

SAN MANUEL HOTEL AND CASINO EXPANSION PROJECT

Final Tribal Environmental Impact Report

Lead Agency
San Manuel Band of Mission Indians

March 2018



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Notice of Completion of a Final Tribal Environmental Impact Report

The San Manuel Band of Mission Indians (Tribe), as lead agency, is issuing notification of the availability of a Final Tribal Environmental Impact Report (TEIR). The Final TEIR analyzes the potential off-Reservation environmental effects of the proposed Hotel & Casino Expansion Project (Project) and responds to all comments received on the Draft TEIR. The Final TEIR has been developed in accordance with the requirements of the Tribal-State Gaming Compact (Compact) between the Tribe and the State of California.

Project Description: The Project includes the development of approximately 795,000 square feet of new entertainment and hospitality facilities, including a hotel, performance venue, additional gaming area, restaurants and other guest amenities, back of house and administrative facilities, an approximately 2,200 stall parking structure and additional power utility infrastructure. The Project is anticipated to provide approximately 1,400 jobs during the construction phase and approximately 1,200 jobs during operation. The TEIR assesses a Phase 1 with 55,000 square feet of additional gaming and a Phase 2 which increases this number to 100,000 square feet through the conversion of meeting and event and back-of-house space. In addition, the TEIR considers several different sources to provide power to the Project, including obtaining power from Southern California Edison via existing lines, and/or development of a customer dedicated substation on the Tribe's Reservation (with new 66 kilovolt [kV] transmission poles, a new 66 kV transmission conductor, and telecommunications lines on existing structures), and/or a future Tribal owned combined heat and power cogeneration, and/or fuel cell power facilities on the Tribe's Reservation.

Project Location: The Project is located on the Tribe's Reservation in San Bernardino County, California, adjacent to the City of San Bernardino and approximately one mile north of the City of Highland. Regional access to the casino is provided by Interstate 210, with local access provided by Highland Avenue and Victoria Avenue. Construction and operational activities would occur within a 70± acre Project site in the southwestern portion of the Reservation, which includes or is adjacent to existing casino facilities.

Availability of the Final TEIR: The Final TEIR is available on the Tribe's website: www.SanManuelTEIR.com. Copies of the Final TEIR are available at the Howard M. Rowe Branch Library at 108 East Marshall Boulevard in the City of San Bernardino and the Highland Sam J. Racadio Library at 7863 Central Avenue in the City of Highland.

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EXECUTIVE SUMMARY

San Manuel Hotel and Casino Expansion Project

S.1 Background

This ~~Draft~~Final Tribal Environmental Impact Report (TEIR) has been prepared by the San Manuel Band of Mission Indians (Tribe) to analyze the potential off-Reservation environmental effects of the proposed Hotel and Casino Expansion Project (referred to in this ~~Draft~~Final TEIR as the Project). The Project is located on the Tribe's Reservation in San Bernardino County, California. This ~~Draft~~Final TEIR was prepared pursuant to Section 11.0 of the 2016 Tribal-State Compact between the State of California and the San Manuel Band of Mission Indians (Compact). The Tribe serves as the Lead Agency for the TEIR.

S.2 Summary Description of the Project

The Project includes the development of approximately 795,000 square feet of new entertainment and hospitality facilities, including a hotel, performance venue, additional gaming area, restaurants and other guest amenities, back of house and administrative facilities, an approximately 2,200 stall parking structure and additional power utility infrastructure. The Project is anticipated to provide approximately 1,400 jobs during the construction phase and approximately 1,200 jobs during operation. The ~~Draft~~Final TEIR assesses a Phase 1 with 55,000 square feet of additional gaming and a Phase 2 which increases this number to 100,000 square feet through the conversion of meeting and event and back-of-house space. Although it is anticipated that the Project will obtain electrical power through existing power lines from its current provider, Southern California Edison, the ~~Draft~~Final TEIR also studies the impacts of alternative sources for power, including a customer dedicated substation (with new 66 kilovolt [kV] transmission poles, a new 66 kV transmission conductor, and telecommunications lines on existing structures), a combined heat and power cogeneration facility and a fuel cell power facility.

The Project has adopted the following Project design features and construction standards:

- California Building Code and Public Safety Code Applicable to San Bernardino County: The development would be constructed in compliance with standards which meet or exceed the California Building Code and Public Safety Code applicable to San Bernardino County, as set forth in titles 19 and 24 of the California Code of Regulations. In addition, the Project would

comply with the federal Americans with Disabilities Act, P.L. 101-336, as amended, 42 U.S.C. § 12101 et seq.

- Light and Glare Shielding: The Project will provide shielding consistent with those used on the existing casino and parking structure to reduce light and glare on adjacent off-Reservation residences, including providing shields along the parking structure ramps, use of landscaping screens and walls, shielded light fixtures and the use of directional controls where applicable.
- Dust and Water Quality Controls: Prior to construction, the Project will obtain a National Pollution Discharge Elimination System (NPDES) Construction General Permit from the United States Environmental Protection Agency. As required for such permit, a Stormwater Pollution Prevention Plan (SWPPP) will be developed and followed throughout the duration of the construction. The SWPPP would provide erosion, sediment and dust controls during construction.
- Operational Sound Control: The Project will maintain existing on and off-Reservation sound walls, wherever feasible. Such sound walls include those walls located between the existing casino and central plant and the off-Reservation residences located on the end of Glenmare Street along Marshall Boulevard, Val Mar Circle and along Blythe Avenue, at the end of Edgemont Drive, along Marshall Boulevard. The performance venue will include soundproofing.
- Aesthetics and Landscaping: The Project will be in keeping with the design of the landscaping and architectural themes of the existing casino facility.
- Construction Equipment Air Quality Controls: The Project will require all off-road diesel construction equipment greater than 50 horsepower (hp) used for this Project to meet U.S. EPA Tier 3 off-road emission standards or best available control technology, wherever feasible.
- Construction Dust Control: The Project will implement the following fugitive dust control measures:
 - Water spray/mists or similar suppressant (e.g., SoilSeal) shall be used during bulk material handling, earth-moving, construction and demolition activities, and vehicle movement on unpaved roads. Application of water dust suppressant shall occur at least 3 times per day on active areas of disturbance and unpaved roads.
 - To minimize dust on unpaved roads at the site, limit truck speed to 15 miles per hour or less on unpaved roads.
- Low-VOC Paint for Architectural Coating. The Project will use low-VOC paint and coating for architectural coating.
- California Green (CalGreen) Building Standards. The Tribe has adopted the CalGreen building standards applicable to San Bernardino County for this Project.
- Anti-Idling Program. The Tribe will implement an anti-idling policy for this Project. Vendors will be instructed to advise drivers that trucks and other equipment shall not be left idling for more than 5 minutes. Signs informing truck drivers of the anti-idling policy will be posted in the loading docks of the Project.

