of Newport Beach was adopted in 2006. As Newport Beach is almost fully built out, the General Plan establishes policies for the development and long-term maintenance of the adopted pattern of land uses. The Natural Resources Element of the General Plan provides direction regarding the conservation, development, and utilization of natural resources and addresses air quality, among many resources. The specific General Plan goals and policies that could result in reduction of air

pollutant emissions for the Proposed Project are addressed in Section 4.9, *Land Use and Planning* of this EIR.

## 4.2.2 AIR POLLUTANTS OF CONCERN

### **Criteria Air Pollutants**

Air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), coarse particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), lead, and fugitive dust are primary air pollutants. Of these, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are criteria pollutants. ROG and NO<sub>x</sub> are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere (for example, ozone (O<sub>3</sub>) is formed by a chemical reaction between ROG and NO<sub>x</sub> in the presence of sunlight). O<sub>3</sub> and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in *Table 4.2-1*.

### **Toxic Air Contaminants**

Toxic air contaminants (TACs) are considered 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 effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

To date, CARB has designated 244 compounds as TACs (CARB, 1999). 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, most importantly particulate matter from diesel fuel engines.

**Table 4.2-1. Criteria Air 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 fuel 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 <sub>2</sub> )	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor 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 <sub>3</sub> )	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 (PM <sub>10</sub> & PM <sub>2.5</sub> )	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 <sub>2</sub> )	A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from oil; or when metal 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: Michael Baker International, 2017a.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. 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 particles 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. 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.

### 4.2.3 EXISTING CONDITIONS

Air quality in a region is determined by the region's topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the air basin, which encompasses the project site.

#### **Climate and Meteorology**

The CARB divides the State into air basins that share similar meteorological and topographical features. Newport Beach lies in the South Coast Air Basin, which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The air basin is on a coastal plain with connecting broad valleys and low hills and is bound by the Pacific Ocean on the southwest, with high mountains forming the remainder of the perimeter.

The Air Basin is part of a semi-permanent high pressure zone in the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. In contrast to a 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 scattered thundershowers near the coast, with heavier shower activity in the east and over the mountains. Although the air basin 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 air basin by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent, and low clouds are a characteristic climatic feature.

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 air basin, 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 air basin generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

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 Newport Beach.

### **Sensitive Air Quality 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 cardiorespiratory diseases.

Residential areas are considered sensitive receptors to air pollution 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. 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. The project site is a surface parking area for the office uses. The area around the site is primarily commercial and office uses. Currently, the closest sensitive receptors are multi-family residences located on the northeast corner of Campus Drive at Jamboree Road, approximately 1,410 feet northeast of the project site. However, Phase I of the Uptown Newport development is currently under construction and could have occupied residences during construction of the Project. Uptown Newport is located southeast of the project site along Jamboree Road (see Figure 4.1-1).

### **Criteria Air Pollutant Monitoring Data**

Ambient air quality in Newport Beach can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections near Newport Beach are documented by measurements made by the SCAQMD. Ozone and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) are pollutants of particular concern in the air basin. The Mission Viejo Monitoring Station, located at 26081 Via Pera in the City of Mission Viejo, is approximately 11 miles southeast of the project site. This station monitors ambient concentrations of ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. The ambient emission concentrations vary due to localized variations in emission sources and climate and are considered generally representative of ambient concentrations in Newport Beach. *Table 4.2-2* summarizes published data for the Mission Viejo Monitoring Station for 2013 to 2015, the latest year that data is available.

Pollutant Standards	2013	2014	2015
<b>Ozone</b>			
Max 1-hour concentration (ppm)	0.104	0.115	0.099
Max 8-hour concentration (ppm) (State/federal)	0.082 / 0.082	0.088 / 0.088	0.088 / 0.088
Number of days above State 1-hr standard	2	4	2
Number of days above State/federal 8-hour standard	5 / 5	10 / 10	8 / 8
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>			
Max 24-hour concentration (µg/m <sup>3</sup> ) (State/federal)	50.0 / 51.0	40.0 / 41.0	48.0 / 49.0
Number of days above State/federal standard	0 / 0	0 / 0	* / *
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>			
Max 24-hour concentration (µg/m <sup>3</sup> ) (State/federal)	28.0 / 28.0	25.5 / 25.5	31.5 / 31.5
Number of days above federal standard	0	*	0
µg/m <sup>3</sup> = micrograms per cubic meter; ppm = parts per million * Insufficient data to determine the value Source: Michael Baker International, 2017a.			

### **Ambient Air Quality Attainment Status**

Based on monitored air pollutant concentrations, the USEPA and CARB designate an area's "attainment status" for the criteria pollutants. 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. Areas for which there is insufficient data available are designated unclassified. The region is designated as a nonattainment area for the federal and State standards for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. *Table 4.2-3* identifies the attainment status in the air basin for the criteria pollutants.

