5.1 AIR QUALITY

This section of the EIR evaluates the potential for the Honda Center Enhancement Project (Proposed Project) to impact air quality in the local and regional context. The analysis in this section is based on the following:

Air Quality and Greenhouse Gas Emissions Technical Study for: The Honda Center, The Planning Center|DC&E, November 2011.

A complete copy of this study is included in Appendix C to this EIR.

5.1.1 Environmental Setting

South Coast Air Basin

The project site lies within the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semipermanent high-pressure zone of 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. (SCAQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the project site is the Santa Ana Station Monitoring Station (ID 049087). The average low is reported at 43.0°F in January while the average high is 84.7°F in August (WRCC 2011).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through 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. Rainfall averages 13.79 inches per year in the project area (WRCC 2011).

Humidity

Although the SoCAB 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 SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 2005).

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 somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur, both in 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 months, surface high-pressure systems over the SoCAB, 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 transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB 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 (SCAQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that 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 are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (SCAQMD 2005).

Air Pollutants of Concern

Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_x, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. VOC and NO_x are criteria pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below. Other pollutants, such as carbon dioxide (CO_2), a natural by-product of animal respiration that is also produced in the combustion process, have been linked to phenomena such as global climate change. These emissions are unregulated and the South Coast Air Quality Management District (SCAQMD) has not yet adopted thresholds for them applicable to residential and commercial development projects. GHG emissions that affect global climate change, including CO_2, methane (CH_4), nitrous oxide (N_2O), and fluorinated gases, are discussed in Section 5.2, Greenhouse Gas Emissions, of this EIR.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect

associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels.

Volatile Organic Compounds (VOC) are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOCs include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by VOCs, but rather by reactions of VOCs to forms of secondary pollutants such as ozone (SCAQMD 2005). There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of O_3, the SCAQMD has established a significance threshold for this pollutant (SCAQMD 2005).

Nitrogen Oxides (NO_x) are a byproduct of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). The principal form of NO_2 produced by combustion is NO, but NO reacts with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm). NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure (SCAQMD 2005). The SoCAB is designated as an attainment area for NO_2 under the National AAQS and nonattainment under the California AAQS.

Sulfur Dioxide (SO_2) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2 (SCAQMD 2005). When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. The SoCAB is designated as attainment under the California and National AAQS.

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (SCAQMD 2005).

The US Environmental Protection Agency's (EPA) scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with

cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. Diesel particulate matter (DPM) is classified by the California Air Resources Board (CARB) as a carcinogen. The SoCAB is a nonattainment area for $PM_{2.5}$ and PM_{10} under California and National AAQS.[1]

Ozone (O_3) is commonly referred to as "smog" and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Additionally, O_3 has been tied to crop damage, typically in the form of stunted growth and premature death. O_3 can also act as a corrosive, resulting in property damage such as the degradation of rubber products (SCAQMD 2005). The SoCAB is designated as extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour).

Lead (Pb) concentrations decades ago exceeded the state and federal AAQS by a wide margin, but have not exceeded state or federal air quality standards at any regular monitoring station since 1982 (SCAQMD 2005). However, in 2008 the USEPA and CARB adopted more strict lead standards and special monitoring sites immediately downwind of lead sources[2] recorded very localized violations of the new state and federal standards. As a result of these localized violations, the Los Angeles County portion of the SoCAB was designated in 2010 as nonattainment under the California and National AAQS for lead (SCAQMD 2010). The project is not characteristic of industrial-type projects that have the potential to emit lead. Therefore, lead is not a pollutant of concern for the project.

Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to

[1] CARB approved the SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010 because the SoCAB has not violated federal 24-hour PM_{10} standards during the period from 2004 to 2007. However, the USEPA has not yet approved this request.

[2] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 identified that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2010).

below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

Since the last update to the TAC list in December 1999, 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 relatively few compounds, the most important being particulate matter from diesel-fueled engines.

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered 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.

