These estimates used the cancer risk calculation methods adopted by the California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) in 2015. This methodology supersedes the 2003 guidelines and takes into account the sensitivity of children to TAC emissions, breathing rates, and time spent at home since children have higher breathing rates compared to adults and would likely spend more time at home resulting in longer exposure durations.[77]

Under the updated OEHHA methodology, the relative reduction in the overall cancer risk from the MATES IV results compared to MATES III would be about 65 percent and 57 percent, respectively. Based on the online MATES IV Carcinogenic Risk Interactive Map, the background increase in cancer risk due to exposure to airborne TACs in the vicinity of the Project Site to be 1,000 in one million.[78] The factors that lead to the development of cancer are complex, and include age, genetics, lifestyle (obesity, tobacco use, alcohol use, etc.), and exposure to carcinogens. According to recent studies, approximately 38.4 percent of American men and women will be diagnosed with cancer from all causes at some point during their lifetimes (based on 2013–2015 data).[79] For comparison sake, this can be expressed as a 384,000 in one million cancer risk, and the incremental increase in an individual's lifetime cancer risk due to airborne TACs in the Basin to be an increase of approximately 0.0002 percent. 1,000/1,000,000 × 100 = 0.17.

According to the MATES IV, approximately 68 percent of the airborne carcinogenic risk in the Air Basin is attributed to DPM emissions, approximately 22 percent is attributed to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 10 percent is attributed to stationary sources (which include industries and certain other businesses, such as dry cleaners and chrome plating operations).[80] Generally, the risk from air toxics is lower near the coastline and increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

Existing Project Site Emissions

The Project Site is comprised of approximately 28 acres of land. All but six of the parcels ~~(approximately 25.2 acres)~~ that make up the Project Site are currently vacant, undeveloped or are streets. The six developed parcels, ~~approximately 54,098 sf (1.24 acres)~~ all within the Arena Site, include a fast food restaurant, a motel, a warehouse ~~and~~ light manufacturing facility, a commercial catering business, and a groundwater well and related facilities ~~that would be relocated on site during Proposed Project operations.~~

[77] California Environmental Protection Agency, Office of Health Hazard Assessment, 2015. Air Toxics Hot Spots Program, Guidance Manual for Preparation of Health Risk Assessments. February 2015.
[78] South Coast Air Quality Management District, 2015. *Final Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin*, MATES IV Carcinogenic Risk Interactive Map. May 2015.
[79] National Cancer Institute, Cancer Statistics, 2018. https://www.cancer.gov/about-cancer/understanding/statistics. Accessed on September 4, 2019.
[80] South Coast Air Quality Management District, 2015. *Final Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin*, p. ES-2. May 2015.

Operation of these existing on-site businesses result in the emission of air pollutants associated with vehicle trips to and from the Project Site, on-site combustion of natural gas for heating and cooking, and fugitive emissions of VOCs from the use of aerosol products and coatings and landscaping. However, data with respect to the exact activity level (i.e., utility consumptions) at each business may not be obtainable, so existing emissions were based on default values form the California Emissions Estimator software (CalEEMod®).[81] CalEEMod was developed for the California Air Pollution Officers Associated (CAPCOA) in collaboration with the California Air Districts, which is a Statewide land use emission computer model designed to provide a uniform platform for government agencies, land us planners, and environmental professionals to quantify potential criteria air pollutant and GHG emissions from a variety of land use project. CalEEMod is the SCAQMD-recommended model for quantifying air quality and GHG impacts from land use projects throughout California.[82]

CalEEMod was used to estimate the existing on-site emissions from natural gas appliances and equipment, and fugitive VOC emissions. Defaults were used for area sources with a historical (pre-2005) electricity and natural gas usage rate base on building land use and square footage since the existing buildings on the Project Site were built before 2005.[83] Mobile source emissions associated with existing Project Site operations were calculated outside of CalEEMod using EMFAC2017 emission factors and estimated VMT for existing uses as presented in Section 3.14, Transportation and Circulation. Emissions modeling was conducted using the vehicle fleet mix for the Air Basin as provided in the EMFAC model, and Air Basin-specific vehicle fleet emission factors for 2024. **Table 3.2-3** presents the regional and localized (which excludes mobile) emissions from the existing development on the Project Site.

TABLE 3.2-3
EXISTING PROJECT SITE EMISSIONS (POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Existing Project Site Regional Emissions						
Area (Consumer Products, Landscaping)	1	<1	<1	0	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Motor Vehicles	1	3	13	<1	4	1
Total Regional Existing Emissions	**3**	**3**	**14**	**<1**	**4**	**1**

NOTES:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

[81] California Emissions Estimator Model. Available at: http://www.caleemod.com/
[82] South Coast Air Quality Management District. Air Quality Modeling. https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-modeling. Accessed June 24, 2019.
[83] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide. 2017. http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, Accessed April 25, 2019.

Well Relocation Site

To the north of the Well Relocation Site is an occupied warehousing and shipping company. To the east of the site are residential uses. A vacant lot and residential uses are located to the south. To the west of the site is an occupied commercial use. The nearest air quality sensitive receptors would be the residential uses to the east and south, adjacent and approximately 60 feet from the site, respectively.

3.2.2 Adjusted Baseline Environmental Setting

Section 3.2, Air Quality, assumes the Adjusted Baseline Environmental Setting as described in Section 3.0, Introduction to the Analysis. Related to air quality, the changes associated with the HPSP Adjusted Baseline projects, currently under development and anticipated to be operational prior to construction of the Proposed Project, include operational air emissions associated with new uses on the HPSP project.

The HPSP Adjusted Baseline projects would emit air pollutants associated with vehicle trips, maintenance operations, energy consumption, etc., from all of its operational land uses. Specifically, vehicle trips associated with activities at the HPSP would begin taking place during mid-2020 when the NFL Stadium begins operations and uses are operating on the site and would have an impact on local and regional air quality. Accordingly, the air pollutant emissions associated with this development within the HPSP area are considered as part of the HPSP Adjusted Baseline. The nearest air quality sensitive receptors in the HPSP area under the Adjusted Baseline would be residences located approximately 950 feet north of the Project Site. No other changes to the existing environmental setting related to air quality would occur under the Adjusted Baseline.

3.2.3 Regulatory Setting

This section provides a summary of pertinent federal, State, and local statutes, regulations, plans, and policies that have been adopted that address air quality.

Federal

The 1963 CAA was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, US EPA is responsible for implementation of certain portions of the CAA including mobile source requirements.

The CAA establishes federal air quality standards and specifies future dates for achieving compliance. The CAA also mandates that the State submit and implement a State Implementation Plan (SIP) for areas not meeting these standards. SIPs must include pollution control measures that demonstrate how the NAAQS will be met. The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of

($30,000,000) to achieve the requirements ~~of this subdivision~~, the requirements ~~of this subdivision~~ shall be deemed met, so long as one-half of the reductions are met.

Regional

South Coast Air Quality Management District

SCAQMD has jurisdiction over air quality planning for all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a subregion within SCAQMD jurisdiction. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

Air Quality Management Plan

SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS, the 2012 and the 2016 AQMPs. While the 2016 AQMP is the most recent and was adopted by SCAQMD and CARB, it has not received full US EPA approval for inclusion in the SIP. Therefore, until such time as the 2016 AQMP is completely approved by the US EPA, the 2012 AQMP remains the applicable AQMP; however, this analysis considers both the 2012 and 2016 AQMPs as appropriate.

The 2012 AQMP includes a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, and on-road and off-road mobile sources. It highlights the significant amount of emission reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria air pollutant standards within the timeframes allowed under the CAA.[89]

The key undertaking of the 2012 AQMP is to bring the Air Basin into attainment with the NAAQS for the 24-hour PM2.5 standard. It also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 8-hour O3 standard deadline with new measures designed to reduce reliance on the CAA section 182(e)(5) long-term measures for NOX and VOC reductions. SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The SCAQMD Governing Board adopted the 2016 AQMP on March 3, 2017.[90] CARB approved the 2016 AQMP on March 23, 2017. Key elements of the 2016 AQMP include implementing fair-share emissions reductions strategies at the federal, state, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of ZE and near-zero-emissions (NZE) technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation and other planning efforts.[91] The strategies included in the 2016 AQMP are

[89] South Coast Air Quality Management District, 2013. *Final 2012 Air Quality Management Plan*. February 2013.
[90] South Coast Air Quality Management District, 2017. *Final 2016 Air Quality Management Plan*. March 2017.
[91] South Coast Air Quality Management District, 2017. *Final 2016 Air Quality Management Plan*. March 2017.

the emissions that would actually occur during every day of construction. The maximum daily regional mass emissions of pollutants were compared to the respective SCAQMD thresholds.

According to the Proposed Project construction schedule, as presented in **Table 3.2-6**, construction will begin July 2021 and be completed October 2024. Emission calculations assumed all construction occurs at the earliest feasible dates. If the onset of construction were to be delayed to a later year, construction emissions would be less than those presented. This would result from cleaner construction equipment and vehicle fleet mix expected as a result of State regulations that require cleaner construction equipment to be phased-in for heavy-duty equipment.[122] Thus, should the Proposed Project commence construction on a later year than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.

TABLE 3.2-6
MODELED CONSTRUCTION SCHEDULE

Phase and Subphase	Start Date	End Date
Arena Site		
Demolition	7/1/2021	10/31/2021
Site Preparation and Sound Walls	7/1/2021	9/30/2021
Drainage/Utilities/Trenching	9/1/2021	10/31/2021
Grading/Excavation	11/1/2021	2/28/2022
Foundations/Concrete Pour	12/1/2021	1/1/2023
Building Construction	3/1/2022	6/30/2024
Exterior Enclosure/Architectural Coatings	7/1/2022	5/31/2024
Paving	2/1/2024	5/31/2024
West Parking Garage Site		
Site Preparation and Sound Walls	7/1/2021	7/31/2021
Drainage/Utilities/Trenching	7/1/2021	9/30/2021
Grading/Excavation	7/1/2021	9/30/2021
Foundations/Concrete Pour	9/1/2021	11/30/2021
Building Construction	10/1/2021	2/28/2023
Exterior Enclosure/Architectural Coatings	9/1/2021	2/28/2023
Paving	11/1/2021	2/28/2023

Use Month / Year as in Table 2-5 p. 2-83 ?

[122] California Air Resources Board. 2010. 13 CCR, Section 2449, Final Regulation Order: Regulation for In-Use Off-Road Diesel Vehicles, December 16, 2010.

TABLE 3.2-6
MODELED CONSTRUCTION SCHEDULE

Phase and Subphase	Start Date	End Date
East Transportation and Hotel Site		
Site Preparation and Sound Walls	7/1/2021	8/30/2021
Drainage/Utilities/Trenching	9/1/2021	10/31/2021
Grading/Excavation	10/1/2023	10/31/2023
Foundations/Concrete Pour – Transportation Hub	2/1/2024	2/29/2024
Building Construction – Transportation Hub	3/1/2024	6/30/2024
Exterior Enclosure/Architectural Coatings – Transportation Hub	3/1/2024	6/30/2024
Paving – Transportation Hub	4/1/2024	6/30/2024
Building Construction – Hotel Site	2/1/2024	9/23/2024
Paving – Hotel Site	9/16/2024	10/8/2024
Architectural Coatings – Hotel Site	8/1/2024	10/8/2024
Well Relocation Site		
Demolition	7/1/2021	7/31/2021
Sound Walls	7/1/2021	7/31/2021
Drilling and Casing	8/1/2021	12/23/2021
Utilities	1/1/2022	5/31/2022
Paving/Fencing	6/1/2022	6/30/2022

NOTE:
The emissions were estimated assuming construction begins at the earliest possible date (July 2021). This provides for a conservative emissions estimate as emission factors decline in future years. Construction of the Proposed Project may commence at a later date, which would generally result in similar or reduced emissions, primarily due to vehicles meeting more stringent emissions standards. If construction starts at a later date, emissions could occur in later calendar years; however, the emissions would be similar or reduced compared to the emissions disclosed herein.