Pollutant	State Designation	Federal Designation
Ozone (O <sub>3</sub> )	Nonattainment	Nonattainment
Coarse Particulate Matter (PM <sub>10</sub> )	Attainment/Serious Maintenance	Nonattainment
Fine Particulate Matter (PM <sub>2.5</sub> )	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance	Unclassified/Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment/Maintenance	Unclassified/Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Unclassified/Attainment	Attainment
Source: Michael Baker International, 2017a.		

#### 4.2.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from the City of Newport Beach Environmental Checklist. A significant impact related to air quality would occur if the Proposed Project would:

- Threshold 4.2-1** Conflict with or obstruct implementation of the applicable air quality plan.
- Threshold 4.2-2** Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Threshold 4.2-3** Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Threshold 4.2-4** Expose sensitive receptors to substantial pollutant concentrations.
- Threshold 4.2-5** Create objectionable odors affecting a substantial number of people.

Appendix G of the State CEQA Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district (e.g., SCAQMD) may be relied upon to make the above determinations. The SCAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in *Table 4.2-4*. The SCAQMD thresholds have been developed to ensure attainment of the NAAQS and CAAQS. Both the SCAQMD CEQA Handbook and the 2016 AQMP address attaining the NAAQS and CAAQS.

<b>Air Pollutant</b>	<b>Construction Activities</b>	<b>Operations</b>
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO <sub>x</sub> )	100	55
Sulfur Oxides (SO <sub>x</sub> )	150	150
Coarse Particulates (PM <sub>10</sub> )	150	150
Fine Particulates (PM <sub>2.5</sub> )	55	55

a. Pounds per day  
Source: Michael Baker International, 2017.

In addition to the daily thresholds listed above, development associated with the Proposed Project would also be subject to the ambient air quality standards. These are addressed through an analysis of localized CO impacts. The California 1-hour and 8-hour CO standards are:

- 1-hour = 20 parts per million
- 8-hour = 9 parts per million

The significance of localized impacts depends on whether ambient CO levels near the project site are above State and federal CO standards. The air basin has been designated as in attainment under the federal and State ambient air quality standards for CO.

### **Localized Significance Thresholds**

The SCAQMD has localized significance thresholds (LSTs) for emissions of NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> generated at new development sites; off-site mobile source emissions are not included in the LST analysis. LSTs represent the maximum emissions that can be generated at a project site without expecting to cause or substantially contribute to an exceedance of the most stringent federal or State ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. A LST analysis for construction is applicable for all projects that disturb five acres or less on a single day. Newport Beach is located within North Coastal Orange County Area SRA 18. *Table 4.2-5* shows the LSTs for a 1-acre, 2-acre, and 5-acre project site in SRA 18 with sensitive receptors located within 200 meters of the site.

Project Size	Pollutant (pounds per day)			
	Nitrogen Oxide (NO <sub>x</sub> )	Carbon Monoxide (CO)	Coarse Particulate Matter (PM <sub>10</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )
1 Acre	140 / 140	2,096 / 2,096	54 / 13	22 / 6
2 Acres	165 / 165	2,615 / 2,615	62 / 15	26 / 7
5 Acres	223 / 223	3,888 / 3,888	85 / 21	35 / 9

Source: Michael Baker International, 2017a

### **Toxic Air Contaminant Thresholds**

The SCAQMD regulates levels of air toxics through a permitting process for construction and operations. SCAQMD Rule 1401 applies to new and modified sources that use materials classified as air toxics. The SCAQMD CEQA Guidelines for permit processing consider the following types of projects significant:

- Any project involving the emission of a carcinogenic or toxic air contaminant identified in SCAQMD Rule 1401 that exceeds the maximum individual cancer risk (MICR) of 10 in one million if the project is constructed with best available control strategy for toxics (T-BACT) using the procedures in SCAQMD Rule 1401.
- Any project that could accidentally release an acutely hazardous material or routinely release a toxic air contaminant posing an acute health hazard.
- Any project that could emit an air contaminant not currently regulated by a SCAQMD rule, but that is on the federal or State air toxics list.

### **Methodology**

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the SCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (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.

#### 4.2.5 ENVIRONMENTAL IMPACTS

<b>Threshold 4.2-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?</b>
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As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain 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 California Clean Air Act requires an air quality attainment plan (AQMP) to be prepared for areas designated as nonattainment with federal and State ambient air quality standards. An AQMP outlines emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously addressed, the project site is located within the Air Basin, 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 air basin is in nonattainment. In order to reduce such emissions, the SCAQMD prepared the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving State and federal air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, the CARB, the Southern California Association of Governments (SCAG), and the USEPA. The 2016 AQMP's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 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 (including the 2006 *City of Newport Beach General Plan*).

Criteria for determining consistency with the AQMP are defined by the following indicators:

1. Whether a project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
2. Whether a project will exceed the assumptions in the AQMP based on the year of project buildout and phase.