- Promote Eco-friendly Vehicles Usage. For this Project, the Tribe will pre-wire for EV charging of a portion of the new parking stalls, in accordance with CalGreen standards, as applicable to the County of San Bernardino. The Project will also purchase eco-friendly vehicles for use by the Project.
- Cogeneration Facility Standards. The cogeneration facility will be covered by an air permit issued by the U.S. Environmental Protection Agency and will be designed to meet applicable South Coast Air Quality Management District emissions standards, wherever feasible.
- Geotechnical Recommendations. Construction shall adhere to the recommendations of the Geotechnical Investigation for the Project. Recommendations may be superseded in additional investigations prepared by a California certified engineering geologist.
- Construction Noise Control:
 - Equipment and trucks used for Project construction will use the industry standard noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible). Idling of equipment and vehicles which are not in use will be limited to the extent feasible.
 - Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction will be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust will be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves will be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, will be used whenever feasible.
 - Stationary noise sources will be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.
 - The Tribe shall require construction contractors to limit exterior construction to the hours of 7:00 a.m. through 8:00 p.m.

S.3 Environmental Process

Notice of Preparation

The Tribe filed a Notice of Preparation (NOP) of a Draft TEIR on November 7, 2017 in accordance with Section 11.2 of the Compact, which is included as **Appendix A**. The NOP was distributed to the California State Clearinghouse, County of San Bernardino, City of Highland, City of San Bernardino, resource agencies with off-Reservation jurisdiction and other interested parties. The NOP was also published on the Tribe's website (www.SanManuelTEIR.com) and in the legal notice section of the San Bernardino Sun and Highland Community News newspapers. The NOP was prepared to inform agencies, interested parties and the general public that a Draft TEIR was being prepared and to invite comments on the scope and content of such document. Comments were accepted for a 30-day period ending on December 7, 2017 and comments

received during that time are included in **Appendix B** and summarized in Chapter 6, Agency and Public Comments.

Notice of Completion and Draft TEIR

The Notice of Completion (NOC) and the Draft TEIR were distributed to the California State Clearinghouse, County of San Bernardino, City of Highland, City of San Bernardino, the State Gaming Agency, the California Department of Justice, Office of the Attorney General, resource agencies with off-Reservation jurisdiction and other interested parties. In addition, the NOC and the Draft TEIR were posted on the Tribe’s website (www.SanManuelTEIR.com) and published in both the Highland Community News and the San Bernardino Sun. The Tribe delivered 10 copies of the NOC and Draft TEIR to the Clerk of the Board of Supervisors with a request to post public notice of the Draft TEIR at the office of the County Board of Supervisors and to furnish the public notice to the libraries serving the County. The County of San Bernardino confirmed that such posting was completed.

The Draft TEIR was released for public and agency review on January 10, 2018 and the public review period ended on February 26, 2018. During this review period, on January 25, 2018, the Tribe held a public information meeting on the Draft TEIR at the San Manuel Village Events Center.

Final TEIR

The Final TEIR includes all comments received on the Draft TEIR in **Appendix G**, including comments received at the public information meeting. Responses to comments are provided in Section 6.2 of this Final TEIR. The Tribe has prepared, certified and made the Final TEIR available to the County of San Bernardino, City of San Bernardino, City of Highland, the State Clearinghouse, the State Gaming Agency and the California Department of Justice, Office of the Attorney General. In addition, the NOC and the Final TEIR were posted on the Tribe’s website (www.SanManuelTEIR.com).

S.4 Environmental Impacts and Proposed Mitigation Measures

The Compact requires the study of potential impacts to the off-Reservation environment for the impact concerns set forth in the Compact Checklist. The categories of resources and the analysis of the impact concerns set forth in the Compact Checklist are listed in **Table S-1** along with a summary of potential impacts and proposed mitigation measures relevant to the Project. In the table, the level of significance of each environmental impact is indicated both before and after the application of recommended mitigation measures. This Draft TEIR uses the following terminology to describe environmental effects of the Project:

- **No Impact:** Term used if the Project would not result in an impact to the off-Reservation environment.

- **Less Than Significant Impact:** Term used if the Project would not result in a substantial, adverse change in the physical conditions of the off-Reservation environment. The Project may result in minor adverse changes that are not considered substantial in light of the environmental setting or other factors. Mitigation measures are not required, but may be recommended.
- **Less Than Significant Impact With Mitigation Incorporated:** Term used if the Project would not result in a substantial, adverse change in the physical conditions of the off-Reservation environment if proposed mitigation measures were incorporated. The Project may result in minor adverse changes that are not considered substantial in light of the environmental setting or other factors. Any feasible mitigation measures needed to reduce the impact to less than significant are required.
- **Significant Impact:** Term used if the Project may cause a substantial, adverse change in the physical conditions of the off-Reservation environment. Mitigation measures are identified to reduce or eliminate these potential effects to the environment where feasible.

For detailed discussions of all project impacts and mitigation measures, the reader is referred to the individual environmental analysis chapters of the ~~Draft~~Final TEIR.

**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Residual Impacts
3.1 Effects Found Not to be Significant			
Agriculture and Forest Resources			
A. Involve changes in the existing environment, which, due to their location or nature, could result in conversion of off-Reservation farmland to non-agricultural use?	NI	None required.	NA
Cultural Resources			
A. Cause a substantial adverse change in the significance of an off-Reservation historical or archeological resource?	NI	None required.	NA
B. Directly or indirectly destroy a unique off-Reservation paleontological resource or site or unique off-Reservation geologic feature?	NI	None required.	NA
C. Disturb any off-Reservation human remains, including those interred outside of formal cemeteries?	NI	None required.	NA
Mineral Resources			
A. Result in the loss of availability of a known off-Reservation mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?	NI	None required.	NA
B. Result in the loss of availability of an off-Reservation locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	NI	None required.	NA
Population and Housing			
A. Induce substantial off-Reservation population growth?	NI	None required.	NA
B. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere off-Reservation?	NI	None required.	NA
Recreation			
A. Increase the use of existing off-Reservation neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	NI	None required.	NA
3.2 Aesthetics			
A. Would the Project have a substantial adverse effect on a scenic vista?	LS	None required.	NA
B. Would the Project substantially damage off-Reservation scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway?	LS	None required.	NA

NI=No Impact, LS=Less than Significant, LSM=Less than Significant with Mitigation, S=Significant, NA=Not Applicable

**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Residual Impacts
C. Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views of historic buildings or views in the area?	LS	None required.	NA
3.3 Air Quality, Energy, Greenhouse Gas Emissions			
A. Would the Project conflict with or obstruct implementation of the applicable air quality plan?	LS	None required.	NA
B. Would the Project violate any air quality standard or contribute to an existing or projected air quality violation?	LS	None required.	NA
C. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	LS	None required.	NA
D. Would the Project expose off-Reservation sensitive receptors to substantial pollutant concentrations?	LS	None required.	NA
E. Would the Project create objectionable odors affecting a substantial number of people off-Reservation?	LS	None required.	NA
3.4 Biological Resources			
A. Would the Project have a substantial adverse impact, either directly or through habitat modifications, on any special-status species identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	LS	None required.	NA
B. Would the Project have a substantial adverse effect on any off-Reservation riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	LS	None required.	NA
C. Would the Project have a substantial adverse effect on federally protected off-Reservation wetlands as defined by Section 404 of the Clean Water Act?	LS	None required.	NA
D. Would the Project interfere substantially with the off-Reservation movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	LS	None required.	NA
E. Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	LS	None required.	NA