SOURCE: ESA, 2019.

Construction activities would include demolition of any existing structures or improvements on site, site preparation, excavation and grading, building construction and interior finishing work, structure enclosure and architectural coating, and paving and exterior landscaping. Demolition activities are anticipated to generate approximately 7,607 tons of demolition debris (asphalt and general construction debris). The Proposed Project would export approximately 296,915 cubic yards of soil during grading and excavation activities. Heavy-duty equipment, vendor supply trucks and concrete trucks would be used during construction of foundations, parking structures, and buildings.

Daily regional criteria air pollutant emissions for the different phases of construction were forecasted based on construction activities, on-road and off-road mobile sources, and fugitive dust emission factors associated with the specific construction activity. Over the course of the construction schedule, the length of workdays would vary in range from 8 hours to 24 hours. Over the course of a day or shift, usage would vary depending on the equipment and type of work being performed. For example, during each 8-hour shift, equipment would be operating for seven hours per shift since the workday would include equipment downtime for lunch breaks and safety meetings. During the building construction phase of the Arena Structure, a majority of the

construction days would be 16-hour workdays, but periodically days could also require 24-hour workdays. The 24-hour workdays would be required during a variety of activities, including but not limited to construction such as foundation concrete pours, well-drilling, and ~~assembly of large components of steel framing of the Arena Structure~~ construction of portions of the arena bowl involving placement of precast segments on the Arena Site. (see 3.11 Noise p. 62) The 24-hour workdays would be required for a number of reasons, including technical requirements of certain construction techniques, worker safety, labor rules, and avoidance of conflicts on City streets and highways in the vicinity. Details regarding workday assumptions can be found in Appendix D.

Off-road mobile source emissions would result from the use of heavy-duty construction equipment such as bulldozers, loaders, and cranes. These off-road mobile sources emit VOC, NO_X, CO, SO_2, PM10, and PM2.5. The emissions were estimated using CalEEMod (Version 2016.3.2) software, an emissions inventory software program recommended by SCAQMD. CalEEMod is based on outputs from the OFFROAD model and EMission FACtor (EMFAC) model, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, heavy-duty off-road equipment, and on-road vehicles. Activities parameters, such as number of equipment and equipment usage hours were provided by the applicant.

Fugitive dust emissions (using PM10 as a surrogate) during construction activities were estimated in CalEEMod, which are based on the methods described in the US EPA AP-42 Compilation of Air Pollutant Emission Factors.[123] During the application of architectural coatings, evaporation of solvents contained in surface coatings result in VOC emissions. CalEEMod was used to calculate VOC emissions based on the building surface area and the default VOC content provided by the air district or CARB's statewide limits. Asphalt paving of parking areas are another source of VOC emissions. CalEEMod was used to calculate VOC off-gassing emissions based on the parking lot size and SCAQMD default emission factor.

On-road mobile sources also have the potential to generate temporary criteria air pollutant emissions through workers and haul trucks traveling to and from the Project Site during construction. Daily truck trips and trip lengths were based on information provided by the project applicant. Emission factors for passenger vehicles and heavy-duty trucks used the regional emission factors generated from the EMFAC model 2017 (EMFAC2017), the most recently approved version by the US EPA. EMFAC2017 "represents [California Air Resources Board's] current understanding of motor vehicle travel activities and their associated emission levels."[124] Mobile emission factors vary by speed where vehicles traveling at low speeds have higher emission rates, as seen in the EMFAC2017 data. Additional information is provided in Appendix D. On-road mobile sources related to project construction activities were conservatively assumed to travel at 5 miles per hour (mph) within the local study area (refer to section below, Localized Emissions and Analysis Methodology, for a discussion of the local study area). The 5 mph corresponds to the slowest speeds and the highest emission rates, as seen

[123] US Environmental Protection Agency, AP-42 Compilation of Air Pollutant Emissions Factors, Chapter 13: Miscellaneous Sources, https://www3.epa.gov/ttn/chief/ap42/ch13/index.html. Accessed April 25, 2019.
[124] California Air Resources Board, Mobile Source Emissions Inventory, https://www.arb.ca.gov/emfac/2017/. Accessed April 25, 2019.

calculated using a representative motor vehicle fleet mix for the Proposed Project based on information provided in Appendix K and EMFAC default fuel type.

For vehicle trips associated with the proposed Arena, the vehicle trips associated with spectators, event-day staff, and employees would be primarily passenger vehicles, so the default SCAQMD fleet mix was adjusted for a passenger fleet mix of light-duty autos, motorcycles, light duty trucks, and medium-duty vehicles to estimate passenger fleet-average emission factors. For trips associated with TNC vehicles, the default SCAQMD fleet mix was adjusted for a TNC vehicle fleet mix of light-duty autos, light duty trucks, and medium-duty vehicles to estimate TNC fleet-average emission factors. For vehicle trips associated with shuttles used to transport attendees and employees, the default SCAQMD fleet mix was adjusted for a shuttle fleet mix of light-heavy duty trucks to estimate shuttle fleet-average emission factors. For vehicle trips associated with miscellaneous vehicles, the default SCAQMD fleet mix was adjusted for a miscellaneous vehicle fleet mix of medium-heavy duty and heavy-heavy duty trucks to estimate miscellaneous vehicle fleet-average emission factors. For ancillary land uses, including the hotel and restaurant/retail land uses, the default SCAQMD fleet mix was used to estimate fleet-average emission factors.

For the Proposed Project Arena and associated events, trips lengths were also separated into three trip length segments with different vehicle speeds. As stated above, vehicles traveling at low speeds have higher emission rates on a gram per mile basis.

The first trip length segment was defined as the distance each vehicle trip travelled on residential and business district roadways to and from freeways from the point of the trip origin to the nearest freeway. These vehicles were modeled traveling at a speed of 25 mph, the lowest (and most conservative for emissions) posted speed limit typical on these roadways.[127] This length was modeled as 5 miles because Los Angeles County census data and Geographic Information System mapping shows that 98 percent of the Los Angeles county population lives within 5 miles of a freeway.[128]

The second trip length segment was defined as the distance each event-related vehicle trip travelled on freeways to the Arena. Emissions were modeled based on freeway speed data from the California Department of Transportation (Caltrans) Performance Measurement System (PeMS) for the freeways closest to the Project Site. These vehicles were calculated to travel at a

[127] California Department of Motor Vehicles, California Driver Handbook-Laws and Rules of the Road, https://www.dmv.ca.gov/portal/dmv/detail/pubs/hdbk/speed_limits+. Accessed June 25, 2019.

[128] The average distance used for the first trip length segment was determined by ESA using GIS where it was determined that 98 percent of the Los Angeles County population lives within 5 miles of a freeway. Los Angeles County Enterprise GIS, Los Angeles County GIS Data Portal, 2019, http://egis3.lacounty.gov/egis/. Accessed July 22, 2019. US Census Bureau, American Fact Finder, 2019, https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_P1&prodType=table. Accessed July 22, 2019.

Additionally, the Arena Site would include up to two stationary emergency generators with an estimated total capacity rated at approximately 2,400 kilowatts (kW) to provide emergency power primarily for lighting and other emergency building systems and two emergency fire pumps with an estimated total capacity rated of 300 kW to provide water for the fire suppressant system. Emergency generator and fire pump emissions were calculated based on compliance with applicable federal emissions standards and compliance with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines) mandated emission limits and operating hour constraints. This analysis also assumed that the emergency generators and fire pumps would operate up to two hours per day and 50 hours per year for testing and maintenance (per SCAQMD Rule 1470 limit).

Delivery truck emissions generated from traveling to and from the Project Site, as well as on-site idling were based on the proposed loading dock capacity at the Arena and emission factors from EMFAC2017. The maximum number of delivery trucks were assumed with half of the delivery trucks consisting of TRUs to account for trucks transporting goods that require refrigeration. Delivery trucks emissions were based on one hour of operation per truck per day and emission factors from CARB.[134,135]

Localized Emissions and Analysis Methodology

Localized construction and operations related NO_X, CO, PM10, and PM2.5 emissions concentrations were estimated to determine if the Proposed Project would generate significant localized air quality impacts that could substantially affect air quality sensitive receptors in the vicinity of the Project Site.

The localized off-site emissions analysis focused on an approximately 1.3 mile radius from the Project Site, which is referred to in this analysis as the local study area, rather than the full trip length assumed under the regional construction and operational emission calculations.[136] The local study area was the focus of this analysis because it would result in the highest incremental increase in ambient air pollutant concentration due to capturing the emissions from the Proposed Project on-site site construction, on-site operations, and the four intersections experiencing the maximum traffic volumes surrounding the Project Site. The local study area was assumed to capture the maximum localized emissions because vehicles associated with construction and operations tend to dissipate the farther they travel from the Project Site while increasing speed, thus reducing emission rates with increased distance.

Similar to the regional impact analysis, CARB's EMFAC2017 was used to generate emissions factors for construction and operational mobile sources for the localized impact analyses. The mobile emissions associated with the Proposed Project in the local study area were calculated using

[134] California Air Resources Board, 2011. Staff Report: 2011 Amendments for the Airborne Toxic Control Measure for In-USE Diesel Fueled TRUs and TRU Generator Sets, and Facilities where TRUs Operate, August 2011.
[135] California Air Resources Board, 2012. Final Regulation Order, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities where TRUs Operate, October 2012.
[136] In compliance with PRC § 21151.8 (a)(2).

the fleet mix information provided in Appendix K and the average vehicle speed assumption of 5 mph to account for reduced vehicle speeds due to traffic congestion.[137] The mobile source emissions from the post-event hour were assumed to be the highest based on the expected number of vehicles on the road, increased traffic congestion, and associated low vehicle speeds. As previously mentioned, vehicles traveling at low speeds have higher emission rates. Detailed information regarding vehicle fleet mix and emission factors by speed is provided in Appendix D.

The Proposed Project localized construction and operations emissions were then apportioned into the US EPA AMS/EPA Regulatory Model (AERMOD) model to generate concentrations of NO_X, CO, PM10, and PM2.5 at receptor locations surrounding the Project Site (see *Air Dispersion Modeling*, below, for more details). In addition, to evaluate the contribution to future localized levels of CO and NO_2 from future traffic activity associated with the HPSP Adjusted Baseline projects (including events at the NFL Stadium) and events at The Forum, emissions were calculated generally following the methodology presented above for the Proposed Project-related mobile sources assumed to operate in the local study area.

The ambient pollutant concentrations of NO_X, CO, PM10, and PM2.5 surrounding the Project Site are listed in Table 3.2-2, above, for years 2015-2017, and were established based on measurements from the most representative SCAQMD Monitoring stations in the SRA 2 receptor area. As mentioned above, the LAX-Hastings Monitoring Station is the most representative of the air quality conditions surrounding the Project Site and was used to determine ambient levels of NO_X and CO.