With respect to the first criterion, based on the air quality modeling analysis conducted for the Proposed Project summarized later in this EIR section and provided in Appendix B, the construction of the Project would exceed  $\text{NO}_x$  thresholds in 2021 and result in a significant and unavoidable impact despite the implementation of mitigation (refer to the discussion under Threshold 4.2-2). Operation of the Project would not result in significant impacts based on the SCAQMD thresholds of significance. Therefore, Project operation would not increase the frequency or severity of existing air quality violations. However, due to exceedance of  $\text{NO}_x$  thresholds during the estimated 54-month (4.5-year) construction period and the fact that  $\text{NO}_x$  is a precursor to a nonattainment pollutant, the Project would potentially contribute to the

exceedance of NO<sub>x</sub> pollutant concentration standards. Therefore, Project construction would not be consistent with the first criterion and would potentially result in an increase in the frequency or severity of existing air quality violations or delay timely attainment of air quality standards despite the implementation of Mitigation Measure (MM) 4.2-1.

Concerning the second criterion, the 2016 AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts are defined in consultation with local governments and with reference to local general plans. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Therefore, the SCAQMD's second criterion for determining project consistency focuses on whether the Proposed Project exceeds the assumptions used in preparing the forecasts presented in the 2016 AQMP.

In the case of the 2016 AQMP, several sources of data form the basis for the projections of air pollutant emissions including the *City of Newport Beach General Plan* (General Plan), SCAG's *Growth Management Chapter of the Regional Comprehensive Plan* (RCP), and SCAG's RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth. The City's General Plan Land Use Map designates the project site as "Mixed Use Horizontal (MU-H2)". The MU-H2 designation applies to properties located in the Airport Area. It is intended to provide for the development of areas in a horizontally distributed mix of uses which may regional commercial office, multi-family residential, vertical mixed-use buildings, industrial, hotel rooms, and ancillary neighborhood commercial uses. The project site is zoned "Koll Center Newport Planned Community (PC-15 Koll Center)" and zoning regulations are provided in the Koll Center Planned Community Development Standards (PC Text) adopted by Ordinance No. 1449 and subsequently amended several times. Specifically, the project site is within Professional and Business Offices Site B of PC-15 Koll Center. PC-15 Koll Center includes all parcels bordered by Campus Drive to the northeast, Jamboree Road to the southeast, and MacArthur Boulevard to the southwest. PC-15 permits professional and business offices, hotels and motels, retail, restaurants and entertainment, a courthouse, private clubs, and auto detailing and service stations. Site B allows professional and business offices, restaurants, and support commercial uses.

The Project proposes to construct a mixed-use infill residential and retail development with 260 residential condominiums, 3,000 sf of ground-floor retail uses, a 1.17-acre public park, a free-standing parking structure, and the reconfiguration of some of the existing surface parking areas. The Project is consistent with the MU-H2 land use designation for the project site and would implement the City's General Plan goals and policies for this portion of the Airport Area because it would integrate a mix of residential and neighborhood-serving retail uses, as well as a public park into the existing Koll Center Newport business park. No change to the existing General Plan land use designation is required as a part of the City's consideration of the Proposed Project.

The Project is generally consistent with the types, intensity, and patterns of land use envisioned for the area in the RCP. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the cities; these are used by SCAG in all phases of implementation and review. Additionally, as SCAQMD incorporated these same projections into the 2016 AQMP, it can be concluded that the Project would be consistent with the projections. As a result, the Project would not exceed growth assumptions within the City's General Plan.

Therefore, the Project would be consistent with the 2016 AQMP and would not conflict with the second criterion.

Although the Project is consistent with the land use designation presented in the City's General Plan and would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP, Project construction would exceed NO<sub>x</sub> thresholds in 2021 and result in a significant and unavoidable impact despite the implementation of mitigation (refer to the discussion under Threshold 4.2-2). The Project would potentially contribute to the exceedance of NO<sub>x</sub> pollutant concentration standards. Therefore, Project construction would potentially result in an increase in the frequency or severity of existing air quality violations or delay timely attainment of air quality standards. Impacts would be significant and unavoidable.

**Impact Summary:** *Significant and Unavoidable Impact.* The AQMP provides controls sufficient to attain the federal and State ozone and particulate standards based on the long-range growth projections for the region. Although the Project does not exceed the assumptions in the AQMP, construction activities would exceed NO<sub>x</sub> thresholds. Therefore, Project construction would potentially result in an increase in the frequency or severity of existing air quality violations or delay timely attainment of air quality standards. The Project would potentially conflict with the AQMP.

**Threshold 4.2-2: Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

### ***Regional Construction Emissions***

Construction associated with the Proposed Project would generate criteria air pollutant emissions. Construction-generated emissions are relatively short term and of temporary duration, lasting only as long as construction activities occur, but are 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 demolition, 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 for the Project is estimated to be approximately 54 months. Approximately 2,366 tons of demolition material would be generated by the removal of approximately 819 parking spaces and landscape materials. In addition, the Project would require the net export of approximately 118,504 cubic yards of soil during the grading/site preparation phases.

Construction-generated emissions were calculated using CalEEMod, which is designed to model emissions for land use development projects based on typical construction requirements. Predicted maximum daily construction-generated emissions for the Proposed Project are identified in *Table 4.2-6*. As shown, all criteria pollutant emissions would remain below their respective thresholds except for NO<sub>x</sub> during 2021

due to the overlap of several sub-phases. NO<sub>x</sub> emissions are primarily generated by engine combustion in construction equipment, haul trucks, and employee commuting, requiring the use of newer construction equipment with better emissions controls would reduce construction-related NO<sub>x</sub> emissions. Therefore, MM 4.2-1 would require the Project to use diesel construction equipment that complies with Tier 3-level emissions standards during construction Phases 2 and 3 (years 2020-2022).