NI=No Impact, LS=Less than Significant, LSM=Less than Significant with Mitigation, S=Significant, NA=Not Applicable

**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Residual Impacts
3.5 Geology and Soils			
A. Would the Project expose off-Reservation people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving (1) the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, or (2) strong seismic ground shaking?	LS	None required.	NA
B. Would the Project expose off-Reservation people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?	LS	None required.	NA
C. Would the Project expose off-Reservation people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	LS	None required.	NA
D. Would the Project result in substantial off-Reservation soil erosion or the loss of topsoil?	LS	None required.	NA
3.6 Hazards and Hazardous Materials			
A. Would the Project create a significant hazard to the off-Reservation public or the off-Reservation environment through the routine transport, use, or disposal of hazardous materials?	LS	None required.	NA
B. Would the Project create a significant hazard to the off-Reservation public or the off-Reservation environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	LS	None required.	NA
C. Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed off-Reservation school?	LS	None required.	NA
D. Would the Project expose off-Reservation people or structures to a significant risk of loss, injury or death involving wildland fires?	LS	None required.	NA
3.7 Land Use			
A. Would the Project conflict with any off-Reservation land use plan, policy, or regulation of an agency adopted for the purpose of avoiding or mitigating an environmental effect?	LS	None required.	NA
B. Would the Project conflict with any applicable habitat conservation plan or natural communities conservation plan covering off-Reservation lands?	LS	None required.	NA

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Residual Impacts
3.8 Noise			
A. Would the Project result in exposure of off-Reservation persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	LS	None required.	NA
B. Would the Project result in exposure of off-Reservation persons to excessive groundborne vibration or groundborne noise levels?	LS	None required.	NA
C. Would the Project result in a substantial permanent increase in ambient noise levels in the off-Reservation vicinity of the project?	LS	None required.	NA
D. Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the off-Reservation vicinity of the project?	LS	None required.	NA
3.9 Public Services			
A. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered off-Reservation governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for off-Reservation fire protection and emergency medical services?	LS	None required.	NA
B. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered off-Reservation governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for off-Reservation law enforcement services?	LS	None required.	NA
C. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered off-Reservation governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for off-Reservation public school services?	LS	None required.	NA
3.10 Transportation and Traffic			
A. Would the Project cause an increase in off-Reservation traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	S	Mitigation Measure 3.10-1: Arden Avenue/Highland Avenue Intersection Improvements – the Applicant shall pay a fair-share contribution to stripe the northbound through lane to a second northbound left-turn lane and restripe the northbound right-turn lane to a northbound shared through-right-turn lane on Arden Avenue; and modify the existing traffic signal and include the northbound and southbound left-turn movements as lead-lag to avoid conflict.	LSM

NI=No Impact, LS=Less than Significant, LSM=Less than Significant with Mitigation, S=Significant, NA=Not Applicable

**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Residual Impacts
B. Would the Project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated off-Reservation roads or highways?	LS	None required.	NA
C. Would the Project substantially increase hazards to an off-Reservation design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	LS	None required.	NA
D. Would the Project result in inadequate emergency access for off-Reservation responders?	LS	None required.	NA
3.11 Utilities and Service Systems			
A. Would the Project exceed off-Reservation wastewater treatment requirements of the applicable Regional Water Quality Control Board?	LS	None required.	NA
B. Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant off-Reservation environmental effects?	LS	None required.	NA
C. Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant off-Reservation environmental effects?	LS	None required.	NA
D. Would the Project result in a determination by an off-Reservation wastewater treatment provider (if applicable), which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	LS	None required.	NA
3.12 Water Resources			
A. Would the Project: (i) violate any water quality standards or waste discharge requirements, (ii) substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion of siltation off-site, (iii) substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding off-site, or (iv) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff off-Reservation?	LS	None required.	NA

NI=No Impact, LS=Less than Significant, LSM=Less than Significant with Mitigation, S=Significant, NA=Not Applicable

**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Residual Impacts
B. Would the Project substantially deplete off-Reservation groundwater supplies or interfere substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	LS	None required.	NA
C. Would the Project: (i) place structures within a 100-year flood hazard area, which would impede or redirect off-Reservation flood flows, or (ii) expose off-Reservation people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	LS	None required.	NA
Cumulative			
A. Have impacts that are individually limited, but cumulatively considerable off-Reservation? “Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past, current, or probable future projects.	S	Mitigation Measure 3.10-1: Arden Avenue / Highland Avenue Intersection Improvements – the Applicant shall pay a fair-share contribution to stripe the northbound through lane to a second northbound left-turn lane and restripe the northbound right-turn lane to a northbound shared through-right-turn lane on Arden Avenue; and modify the existing traffic signal and include the northbound and southbound left-turn movements as lead-lag to avoid conflict.	LSM

NI=No Impact, LS=Less than Significant, LSM=Less than Significant with Mitigation, S=Significant, NA=Not Applicable

CHAPTER 1

Introduction

1.1 Introduction

This ~~Draft~~ Final Tribal Environmental Impact Report (TEIR) has been prepared by the San Manuel Band of Mission Indians (Tribe) to analyze the potential off-Reservation environmental effects of the proposed Hotel and Casino Expansion Project (referred to in this TEIR as the Project). The Project is located on the Tribe's Reservation in San Bernardino County, California. This TEIR was prepared pursuant to Section 11.0 of the 2016 Tribal-State Compact between the State of California and the San Manuel Band of Mission Indians (Compact). The Tribe serves as the Lead Agency for the TEIR.