As described in Section 3.2.1, since the Air Basin is non-attainment for the PM10 and PM2.5 standards, SCAQMD has established incremental increase thresholds of 10.4 $\mu g/m^3$ (for construction) and 2.5 $\mu g/m^3$ (for operations), and ambient background levels are not required.

As described in Section 3.2.1, ambient levels for CO and NO_X at the Project Site are below the NAAQS and CAAQS. The Proposed Project is considered to have a significant impact if local levels of these pollutants from future Project-related emissions in addition to ambient concentrations of CO and NO_X under Adjusted Baseline conditions result in an exceedance of one or more of the CO and NO_X NAAQS and CAAQS. Details regarding the modeling methodology can be found in *Intersection Hotspot Analysis*, below.

During construction of the Proposed Project, the highest localized air quality impacts were assumed to occur when the NFL Stadium and The Forum would experience full-capacity events overlapping with construction of the Proposed Project. To estimate the highest potential impacts from the Proposed Project, construction was assumed to occur simultaneously with a major event at the NFL Stadium and a concert at The Forum on the same day ~~(i.e., on a Saturday)~~. This infrequent but potential occurrence would be expected to result in the highest construction localized air quality impacts. As discussed in Project Design Feature-3.2-1, heavy duty construction trucks (import,

[137] City/County Association of Government of San Mateo County, 2014. Appendix B-Traffic Level of Service Calculation Methods, 2014.

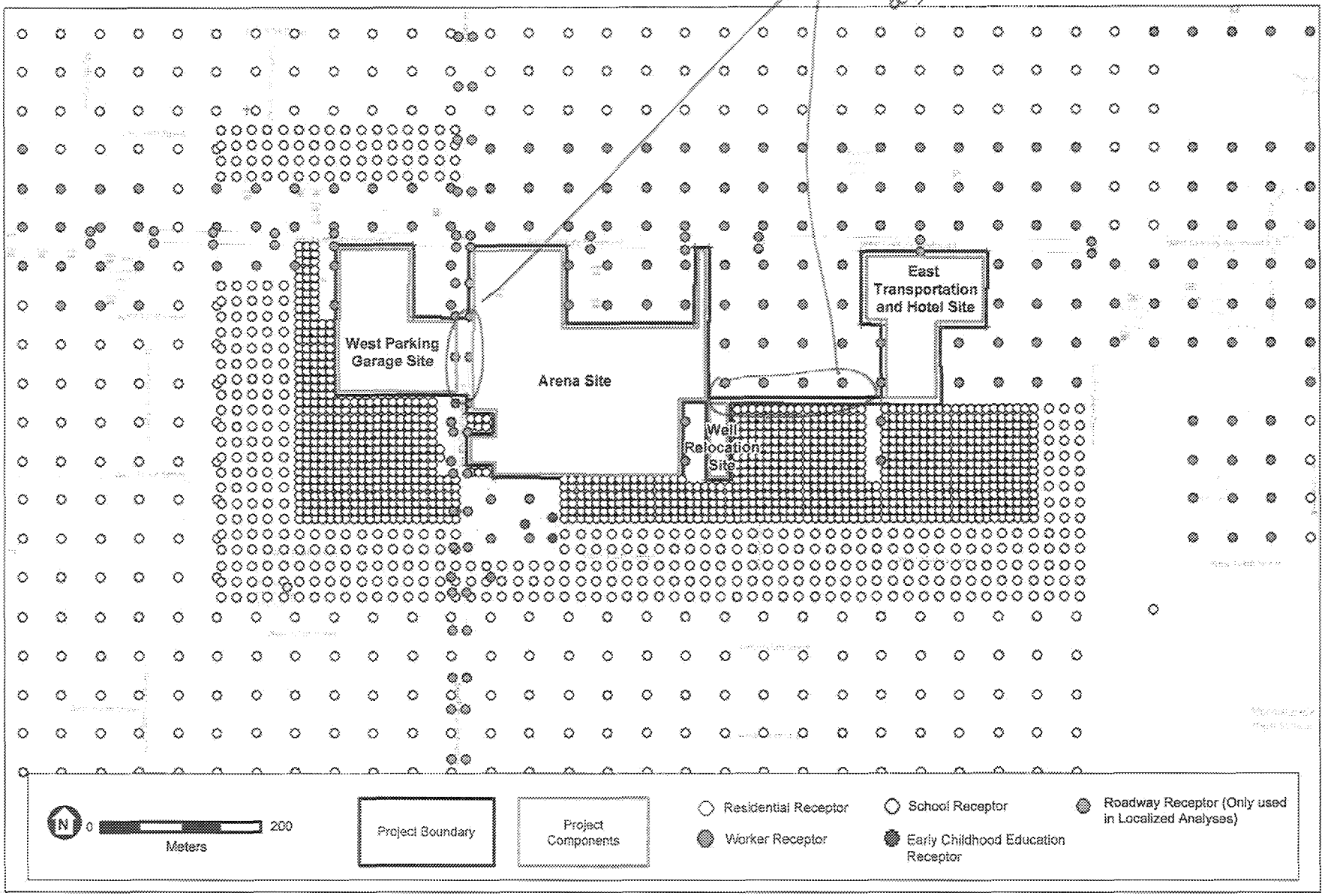
export, delivery, etc.) would be prohibited from traveling to and from the Project Site during the pre-and post-event hours on days with major events at ~~Hollywood Park~~ the NFL Stadium and/or The Forum.

During operation of the Proposed Project, the potentially highest localized air quality impacts are expected to occur when the Project Site hosts a major event (i.e., sold-out concert) and the NFL Stadium and The Forum experience full-capacity events on the same day ~~(i.e., on a Saturday).~~ This scenario was analyzed by applying the maximum peak hour volumes for a major event at the Project Site, major events at The Forum and NFL Stadium, and maximum peak hour volumes for the ancillary uses at the HPSP. It was assumed these maximum peak hour volumes would occur simultaneously within the local study area. This scenario is expected to represent the highest operational localized air quality impacts from event attendees and normal traffic.

For pollutants with annual concentration standards—NO_2 and PM10—annual Proposed Project construction and operations were modeled concurrently with the presumed annual event schedules for the NFL Stadium and The Forum as described in Section 3.14, Transportation and Circulation. The analyses listed in **Table 3.2-7** were conducted for localized construction and operational impacts.

Air Dispersion Modeling

To evaluate local impacts for construction and operation of the Proposed Project, air dispersion modeling was completed using the AERMOD model with five years of meteorological data from the Hawthorne Airport (SCAQMD Station ID KHHR), the closest and most representative meteorological monitoring station. The AERMOD model was used to simulate the movement of Proposed Project-related air pollutants from construction and operation activities through the air, and to generate concentrations of those pollutants at numerous receptor locations surrounding the Project Site. Similarly, the AERMOD model was used to simulate the movement of vehicle trips associated with Adjusted Baseline CO and NO_X emissions and generate air concentrations at the receptor locations surrounding the Project Site. The estimated concentrations provide conservative estimates and tend to overestimate actual impacts and therefore may not represent



SOURCE: ESA, 2019

Inglewood Basketball and Entertainment Center

Figure 3.2-3
Air Dispersion Modeling Receptor Grid

ESA

In order to determine the potential health impacts, mass emission rates from operation of the Proposed Project were distributed spatially and temporally. The dispersion of these pollutants was predicted using a photochemical grid model and meteorological data for a representative year to evaluate "worst case" dispersion of criteria pollutant emissions. A "baseline" model was run using SCAQMD emissions inventory data from their AQMP efforts to represent pollutant dispersion and corresponding health effects (like asthma-related or respiratory-related hospital admissions, etc.) without contribution from the Proposed Project. The criteria pollutant emissions from the Proposed Project were then combined spatially and temporally with the SCAQMD emission inventory data and run in a second model run. The two sets of results were then compared to analyze the difference in health impacts and the corresponding contribution from the operation of the Proposed Project.

The quantitative HIAs were performed for emissions of ozone (including precursor pollutants, NO_X and VOC) and PM2.5 (primary and secondary). These analyses used CMAQ, a photochemical grid model (PGM), to predict the potential increases in the regional ambient air concentrations of ozone and PM2.5 due to implementation of the Proposed Project. The modeling effort included developing meteorology, emissions, a chemical transport model, and other environmental conditions using third-party models and processing tools in order to model impacts in CMAQ. For meteorology, a regional model – the weather research and forecasting (WRF) model – and a chemistry interface processors (MCIP) was used in conjunction with CMAQ. Additional emissions and initial and boundary conditions models were used with CMAQ to calculate resulting ozone and PM2.5 concentrations. Proposed Project construction emissions were less than operation emissions on an average annual basis, localized and very small over the life of the Proposed Project (e.g., total construction emissions as compared to 30-year operation emissions is about 12 percent for NO_X and VOC, and less than 2 percent for PM), and therefore not included in the quantitative HIAs.

Daily PM2.5, NO_X, and VOC emissions profile for an annual period were established by analyzing the estimated normal operational scenarios and schedule at the Project Site. To conservatively generate the worst-case incremental concentrations that could be induced by the Proposed Project, the HIA used the existing ~~baseline~~ sources instead of Adjusted Baseline Environmental Setting sources ~~(i.e., the HPSP Adjusted Baseline projects)~~. Contributions from the Adjusted Baseline would yield higher concentrations of NO_2 and VOC in the region of the Project Site, which could reduce the rate of formation of ozone from the Proposed Project. Studies, like that performed by the University of Michigan, have demonstrated that ozone formation increases with increasing NO_X emissions when ambient NO_2 is lower, and ozone can decrease with increasing NO_X emissions when ambient NO_2 is high.[157] Therefore, including the contribution from the Adjusted Baseline to background ambient concentrations could produce a less conservative analysis (i.e., smaller incremental ozone emissions than if using Existing ~~Baseline~~ sources).

[157] University of Michigan, Overview: Tropospheric ozone, smog and ozone-NO_X-VOC sensitivity, http://www-personal.umich.edu/~sillman/ozone.htm. Accessed July 22, 2019.