Construction Year	Pollutant (pounds per day) <sup>a, b</sup>					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO <sub>x</sub> )	Carbon Monoxide (CO)	Sulfur Dioxide (SO <sub>2</sub> )	Coarse Particulate Matter (PM <sub>10</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )
2018	5.22	47.13	35.14	0.14	8.02	2.73
2019	10.05	66.44	71.23	0.24	16.93	5.83
2020	9.17	74.02	66.72	0.24	16.66	5.57
2021	17.99	142.43	136.81	0.41	33.65	13.56
2022	9.83	79.08	76.81	0.27	26.03	9.67
<b>Highest of all Years</b>	<b>17.99</b>	<b>142.43</b>	<b>136.81</b>	<b>0.41</b>	<b>33.65</b>	<b>13.56</b>
SCAQMD Significance Threshold	75	100	550	150	150	55
<b>Exceed SCAQMD Threshold?</b>	No	<b>Yes</b>	No	No	No	No

a. Emissions were calculated using CalEEMod, as recommended by the SCAQMD.

b. Construction emission incorporate reductions/credits in CalEEMod that are required by the SCAQMD. The credits include the following: replace ground cover in disturbed areas quickly; water exposed surfaces two times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.

Source: Michael Baker International, 2017a.

Table 4.2-7 identifies construction emissions with the implementation of MM 4.2-1. It should be noted that Tier 4 certified equipment is generally available and would reduce short-term NO<sub>x</sub> emissions and these standards apply to new equipment. However, construction fleets typically include a mix of older and newer equipment and other non-Tier 4 equipment are still permitted to operate. Mitigation requiring all construction equipment to meet Tier 4 standards is not considered feasible because it means that the entire construction fleet would need to consist of new (or newly retrofitted) equipment. Additionally, Tier 4 equipment may not be available for all types of equipment. No other feasible mitigation measures exist that would reduce these emissions to levels that are less than significant. Despite the implementation of MM 4.2-1, construction exhaust emissions would remain significant and unavoidable.

Additionally, while PM<sub>10</sub> and PM<sub>2.5</sub> emissions would not exceed thresholds, the Proposed Project would be subject to SCAQMD Rules 402, 403, and 1113, as set forth in Standard Conditions 4.2-1 and 4.2-2 to further reduce specific construction-related emissions. Table 4.2-6 and Table 4.2-7 identify Project emissions with the implementation of the applicable reduction measures required by SCAQMD Rules.

Construction Year	Pollutant (pounds per day) <sup>a, b, c</sup>					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO <sub>x</sub> )	Carbon Monoxide (CO)	Sulfur Dioxide (SO <sub>2</sub> )	Coarse Particulate Matter (PM <sub>10</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )
2018	3.55	44.24	40.90	0.14	6.29	2.24
2019	7.62	60.08	71.99	0.24	13.31	4.75
2020	7.08	62.86	67.83	0.24	13.33	4.67
2021	11.17	118.47	145.25	0.41	23.64	10.03
2022	7.25	69.88	85.09	0.27	17.42	6.64
<b>Highest of all Years</b>	<b>11.17</b>	<b>118.47</b>	<b>145.25</b>	<b>0.41</b>	<b>23.64</b>	<b>10.03</b>
SCAQMD Significance Threshold	75	100	550	150	150	55
<b>Exceed SCAQMD Threshold?</b>	No	<b>Yes</b>	No	No	No	No

a. Emissions were calculated using CalEEMod, as recommended by the SCAQMD.  
 b. Construction emission incorporate reductions/credits in CalEEMod that are required by the SCAQMD. The credits include the following: replace ground cover in disturbed areas quickly; water exposed surfaces two times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.  
 c. Mitigation includes the use of CARB certified Tier 3 engines.

Source: Michael Baker International, 2017a.

**Localized Construction Emissions**

The nearest sensitive receptors to the project site are currently the multi-family residences located approximately 1,410 feet northeast of the site. However, Uptown Newport Phase I is currently under construction and would likely be occupied during construction of the Proposed Project. Additionally, Phase 1 (Residential Building 1) of the Project would be occupied during construction of Phase 2 (Residential Buildings 2 and 3) and Phase 3 (public park and parking reconfiguration). These receptors would all be adjacent to the construction area. The SCAQMD LST methodology 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. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. In order to be conservative, LSTs for receptors located at 25 meters were used (according to the SCAQMD LST guidance, the 25-meter threshold should be used for receptors located 25 meters away or less).