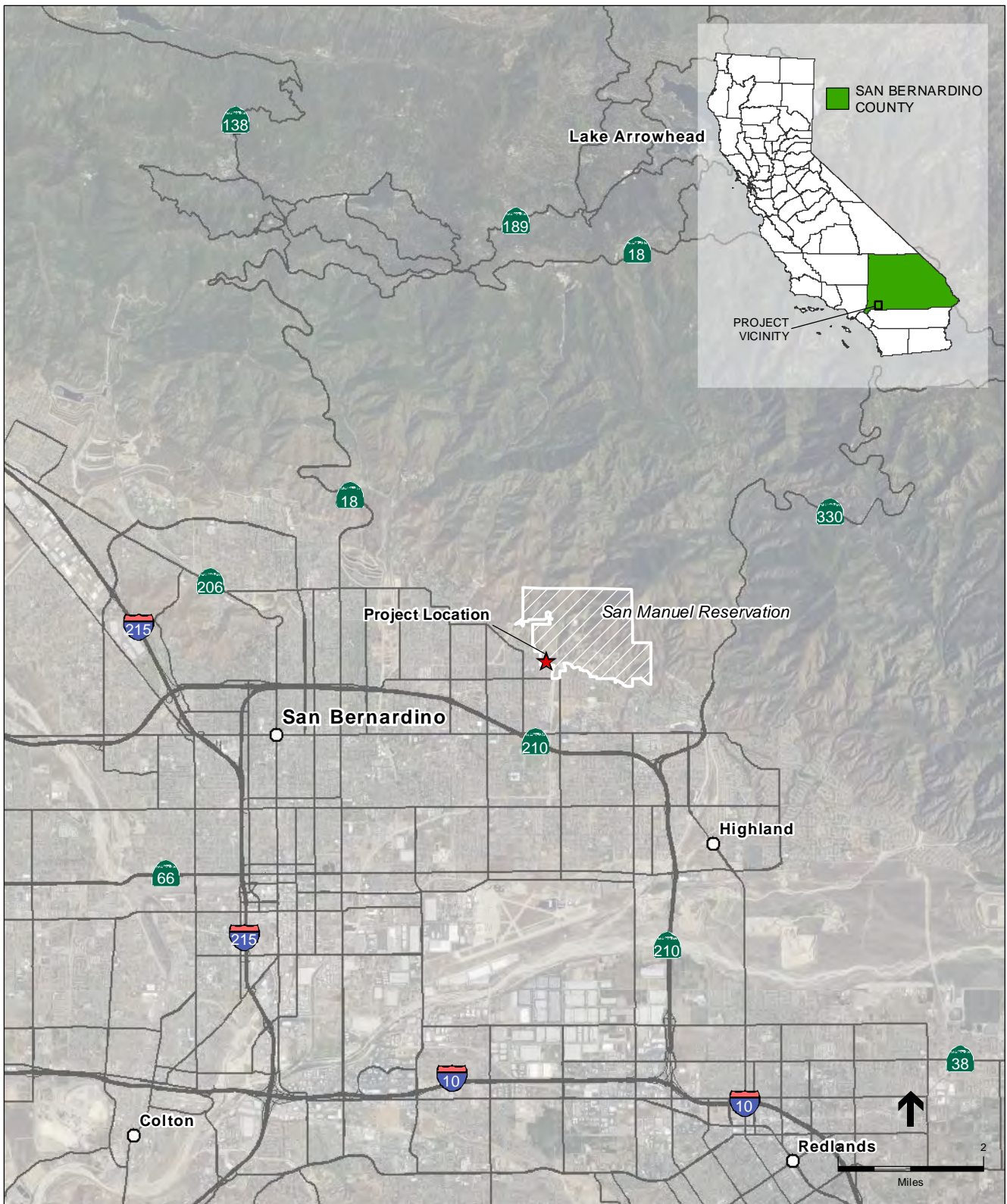
1.2 Project Background and History

The San Manuel Band of Mission Indians is a federally recognized Indian Tribe. The San Manuel Reservation (Reservation) was established in 1891 by the United States. In the mid-1980s, the Tribe constructed the San Manuel Indian Bingo facility in the southwestern portion of the Reservation. In 1994, that bingo facility was expanded to include casino operations. In 2005, the current San Manuel Casino building was opened; the original casino building was later demolished to construct a new parking structure. The San Manuel Casino provides economic stability for the Tribe and has become a major source of jobs and economic prosperity for the entire region.

1.3 Project Location

The Project is located on the Tribe's Reservation in San Bernardino County, California, adjacent to the City of San Bernardino and approximately one mile north of the City of Highland (**Figure 1-1**). Regional access to the casino is provided by Interstate 210, with local access provided by Highland Avenue and Victoria Avenue.

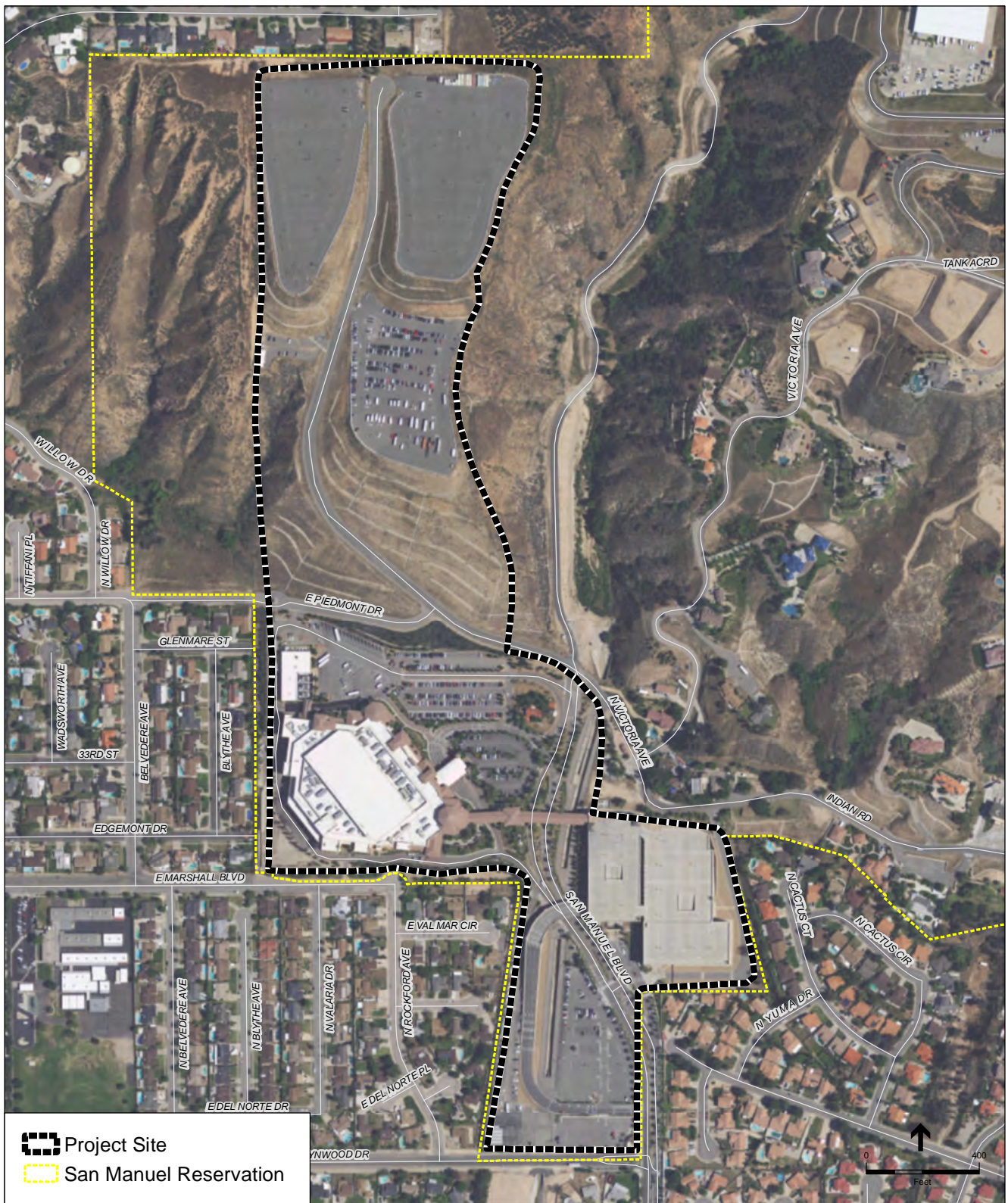
Construction and operational activities would occur on a portion of the previously disturbed 70± acre Project site in the southwestern portion of the Reservation (**Figure 1-2**). The Project site is currently developed with parking, roadways and landscaped areas.