Construction Project Design Feature 3.2-1

The project applicant will implement the following construction equipment features for equipment operating at the Project Site, as well as the following construction protocols. These features and protocols would be included in applicable bid documents, and successful contractor(s) must demonstrate the ability to supply such equipment and comply with such protocols. Construction features would include the following:

- *The Project shall utilize off-road diesel-powered construction equipment that meets or exceeds the California Air Resources Board (CARB) and United States Environmental Protection Agency (US EPA) Tier 4 Final off-road emissions standards or equivalent for all equipment rated at 50 horsepower (hp) or greater. Such equipment shall be outfitted with Best Available Control Technology (BACT) which means a CARB certified Level 3 Diesel Particulate Filter or equivalent.*
- *During plan check, the Project representative will make available to the lead agency and South Coast Air Quality Management District (SCAQMD) a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during construction. The inventory will include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be maintained on site at the time of mobilization for each applicable piece of construction equipment.*
- *Equipment such as concrete/industrial saws, pumps, aerial lifts, material hoist, air compressors, and forklifts must be electric or alternative-fueled (i.e., non-diesel). Pole power shall be utilized at the earliest feasible point in time, and shall be used to the maximum extent feasible in lieu of generators. If stationary construction equipment, such as diesel- or gasoline-powered generators, must be operated continuously, such equipment must be located at least 100 feet from air quality sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.*
- *To control dust emissions during soil disturbing phases such as demolition, site preparation, and grading and excavation, the Project shall apply water at least every 2 hours per day on active areas of disturbance and paved roads.*
- *Contractors will maintain and operate construction equipment to minimize exhaust emissions. All construction equipment must be properly tuned and maintained in accordance with the manufacturer's specifications and documentation demonstrating proper maintenance, in accordance with the manufacturer's specifications, shall be maintained on site. Tampering with construction equipment to increase horsepower or to defeat emission control devices must be prohibited.*
- *Construction activities must be discontinued during second-stage smog alerts. Records of discontinued construction activities due to second stage smog alerts will be maintained on site by the contractor.*
- *Heavy duty construction trucks (import, export, delivery, etc.) would be prohibited from traveling to and from the Project Site during the pre-and post-event hours on major event days at ~~Hollywood Park~~ the NFL Stadium and/or The Forum.*
- *All haul truck trips would be prohibited from leaving the site after 3:00 PM.*

(suggested for consistency w/ other sections)

Operations Project Design Feature 3.2-2

The project applicant will implement the following operational equipment requirements and operation protocols for equipment operating at the Project Site. These features would be included in applicable bid documents, and successful contractor(s) must demonstrate the ability to supply such equipment and comply with such protocols. Operation features would include the following:

- *All emergency generators used for Project operations shall be selected from the SCAQMD certified generators list and meet applicable federal standards for diesel emissions. For after-treatment of engine exhaust air, a diesel particulate filter shall be provided to meet the emission level requirements of SCAQMD. The Project would have two emergency generators and two fire pumps, each could operate up to two hours per day and 50 hours per year for testing and maintenance (per SCAQMD Rule 1470 limit) to ensure reliability in the case of a power outage. Testing of the generators for maintenance and operations purposes would be permitted only during non-event days.*
- *Heavy-duty delivery trucks would be prohibited from traveling to and from the Project Site during the two hours before and one hour after an event at the ~~IBEC~~ of more than 9,500 attendees, and during pre-and post-event hours during major event days at the ~~Hollywood Park~~ and/or The Forum.*

Impacts and Mitigation Measures

Impact 3.2-1: Construction and operation of the Proposed Project would conflict with implementation of the applicable air quality plan. (Significant and Unavoidable)

The following analysis addresses consistency of the Proposed Project with applicable plans and policies that regulate air quality. In particular, the analysis addresses consistency with SCAQMD's AQMP, which, as discussed above, is an air quality plan that includes strategies for achieving attainment of applicable ozone, PM10, and PM2.5 standards. In addition, consistency with the air quality related policies in the City of Inglewood General Plan Land Use Element are also addressed. Finally, this analysis addresses consistency with the City's ECAP, which includes strategies to mitigate the City's impacts on air quality and climate change.

Air Quality Management Plan

As discussed above, SCAQMD has adopted a series of AQMPs to lead the Air Basin into compliance with several criteria air pollutant standards and other federal requirements, while taking into account construction and operational emissions associated with population and economic growth projections provided by SCAG's 2016 RTP/SCS.[158] SCAQMD recommends that, when determining whether a project is consistent with the relevant AQMPs, the lead agency should assess whether the project would directly obstruct implementation of the plans by impeding SCAQMD's efforts to achieve attainment with respect to any criteria air pollutant for which it is currently not in attainment of the NAAQS and CAAQS (e.g., ozone, PM10, and

[158] Southern California Association of Governments, 2016. *2016 Regional Transportation Plan/Sustainable Communities Strategy*. April 2016.

PM2.5) and whether it is consistent with the demographic and economic assumptions (typically land use related, such as employment and population/residential units) upon which the plan is based.[159] SCAQMD guidance indicates that projects whose growth is included in the projections used in the formulation of the AQMP are considered to be consistent with the plan and would not interfere with its attainment.[160]

Construction

Control Strategies

During construction, the Proposed Project would comply with CARB's requirements to minimize short-term emissions from on-road and off-road diesel equipment, including the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time, and with SCAQMD's regulations such as Rule 403 for controlling fugitive dust and Rule 1113 for controlling VOC emissions from architectural coatings. Furthermore, the Proposed Project would comply with fleet rules to reduce on-road truck emissions (i.e., 13 CCR section 2025, CARB Truck and Bus regulation). In addition, as included in Project Design Feature 3.2-1, the Proposed Project would require the use of off-road diesel-powered construction equipment that meets or exceeds CARB and US EPA Tier 4 Final off-road emissions standards or equivalent for all equipment rated at 50 horsepower (hp) or greater. Compliance with these measures and requirements would be consistent with and meet or exceed the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Nonetheless, as discussed further below in the analysis for Impact 3.2-2, even though the Proposed Project would be consistent with applicable strategies in the AQMP, local and state regulations, and other voluntary measures designed to reduce non-attainment pollutants, regional emissions during construction of the Proposed Project would exceed the significance threshold for NO_X. Emissions of VOCs, PM10, and PM2.5 during construction of the Proposed Project are not predicted to exceed regional mass emission thresholds.

Growth Projections

The Proposed Project would result in an increase in short-term employment compared to existing conditions. Although the Proposed Project would generate construction workers on the Project Site during the construction process, ~~it would not create new construction jobs as~~ construction-related jobs generated by the Proposed Project would likely be filled by employees within the construction industry within the City of Inglewood and the greater Los Angeles County region. Construction industry jobs generally have no regular place of business, as construction workers commute to job sites throughout a given region, which may change several times a year. Moreover, these jobs would be temporary in nature. Therefore, the construction jobs generated by the Proposed Project would not conflict with the long-term employment or population projections upon which the AQMPs are based.

[159] South Coast Air Quality Management District, Air Quality Analysis Handbook, pp. 12-2, 12-3, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook. Accessed April 16, 2019.
[160] South Coast Air Quality Management District, 1993. CEQA Air Quality Handbook, p. 12-1. November 1993.

~~Because emissions during construction of the Proposed Project would exceed the significance threshold for NO_x, this construction impact is considered significant.~~

Impact addressed / included in conclusion on p. 3.2-72

Operation

Control Strategies

As discussed above, the SCAQMD AQMPs includes land use and transportation strategies from the SCAG 2016 RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions. The applicable land use strategies include planning for growth around livable corridors; providing more options for short trips/neighborhood mobility areas; supporting ZE vehicles & expanding vehicle charging stations; supporting local sustainability planning. The applicable transportation strategies include managing through the Transportation Demand Management (TDM) Program and the Transportation System Management (TSM) Plan including advanced ramp metering, and expansion and integration of the traffic synchronization network; promoting active transportation. The majority of the transportation strategies are to be implemented by cities, counties, and other regional agencies such as SCAG and SCAQMD, although some can be furthered by individual development projects.

The location, design, and land uses of the Proposed Project would support land use and transportation strategies related to reducing vehicle trips for patrons and employees by increasing commercial and hotel density near public transit. The Proposed Project is considered an "urban infill" project, as it would replace existing low density commercial and light manufacturing/ warehouse uses with a high-density, mixed-use development that would include an 18,000 fixed seat arena, office uses, a training facility, a sports medicine clinic, retail, restaurant, commercial uses, a hotel, and community spaces. The Proposed Project proposes higher density, consistent with compact growth, on infill urban land accessible to and well served by public transit including frequent and comprehensive transit services. New job growth, as a result of the completed Proposed Project, is focused in an infill area well served by transit.

3 ?

The Project Site is located within one-quarter mile of eight existing Metro bus stops along the following four Metro routes, 117, 211/215, and 212/312. In addition, local transit service to the Project Site would be provided by Metro in the form of future below- and at-grade light rail on the Metro Crenshaw/LAX line, which is currently under construction and expected to be complete and operational in mid-2020. During operation of the Proposed Project, a shuttle pick-up and drop-off shuttle service will be provided at the following two Metro rail stations: the existing Metro Green Line – Hawthorne/Lennox Station and the future Metro Crenshaw/LAX Line – ~~Florence/La Brea~~ Station. The Project Site's proximity to these publicly available transit services enable the Proposed Project to potentially reduce vehicle trips, VMT, and associated transportation-related emissions compared to a project without these characteristics.

Downtown Inglewood

The Proposed Project land use characteristics (including increased density, location efficiency, increased land use diversity and mixed-uses, etc.), many of which overlap the strategies in the AQMPs, have been shown by CAPCOA, in its guidance document entitled *Quantifying*

Greenhouse Gas Mitigation Measures,[161] to support a relative reduction in vehicle trips and VMT in comparison to a project that does not include these land use characteristics, and corresponding vehicle emissions, further supporting consistency with the AQMPs. In particular, the Proposed Project would increase the Project Site density from 4.25 jobs per acre to 35.46 jobs per acre.[162] In addition, the Project Site is an urban location within the City of Inglewood and would be developed on an infill site that is located in a highly urbanized part of the SCAG region and is accessible to numerous transit lines, and would be located immediately adjacent to another major mixed use project that is under development (Hollywood Park Specific Plan). Furthermore, the Proposed Project would co-locate complementary arena, office, retail/restaurant, commercial, and hotel uses in close to proximity to existing off-site commercial and residential uses. The Project Site is adjacent to two LA Metro bus routes (lines 117 and 212/312 stop at the intersection of West Century Boulevard and South Prairie Avenue) and is also within one half mile of a Metro bus route (the combined 740/40 line stops at the intersection of West Century Boulevard and La Brea/Hawthorne Boulevard). These Metro bus routes provide frequent service during peak commute hours. As described in Section 3.0, Introduction to the Analysis, the Inglewood Transit Connector (ITC) (Cumulative Project #74) is a planned 1.8-mile electric train system with a station near the intersection of West Century Boulevard and South Prairie Avenue, adjacent to the Project Site; if approved and constructed, the ITC would provide close connections from the Project Site and the adjacent HPSP development to the LA Metro Crenshaw line Downtown Inglewood station. Additionally, as discussed above, the Proposed Project would provide shuttle pick-up and drop-off service at two LA Metro rail stations.

As demonstrated above, the Proposed Project would support land use and transportation strategies in the AQMPs. Nevertheless, as discussed further below in the analysis for Impact 3.2-2, regional emissions during operation of the Proposed Project would exceed the regional significance thresholds for those criteria air pollutants for the Air Basin is not in attainment (i.e., VOC, NO_X, PM10, and PM2.5).

Growth Projections

As discussed in Section 3.12, Population, Employment, and Housing, the Project Site is mostly vacant, and is partially developed with a fast-food restaurant, a motel, two warehouse and light manufacturing facilities, a commercial catering business, and a groundwater well and related facilities. Existing employment at the Project Site totals approximately 119 people. Operation of the Proposed Project would include permanent employment associated with the operations of the Arena and other uses included in the Proposed Project. The Proposed Project would eliminate the current uses and jobs at the Project Site (approximately 119 jobs) and would generate 768 permanent jobs at the Project Site as well as an additional 225 full-time equivalent jobs to support arena and/or plaza events throughout the year. Combined with the 768 permanent jobs, the

[161] California Air Pollution Control Officers Association (CAPCOA), 2010. Quantifying Greenhouse Gas Mitigation Measures. August 2010.

[162] Existing jobs per acre = 119 existing employees / 28 acres = 4.25 jobs per acre; proposed jobs per acre = 768 regular jobs plus 225 full time equivalent annual event jobs for a total of 993 full time employees / 28 acres = 35.46 jobs per acre.

Proposed Project would result in a total of 993 full-time equivalent jobs, for a net increase of 874 full-time jobs within the City.