Table 4.2-8 presents the results of localized emissions during construction activity. The LSTs reflect a maximum disturbance of five acres daily assumed for the Proposed Project. Using a five-acre LST threshold is conservative as it discounts the dispersion factor inherent with a bigger site. The table shows that the emissions of these pollutants on the peak day of construction would exceed PM<sub>10</sub> and PM<sub>2.5</sub> thresholds despite compliance with SCAQMD Rule 403 fugitive dust control measures. These impacts are due to the intensity of construction work and the timing and overlap of the construction phases. No additional

mitigation measures are available to further reduce emissions. Therefore, localized impacts would be significant and unavoidable during Phase 2 and Phase 3 construction activities.

<b>Table 4.2-8. Localized Significance of Construction Emissions</b>				
<b>Activity</b>	<b>Pollutant (pounds per day) <sup>a,b</sup></b>			
	<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	<b>Carbon Monoxide (CO)</b>	<b>Fine Particulate Matter (PM<sub>10</sub>)</b>	<b>Coarse Particulate Matter (PM<sub>2.5</sub>)</b>
<b>Sequential Phases</b>				
Phase A: Site Clearing/ Excavation (2018)	10.59	14.90	0.85	0.71
Phase A: Concrete and Rough/ Finish (2018)	17.73	20.88	0.84	0.84
Phase A: Landscaping (2018)	9.79	11.79	0.49	0.49
Phase 1: Site Demolition/ Clearing (2018)	10.59	14.90	1.43	0.80
Phase 1: Shoring (2018)	16.90	15.54	1.00	0.81
Phase 1: Excavation (2018)	9.11	13.50	0.53	0.53
Phase 1: Excavation (2019)	9.11	13.50	0.53	0.53
Phase 1: Foundation (2019)	17.84	21.90	1.13	1.13
Phase 1: Structural Concrete, Rough Interior Fit Out, and Interior Finish Fit Out (2019)	18.68	22.64	1.18	1.18
Phase 1: Structural Concrete, Rough Interior Fit Out, and Interior Finish Fit Out (2020)	18.68	22.64	1.18	1.18
Phase 1: Landscaping (2020)	9.79	11.79	0.49	0.49
Phase 2: Site Demolition/ Clearing (2020)	21.18	29.81	1.96	1.47
Phase 2: Shoring (2020)	27.59	30.52	1.44	1.30
Phase 2: Excavation (2020)	19.10	28.18	1.12	1.12
Phase 2: Foundation (2020)	35.69	43.79	2.26	2.26
Phase 2: Foundation (2021)	35.69	43.79	2.26	2.26
<i>SCAQMD Localized Screening Threshold (5 acres of disturbance at 25 meters)</i>	<i>197</i>	<i>1,711</i>	<i>14</i>	<i>9</i>
<b>Significant?</b>	No	No	No	No
<b>Overlapping Phases<sup>c</sup></b>				
Phase 2: Structural Concrete, Rough Interior Fit Out (2021)	38.01	46.89	2.38	2.38
Phase 3: Site Demolition/ Clearing (2021)	18.31	24.67	1.21	0.92
Phase 3: Grading (2021)	34.07	42.24	5.29	3.12
Phase 2: Rough Interior Fit Out and Interior Finish Fit Out (2022)	2.32	3.10	0.12	0.12
Phase 2: Landscaping (2022)	19.59	23.58	0.97	0.97
Phase 3: Grading (2022)	34.07	42.24	5.29	3.12
Phase 3: Reconfigure Parking Lot (2022)	7.00	10.48	0.40	0.40

Activity	Pollutant (pounds per day) <sup>a,b</sup>			
	Nitrogen Oxide (NO <sub>x</sub> )	Carbon Monoxide (CO)	Fine Particulate Matter (PM <sub>10</sub> )	Coarse Particulate Matter (PM <sub>2.5</sub> )
<b>Total Overlapping Phases</b>	<b>153.37</b>	<b>193.20</b>	<b>15.66</b>	<b>11.03</b>
<i>SCAQMD Localized Screening Threshold (5 acres of disturbance at 25 meters)</i>	<i>197</i>	<i>1,711</i>	<i>14</i>	<i>9</i>
<b>Significant?</b>	No	No	Yes	Yes

a. Emissions are on-site only and do not include emissions associated with hauling, deliveries, or worker trips.  
 b. Construction emission incorporate fugitive dust reductions/credits in CalEEMod that are required by the SCAQMD. The credits include the following: replace ground cover in disturbed areas quickly; water exposed surfaces two times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.  
 c. Later Phase 2 construction activities would overlap (i.e., occur simultaneously) with each other as well as with Phase 3 activities. The emissions from these individual activities are combined, as they could potentially occur on-site at the same time.

Source: Michael Baker International, 2017a.

**Regional Operational Emissions**

Project-generated emissions would be associated with mobile source emissions from motor vehicle use, energy emissions from energy consumption, and area sources generated by the use of natural-gas-fired appliances, landscape maintenance equipment, consumer products, and architectural coatings. Operational emissions attributable to the Project are summarized in *Table 4.2-9*.

*Mobile Source Emissions.* Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are all pollutants of regional concern (NO<sub>x</sub> and ROG react with sunlight to form O<sub>3</sub> [photochemical smog], and wind currents readily transport SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using CalEEMod. This model predicts ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from motor vehicle traffic associated with new or modified land uses. The *Traffic Impact Study* notes that the Proposed Project would generate 1,207 daily trips at buildout (*Table 4.2-9*).