In 2000, SCAQMD conducted a study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,400 in a million. The largest contributor to this risk was diesel exhaust, accounting for 71 percent of the air toxics risk. In 2008, the SCAQMD conducted its third update to its study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in one million. The largest contributor to this risk was diesel exhaust, accounting for approximately 84 percent of the air toxics risk (SCAQMD 2008). In the vicinity of the project site, excess cancer risk is 1,034 in a million (SCAQMD 2011). It should be noted that several recent studies from University of California Los Angeles (UCLA) have indicated that background TAC studies may over estimate background cancer risks from TAC, such as DPM (Enstrom 2005).

Other Effects of Air Pollution

Air pollution creates numerous impacts to our economy, including lost workdays due to illness, a desire on the part of businesses to locate in areas with a healthy environment, and increased expenses from medical costs. Pollutants may also lower visibility and cause damage to property. Certain air pollutants are responsible for discoloring painted surfaces, eating away at stones used in buildings, dissolving the mortar that holds bricks together, and cracking tires and other items made from rubber. In conformance with the requirements of the Clean Air Act Amendments, the federal EPA has prepared a monetary cost/benefit analysis related to implementation requirements. By the year 2010, the EPA estimates that its emissions- reduction programs would cost approximately 27 billion dollars. The programs are estimated to result in a savings benefit of 110 billion dollars, for a net benefit of 83 billion dollars. While these values are for the nation as a whole, a net benefit ratio of about 4:1 is noted, and a similar ratio could be expected for the California and its residents.

Another direct cost/benefit issue relates to federal funding. Areas that do not meet the federal air quality standards may lose eligibility for federal funding for road improvements and other projects that require federal or California Department of Transportation approval.

Cleaner air also yields benefits to ecological systems. Just as humans are affected by air pollution, so are plants and animals. Animals must breathe the same air and are subject to the same types of negative health effects. Certain plants and trees may absorb air pollutants that can stunt their development or cause premature death. The benefits of Clean Air Act Amendments programs that can be quantified within the overall monetary benefits include increased agricultural and timber yields, reduced effects of acid rain on aquatic ecosystems, and reduced effects of nitrogen deposited to coastal estuaries. Many ecological benefits, however, remain difficult or impossible to quantify, or can only be quantified for a limited geographic area. The magnitude of quantified benefits and the wide range of unquantified benefits nonetheless suggest that as we learn more about ecological systems and can conduct more comprehensive ecological benefits assessments, estimates of these benefits could be substantially greater.

Regulatory Framework

AAQS have been promulgated at the local, state, and federal levels for criteria pollutants. The project site is in the SoCAB and is subject to the rules and regulations imposed by the SCAQMD, as well as the California CAAQS adopted by CARB and federal NAAQS.

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of 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.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 5.1-1, these pollutants include O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead (Pb). In addition, 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.

Table 5.1-1
Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.075 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Average	*	*[1]	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm[1]	
	24 hours	0.04 ppm	*[1]	
Suspended Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 $\mu g/m^3$	150 $\mu g/m^3$	
Suspended Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 $\mu g/m^3$	
Lead (Pb)	Monthly	1.5 $\mu g/m^3$	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	*	1.5 $\mu g/m^3$	
	3-Month Average	*	0.15 $\mu g/m^3$	
Sulfates (SO_4)	24 hours	25 $\mu g/m^3$	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles[1]	*	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

Table 5.1-1
Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Hydrogen Sulfide	1 hour	0.03 ppm	*	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	*	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2010
ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
[1] When relative humidity is less than 70 percent.
* Standard has not been established for this pollutant/duration by this entity.

Air Quality Management Planning

The SCAQMD and the Southern California Association of Governments (SCAG) are the agencies responsible for preparing the air quality management plan (AQMP) for the SoCAB. Since 1979, a number of AQMPs have been prepared.

The most recent comprehensive plan was adopted on June 1, 2007, and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2007 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standards through a more focused control of SO_x, directly emitted $PM_{2.5}$, and focused control of NO_x and VOC by 2015. The eight-hour ozone control strategy builds upon the $PM_{2.5}$ strategy, augmented with additional NO_x and VOC reductions to meet the standard by 2024, assuming an extended attainment date is obtained.