As described in Section 3.12, Population, Employment, and Housing, the City of Inglewood's total employment in 2017 exceeded that projected by the 2016 RTP/SCS for 2020, and even additional employment projections through 2040.[163] Therefore, any project that includes employment would exceed the 2016 RTP/SCS forecasts for the City. As is discussed in Section 3.12, the SCAG employment projections were undertaken in 2012, during a period of economic recession, and have not been updated to reflect current and anticipated conditions in Inglewood. While this employment growth was not necessarily forecasted within SCAG's projection horizon, which could cause additional people to move into the area beyond what was planned, there is sufficient infrastructure planned (as detailed within Section 3.13, Public Services, and Section 3.15, Utilities and Service Systems) to accommodate the additional growth, and there would be no further environmental effects, including those related to air quality, beyond those described in the analysis of criteria pollutant emissions presented under Impact 3.2-2. In addition, as discussed in Section 3.12, Population, Employment, and Housing, the City of Inglewood has established several goals and policies to foster redevelopment of infill sites that would support healthy economic development. Moreover, as addressed under Section 2.4, Project Site Existing Conditions, and Section 3.10, Land Use and Planning, the Project Site is intended to support employment uses. Therefore, while the Proposed Project would require amendments to the General Plan, ~~Planning and Zoning Code Text, and Zoning Map~~ and would introduce more jobs to the Project Site than may have resulted under existing zoning, this growth is consistent with the City of Inglewood General Plan.

and the Inglewood Municipal Code

SCAG 2016 RTP/SCS

Goal 6 of the 2016 RTP/SCS aims to improve air quality and encourage active transportation. The TDM programs as described above would be designed to reduce vehicle trips through a variety of TDM components. This would reduce GHG, criteria pollutant, and TAC emissions from transportation, and would therefore improve air quality impacts from Project-related transportation. In addition, as described above, the TDM Program would encourage active transportation and alternative modes of travel; for example, the Proposed Project would include 23 visitor and 60 employee on-site bike parking spaces, ~~which would exceed the City's bicycle parking code~~. This would further support Goal 6 of the RTP/SCS.

Goal 7 of the 2016 RTP/SCS aims to actively encourage and create incentives for energy efficiency. The Proposed Project would utilize energy efficiency appliances and equipment, as required by Title 24, and it would provide EV charging stations to support the future use of electric and hybrid-electric vehicles by employees and visitors traveling to and from the site. In addition, the Proposed Project would be designed and constructed to meet LEED Gold certification requirements, which would require the incorporation of energy efficiency measures. The Proposed Project would also comply with Title 24 energy efficiency requirements, use 100 percent LED lighting indoors and outdoors throughout the site, and install high efficiency

[163] Southern California Association of Governments, 2016. RTP/SCS Growth Forecast by Jurisdiction, p. 1. 2016.

HVAC systems. In addition, the Proposed Project design would include compliance with CalGreen Code Voluntary Tier 1, ~~which~~ and is estimated to achieve a 10 percent reduction in energy consumption over Title 24 2019 standards based on the preliminary design of the Proposed Project. These actions would support Goal 7 of the 2016 RTP/SCS.

General Plan Air Quality-Related Policies

As discussed above, the City of Inglewood General Plan Land Use Element includes a goal relevant to air pollutant emissions.

> **Circulation Goal:** Promote and support adequate public transportation within the City and the region.

As described in Chapter 2, Project Description, the Proposed Project constitutes a large-scale development integrating commercial, office, hotel, and entertainment uses that support public transportation. The Proposed Project would include provisions that would promote the use of public transportation as a means of travel to and from the Proposed Project, including a transportation hub at the East Transportation and Hotel Site, shuttle stops on South Prairie Avenue, and a shuttle system for large events that would connect the Proposed Project to nearby Metro Crenshaw and Green Line rail stations. For these reasons, the Proposed Project would be consistent with Inglewood General Plan policies related to air quality.

Air Quality-Related Policies from the Inglewood Energy and Climate Action Plan

As described above, the City's ECAP includes strategies to mitigate the City's impacts on air quality and climate change. While these strategies are primarily directed towards GHG emission-reductions, the measures in the City's ECAP would also achieve co-benefits of reducing criteria air pollutants and TACs. These strategies include:

Strategy 1: Lead by Example with Municipal Government Actions

- Accelerate city vehicle fleet replacement
- Continue commute trip reduction program
- Planning for electric vehicle infrastructure

Strategy 4: Improve Transportation Options and Manage Transportation Demand

- Make roadways more efficient
- Improve transit
- Improve bicycle facilities
- Make parking more efficient
- Reduce commute trips
- Encourage land use intensification and diversity

and PM2.5), the Proposed Project would have a significant impact regarding consistency with the AQMP.

Regarding construction emissions, the Applicant has agreed to use off-road diesel-powered construction equipment that meets or exceeds CARB and US EPA Tier 4 Final off-road emissions standards or equivalent for all equipment rated at 50 hp or greater. Such equipment will be outfitted with BACT devices including, but not limited to, a CARB certified Level 3 Diesel Particulate Filters. Based on registration data, over 75 percent of heavy-duty diesel vehicles (i.e., vendor and haul trucks) in the State are model year 2010 or newer.

All construction equipment and vehicles shall maintain compliance with the manufacturer's recommended maintenance schedule and the Applicant will maintain maintenance records. The Applicant will strive to use ZE or NZE heavy- duty haul trucks during construction, and no idling signs will be posted upon entry and throughout the Project Site during construction. In addition, the project applicant will restrict vehicle idling time to no longer than five minutes and will post signs at the entrance and throughout the site stating that idling longer than five minutes is not permitted. Even with implementation of Project Design Feature 3.2-1 and Mitigation Measure 3.2-1(c)-construction-related daily emissions would exceed the SCAQMD significance threshold for NO_X. Therefore, short-term regional construction emissions would be considered **significant and unavoidable.**

Regarding operational emissions, feasible mitigation in line with the VMT-reduction targets of the AQMP and the City's ECAP to reduce regional emissions during operation of the Proposed Project have been developed. Implementation of Mitigation Measure 3.2-1 would require the implementation Mitigation Measure 3.14-2(b), which involves the implementation of a TDM program, consistent with the transportation strategies noted in the 2016 RTP/SCS. In particular, the TDM program would be designed to provide transportation services and ~~monetary~~ incentives and that encourage and support the use by employees, event attendees and customers of alternative modes of transportation and the reduction of vehicle trips, including by increasing average vehicle occupancy. ~~The TDM program would be designed to be consistent with the requirements and achieve the reduction in vehicle trips set forth in AB 987~~. The Proposed Project TDM program would include a variety of components, including programs to encourage alternative modes of transportation (rail, public bus, and vanpool), including event-day dedicated shuttle services; programs to carpools and ZE vehicles, active transportation, employee vanpools, a park-n-ride program, and information services; and programs to reduce on-site parking demand, including event-day local microtransit service.

As demonstrated in Appendix K, the TDM program would result in a reduction of vehicle trips. Potential trip reductions are based on estimates of vehicle trips for LA Clippers home basketball games and other non-NBA basketball game events to be hosted at the Project Site, as well as LA Clippers employees who will use the LA Clippers practice and training facility and the LA Clippers offices, and vehicle trips by employees and patrons of the sports medicine clinic, retail, restaurant, community space and hotel uses included at the Project Site. The TDM program would be designed to achieve and maintain a reduction in the number of vehicle trips, on an annual basis, by attendees, employees, visitors, and customers as compared to trips generated by Project operations absent the TDM program. The implementation of this mitigation measure would reduce ~~reliance on the personal automobile~~, thereby reducing Project-related emissions during operation of the Proposed Project. However, as the timing and efficacy of these measures cannot be

"Single-occupancy vehicle trips and encourage the use of other modes of transportation besides automobiles,"

Corrected language sent to p. 3.2-90

determined with certainty at this time, the regional operational emissions would continue to exceed the significance thresholds for those criteria air pollutants and precursors for which the Air Basin is not in attainment (i.e., VOC, NO_X, PM10, and PM2.5). As such, even with implementation of Mitigation Measure 3.14-2(b), the Proposed Project would not be consistent with the control strategies in the AQMPs.

The Applicant has agreed to conduct maintenance and/or testing on the emergency generators or fire pump generators on three separate non-event days. Each emergency generator shall be tested on a separate non-event day and the two fire pump generators may be tested together on a separate non-event day. As shown in **Table 3.2-24**, below, NO_X emissions during operations would be reduced to less-than-significant levels during Non-Event days. However, NO_X, CO, PM10, and PM2.5 emissions would remain in excess of the SCAQMD significance thresholds on Event days. In addition, the Applicant has agreed to provide incentives to vendor delivery trucks that use ZE or NZE trucks during project operations. As previously stated, registration data indicates over 75 percent of heavy-duty diesel vehicles (i.e., vendor and haul trucks) in the state are model year 2010 or newer. Thus, there are no additional feasible mitigation strategies to further reduce the maximum daily regional emissions of VOC, NO_X, CO, PM10, and PM2.5 during operations and the Proposed Project would continue to be above the SCAQMD regional significance thresholds and impacts would be **significant and unavoidable.**

The Proposed Project would be consistent with the air quality related policies in the City's General Plan and ECAP. However, even with implementation of all feasible mitigation, regional Proposed Project emissions of nonattainment pollutants would remain in excess of applicable thresholds, and this impact would be considered **significant and unavoidable.**

Impact 3.2-2: Construction and operation of the Proposed Project would result in a cumulatively considerable net increase in NO_X emissions during construction, and a cumulatively considerable net increase in VOC, NO_X, CO, PM10, and PM2.5 during operation of the Proposed Project. (Significant and Unavoidable)

Construction

Construction of the Proposed Project has the potential to temporarily emit criteria air pollutant emissions through the use of heavy-duty construction equipment, and through vehicle trips generated from workers and haul trucks traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Mobile source emissions, primarily NO_X and PM emissions (i.e., PM10 and PM2.5), would result from the use of diesel powered on-and off-road vehicles and equipment.

Construction emissions would vary substantially from day to day, depending on the level of activity and the specific type of construction activity. The maximum daily construction emissions for the Proposed Project were estimated for each construction phase. Some individual construction phases could potentially overlap; therefore, the estimates of maximum daily emissions included these potential overlaps by combining the relevant construction phase emissions. Detailed calculations for all individual phases and all overlap scenarios modeled are included in Appendix D.

combustion, and area sources such as landscaping equipment and consumer products usage. The Proposed Project would also produce criteria air pollutant emissions from delivery trucks, charbroilers, cooling towers, and on-site diesel-fueled emergency generators. The on-road mobile sources related to the operation of the Proposed Project include passenger vehicles for workers, players and supporting staff, event attendees, customers to the commercial uses, hotel guests, media vans and trucks delivering to and from the Project Site. VMT data, which takes into account ridership, mode, and distance on freeways and local streets is provided in Appendix K.

Regional air emissions from the Proposed Project were assessed based on the incremental increase in emissions compared to existing baseline conditions (i.e., existing on-site or off-site Project-related emissions), consistent with SCAQMD methodology. This methodology measures the incremental project contributions and so the Adjusted Baseline conditions are not relevant to the mass emissions threshold. Analysis of localized emissions under Impact 3.2-3 includes consideration of the Adjusted Baseline condition, because as explained below, the standards against which localized emissions are compared are cumulative in nature.