*Area Source Emissions.* Area source emissions would be generated due to an increased demand for consumer products, architectural coating, and landscaping. Area source emissions from the Proposed Project would not exceed SCAQMD thresholds for ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub> (*Table 4.2-9*).

<b>Table 4.2-9. Operational Emissions</b>						
<b>Source</b>	<b>Pollutant (pounds per day)</b>					
	<b>Reactive Organic Gases (ROG)</b>	<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	<b>Carbon Monoxide (CO)</b>	<b>Sulfur Dioxide (SO<sub>2</sub>)</b>	<b>Coarse Particulate Matter (PM<sub>10</sub>)</b>	<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>
<b>Summer Emissions</b>						
Area	6.89	4.13	23.19	0.03	0.43	0.43
Energy	0.09	0.77	0.33	0.00	0.06	0.06
Mobile	1.66	6.41	20.69	0.08	7.20	1.96
<i>Total Summer Emissions</i>	<i>8.64</i>	<i>11.31</i>	<i>44.21</i>	<i>0.11</i>	<i>7.69</i>	<i>2.45</i>
<b>Winter Emissions</b>						
Area	6.89	4.13	23.19	0.03	0.43	0.43
Energy	0.09	0.77	0.33	0.00	0.06	0.06
Mobile	1.63	6.57	19.90	0.08	7.20	1.96
<i>Total Winter Emissions</i>	<i>8.61</i>	<i>11.47</i>	<i>43.42</i>	<i>0.11</i>	<i>7.69</i>	<i>2.45</i>
SCAQMD Threshold	55	55	550	150	150	55
<b>Exceed SCAQMD Threshold?</b>	No	No	No	No	No	No
Note: emissions rates differ from summer to winter because weather factors are dependent on the season, and these factors affect pollutant mixing/dispersion, ozone formation, etc. Source: Michael Baker International, 2017a.						

**Energy Source Emissions.** Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the Proposed Project. The primary use of electricity and natural gas by the Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. The mitigated energy source emissions from the Project would not exceed SCAQMD thresholds for ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub> (Table 4.2-9).

The Project’s net emissions would not exceed SCAQMD thresholds for any criteria air pollutants. Therefore, regional operations emissions would result in a less than significant long-term regional air quality impact.

**Localized Operational Emissions**

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a 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 Proposed Project does not include such uses. Therefore, in the case of the Project, the operational phase LST protocol does not need to be applied.

**Impact Summary:** *Significant and Unavoidable Impact.* Construction-related emissions would exceed the SCAQMD’s NO<sub>x</sub> thresholds despite the implementation of Mitigation Measure 4.2-1. Localized construction emissions would also exceed PM<sub>10</sub> and

PM<sub>2.5</sub> thresholds despite the implementation of Standard Conditions. Operational air emissions associated with the Proposed Project would be less than significant.

**Threshold 4.2-3: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors)?**

A significant impact to air quality would occur if a project would result in a cumulative considerable net increase of any criteria pollutant for which the region is nonattainment under applicable national or State ambient air quality standards. To determine whether a project would result in a cumulatively considerable increase in nonattainment criteria pollutants or exceed the quantitative thresholds for ozone precursors, project emissions may be evaluated based on the quantitative emission thresholds established by the SCAQMD in its CEQA Air Quality Handbook (SCAQMD 1993, as amended). The SCAQMD has established quantitative thresholds against which a project's emissions could be evaluated to determine if there is a potential for a significant impact. The SCAQMD's approach to assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and California Clean Air Acts. As such, the analysis of cumulative impacts focuses on determining whether the Project is consistent with the growth assumptions upon which the SCAQMD's AQMP is based. If the Project is consistent with the growth assumptions, then future development would not impede the attainment of NAAQS and a significant cumulative air quality impact would not occur.

With respect to the Proposed Project's construction-related air quality emissions and cumulative basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to federal Clean Air Act mandates. As such, the Project would comply with SCAQMD Rule 403 requirements. In addition, the Project would comply with adopted 2016 AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the air basin, which would include related projects. However, as the Project would exceed SCAQMD construction NO<sub>x</sub> thresholds despite the implementation of MM 4.2-1, it would be cumulatively considerable.

The Project would not result in 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. Because the operational emissions calculated for the 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, the Project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Cumulative projects would be required to reduce their emissions per SCAQMD rules and mandates, cumulative emissions would not contribute to an exceedance of the federal or California ambient air quality standards and would, therefore, comply with the goals of the 2016 AQMP. Therefore, it can be reasonably inferred that the Project-related emissions, in combination with those from other projects in the area, would not deteriorate the local air quality and would not result in cumulative operational impacts. Therefore, the Project's contribution to regional pollutant concentrations would not be cumulatively considerable.