SOURCE: USDA, 2016; ESRI, 2012; ESA, 2017

San Manuel Band of Mission Indians Final TEIR

Figure 1-1
Regional Location



SOURCE: ESRI Imagery 5/3/2016

San Manuel Band of Mission Indians Final TEIR
Figure 1-2
 Project Site Aerial Photograph

The Project site is immediately surrounded by undeveloped portions of the Reservation and off-Reservation residential development. To the north of the Project site for approximately 500 feet is off-Reservation residential development; beyond 500 feet are undeveloped portions of the Reservation. The Project site is bounded on the east and west by undeveloped portions of the Reservation and on- and off-Reservation residential development. To the south of the Project site are off-Reservation areas containing residential development and a stormwater channel.

1.4 Project Objectives

Development of the Project would achieve the following objectives:

- Provide amenities for existing and future patrons of San Manuel Casino;
- Provide a sustainable, long-term economic base for the Tribe that supports social, governmental, administrative, educational, health, and welfare services to improve the quality of life of Tribal members and provide capital for other economic opportunities;
- Provide employment opportunities during construction and operation phases for Tribal members and residents of the surrounding communities; and
- Promote regional tourism and economic growth.

1.5 Overview of the Environmental Process

Section 11.0 of the Compact requires that a TEIR be prepared for a project on Tribal land “a principal purpose of which is to serve the Tribe’s Gaming Activities or Gaming Operation, and which may cause either a direct physical change in the off-reservation environment or a reasonably foreseeable indirect physical change in the off-reservation environment.” The following discussion provides an overview of the public and agency review periods in the TEIR process.

1.5.1 Notice of Preparation

The Tribe filed a Notice of Preparation (NOP) of a Draft TEIR on November 7, 2017 in accordance with Section 11.2 of the Compact, which is included as **Appendix A**. The NOP was distributed to the California State Clearinghouse, County of San Bernardino, City of Highland, City of San Bernardino, resource agencies with off-Reservation jurisdiction and other interested parties. The NOP was also published on the Tribe’s website (www.SanManuelTEIR.com) and in the legal notice section of the San Bernardino Sun and Highland Community News newspapers. The NOP was prepared to inform agencies and the general public that a Draft TEIR was being prepared and invite comments on the scope and content of such document. Comments were accepted for a 30-day period ending on December 7, 2017. Comments received during that time are included in **Appendix B** and summarized in Chapter 6, Agency and Public Comments. The NOP provided a preliminary description of the Project, Project location, and a summary of probable off-Reservation environmental impacts.

1.5.2 Notice of Completion and Draft TEIR

The Notice of Completion (NOC) and the Draft TEIR ~~are being~~were distributed to the California State Clearinghouse, County of San Bernardino, City of Highland, City of San Bernardino, the State Gaming Agency, the California Department of Justice, Office of the Attorney General, resource agencies with off-Reservation jurisdiction and other interested parties. In addition, the NOC ~~is was being~~was posted on the Tribe's website (www.SanManuelTEIR.com) and published in both the Highland Community News and the San Bernardino Sun at least one newspaper of general circulation. The Tribe ~~is provided~~ing ten (10) copies of the NOC and the Draft TEIR to the County of San Bernardino along with a request to post public notice of the Draft TEIR at the office of the County Board of Supervisors and to furnish the public notice to the libraries serving the County. ~~the NOC at the office of the County Board of Supervisors and to furnish the NOC to the public libraries serving the County of San Bernardino and to serve the NOC to additional interested persons identified by the Tribe.~~ The Tribe provided the NOC to interested persons, including respondents to the NOP, and provided the proof of distribution to the County.

The Draft TEIR ~~was released for public and agency review on~~will be available for January 10, 2018 and the public review period ended on February 26, 2018. ~~a minimum 45-day public and agency review period.~~ During this review period, ~~on January 25, 2018,~~ the Tribe ~~will held~~hold a public information meeting on the Draft TEIR at the San Manuel Village Events Center. Approximately 93 members of the public, including residents, community leaders, and city officials attended the meeting. A court reporter was available to take verbal comments.

The NOC ~~included~~s the following information: a brief description of the Project, the proposed location for the Project, the address where copies of the Draft TEIR ~~were~~are available, information on the public information meeting and notice of the comment period, including the date the review period ~~ended~~s and how to submit comments.

1.5.3 Final TEIR

The Final TEIR ~~will include~~s all comments received on the Draft TEIR in **Appendix G**, including comments received at the public information meeting. ~~on the Draft TEIR along with responses to substantive comments related to off-Reservation environmental impacts. Responses to comments are provided in Section 6.2 of this Final TEIR.~~ The Tribe ~~has will~~prepared, certified and ~~make~~made the Final TEIR available to the County of San Bernardino, City of San Bernardino, City of Highland, the State Clearinghouse, the State Gaming Agency and the California Department of Justice, Office of the Attorney General. In addition, the NOC and the Final TEIR were posted on the Tribe's website (www.SanManuelTEIR.com).

CHAPTER 2

Project Description

2.1 Introduction

This section presents information regarding the components of the Project under consideration by the Tribe. Additional alternatives are discussed in Chapter 4, Other Considerations.

2.2 Project Elements

The Project would be located on the Tribe's Reservation within a 70± acre Project site shown on **Figure 2-1**. The Project includes the development of new entertainment and hospitality facilities and the expansion of the Tribe's existing gaming facilities, including a hotel, performance venue, additional gaming area, restaurants and other guest amenities, back of house and administrative facilities, an approximately 2,200 stall parking structure and additional power utility infrastructure. The ~~Draft~~ Final TEIR assesses a Phase 1 with 55,000 square feet of additional gaming and a Phase 2 which increases this number to 100,000 square feet through the conversion of meeting and event and back-of-house space. Total indoor building floor area for all new and expanded uses (excluding the parking structure and infrastructure facilities) is approximately 795,000 square feet. The Project is anticipated to provide approximately 1,400 jobs during the construction phase and approximately 1,200 jobs during operation.

The Project involves construction of additional new hospitality and entertainment facilities and the expansion of the Tribe's existing gaming facilities as follows:

- **Hotel** – The hotel would include approximately 500 hotel rooms, retail elements, pool, spa and underground parking (see Figure 2-1, #5). The proposed hotel includes one tower with approximately 17 floors and a height of up to approximately 197 feet. There would be approximately one level of parking under the hotel and adjacent area.
- **Meeting and Event Space** – Approximately 35,000 square feet of meeting and event space would be located on the lower floors of the hotel (see Figure 2-1, #5) and may be converted along with back of house areas to gaming space in the future.
- **Performance Venue** – The performance venue would be approximately 58,000 square feet with a capacity of up to 4,000 seats (see Figure 2-1, #7). The performance venue building is proposed to be approximately 70 feet tall.