Project emissions resulting from operational activities during ~~other~~ Proposed Project ~~scenarios~~ are presented in **Tables 3.2-15** through **3.2-22**. ~~Similar to the regular season basketball game scenario~~, these other scenarios that were analyzed also include emissions from the event, as applicable, as well as associated office uses, practice hours, and other ancillary uses.

Projected emissions resulting from operational activities of the Proposed Project under ~~the~~ basketball game scenario are presented in **Table 3.2-23** and include emissions from a regular season basketball game as well as associated office uses, practice facilities, and other ancillary uses. The analysis is based on the Proposed Project planned first operations taking place in 2024. This is the most conservative assumption as years after 2024 account for lower emission factors, improved energy efficiency, and reduced number of vehicles trips, which would result in lower emissions as compared to emission in 2024.

The calculations in Tables 3.2-15 through 3.2-23 incorporate compliance with applicable project design features including Project Design Feature 3.2-2, which would serve to reduce emissions from operation of the emergency generators. In addition, the Proposed Project would incorporate a shuttle program on major event days, which would serve to facilitate multi-modal travel to and from events at the Project Site and LA Metro Crenshaw and Green Line stations during event days. The Proposed Project would also be designed and constructed to meet LEED Gold certification requirements, which could include a 700 kW PV system, Title 24 compliance, use of 100 percent LED lighting indoors and outdoors throughout the site, and implementation of high efficiency HVAC systems. In addition, the Proposed Project design would include compliance with CalGreen Code Voluntary Tier 1, which is estimated to achieve a 10 percent reduction in energy consumption over Title 24 2019 standards based on the preliminary design of the Proposed Project. Implementation of these design features would serve to reduce air quality emissions during operation of the Proposed Project.

TABLE 3.2-15
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – NON-EVENT DAY (ANCILLARY USES ONLY) SCENARIO (2024) (POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project						
Area (Consumer Products, Landscaping)	11	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	4	4	<1	<1	<1
Motor Vehicles	11	23	116	<1	38	10
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Emergency Generators/Emergency Fire Pumps	3	52	31	<1	<1	<1
Total Project	**26**	**82**	**157**	**<1**	**40**	**12**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**21**	**75**	**125**	**<1**	**29**	**9**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	**Yes**	No	No	No	No

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

TABLE 3.2-16
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – PLAZA EVENT SCENARIO (2024) (POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project (including event, office, practice, and ancillary uses)						
Area (Consumer Products, Landscaping)	11	<1	<1	<1	<1	<1
Energy (Natural Gas)	<1	4	4	<1	<1	<1
Motor Vehicles	23	36	284	1	98	27
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	—	—	—	1	<1
Cooling Tower	—	—	—	—	<1	<1
Total Project	**35**	**44**	**293**	**1**	**100**	**28**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**29**	**37**	**261**	**1**	**89**	**25**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

Global comment suggest using attendances for all events to emphasize max attendance used and consistency w/ concert levels. In alternative, limit or 18,500 – attendance for concert

2,800 ATTENDEE

TABLE 3.2-17
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – CORPORATE/COMMUNITY EVENT SCENARIO (2024)
(POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project (including event, office, practice, and ancillary uses)						
Area (Consumer Products, Landscaping)	16	<1	1	<1	<1	<1
Energy (Natural Gas)	1	6	5	<1	<1	<1
Motor Vehicles	21	35	257	1	88	24
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	----	----	----	1	<1
Cooling Tower	----	----	----	----	<1	<1
Total Project	**38**	**43**	**267**	**1**	**90**	**25**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**33**	**36**	**235**	**1**	**79**	**22**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

3,500 ATTENDEE

TABLE 3.2-18
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – OTHER EVENT SCENARIO (2024)
(POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project (including event, office, practice, and ancillary uses)						
Area (Consumer Products, Landscaping)	28	<1	1	<1	<1	<1
Energy (Natural Gas)	1	8	7	<1	1	1
Motor Vehicles	34	46	448	1	157	42
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	----	----	----	1	<1
Cooling Tower	----	----	----	----	<1	<1
Total Project	**63**	**57**	**461**	**1**	**158**	**44**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**57**	**51**	**429**	**1**	**148**	**41**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	Yes	No	No	No	No	No

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

8,500 ATTENDEE ✓

TABLE 3.2-19
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – FAMILY SHOW SCENARIO (2024)
(POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project (including event, office, practice, and ancillary uses)						
Area (Consumer Products, Landscaping)	28	<1	1	<1	<1	<1
Energy (Natural Gas)	1	8	7	<1	1	1
Motor Vehicles	37	49	494	1	173	47
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	----	----	----	1	<1
Cooling Tower	----	----	----	----	<1	<1
Total Project	**66**	**60**	**507**	**2**	**175**	**48**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**61**	**54**	**475**	**1**	**164**	**45**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**Yes**	No	No	No	**Yes**	No

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

TABLE 3.2-20
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – 9,500 ATTENDEE CONCERT SCENARIO (2024)
(POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project (including event, office, practice, and ancillary uses)						
Area (Consumer Products, Landscaping)	28	<1	1	<1	<1	<1
Energy (Natural Gas)	1	8	7	<1	1	1
Motor Vehicles	40	69	542	2	190	51
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	----	----	----	1	<1
Cooling Tower	----	----	----	----	<1	<1
Total Project	**69**	**80**	**555**	**2**	**192**	**53**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**64**	**74**	**523**	**2**	**181**	**50**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**Yes**	**Yes**	No	No	**Yes**	No

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

TABLE 3.2-21
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – 14,500 ATTENDEE CONCERT SCENARIO (2024)
(POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project (including event, office, practice, and ancillary uses)						
Area (Consumer Products, Landscaping)	32	<1	1	<1	<1	<1
Energy (Natural Gas)	1	10	8	<1	1	1
Motor Vehicles	56	84	768	2	271	73
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	----	----	----	1	<1
Cooling Tower	----	----	----	----	<1	<1
Total Project	**89**	**96**	**781**	**2**	**272**	**74**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**83**	**89**	**750**	**2**	**262**	**71**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	Yes	Yes	Yes	No	Yes	Yes

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

TABLE 3.2-22 18,500
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – ~~SOLD OUT~~ ATTENDEE CONCERT SCENARIO (2024)
(POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project (including event, office, practice, and ancillary uses)						
Area (Consumer Products, Landscaping)	32	<1	1	<1	<1	<1
Energy (Natural Gas)	1	10	8	<1	1	1
Motor Vehicles	66	93	917	3	324	87
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	----	----	----	1	<1
Cooling Tower	----	----	----	----	<1	<1
Total Project	**99**	**105**	**930**	**3**	**326**	**89**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**94**	**98**	**899**	**3**	**315**	**86**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	Yes	Yes	Yes	No	Yes	Yes

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

18,000 ATTENDEE

TABLE 3.2-23
MAXIMUM REGIONAL OPERATIONAL EMISSIONS – BASKETBALL GAME SCENARIO (2024)
(POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Proposed Project (including event, office, practice, and ancillary uses)						
Area (Consumer Products, Landscaping)	32	<1	1	<1	<1	<1
Energy (Natural Gas)	1	10	8	<1	1	1
Motor Vehicles	64	93	922	3	331	89
Delivery Trucks	<1	3	5	<1	<1	<1
Charbroilers	<1	-	-	-	1	<1
Cooling Tower	-	-	-	-	<1	<1
Total Project	**97**	**106**	**935**	**3**	**332**	**90**
Total Existing	**(6)**	**(7)**	**(31)**	**(<1)**	**(10)**	**(3)**
Net Total Regional Emissions	**92**	**99**	**904**	**3**	**322**	**88**
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**Yes**	**Yes**	**Yes**	No	**Yes**	**Yes**

NOTE:
Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

SOURCE: ESA, 2019.

The calculations in Tables 3.2-15 through 3.2-23 incorporate compliance with applicable project design features including Project Design Feature 3.2-2, which would serve to reduce emissions from operation of the emergency generators. In addition, the Proposed Project would incorporate a shuttle program on major event days, which would serve to facilitate multi-modal travel to and from events at the Project Site and LA Metro Crenshaw and Green Line stations during event days. The Proposed Project would also be designed and constructed to meet LEED Gold certification requirements, which could include a 700 kW PV system, Title 24 compliance, use of 100 percent LED lighting indoors and outdoors throughout the site, and implementation of high efficiency HVAC systems. In addition, the Proposed Project design would include compliance with CalGreen Code Voluntary Tier 1, which is estimated to achieve a 10 percent reduction in energy consumption over Title 24 2019 standards based on the preliminary design of the Proposed Project. Implementation of these design features would serve to reduce air quality emissions during operation of the Proposed Project.

As identified in Table 3.2-15, operational emissions for the Proposed Project for the non-event day (ancillary uses only) scenario would not exceed SCAQMD daily operational thresholds for VOC, CO, SO_X, PM10, and PM2.5 emissions, and would only exceed SCAQMD daily operational thresholds for NO_X on days when emergency generators are tested. Emergency generator testing would occur at a maximum of twice a month, pursuant to Mitigation Measure 3.2-2(b), discussed below. On all other non-event days when there is no emergency generator testing, there would be no exceedance of any mass emissions thresholds. However, as identified in Tables 3.2-16 through 3.2-23, operational emissions for the Proposed Project on event days

Certain

would exceed SCAQMD daily operational thresholds for all criteria air pollutants with the exception of SO_X. The VOC regional operational impact would be primarily related to the anticipated use of consumer products (e.g., cleaning solutions) and landscaping. The NO_X, CO, PM10, and PM2.5 regional operational impacts would result from vehicular trips to and from the Project Site and operation of emergency generators.

Even with implementation of the project design features discussed above, operational VOC, NO_X, CO, PM10, and PM2.5 emissions would exceed the applicable regional emissions significance threshold for the sold-out attendee concert scenario, which has the highest number of attendees, as well as for the regular season basketball game, 14,500-attendee concert, 9,500-attendee concert, family show, and other event scenario. Emissions on these event days would result in **potentially significant impacts**.

Health Impacts Assessment – Regional Effects

Impact 3.2-2 concludes that during construction, the Proposed Project would emit a criteria air pollutant (NO_X) in an amount that exceeds the mass emission threshold that is recommended for this pollutant by SCAQMD. In addition, during operations, under various operational scenarios, the Proposed Project would emit criteria air pollutants (VOC, NO_X, CO, PM10, and PM2.5) in amounts that would exceed the applicable mass emission thresholds recommended by SCAQMD. These exceedances would occur for the sold-out attendee concert scenario, which has the highest number of attendees, as well as for the regular season basketball game, 14,500-attendee concert, 9,500-attendee concert, family show, other event, and non-event day (with generator testing) scenarios. The analysis therefore concludes that, for this reason, the Proposed Project's emissions are significant with respect to these criteria air pollutants. The types of adverse health effects known to occur as a result of exposure to these pollutants and the potential secondary formed ozone have been discussed in "Pollutants and Related Health Effects" under Section 3.2.1, above, and also summarized below:

- VOCs are organic chemical compounds of carbon. Some VOCs are highly reactive and play a critical role in the formation of ozone. Other VOCs can result in adverse health effects from direct exposure and are classified by the TACs or HAPs by the USEPA.
- NO_X is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include NO_2 and NO. There are no health-based ambient air quality standards specifically for NO; however, NO can oxidize in the atmosphere to form NO_2. As discussed previously in Section 3.2.1, NO_2 can potentially irritate the nose and throat, aggravate lung and heart problems, and may increase susceptibility to respiratory infections, especially in people with asthma. Emissions of NO_X are a precursor to the formation of ground-level ozone, which occurs due to complex photo-chemical reactions of these pollutants in the atmosphere in the presence of sunlight. NO_2 can also potentially contribute to the secondary formation of particulate matter (PM10 and PM2.5) from conversion in the atmosphere.
- Ozone is a respiratory irritant that can cause the following health effects: irritate respiratory system; reduce lung function; breathing pattern changes; reduce breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; and/or increase mortality risk.