Area Designations

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme. Attainment classifications apply to individual pollutants:

- ***Unclassified:*** the data are incomplete and do not support a designation of attainment or nonattainment for a pollutant
- ***Attainment:*** the California AAQS were not violated at any site in the area during a three-year period for that pollutant
- ***Nonattainment:*** there was at least one violation of a state AAQS for that pollutant in the area
- ***Nonattainment/Transitional:*** a subcategory of the nonattainment designation; signifies that the area is close to attaining the AAQS for that pollutant

The attainment status for the SoCAB is shown in Table 5.1-2. The SoCAB is also designated as attainment of the California AAQS for sulfates. According to the 2007 AQMP, the SoCAB will have to meet the new federal 8-hour O_3 standard by 2024, $PM_{2.5}$ standards by 2015, and the recently revised 24-hour $PM_{2.5}$ standard by 2020. The SCAQMD has recently designated the SoCAB as nonattainment for NO_2 (entire basin) and lead (Los Angeles County only) under the California AAQS.

Table 5.1-2
Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	Extreme Nonattainment[1]
Ozone – 8-hour	Extreme Nonattainment	Severe-17 Nonattainment[2]
PM_{10}	Serious Nonattainment	Nonattainment[3]
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment[4]
NO_2	Nonattainment[5]	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Nonattainment[6]	Nonattainment[6]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2010.
[1] Under prior standard.
[2] SCAQMD may petition for Extreme Nonattainment designation. A Sever-17 designation means that the area has a 8-hr ozone design value of 0.127 ppm up to but not including 0.187 ppm; has a maximum of 17 years to attain.
[3] Annual standard revoked September 2006. CARB approved the SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM_{10} standards from 2004 to 2007. However, the EPA has not yet approved this request.
[4] The EPA granted the request to redesignate the SoCAB from nonattainment to attainment for the CO National AAQS on May 11, 2007 (Federal Register Volume 71, No. 91), which became effective June 11, 2007.
[5] The state NO_2 standard was made more stringent in 2007 from 0.25 ppm to 0.18 ppm. Under the revised standards, the entire SoCAB was designated nonattainment on March 25, 2010. In addition, the EPA adopted a new 1-hour NO_x standard of 0.100 ppm on January 22, 2010.
[6] The Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas within the SoCAB are unclassified.

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 cardiorespiratory diseases.

Residential areas are also considered to be 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. Other sensitive receptors include retirement facilities, hospitals, and schools. 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. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

Baseline Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site and project area are best documented by measurements made by SCAQMD. The project site is located within Source Receptor Area (SRA) 17 – Central Orange County (Inland Orange County). The air quality monitoring station closest to the project is the Anaheim Monitoring Station. However, this station does not monitor SO_x. Consequently, data was obtained from the Costa Mesa Monitoring Station for this criteria pollutant. Data from these stations are summarized in Table 5.1-3. The data show that the area occasionally exceeds the state and federal one-hour and eight-hour O_3 standards and regularly exceeds the state PM_{10} and federal $PM_{2.5}$ standards. The CO, SO_2, and NO_2 standards have not been exceeded in the last five years in the project vicinity.

Table 5.1-3
Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations				
	2006	2007	2008	2009	2010
Ozone (O_3)[1]					
State 1-Hour ≥ 0.09 ppm	6	2	2	0	0
State 8-hour ≥ 0.07 ppm	5	7	10	2	0
Federal 8-Hour > 0.075 ppm	3	1	5	1	0
Max. 1-Hour Conc. (ppm)	0.113	0.127	0.105	0.093	0.063
Max. 8-Hour Conc. (ppm)	0.089	0.100	0.086	0.077	0.056
Carbon Monoxide (CO)[1]					
State 8-Hour > 9.0 ppm	0	0	0	0	0
Federal 8-Hour ≥ 9.0 ppm	0	0	0	0	0
Max. 8-Hour Conc. (ppm)	2.90	2.91	3.44	2.73	0.191
Nitrogen Dioxide (NO_2)[1]					
State 1-Hour ≥ 0.18 ppm	0	0	0	0	
Max. 1-Hour Conc. (ppm)	0.114	0.086	0.093	0.068	0.066
Sulfur Dioxide (SO_2)[2]					
State 1-Hour ≥ 0.04 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.005	0.004	0.003	0.004	0.002
Coarse Particulates (PM_{10})[1]					
State 24-Hour > 50 µg/m^3	7	6	3	1	NA
Federal 24-Hour > 150 µg/m^3	0	1[3]	0	0	0
Max. 24-Hour Conc. (µg/m^3)	104.0	489.0[3]	61.0	63.0	37.2
Fine Particulates ($PM_{2.5}$)[1]					
Federal 24-Hour > 35 µg/m^3	7	14	5	4	0
Max. 24-Hour Conc. (µg/m^3)	56.2	79.4	67.8	64.5	NA