As previously addressed, the Proposed Project would exceed SCAQMD construction NO<sub>x</sub> thresholds. However, the Project would not result in significant operational air quality impacts including nonattainment criteria pollutants. Due to the exceedance of the construction NO<sub>x</sub> thresholds, the Project would potentially conflict with the 2016 AQMP, which is intended to bring the air basin into attainment for all criteria pollutants. Therefore, the Project's contribution to regional pollutant concentrations would be cumulatively considerable.

**Impact Summary:** *Significant and Unavoidable Impact.* The Project would result in significant construction impacts for NO<sub>x</sub> (a criteria pollutant precursor). Operational air quality impacts including nonattainment criteria pollutants would be less than significant. Due to the exceedance of the construction NO<sub>x</sub> threshold (despite implementation of MM 4.2-1) the Project would not be consistent with the 2016 AQMP, which is intended to bring the air basin into attainment for all criteria pollutants. Therefore, the Project's contribution to regional pollutant concentrations would be cumulatively considerable.

<b>Threshold 4.2-4:</b>	<b>Would the Project expose sensitive receptors to substantial pollutant concentrations?</b>
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The Proposed Project could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated levels. Unlike the mass of construction emissions shown in the regional emissions analysis in Tables 4.2-6 through 4.2-9, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or µg/m<sup>3</sup>) and can be correlated to potential health effects. Exposure to pollutant concentrations in exceedance of the NAAQS or CAAQS are generally considered substantial.

### ***Carbon Monoxide Hotspots***

A CO hot spot is an area of localized carbon monoxide pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. The purpose of the analysis is to verify that a project would not cause or contribute to a violation of the CO standard at intersections for which a significant impact would occur. It should be noted that the air basin is designated as an attainment area for State and federal CO standards; and that there has been a decline in CO emissions even though vehicle miles traveled on urban and rural roads have increased. The SCAQMD studied the four most congested intersections within the Air Basin in 2003 in order to support their CO "attainment" demonstration to the USEPA. The modeled intersections experienced more than 100,000 average daily trips, and SCAQMD found that even these highly-congested intersections would not cause a CO hot spot to result. Therefore, it can be reasonably inferred that CO hot spots would not be experienced at any vicinity intersections as a result of 1,207 additional vehicle trips attributable to the Project.

Additionally, the SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service (LOS) D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections. As indicated in the *Traffic Impact Study* for the Project, implementation of the Project would not result in an increase in delay of 0.02 for any of the study intersections during both the

Existing Plus Project scenario and the Year 2022 With Project scenario. Therefore, impacts would be less than significant and no mitigation is required.

### ***Diesel Particulate Matter***

Construction would result in the generation of DPM 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 models and methodologies for conducting health risk assessments are associated with chronic exposure periods of 9, 30, and 70 years, which do not correlate with the temporary and highly variable nature of construction activities. Furthermore, construction would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than five minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions.

### ***John Wayne Airport Toxic Air Contaminants***

The project site is approximately 2,500 feet southeast of the John Wayne Airport, which is a potential source of TACs. A health risk assessment was conducted for the airport as part of the 2014 *John Wayne Airport Settlement Agreement Amendment Environmental Impact Report* (2014 John Wayne Airport EIR). The 2014 John Wayne Airport EIR analyzed health risk impacts from airport operations to surrounding areas inclusive of the project site. The health risk assessment determined that cancer risks to all receptors would be less than four in one million and would not exceed the SCAQMD significance threshold of greater than or equal to ten in one million. Additionally, the chronic non-cancer hazard index and the acute non-cancer impacts would also be less than significant (County of Orange, 2014). Therefore, implementation of the Proposed Project would not expose sensitive receptors from substantial pollutant concentrations from the John Wayne Airport. Impacts are less than significant and no mitigation is required.

**Impact Summary:**      ***Less Than Significant Impact.*** The Project would not cause nor expose persons to significant levels of toxic air contaminants. Impacts are less than significant.

<b>Threshold 4.2-5:</b>	<b>Would the Project create objectionable odors affecting a substantial number of people?</b>
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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 Project would not include any of these operations. The Project would not be a source of objectionable odors.

During Project operations, the only potential for odor generation is from temporary refuse storage. However, solid waste collection requirements in the City require all refuse containers to be covered with a lid which prevents odor from escaping, flies or insects, the contents from leaving the interior of the container, and rain or water from entering the interior of the container. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. The Project would be required to comply with Municipal Code Section 20.30.120 (Solid Waste and Recyclable Materials Storage), which mandates that all multi-unit projects with five or more dwelling units "...provide enclosed refuse and recyclable material storage areas with solid roofs." The Applicant proposes a trash room on each level of Building 1, Building 2, and Building 3. Trash rooms would minimize impacts to residents within their living units. The potential for objectionable odors to emanate from the Project's refuse containers would be very slight and no different than the potential for refuse-related odors from other residential land uses in the City. Therefore, impacts associated with odors from Project operation would be less than significant.

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g., diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects. No other sources of objectionable odors have been identified for the Proposed Project. Therefore, the Project would not result in significant objectionable odors. Impacts would be less than significant and no mitigation is required.

**Impact Summary:**     ***Less Than Significant.*** Odors may be perceived during construction but these are a temporary, short-term impact, typical of construction operations. No mitigation is required.