Proposed Project is presumed to conform with the NAAQS.[166] While based on the status of an air basin level of attainment of the health-based NAAQS, emissions in excess of the mass emission thresholds from one project does not mean the air basin would experience measurably higher ground level concentrations, or more frequent occurrences of ground level concentrations in exceedance of standards, or delay timely attainment of a particular NAAQS. The effect on ambient concentrations of emissions from one project, which in turn may influence air pollutant-based health impacts, can only be determined through dispersion modeling, and as appropriate, health effects modeling. The following analysis is provided for information purposes, to determine the extent the criteria air pollutant emissions from the Proposed Project would result in (1) changes in the concentration of criteria air pollutants in the atmosphere, and (2) correlative health effects that may occur as a result of those changes in air pollutant concentrations.

As previously discussed, the current version of the US EPA BenMAP-CE model only has health impact functions associated with ozone (including precursors, NO_X and VOC) and PM2.5, so those were the criteria pollutants for which health effects were quantified in this study. Although exposure to high levels of CO and NO_2 is recognized to result in negative health effects, the applicable NAAQS are widely recognized to be health protective, even for sensitive populations (see discussion under Impact 3.2-3). USEPA guidance recommends that a Gaussian dispersion model, such as AERMOD, is the appropriate model to predict the dispersion and accumulation of NO_2 and CO in the atmosphere since those pollutants are nonreactive (unlike ozone and secondary PM formation). Generally, as nonreactive pollutants travel away from the source, their concentrations diminish rather quickly. Thus, health impacts from exposure to NO_2 and CO are localized in nature; refer to the health impacts discussion under Impact 3.2-3 below.

This assessment evaluates the potential for the Proposed Project to contribute to regional ozone formation and ozone health impacts along with primary and secondary particulate matter health impacts. The Proposed Project contribution to a regional concentration of ozone and PM2.5 were modeled in the photochemical grid model, CMAQ, and the corresponding endpoint health effects were modeled in BenMAP-CE. The analysis was performed in consultation with SCAQMD.

Dispersion modeling performed using CMAQ predicts slight increases in the maximum ozone and PM2.5 concentrations with the Proposed Project emissions as compared to the baseline emissions. Both baseline and Proposed Project scenarios used SCAQMD controlled emissions inventory for year 2025, provided by SCAQMD for the Proposed Project. The baseline scenario used only the re-gridded SCAQMD 2025 dataset, while the Proposed Project dataset added incremental project emissions to the SCAQMD dataset.

the first full year of Project operations

The CMAQ result for the baseline as compared to the baseline plus Proposed Project shows a maximum increase of 0.0109 ppb, or 0.021 percent, at the most affected node for maximum daily 8-hour average ozone, and 0.0011 $\mu g/m^3$, or 0.0082 percent, for PM2.5. Note that these estimated increases are for the most affected node; thus, the estimated changes at all other nodes will be

[166] US Environmental Protection Agency. Frequent Questions about General Conformity. Available: https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity. Accessed July 2019.

in the context of the very small increments of change that are predicted, could result in large margins of error for the overall modeled outcomes.

That does not mean the modeled results are invalid or meaningless. Rather, it means that one should not have undue confidence in the seeming precision of the reported outcome. Stated another way, the modeled results may be valid, but they should not be misinterpreted as an exact calculation of something as complex as criteria air pollutant dispersion modeling, or as correlating a given level of emissions with specific health effects. That is particularly true where, as here, regional models have been adapted for use at the project level. In this case, the calculated impact may be smaller than the reasonable margin of errors of such analyses. For example, the summation of modeled PM2.5-related incremental health effects incidences are negative values, while the summation of modeled ozone-related incremental health effects incidences are positive values. Negative incremental values at a set location for a set period of time arise when the predicted concentration with Project emissions are lower than the baseline value. For example, the baseline PM2.5 value at a particular point in space and time might be reported as 13 $\mu g/m^3$. With an error range of 20 percent, the result could more accurately be reported as 10.4 to 15.6 $\mu g/m^3$. The PM2.5 concentration with Project emissions at that same point may be reported as 12.5 $\mu g/m^3$, which could more accurately be reported as 10.0 to 15.0 $\mu g/m^3$. When comparing the two ranges, one can see how both negative and positive incremental increases are possible. The narrower the error range is, the more likely the results will reflect the true trend.

Performance of this quantitative HIA using the best available tools and guidance demonstrates that applying state-of-the art models and methods designed to predict the health effects of large changes in air basin-wide emissions does not result in statistically significant results with respect to emissions increases at the project level. Therefore, no meaningful conclusion can be drawn with respect to potential health effects from the criteria pollutant emissions of the Proposed Project.

Conclusion

As discussed above, the Proposed Project would result in operational VOC, NO_X, CO, PM10, and PM2.5 emissions that would exceed the applicable regional emissions significance threshold for the sold-out attendee concert scenario, which has the highest number of attendees, as well as for the regular-season basketball game, 14,500-attendee concert, 9,500-attendee concert, family show, and other event scenario, as well as non-event with generator testing scenario. The impact of emissions on these days would be **potentially significant**.

Mitigation Measure 3.2-2(a)

Implement Mitigation Measure 3.14-2(b).

Mitigation Measure 3.2-2(b)

Emergency Generator and Fire Pump Generator Maintenance & Testing. The Applicant shall conduct maintenance and/or testing of the emergency generators or fire pump generators on three separate non-event days. Each emergency generator shall be tested on a separate non-event day and the two fire pump generators may be tested together on a separate non-event day.

Mitigation Measure 3.2-2(d)

The project applicant shall provide incentives for vendors and material delivery trucks that would be visiting the Proposed Project to encourage the use of ZE or NZE trucks during operation, such as trucks with natural gas engines that meet CARB's adopted optional NO_X emissions standard of 0.02 grams per brake horsepower-hour (g/bhp-hr). At a minimum, incentivize the use of 2010 model year delivery trucks.

Level of Significance After Mitigation: The Applicant has agreed to use off-road diesel-powered construction equipment that meets or exceeds CARB and US EPA Tier 4 Final off-road emissions standards or equivalent for all equipment rated at 50 hp or greater. Based on registration data, over 75 percent of heavy-duty diesel vehicles (i.e., vendor and haul trucks) in the state are model year 2010 or newer. Even with implementation of Project Design Feature 3.2-1 and Mitigation Measure 3.2-1(c) discussed below, construction-related daily emissions would exceed the SCAQMD significance threshold for NO_X. Therefore, short-term regional construction emissions would be **significant and unavoidable**.

With regard to regional operational emissions, under Mitigation Measure 3.2-2(a) the Proposed Project would implement Mitigation Measure 3.14-2(b), which would require the Proposed Project to develop a TDM program which would be designed to reduce vehicle trips by spectators, event-day staff, and employees through the use of alternate modes of transportation including public transit, shuttles, ridesharing, walking, and biking. The TDM program would be required to demonstrate a reduction in vehicle trips produced by the Proposed Project. Potential trip reductions are based on estimates of vehicle trips for LA Clippers home basketball games and other non-NBA basketball game events to be hosted at the Project Site, as well as LA Clippers employees who would use the LA Clippers practice and training facility and the LA Clippers offices, and vehicle trips by employees and patrons of the sports medicine clinic, retail, restaurant, community space, and hotel uses included at the Project Site. The TDM program would be designed to reduce single-occupancy vehicle trips and to use other modes of transportation besides automobile to travel to basketball games and other events hosted at the Proposed Project. The implementation of this mitigation measure would serve to further reduce mobile emissions during operation of the Proposed Project, as well as any negligible related health effects. Because ~~the timing for this mitigation measure is speculative and the~~ efficacy of these measures to reduce trips cannot be determined with certainty at this time, maximum daily regional emissions of VOC, NO_X, CO, PM10, and PM2.5 during operation of the Proposed Project would continue to be above the SCAQMD regional significance thresholds and impacts would be **significant and unavoidable**.

VOC?

As shown in **Table 3.2-24**, with Mitigation Measure 3.3-2(b), NO_X emissions during operations would be reduced to less-than-significant levels during Non-Event days. However, NO_X, CO, PM10, and PM2.5 emissions would remain in excess of the SCAQMD significance thresholds on Event days, therefore impacts would be **significant and unavoidable**.

all days

Impact 3.2-3: Construction and operation of the Proposed Project could expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

Local Air Quality

Construction

Potential localized impacts from short-term construction activities were analyzed using an air dispersion model (AERMOD) to generate concentrations of NO_2, CO, PM10, and PM2.5 at air quality sensitive receptor locations surrounding the Project Site. As discussed in Project Design Feature 3.2-1, heavy duty construction trucks (import, export, delivery, etc.) would be prohibited from traveling to and from the Project Site during the pre-and post-event hours on days with major events at Hollywood Park and/or The Forum.

Particulate Matter

Project-generated incremental increases of PM10 and PM2.5 were then compared to SCAQMD's allowable incremental increase thresholds. The results of the PM analysis are presented in **Table 3.2-25**. As shown in Table 3.2-24, localized maximum daily construction emissions would not exceed the allowable 24-hour or annual incremental increase in PM10 or PM2.5. Therefore, the emissions of PM during construction would be less than significant.

TABLE 3.2-25
ASSESSMENT OF LOCALIZED PM EMISSIONS DURING CONSTRUCTION

Pollutant	Averaging Time, units	Project Local Increase	Threshold	Total Impact Exceeds Threshold
PM10	24 hour, $\mu g/m^3$	7.0	10.4	No
	Annual, $\mu g/m^3$	0.64	1.0	No
PM2.5	24 hour, $\mu g/m^3$	4.3	10.4	No

NOTES:
$\mu g/m^3$ = micrograms per cubic meter (a concentration unit)

SOURCE: ESA 2019.

Nitrogen Dioxide and Carbon Monoxide

To compare the Proposed Project construction emission concentrations of NO_2 and CO to applicable NAAQSs, existing concentrations of these pollutants from nearby monitors (see Table 3.2-2, above) and the future contribution to ambient concentrations resulting from the Adjusted Baseline must be included, as detailed on **Table 3.2-26**. As described in Project Design Feature 3.2-1, on days when major events are held at ~~Hollywood Park~~ the NFL Stadium and The Forum, the project applicant would not allow trucks to travel to or from the project construction site during the pre-event and post-event hours. As detailed on Table 3.2-25, annual emissions were modeled to demonstrate compliance with the annual NO_2 NAAQS.

TABLE 3.2-27
ASSESSMENT OF LOCALIZED PM EMISSIONS DURING OPERATION

Pollutant	Averaging Time, units	Project Local Increase	Standard/ Threshold	Total Impact Exceeds Threshold
PM10	State 24 hour, µg/m³	0.56	2.5	No
	State Annual, µg/m³	0.12	1.0	No
PM2.5	State 24 hour, µg/m³	0.28	2.5	No

NOTE:
µg/m³ = micrograms per cubic meter (a concentration unit)

SOURCE: ESA 2019.