Source: CARB 2010.
ppm: parts per million; µg/m^3: or micrograms per cubic meter.
[1] Data obtained from the Anaheim Monitoring Station.
[2] Data obtained from the Costa Mesa Monitoring Station.
[3] Statistic includes an exceptional event, such as a wildfire. The second-highest concentration reported is 75.0 ppm.

5.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines a project would normally have a significant effect on the environment if it would:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

AQ-4 Expose sensitive receptors to substantial pollutant concentrations.

AQ-5 Create objectionable odors affecting a substantial number of people.

The Initial Study, included as Appendix A, substantiates that impacts associated with Threshold AQ-5 would be less than significant. This impact will not be addressed in the following analysis.

South Coast Air Quality Management District Significance Criteria

The analysis of the Proposed Project's air quality impacts follows the guidance and methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* and the significance thresholds on SCAQMD's website.[3] CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. SCAQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

Regional Significance Thresholds

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project's direct and cumulative impact on air quality in the SoCAB. Table 5.1-4 lists SCAQMD's regional significance thresholds.

Table 5.1-4
SCAQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROG)	75 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Nitrogen Oxides (NO_X)	100 lbs/day	55 lbs/day
Sulfur Oxides (SO_X)	150 lbs/day	150 lbs/day
Coarse Inhalable Particulates (PM_{10})	150 lbs/day	150 lbs/day
Fine Inhalable Particulates ($PM_{2.5}$)	55 lbs/day	55 lbs/day

Localized Significance Thresholds

SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at the project site (offsite mobile-source emissions are not included the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS. LSTs are based on the ambient concentrations of that pollutant within the project SRA and the distance to the nearest sensitive receptor. LST analyses are applicable for all projects of five acres and less; however, they can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required. Projects larger than five acres can determine the localized significance for construction by performing dispersion modeling based on the AAQS. Because the project is not an industrial project that has the potential to emit substantial sources of stationary emissions operational LSTs are not an air quality impact of concern associated with the project.

[3] SCAQMD's Air Quality Significance Thresholds are current as of March 2011 and can be found here: http://www.aqmd.gov/ceqa/hdbk.html.

CO Hotspots

Localized CO impacts are determined based on the presence of congested intersections. The significance of localized project impacts depends on whether the project would cause substantial concentrations of CO. A project is considered to have significant impacts if project-related mobile-source emissions result in an exceedance the California one-hour and eight-hour CO standards.

5.1.3 Environmental Impacts

Modeling Methodology

SCAQMD has published the *CEQA Air Quality Handbook* (Handbook) as well as updates included on SCAQMD's website, which are intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. This Handbook provides standards, methodologies, and procedures for conducting air quality analyses in environmental impact reports and was used extensively in the preparation of this analysis. Modeling was conducted using emission factors and methodologies in the California Emissions Estimator Model (CalEEMod), version 2011.1.1, EMFAC2007, and CalEEMod user's guide (SCAQMD 2011).