SOURCE: WATG, 2017

San Manuel Band of Mission Indians Final TEIR

Figure 2-1
Project Site with Existing Facilities and New Facilities

- Expanded Gaming Area – Expanded gaming area would be approximately 55,000 square feet under Phase 1 with the potential for an additional 45,000 square feet to be added under Phase 2 if meeting and event space/back of house is converted to gaming (see Figure 2-1, #5). The expanded gaming area connects to the existing casino and would be approximately 70 feet tall.
- Restaurants – New restaurants would be located in the hotel and gaming areas (see Figure 2-1, #5).
- Administrative Facilities – The Project would include administrative offices, guest and support services and other back of house areas for the hotel, performance venue and casino operations (see Figure 2-1, #5).
- Parking Structure – A new on-site parking structure (see Figure 2-1, #6) would accommodate approximately 2,200 vehicles and includes a pedestrian bridge connecting to the existing pedestrian bridge which connects to the existing casino. The parking structure would contain approximately six levels with one level of parking below ground level.
- Improvements to Existing Facilities and Infrastructure – Development of new and expanded facilities would include reconfiguration of internal access roads, pedestrian walkways, and infrastructure improvements. During construction, the main entrance of the existing casino will be located at the current valet pick up area at the southeast corner of the existing casino. The poker gaming operations in the existing casino will be temporarily relocated in a tent structure in the surface parking area. The poker gaming operations will be permanently relocated to the ground floor of the existing parking structure and the area where the poker facilities are located in the existing casino will be replaced by a lounge and a high-limit gaming area and back of house facilities. Such relocation will result in an approximately 4,000 square foot reduction in gaming area in the existing casino. Off-Reservation infrastructure improvements, if needed, would include 1) new poles and upgrades to existing power poles for the substation energy alternative/variant, 2) upgrades to the existing sewer line within the existing utility trench and disturbed right-of-way of Marshall Boulevard (between Arden Avenue and North Victoria Avenue), and/or 3) the potential installation of a natural gas line within the existing utility trench and disturbed right-of-way of North Victoria Avenue (between the Reservation and Highland Avenue) if the fuel cell and/or cogeneration facility energy alternatives/variants are implemented. A new natural gas line along North Victoria Avenue is not currently anticipated to be needed but may be necessary under the fuel cell and/or cogeneration facility energy alternatives/variants.

2.3 Energy Alternatives/Variants

The Project is expected to continue to use the existing utility providers, including obtaining power through Southern California Edison (SCE) via existing lines and/or development of a customer dedicated substation (see Figure 2-1, #8 for potential substation location) with new 66 kilovolt (kV) transmission poles, a new 66 kV transmission conductor, and telecommunications lines on existing structures and requisite transmission lines. SCE is currently studying the feasibility of providing an open air substation with new 66 kilovolts (kV) with the aforementioned transmission and telecommunications lines and transmission conductor. The new 66 kV transmission lines that would connect to the existing lines at the corner of Marshall Boulevard and Arden Avenue the existing Del Rosa substation and travel to the substation

location on the Tribe's Reservation in existing disturbed SCE right of way on Arden Avenue and Piedmont Drive and on previously disturbed areas of the Reservation. The new substation is to be located on the Reservation and the footprint would be approximately 20,000 square feet and the height would be approximately 20 feet from grade and would be located in the already disturbed upper surface parking (see Figure 2-1, #8). The substation facility would be screened by a wall and/or trees to mitigate the view from its surroundings.

In addition, the Project may connect to a future Tribal-owned combined heat and power cogeneration facility (see Figure 2-1, #9) and/or a fuel cell power facility (see Figure 2-1, #8) on the Reservation. The cogeneration facility would be sized to provide approximately 6 megawatts of electrical power to be used by the Project. The cogeneration facility would incorporate waste heat recovery to produce hot water to offset and replace boiler gas consumption for space heating and domestic hot water and produce chilled water for space cooling to reduce chiller electricity consumption. The cogeneration facility would be located next to the existing Central Plant (see Figure 2-1, #4) in a previously disturbed area. The footprint is approximately 10,000 square feet and would extend at its highest point to approximately 35 feet in height, which is lower than the existing height of the casino of approximately 70 feet. The fuel cell facility would include solid oxide fuel cells which electrochemically convert stored energy in externally provided fuel (natural gas) to electricity. The fuel cell facility would be located in the northern parking lot area which has up to 20,000 square feet of space for either an electrical substation and/or fuel cell facility. It is expected that the cogeneration and/or fuel cell facility could be served from the existing 4-inch natural gas service provided by Southern California Gas (SCG) Company.

2.4 Project Construction and Design Features

Construction activities, including staging, would be contained within previously disturbed and/or paved areas of the Reservation.

Construction activities could include, but are not limited to, excavation/grading/clearing, foundation construction, facility construction, exterior-interior finish work, and site work landscaping. It is anticipated that cut and fill would be balanced on the Reservation.

The Project will incorporate the following:

- California Building Code and Public Safety Code Applicable to San Bernardino County: The development would be constructed in compliance with standards which meet or exceed the California Building Code and Public Safety Code applicable to San Bernardino County, as set forth in titles 19 and 24 of the California Code of Regulations. In addition, the Project would comply with the federal Americans with Disabilities Act, P.L. 101-336, as amended, 42 U.S.C. § 12101 et seq.
- Light and Glare Shielding: The Project will provide shielding consistent with those used on the existing casino and parking structure to reduce light and glare on adjacent off-Reservation residences, including providing shields along the parking structure ramps, use of landscaping screens and walls, shielded light fixtures and the use of directional controls where applicable.

- Dust and Water Quality Controls: Prior to construction, the Project will obtain a National Pollution Discharge Elimination System (NPDES) Construction General Permit from the United States Environmental Protection Agency. As required for such permit, a Stormwater Pollution Prevention Plan (SWPPP) will be developed and followed throughout the duration of the construction. The SWPPP would provide erosion, sediment and dust controls during construction.
- Operational Sound Control: The Project will maintain existing on and off-Reservation sound walls, wherever feasible. Such sound walls include those walls located between the existing casino and central plant and the off-Reservation residences located on the end of Glenmare Street along Marshall Boulevard, Val Mar Circle and along Blythe Avenue, at the end of Edgemont Drive, along Marshall Boulevard. The performance venue will include soundproofing.
- Aesthetics and Landscaping: The Project will be in keeping with the design of the landscaping and architectural themes of the existing casino facility.
- Construction Equipment Air Quality Controls: The Project will require all off-road diesel construction equipment greater than 50 horsepower (hp) used for this Project to meet U.S. EPA Tier 3 off-road emission standards or best available control technology, wherever feasible.
- Construction Dust Control: The Project will implement the following fugitive dust control measures:
 - Water spray/mists or similar suppressant (e.g., SoilSeal) shall be used during bulk material handling, earth-moving, construction and demolition activities, and vehicle movement on unpaved roads. Application of water dust suppressant shall occur at least 3 times per day on active areas of disturbance and unpaved roads.
 - To minimize dust on unpaved roads at the site, limit truck speed to 15 miles per hour or less on unpaved roads.
- Low-VOC Paint for Architectural Coating. The Project will use low-VOC paint and coating for architectural coating.
- California Green (CalGreen) Building Standards. The Tribe has adopted the CalGreen building standards applicable to San Bernardino County for this Project.
- Anti-Idling Program. The Tribe will implement an anti-idling policy for this Project. Vendors will be instructed to advise drivers that trucks and other equipment shall not be left idling for more than 5 minutes. Signs informing truck drivers of the anti-idling policy will be posted in the loading docks of the Project.
- Promote Eco-friendly Vehicles Usage. For this Project, the Tribe will pre-wire for EV charging of a portion of the new parking stalls, in accordance with CalGreen standards, as applicable to the County of San Bernardino. The Project will also purchase eco-friendly vehicles for use by the Project.