Particulate Matter

As shown in Table 3.2-27, localized maximum daily operational emissions would not exceed the allowable incremental increase in PM10 or PM2.5. Therefore, impacts would be **less than significant**.

Nitrogen Dioxide and Carbon Monoxide

To compare the Proposed Project operational concentrations of NO_2 and CO to applicable NAAQSs, existing concentrations of these pollutants from nearby monitors (see Table 3.2-2, above) and the future contribution to ambient concentrations resulting from the Adjusted Baseline must be included, as detailed in **Table 3.2-28**. As described above, on days when events are held at Hollywood Park and the Forum, the project applicant would not allow delivery trucks to travel to or from the Project Site during the two pre- and post-event hours. Therefore, to assess the potential for maximum localized impacts in the vicinity of the Project Site within the applicable pollutant standard averaging times (i.e., 1 hour for NO_2 and CO NAAQS and 8 hours for CO NAAQS), two scenarios were modeled. The first includes the Proposed Project major event emissions (excluding delivery truck activity in the pre- and post- event hours) concurrent with emissions from ancillary HPSP uses, a major event at the NFL Stadium, and a concert at The Forum. The second localized scenario includes Project operational emissions for a 9,500 or less person event which includes delivery truck activity in the two pre-event hours and one post-event hour concurrent with a major event at the NFL Stadium, a concert at The Forum, and ancillary uses of HPSP. As detailed on Table 3.2-28, annual emissions were modeled to demonstrate compliance with the annual NO_2 NAAQS.

As shown in Table 3.2-28, localized maximum daily operational emissions, added to existing ambient conditions and projected future contributions from the Adjusted Baseline, would not result in an exceedance of applicable NAAQS for NO_2. Therefore, the impact of operational emissions would be **less than significant**.

of the Proposed Project regional operational emissions), but also are localized and short term in nature; correspondingly, health effects associated with localized construction and operational emissions are expected to be smaller than those negligible (if not zero) regional health effects that were disclosed in Impact 3.2-2, above.

Toxic Air Contaminants

Health Risk Assessment

Lifetime Cancer Risk

Excess lifetime cancer risk is estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to carcinogens. As the individual incremental increase in lifetime cancer risk is assessed over long exposure time periods (i.e., 30-year for residential receptors), the potential effects of Proposed Project-related carcinogenic TAC emissions must include the combination of exposure to construction-related activities and exposure to operation-related activities. For cancer risk, SCAQMD guidance identifies a significant impact if a project would result in an incremental cancer risk that is greater than 10 in one million for any receptor.

The TAC emissions of the Proposed Project would be generated from mobile sources, including gasoline powered passenger vehicles, diesel-powered heavy-duty trucks, and emergency generators/emergency fire pumps. These sources generate TOG and PM10 from combustion of gasoline and diesel fuels. Gasoline and diesel TOG and PM10 emissions are composed of MSATs in varying distributions resulting in a speciation profile. The speciation profile represents the MSAT's weight fraction of TOG and PM10.

For construction, the potential emission sources of MSATs and DPM would be diesel-fueled heavy-duty equipment, on-road travel and idling emissions from diesel-fueled haul trucks, and on-road travel emissions from gasoline-fueled worker vehicles. For operation, the potential emission sources would be gasoline-fueled passenger vehicles travelling to and from the Project Site, diesel-fueled delivery trucks, diesel-fueled delivery truck with TRUs, and diesel-fueled emergency generators and emergency fire pumps.

A dense receptor grid around the Project Site and surrounding roadways that would carry the Proposed Project traffic, captures the maximum health risk impacts to exposed air quality sensitive receptors. The same meteorological, terrain, and other modeling input options as described in the section for the LST modeling analysis were used to characterize air dispersion and measure health risk impacts at air quality sensitive receptors.

Table 3.2-31 presents the estimated incremental cancer risks for the exposure scenario that starts from Proposed Project construction for air quality sensitive receptors over a maximum 30-year exposure in line with OEHHA guidance starting with the first year of construction of the Proposed Project. The EMFAC model assumes that engines get cleaner over time, resulting in reduced emission rates; therefore, using 2024 emission levels is the "worst-case" scenario and thus conservative. As shown in Table 3.2-31, the Proposed Project would not exceed SCAQMD's

for Project operational emissions

considered by SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."[176] Therefore, consistent with this guidance, the potential for the Proposed Project to results in cumulative impacts from regional emissions is assessed based on SCAQMD thresholds.

Impact 3.2-5: Construction and operation of the Proposed Project, in conjunction with other cumulative development, would result in inconsistencies with implementation of applicable air quality plans. (Significant and Unavoidable)

As described above under Impact 3.2-1, ~~impacts related to consistency with the AQMPs and the air quality-related policies in the City's General Plan and ECAP during construction of the~~ Proposed Project would be ~~less than significant. However, during operation,~~ the Proposed Project would not be consistent with the AQMP as the Proposed Project would generate emissions of nonattainment pollutants or precursors (i.e., VOC, NO_X, PM10, and PM2.5) that exceed the applicable significance thresholds. Based on SCAQMD guidance, the exceedance of ~~this~~ threshold indicates that the Proposed Project would have a considerable contribution to a significant impact. Therefore, the Proposed Project would result in a **potentially significant cumulative impact**.

Mitigation Measure 3.2-5(a)

Implement Mitigation Measure 3.14-2(b). (Implementation of a comprehensive Transportation Demand Management (TDM) program)

Mitigation Measure 3.2-5(b)

Implement Mitigation Measure 3.2-2(b). (Emergency Generator and Fire Pump Generator Maintenance & Testing)

Mitigation Measure 3.2-5(c)

Implement Mitigation Measure 3.2-2(c). (Construction Emissions Minimization Plan)

Mitigation Measure 3.2-5(d)

Implement Mitigation Measure 3.2-2(d). (Incentives for vendors and material delivery trucks to use ZE or NZE trucks during operation)

Level of Significance After Mitigation: Because Proposed Project regional emissions during construction would exceed the significance thresholds for those criteria air pollutants for which the Air Basin is not in attainment (i.e., VOC, NO_X, PM10, and PM2.5), the Proposed Project would have a considerable contribution to a significant cumulative inconsistency with the AQMPs. As discussed above, the Proposed Project would implement Mitigation Measures 3.2-5(a-d), which would require the Applicant to use off-road diesel-powered construction equipment that meets or exceeds the CARB and US EPA Tier 4 Final off-road emissions standards or equivalent for all equipment rated at

[176] South Coast Air Quality Management District, 2003. White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (August 2003). Appendix D, Page D-3.

50 hp or greater and implement a Construction Emissions Minimization Plan during project construction.

Implementation of a TDM program would serve to reduce Project-related mobile emissions during operation of the Proposed Project. Maintenance and/or testing of emergency generators or fire pump generators will be conducted on three separate non-event days. Each emergency generator shall be tested on a separate non-event day and the two fire pump generators may be tested together on a separate non-event day. As demonstrated in Table 3.2-24, NO_X emissions during operations would be reduced to less-than-significant levels during Non-Event days. However, NO_X, CO, PM10, and PM2.5 emissions would remain in excess of the SCAQMD significance thresholds on Event days. In addition, the Applicant has agreed to provide incentives to vendor delivery trucks that use ZE or NZE trucks during project operations. As previously stated, registration data indicates over 75 percent of heavy-duty diesel vehicles (i.e., vendor and haul trucks) in the state are model year 2010 or newer. Thus, there are no additional feasible mitigation strategies to further reduce the regional emissions generated during operation of the Proposed Project, based on the above, construction and operation of the Proposed Project would contribute to a **significant and unavoidable cumulative impact** as it relates to consistency with the applicable air quality plan.

Impact 3.2-6: Construction and operation Proposed Project, in conjunction with other cumulative development, would result in cumulative increases in short-term (construction) and long-term (operational) emissions. (Significant and Unavoidable)

Construction

The SCAQMD CEQA Air Quality Handbook states: "[f]rom an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the District."[177] As shown in Table 3.2-14, provided under Impact 3.2-2, above, regional emissions during construction of the Proposed Project would exceed the SCAQMD significance threshold for NO_X. Thus, based on SCAQMD methodology, the Proposed Project construction emissions would represent a considerable contribution to a cumulative impact, resulting in a **potentially significant cumulative impact**.

Operation

As discussed under Impact 3.2-2, above, and shown in Tables 3.2-15 through 3.2-22, regional emissions of VOC, NO_X, CO, PM10, and PM2.5 emissions during operation of the Proposed Project would exceed the SCAQMD significance thresholds. Thus, based on SCAQMD methodology, the Proposed Project operational emissions would represent a considerable contribution to a cumulative impact, resulting in a **potentially significant cumulative impact**.

[177] South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993, p. 6-1.

Mitigation Measure 3.2-6(a)

Implement Mitigation Measure 3.14-2(b). Implementation of a comprehensive Transportation Demand Management (TDM) program.

Level of Significance After Mitigation: As discussed above under Mitigation Measure 3.2-2(c), there would be no feasible mitigation measures to further reduce NO_X emissions during construction. Thus, consistent with SCAQMD guidance, the Proposed Project NO_X emissions during construction of the Proposed Project would be cumulatively considerable, resulting in a **significant and unavoidable cumulative impact.**

Implementation of Mitigation Measure 3.14-2(b) would reduce regional and localized emissions for all pollutants during operation of the Proposed Project. However, even after implementation of the required TDM Program, emissions are predicted to remain in excess of applicable thresholds. Thus, consistent with SCAQMD recommendations, the Proposed Project contribution to VOC, NO_X, CO, PM10, and PM2.5 emissions during operation of the Proposed Project would remain cumulatively considerable, resulting in a **significant and unavoidable cumulative impact.**

Mitigation Measure 3.2-6(b)

Implement Mitigation Measure 3.2-2(b). Emergency Generator and Fire Pump Generator Maintenance & Testing.

Level of Significance After Mitigation: As shown in Table 3.2-24, NO_X emissions during operations would be reduced to less-than-significant levels during Non-Event days. However, NO_X, CO, PM10, and PM2.5 emissions would remain in excess of the SCAQMD significance thresholds on Event days, therefore cumulative impacts would be **significant and unavoidable.**

Mitigation Measure 3.2-6(c)

Implement Mitigation Measure 3.2-2(c). Prepare and implement a Construction Emissions Minimization Plan.

Level of Significance After Mitigation: As discussed above under Mitigation Measure 3.2-2(b), there would be no feasible mitigation measure to further reduce the maximum daily regional emissions of ~~VOC,~~ NO_X, ~~CO, PM10, and PM2.5~~ during construction and the Proposed Project would cumulatively be above the SCAQMD regional significance thresholds and cumulative impacts would be **significant and unavoidable.**

Mitigation Measure 3.2-6(d)

Implement Mitigation Measure 3.2-2(d). Incentivize use of ZE or NZE trucks.

Level of Significance After Mitigation: The Applicant has agreed to provide incentives to vendor delivery trucks that use ZE or NZE trucks during project operations. Based on registration data, over 75 percent of heavy-duty diesel vehicles (i.e., vendor and haul trucks) in the state are model year 2010 or newer. Thus, there are no additional feasible mitigation strategies to further reduce the maximum daily regional emissions of ~~VOC,~~ NO_X, ~~CO, PM10, and PM2.5~~ during operations and the Proposed Project would cumulatively be above the SCAQMD regional significance thresholds and cumulative impacts would be **significant and unavoidable.**