IMPACT 5.1-1: THE PROPOSED PROJECT WOULD NOT CONFLICT OR OBSTRUCT IMPLEMENTATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT PLAN. [THRESHOLDS AQ-1]

Impact Analysis: The regional emissions inventory for the SoCAB is compiled by the SCAQMD and the SCAG. Regional population, housing, and employment projections used by SCAG are based on the City's General Plan land use designations and planned developments. The emissions inventory in the AQMP is based on these projections. These demographic trends are incorporated into the Regional Transportation Plan compiled by SCAG, to determine priority transportation projects determine the future efficiency of the transportation system within the SCAG region. If a project results in changes that affect the existing population, housing, or employment growth patterns and therefore SCAG's demographic projections, it could affect the assumptions in SCAQMD's AQMP. The Proposed Project is considered a regionally significant project because of the size of the facility and the extent of the proposed increase use of the facility. However, the Proposed Project would not increase capacity of Honda Center. Consequently, the project would not affect the southern California region's demographic projections. Increasing the number of events held at Honda Center and the increase in emissions on sold out vs. average attendance event days would not conflict with the AQMP.

IMPACT 5.1-2: THE PROPOSED PROJECT WOULD NOT GENERATE CONSTRUCTION EMISSIONS THAT EXCEED SCAQMD'S REGIONAL CONSTRUCTION THRESHOLDS OR CUMULATIVELY CONTRIBUTE TO THE NONATTAINMENT DESIGNATIONS OF THE SOCAB. [THRESHOLDS AQ-2 AND AQ-3]

Impact Analysis: Construction activities generate criteria air pollutant emissions from use of off-road construction equipment, on-road vehicles associated with construction employees and material deliveries, fugitive dust generated during grading, and off-gas emissions during application of architectural coatings and paving. Construction emissions associated with the proposed project would occur during construction of

improvements on the south side[4] of the existing facility, including an approximate 5,846 square foot restaurant to serve event attendees, a 5,846 square foot team store and a 9,114 square feet open area on the Main Level (Level 200); and above the main level improvements, a 9,518 square feet restaurant to serve event attendees and a 12,436 square foot outdoor terrace on the Club Level (Level 300). Other interior improvements include locker room, office space, bunker suite and balcony suite renovations; electrical upgrades and an increase in the capacity of the loading dock. Interior renovations would not require use of large off-road construction equipment and therefore are not included in the modeling below. Construction phasing and equipment was provided by Honda Center and modeled using the California Emissions Estimator Model (CalEEMod), Version 2011.1.1. As shown Table 5.1-5, construction activities would not result in emissions that exceed SCAQMD regional significance thresholds. No significant impacts would occur.

Table 5.1-5
Maximum Daily Construction Emissions

Source	Pollutants (lb/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Maximum Daily Construction Emissions	20	12	9	<1	2	1
SCAQMD Regional Significance Threshold	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2011.1.1. Equipment list and phasing provided by Honda Center.

IMPACT 5.1-3: THE PROPOSED PROJECT WOULD GENERATE AN INCREASE IN DAILY TRANSPORTATION EMISSIONS OF VOC, NO_X, AND CO THAT EXCEED SCAQMD'S REGIONAL OPERATIONAL THRESHOLDS AND CUMULATIVELY CONTRIBUTE TO THE NONATTAINMENT DESIGNATIONS OF THE SOCAB. [THRESHOLDS AQ-2 AND AQ-3]

Impact Analysis: An inventory of Honda Center's maximum daily criteria air pollutant emissions are shown in Table 5.1-6. Project-related air pollutants come from area-, energy-, and mobile-source emissions. The Proposed Project would not increase seating capacity at Honda Center. Therefore, maximum daily emissions generated by events at Honda Center would not increase from baseline conditions as a result of the project. However, it should be noted that these maximum daily emissions would occur an additional 60 days per year with the proposed project. Therefore, for the purposes of this EIR, although Honda Center currently generates both average attendance events and sell out events, impacts are based on the incremental increase caused by sell out events at Honda Center. Significance is based on the comparison of Sell Out Honda Center Events vs. Average Attendance Honda Center Events. As shown in Table 5.1-6, sell out events generate substantially more traffic than average attendance events at Honda Center. As a result, these emissions exceed SCAQMD's regional significance thresholds for VOC, NO_x, and CO and would cumulatively contribute to the nonattainment designations of the SoCAB.