- Cogeneration Facility Standards. The cogeneration facility will be covered by an air permit issued by the U.S. Environmental Protection Agency and will be designed to meet applicable South Coast Air Quality Management District emissions standards, wherever feasible.
- Geotechnical Recommendations. Construction shall adhere to the recommendations of the Geotechnical Investigation for the Project. Recommendations may be superseded in additional investigations prepared by a California certified engineering geologist.
- Construction Noise Control:
 - Equipment and trucks used for Project construction will use the industry standard noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible). Idling of equipment and vehicles which are not in use will be limited to the extent feasible.
 - Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction will be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust will be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves will be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, will be used whenever feasible.
 - Stationary noise sources will be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.
 - The Tribe shall require construction contractors to limit exterior construction to the hours of 7:00 a.m. through 8:00 p.m.

CHAPTER 3

Off-Reservation Environmental Analysis

3.1 Introduction to the Off-Reservation Analysis

The Tribe has determined that there will be no off-Reservation impacts to the environmental topics of agricultural resources, cultural resources, mineral resources, population and housing, or recreation, as discussed in Section 3.1.2 below. Sections 3.2 through 3.12 of this TEIR provide an analysis of the Project's potential off-Reservation impacts for the following resource areas:

- Aesthetics
- Air Quality
- Biological Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Land Use
- Noise
- Public Services
- Transportation and Traffic
- Utilities and Service Systems
- Water Resources

This TEIR includes feasible mitigation measures to address potential adverse impacts to the off-Reservation environment for these resource areas where applicable and feasible.

3.1.1 Definition of Terms

This TEIR uses the following terminology to describe environmental effects of the Project:

- **No Impact:** Term used if the Project would not result in an impact to the off-Reservation environment.
- **Less Than Significant Impact:** Term used if the Project would not result in a substantial, adverse change in the physical conditions of the off-Reservation environment. The Project may result in minor adverse changes that are not considered substantial in light of the environmental setting or other factors. Mitigation measures are not required, but may be recommended.

- **Less Than Significant Impact With Mitigation Incorporated:** Term used if the Project would not result in a substantial, adverse change in the physical conditions of the off-Reservation environment if mitigation measures were incorporated. The Project may result in minor adverse changes that are not considered substantial in light of the environmental setting or other factors. Any mitigation measures needed to reduce the impact to less than significant are required.
- **Significant Impact:** Term used if the Project may cause a substantial, adverse change in the physical conditions of the off-Reservation environment. Mitigation measures are identified to reduce or eliminate these potential effects to the environment where feasible.

3.1.2 Effects Found Not to be Significant

Through the scoping process and consideration of the Off-Reservation Environmental Impact Analysis Checklist categories (summarized in Table S-1), the Tribe has determined that there will be no off-Reservation impacts to the environmental topics of agricultural resources, cultural resources, mineral resources, population and housing, or recreation, as discussed below. This TEIR subsection provides a brief discussion of why the aforementioned environmental topics were excluded from further analysis.

Agricultural and Forest Resources

The Project site is located within the disturbed and urban area of the existing San Manuel Casino and does not contain farmland, agricultural zoning or existing agricultural uses. The Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned land. The Project would not involve land use changes that would result in conversion of off-Reservation farmland or forest land to non-agricultural or non-forest uses. Accordingly, the Project has no significant impacts on off-Reservation agricultural and forest resources.

Cultural Resources

Project ground disturbance on the Reservation is currently limited to previously disturbed areas of the Project site and thus there are no direct impacts to off-Reservation historical, cultural, paleontological, or unique geologic resources. Potential indirect impacts to off-Reservation resources from on-Reservation development were also reviewed. The Project site is within the study area buffer for a records search conducted on July 7, 2016 at the South Central Coastal Information Center (SCCIC) housed at California State University, Fullerton. The full Project site on the Reservation has been covered by previous studies.

The only off-Reservation cultural resource located within the study area buffer is P-36-017669. P-36-017699 is the Patton State Hospital Historic District. The district contains 47 contributing buildings that have been determined eligible for listing in the National Register of Historic Places (National Register) as contributors to the district. Two additional buildings appear to be eligible for individual listing, but have not been formally determined eligible. As there are presently permanent facilities adjacent to the Project area associated with the San Manuel Casino, as well

as residential development and non-Tribal commercial development, the newly proposed improvements are not deemed to have indirect effects (including visual) on the Patton State Hospital Historic District.

Any off-Reservation infrastructure improvements, if needed, would include improvements to existing power poles, new power poles, upgrades to the existing sewer line within the existing utility trench and disturbed right-of-way of Marshall Boulevard (between Arden Avenue and North Victoria Avenue), and/or installation of a natural gas line within the existing utility trench and disturbed right-of-way of North Victoria Avenue (between the Reservation and Highland Avenue). ~~Upgrades to existing utility infrastructure in previously disturbed areas (existing power poles and Marshall Boulevard improvements)~~ are not anticipated to result in direct or indirect impacts to historical, cultural, paleontological, or unique geologic resources ~~but were given further review~~. North Victoria Avenue improvements were given further review based on proximity to a known resource.

The North Victoria Avenue improvements are adjacent to one known off-Reservation cultural resource, P-36-017699, the Patton State Hospital Historic District previously described. The southwestern boundary of the district extends to the intersection of North Victoria Avenue and Highland Avenue, at the southern end of the off-Reservation improvement area. However, none of the contributing elements of the district occur within the improvements area. Improvements would involve temporary construction impacts where modern roadway improvements and other disturbances have already been made. Further, the improvements would be located at or below grade, and would not permanently alter the appearance of the area. As such, there would be no direct or indirect (including visual) impacts to the Patton State Hospital Historic District by the Project.

Mineral Resources

The Project site has previously been developed and does not contain any known mineral resources of value to the region and residents of the State; therefore, the Project would not result in the loss of an off-Reservation available, important mineral resource recovery site. Accordingly, the Project has no significant impacts on off-Reservation mineral resources.

Population and Housing

The Southern California Association of Governments' (SCAG) population projections for the six-county Southern California region estimate that the City of San Bernardino's population would increase by an overall 21.5 percent from 211,900 persons to 257,400 persons between 2012 and 2040 while the City of Highland's population would increase 24.6 percent from 53,700 to 66,900 persons during that same period. San Bernardino County's projected growth rate is expected to be 32.1 percent, with population increasing from 2,068,000 persons in 2012 to 2,731,300 persons in 2040 (SCAG, 2017). The unemployment rate¹ was 5.8 percent for the City of San Bernardino,

¹ The unemployment figures are unadjusted and therefore have not been altered to account for employment fluctuations associated with seasonal related employment demand.