## 4.2.6 CUMULATIVE IMPACTS

Please refer to Threshold 4.2-3. The Project would not result in significant operational air quality impacts including nonattainment criteria pollutants. However, the Project would exceed SCAQMD construction NO<sub>x</sub> thresholds despite the implementation of MM 4.2-1. Due to the exceedance of the construction NO<sub>x</sub> thresholds, the Project would potentially conflict with the 2016 AQMP, which is intended to bring the air basin into attainment for all criteria pollutants. Therefore, the Project's contribution to regional pollutant concentrations would be cumulatively considerable.

## 4.2.7 MITIGATION PROGRAM

### Project Design Features

- PDF 1**     **Building Design.** The Applicant will pursue a Leadership in Energy and Environmental Design (LEED) Silver Certification for the Project. Project features may include the following.
- Bicycle storage and maintenance facility
  - Electric vehicle charging stations
  - Indoor water use reduction

- Optimized energy performance
- Low emitting materials
- Day lighting
- Enhanced indoor air quality features
- Earth day functions for residents

### **Standard Conditions and Requirements**

**SC 4.2-1 Dust Control.** During construction, the Applicant shall require all construction contractors to comply with South Coast Air Quality Management District's (SCAQMD's) Rules 402 and 403 in order to minimize construction emissions of dust and particulates. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off site. Rule 402 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.

SCAQMD Rule 403 requires that fugitive dust be controlled with Best Available Control Measures so that the presence of such dust does not remain visible beyond the property line of the emission source. This rule is intended to reduce PM<sub>10</sub> emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. This requirement shall be included as notes on the contractor specifications. Table 1 of Rule 403 lists the Best Available Control Measures that are applicable to all construction projects. The measures include, but are not limited to, the following:

- 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.

**SC 4.2-2 Architectural Coatings.** South Coast Air Quality Management District (SCAQMD) Rule 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce reactive organic gas (ROG) emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating

categories. Architectural coatings shall be selected so that the volatile organic compound (VOC) content of the coatings is compliant with SCAQMD Rule 1113. This requirement shall be included as notes on contractor specifications.

The following standard condition is included in the Project analysis of climate change but would also reduce criteria pollutant emissions; please refer to Section 4.6, *Greenhouse Gas Emissions*, of this EIR.

**SC 4.6-1 Energy Efficiency Standards.** The Project shall be built in accordance with the current California Building Energy Efficiency Standards for residential and nonresidential in effect at the time of building permit application submittal to the City of Newport Beach.

### **Mitigation Measures**

**MM 4.2-1** Prior to the issuance of Grading Permit, the construction contractor shall provide evidence to the Community Development Director and City Traffic Engineer that the following measures will be implemented during construction:

- a) Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- b) Provide dedicated turn lanes for movement of construction trucks and equipment both on and off of the project site.
- c) Improve traffic flow by signal synchronization, and ensure that all vehicles and equipment will be properly tuned and maintained according to manufacturers' specifications.
- d) Require the use of electricity from power poles rather than temporary diesel or gasoline powered generators, as feasible.
- e) Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained the lead agency shall use trucks that meet EPA 2007 model year NO<sub>x</sub> emissions requirements.
- f) During Project construction, all internal combustion engines/construction, equipment operating on the project site shall meet EPA-Certified Tier 4 emissions standards, or higher according to the following:
  - All off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
  - A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

## 4.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the Proposed Project, significant unavoidable impacts would occur in the following areas despite the implementation of the Mitigation Program:

- **Project-Related Construction Emissions.** Despite implementation of Standard Conditions and MM 4.2-1, the Project's mitigated construction emissions would remain above SCAQMD thresholds for NO<sub>x</sub> resulting in a significant and unavoidable impact.
- **Localized Project-Related Construction Emissions.** Construction-related emissions would exceed the SCAQMD localized significance thresholds for PM<sub>10</sub> and PM<sub>2.5</sub> after implementation of SC 4.2-1. Therefore, construction would have a significant and unavoidable impact on localized significance air quality.
- **AQMP Consistency.** Although the Project's long-term influence would be consistent with the 2016 AQMP and SCAG's goals and policies, the Project's exceedance of construction NO<sub>x</sub> thresholds would potentially result in a long-term impact on the region's ability to meet state and federal air quality standards. Although operational emissions would not exceed SCAQMD thresholds, impacts associated with AQMP compliance would be significant and unavoidable due to the estimated 54-month construction period.
- **Cumulative Emissions.** As stated above, construction activities would create a significant and unavoidable impact due to exceedances of SCAQMD thresholds for NO<sub>x</sub>. Additionally, ROG, and NO<sub>x</sub> emissions would exceed SCAQMD thresholds during operational activities creating a significant and unavoidable impact in this regard. Implementation of MM 4.2-1 would reduce impacts; however, a significant and unavoidable impact would remain.

Should the City of Newport Beach approve the Project, the City would be required to cite their findings in accordance with CEQA Guidelines Section 15091 and prepare a Statement of Overriding Considerations in accordance with CEQA Guidelines Section 15093.

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