[4] Please note a previous proposal located the proposed improvements on the east side of the existing Honda Center. They have since been relocated to the south side facing Katella Avenue.

Table 5.1-6
Maximum Daily Criteria Air Pollutant Emissions
(in pounds per day)

Operations Phase	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Sell Out Honda Center Event[1]						
Natural Gas	<1	4	3	<1	<1	<1
Transportation	285	339	2,857	4	37	37
Maximum Daily Emissions on an Event Day	285	343	2,860	4	37	37
SCAQMD Regional Significance Thresholds[2]	55	55	550	150	150	55
Average Attendance Honda Center Event						
Natural Gas	<1	4	3	<1	<1	<1
Transportation	222	264	2,226	3	29	28
Maximum Daily Emissions on an Event Day	222	268	2,229	3	29	28
SCAQMD Regional Significance Thresholds[2]	55	55	550	150	150	55
Comparison of Sell Out and Average Attendance Events at Honda Center						
Difference Between a Sell Out Event & Average Attendance Event at Honda Center	79	95	795	1	10	11
SCAQMD Regional Significance Thresholds[2]	55	55	550	150	150	55
Difference Exceeds SCAQMD's Threshold?	**Yes**	**Yes**	**Yes**	No	No	No

Source: EMFAC2007 and SCAQMD 2011.

1 Emissions on a day without a Honda Center event are assumed to be negligible for the purpose of this analysis and therefore the emissions shown in the table under "Sell Out Honda Center Event" represent the increase on days with sell out events compared to an existing non-event day. The proposed project would result in one additional event per week, which would exceed the SCAQMD thresholds for the additional event day.

2 The project would not result in a net increase in the maximum daily emissions at Honda Center. However, for the purposes of this environmental assessment, impacts are based on the incremental increase between sold out events and average attendance events.

IMPACT 5.1-4: CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. [THRESHOLD AQ-4]

Impact Analysis: The proposed project's construction activities have the potential to expose existing sensitive receptors to elevated pollutant concentrations. LSTs were developed by SCAQMD to determine if a project would generate significant localized air quality impacts. SCAQMD's thresholds are based on the California AAQS, which represent the most stringent applicable AAQS and have been established to provide a margin of safety in the protection of the public health. 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.

Unlike mass emissions, which refer to the amount of pollutant emitted in pounds per day (e.g., Table 5.1-5), localized pollutant concentration levels refer to the amount of pollutant in a volume of air (ppm or µg/m3). Because the effect of pollutants emitted during construction or operation depends on the proximity of the source to the receptor, LSTs are based on the location of the emission source relative to the sensitive receptors, as well as the quantity of emissions. Table 5.1-7 shows construction emission rates and LSTs in SRA 17. In accordance with SCAQMD methodology, only onsite stationary sources and mobile equipment occurring on the project site are included in the analysis. As shown in Table 5.1-7, project-related daily construction emissions would not exceed the construction LSTs or expose sensitive receptors to substantial pollutant concentrations.

Table 5.1-7
Localized Offsite Construction Emissions

Source	Pollutants (lb/day)			
	NO_2[1]	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Construction Emissions	8	8	1	1
SCAQMD Localized Significance Threshold	103	1,313	161	87
Exceeds Threshold?	No	No	No	No

Source: CalEEMod Version 2011.1.1. SCAQMD 2003, and SCAQMD 2006: Equipment list and phasing provided by Honda Center. Based on LSTs for a project site in SRA 17 for a 1-acre site with sensitive receptors located at a distance of 1,675 feet for PM_{10} and $PM_{2.5}$ and non-receptors at 390 feet for NO_x and CO. Only onsite air pollutant emissions as per SCAQMD guidance.
[1] The two principle NO_x species are NO and NO_2 with the vast majority (95 percent) of NO_x emissions being NO. Adverse health effects are associated with NO_2 and not NO.

IMPACT 5.1-5: THE PROPOSED PROJECT WOULD NOT EXPOSE SENSITIVE LAND USES TO SUBSTANTIAL POLLUTANT CONCENTRATIONS FROM MOBILE SOURCES. [THRESHOLD AQ-4]

Impact Analysis: Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. Typically, for an intersection to exhibit a significant CO concentration, it would operate at level of service (LOS) E or worse without improvements (Caltrans 1997).

The 1993 CEQA Air Quality Handbook includes methodology to conduct localized CO modeling for traffic generated by a project. At the time of the 1993 Handbook, the SoCAB was designated as nonattainment under the California AAQS and National AAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined. In 2007, the SCAQMD was designated as in attainment for CO under both the California AAQS and National AAQS.

As identified within SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. A CO hot spot analysis was conducted for four busy intersections in Los Angeles[5] at the peak morning and afternoon time periods and did not predict a violation of CO standards. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2011). Event traffic at Honda Center does not produce this volume of traffic in a one-hour period; therefore, the project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project site. Furthermore, the Proposed Project would not increase arena

[5] The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day and LOS E in the morning peak hour and LOS F in the evening peak hour.

capacity and would not increase air pollutant emissions at intersections in the vicinity of the project site. No localized air quality impacts related to mobile-source emissions would occur as a result of the project.

IMPACT 5.1-6: THE PROPOSED PROJECT WOULD NOT EXPOSE SENSITIVE LAND USES TO SUBSTANTIAL POLLUTANT CONCENTRATIONS FROM STATIONARY SOURCES. [THRESHOLD AQ-4]

Impact Analysis: SCAQMD only considers onsite stationary sources and mobile equipment. While regional daily emissions generated by operation of Honda Center are substantial as a result of vehicle travel, onsite emissions generation by stationary sources represent a fraction of total operational emissions. Operation of Honda Center does not generate substantial quantities of onsite, stationary-sources emissions. Land uses that have the potential to generate substantial stationary sources of emissions include industrial land uses, such as chemical processing. While not considered a "stationary" source of emissions, cars idling at Honda Center parking generate exhaust emissions after an event. However, the Proposed Project would not increase seating capacity at Honda Center nor cars generated by events. Therefore, the project would not result in an increase in emissions generated onsite. Onsite emissions generated at full event days and average event days would be similar. Consequently, no localized impacts would occur.

5.1.4 Cumulative Impacts

Cumulative projects include new development and general growth within the project area. As air emissions are typically confined to the existing air basin, so the cumulative project area encompasses the entire SoCAB. The greatest source of emissions within the SoCAB is from mobile sources. The SoCAB is designated as nonattainment of the NAAQS and CAAQS for O_3, PM_{10}, $PM_{2.5}$, and lead (Los Angeles County only) and nonattainment of the CAAQS for NO_2 (CARB 2010). Construction and operation of cumulative projects would further degrade the local air quality, as well as the air quality of the SoCAB. Due to the extent of the area potentially impacted by cumulative project emissions, SCAQMD considers a project cumulatively significant when project-related emissions exceed the SCAQMD regional emissions thresholds (SCAQMD 1993).

Temporary construction-related regional emissions for the proposed project would not exceed SCAQMD's emission thresholds. The project would not result in an increase in stadium seating or a change in operations on an event day. Therefore, operation of the proposed project would also not generate an increase in criteria air pollutant emissions generated per day or exceed SCAQMD's regional significance thresholds. Although Honda Center currently generates both average attendance events and sell out events, for the purpose of the EIR, impacts for the Proposed Project are based on the incremental increase caused by sell out events at Honda Center. Significance is based on the comparison of Sell Out Honda Center Events vs. Average Attendance Honda Center Events. Sell out events generate substantially more traffic than average attendance events at Honda Center. As a result, these emissions exceed SCAQMD's regional significance thresholds for VOC, NOx, and CO and would cumulatively contribute to the nonattainment designations of the SoCAB. Therefore, the proposed project would significantly contribute to cumulative impacts in the SoCAB. In consideration of the preceding factors, the project's contribution to cumulative air quality impacts would be significant, and therefore the project's incremental contribution is cumulatively considerable.

5.1.5 Existing Regulations

The following measures are existing plans, programs, or policies that apply to the Proposed Project and will help to reduce and avoid their respective potential impacts related to air quality:

- CARB Rule 2485 – Airborne Toxics Control Measure (ATCM)
- SCAQMD Rule 201 – Permit to Construct
- SCAQMD Rule 402 – Nuisance Odors
- SCAQMD Rule 403 – Fugitive Dust
- SCAQMD Rule 1108 – Cutback Asphalt
- SCAQMD Rule 1113 – Architectural Coatings
- SCAQMD Rule 1301 – New Source Review
- SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- 40 CFR Part 85 – Control of Air Pollution from Mobile Sources
- 40 CFR Part 89 – Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines
- Building Energy Efficiency Standards (Title 24)
- Appliance Energy Efficiency Standards (Title 20)
- Motor Vehicle Standards (AB 1493)

5.1.6 Level of Significance Before Mitigation

Impacts 5.1-1, 5.1-2, 5.1-4, 5.1-5 and 5.1-6 would be less than significant. Without mitigation, the following impacts would be **potentially significant**:

Impact 5.1-3 Sold out events compared to average attendance events at Honda Center would generate an increase in daily transportation emissions of VOC, NO_x, and CO that exceed SCAQMD's regional operational thresholds and cumulatively contribute to the nonattainment designations of the SoCAB.

5.1.7 Mitigation Measures

Impact 5.1-3

The following mitigation measures are included in Section 5.1-2, Greenhouse Gas Emission, and would also reduce criteria air pollutant emissions generated on a day with a sold out Honda Center event.

2-1 Honda Center shall request a Comprehensive Energy Audit by the Anaheim Public Utilities, which is a free service offered by the utility. According to the Anaheim Public Utilities, customers can reduce energy by as much as 10 to 25 percent of month through efficiency reductions. Energy reductions can be accomplished through retrofits and/or offsets provided by renewable energy generation onsite. Potential combination of measures that could be taken to achieve a reduction in energy demand includes:

a. Replacement of indoor and outdoor lighting fixtures with LED or compact fluorescent fixtures.

b. Retrofitting air conditioning, heating, and ventilation systems and/or calibrating systems for efficiency (e.g., increasing average indoor temperature settings in summer and during hockey events).

c. Replacing restaurant refrigerators, freezers, and other appliances with Energy Star rated appliances to reduce plug-load.

d. Installation of photovoltaic system (e.g., carports with solar panels or rooftop-mounted solar panels) or wind-energy-system at Honda Center to offset energy use generated during an event. For example, a 750 kW-ac photovoltaic system is estimated to produce 1,242,163 kWh per year based on the California Public Utilities Commission's Clean Power Estimator.

2-2 The City of Anaheim shall continue coordinating with the Southern California Regional Rail Authority (SCRRA), which operates Metrolink service on Orange County Line in conjunction with the Orange County Transportation Authority (OCTA). The City of Anaheim shall coordinate with SCRRA to discuss the potential for providing special event service to Honda Center and the Angel Stadium of Anaheim on weekends and during the week. A list of events, including the day or the event, time of the event, and duration of the event at Honda Center and the Angel Stadium of Anaheim shall be provided to SCRRA to initiate these discussions. Barriers to implement Special Event Service on the Orange County Line shall be discussed. Potential funding options to overcoming barriers to implement special event Service on the Orange County line should be indentified and considered, including funding for additional train operators and trains that coincide with commuter service.

2-3 To encourage use of transit by visitors to Honda Center, ticket holders shall be provided information on the Metrolink and Amtrak services available on the day of the event, including Metrolink and Amtrak scheduling.

5.1.8 Level of Significance After Mitigation

Impact 5.1-3

Measure 2-1 through 2-3 would reduce criteria air pollutant emissions to the extent feasible. However, the effectiveness of these mitigation measures is uncertain and cannot be quantified. Therefore, regional criteria air pollutant emissions impacts would remain significant and unavoidable.

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