3.9% for the City of Highland and 4.5 percent for San Bernardino County in October 2017 (EDD, 2017).

The Project is anticipated to provide approximately 1,400 jobs during the construction phase and would add approximately 1,200 permanent employees to the workforce. The Project is anticipated to provide jobs for unemployed or “underemployed” persons and for anticipated population growth in nearby cities and the larger region. The Project is neither anticipated to add to the overall regional growth rate of the nearby cities or San Bernardino County by removing obstacles to growth, such as improving regional infrastructure beyond anticipated needs, nor would the project displace any existing off-Reservation housing. Accordingly, the Project has no significant impacts on off-Reservation population and housing. Growth-inducing effects are further discussed in Section 4.3 in Chapter 4, Other Considerations.

Recreation

The Project includes the expansion of an existing entertainment and recreation facility and provides additional recreational uses. The Project will add to recreational opportunities in the area and is not anticipated to increase or limit the use of existing off-Reservation recreational facilities, including parks, as the Project is not anticipated to result in unplanned growth inducement, as discussed above. As such, the Project does not cause substantial physical deterioration of recreation facilities to occur or be accelerated and the Project has no significant impacts on off-Reservation recreation facilities.

3.2 Aesthetics

3.2.1 Setting

Environmental Setting

The Project site lies within an urbanized area of San Bernardino County, near the base of the San Bernardino Mountains. Urban development currently represents the primary land use in the vicinity of the area. Visual resources located within the vicinity of the Project area include undeveloped foothills of the San Bernardino Mountains, including McKinley Mountain located northeast of the Project area.

The Project site is surrounded by undeveloped portions of the Reservation and on- and off-Reservation residential development. To the north of the Project site for approximately 500 feet is off-Reservation residential development; beyond 500 feet are undeveloped portions of the Reservation and the San Bernardino National Forest. The Project site is bounded on the east and west by undeveloped portions of the Reservation and on- and off-Reservation residential development. To the south of the Project site are off-Reservation areas containing residential development and a stormwater channel.

The Project site is currently developed with the existing casino and associated parking, roadways and landscaped areas. Most of the existing casino facilities are located in a relatively flat area at an elevation of approximately 1,470 feet above mean sea level. The northern surface parking lots are also located on a flat area but at an elevation of approximately 1,750 feet above mean sea level. Potential off-Reservation visual receptors for the Project include residences and motorists to the east, south, and west of the Project site.

Regulatory Setting

Relevant regulations for the surrounding off-Reservation area are discussed below. The Reservation is not subject to such state and local regulations.

Caltrans State Scenic Highway Program

The Project site is not located near an officially designated state scenic highway (Caltrans, 2017).

City of San Bernardino General Plan

The City of San Bernardino General Plan (2005) designates the off-Reservation land adjacent to the Project site as Residential Suburban and located just outside the Hillside Management Overlay and Foothill Fire Zone.

3.2.2 Impact Analysis

A. Would the Project have a substantial adverse effect on a scenic vista?

Undeveloped areas of the San Bernardino Mountains are generally considered scenic in the Project area. Prior off-Reservation and on-Reservation development has previously altered the visual character at the base of the San Bernardino Mountains north of the existing casino facilities.

Renderings of the Project are shown in **Figures 3.2-1 and 3.2-2**. All proposed structures would be constructed in previously disturbed areas and would use natural color schemes similar to existing facilities. As described in Section 2.4 in Chapter 2, Project Description, the Project design would be in keeping with the architectural themes of the existing casino facility. The Project would not cause any physical damage to undeveloped hillside areas, ridgelines or Sand Creek. The proposed casino expansion, events center, and parking structure would be adjacent to and similar in height to existing casino and parking facilities and thus ~~would not significantly alter~~ alteration to existing views for residents and motorists would be limited. The proposed parking structure would alter some second-story views from private residences located east of the proposed parking structure. Second story views from private residences in this area currently include other two-story residences, neighborhood trees, development within the City of San Bernardino, and distant mountain views to the west. As this viewshed currently includes urban development and the residential area is not designated locally as having protected scenic views, this impact is considered less than significant.

The proposed hotel would be taller than existing facilities and change certain views of the base of the San Bernardino Mountains for residents and motorists. These views would change from developed hillside residential and other Tribal community facilities to views of the hotel. The potential for the hotel to shadow off-Reservation areas was modelled for each season (i.e. the first day of spring, summer, fall and winter). Off-Reservation uses which could be affected include residences approximately 700 feet west of the proposed hotel. The hotel is anticipated to be up to 197 feet and at this height would not shadow these residences with the exception of the first hour (or less) following sunrise, when the sun is at the lowest point in the eastern sky (Planetcalc, 2018). As the hotel would only alter views of previously developed hillside areas and would not create a sustained shadow on off-Reservation areas, this impact is considered less than significant.

B. Would the Project substantially damage off-Reservation scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Project construction, including staging, would be limited to the Reservation. Thus, there would be no physical damage or impacts to off-Reservation scenic resources. Any off-Reservation infrastructure improvements would occur within already disturbed rights-of-way.



SOURCE: WATG, 2017

San Manuel Band of Mission Indians Final TEIR

Figure 3.2-1

Visual Rendering of New Hotel, Performance Venue, and Casino Expansion. View from North Side Hilltop Parking



SOURCE: WATG, 2017

San Manuel Band of Mission Indians Final TEIR

Figure 3.2-2

Visual Rendering of New Hotel. View from Nearby Residential Area

C. Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views of historic buildings or views in the area?

The Project incorporates Project design features, discussed in Section 2.4 within Chapter 2, Project Description, which include design in keeping with the architectural themes of the existing casino facility and use of light shielding for nighttime lighting. Similar to existing facilities, the incorporation of these design features would reduce the potential for new substantial sources of light or glare and thus, this impact would be less than significant.

3.3 Air Quality, Energy, Greenhouse Gas Emissions

3.3.1 Setting

This section addresses the impacts of the Project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthy pollutant concentrations, including the type and quantity of emissions that would be generated by the construction and operation of the Project.

Environmental Setting

Climate and Meteorology

The Project site is located within the South Coast Air Basin (Air Basin). Surrounding geographical features include the foothills of the San Bernardino Mountains to the north and the Pacific Ocean approximately 54 miles southwest of the Project site.

The ambient concentrations of air pollutants are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate in addition to the amount of emissions released by existing air pollutant sources.

The Air Basin lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. The Air Basin's meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone, which is a secondary pollutant that forms through photochemical reactions in the atmosphere. Thus, the greatest air pollution impacts throughout the Air Basin typically occur from June through September. This condition is generally attributed to the emissions occurring in the Air Basin, light winds, and shallow vertical atmospheric mixing. These factors reduce the potential for pollutant dispersion causing elevated air pollutant levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of ozone, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert.

Criteria Pollutants

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The pollutants regulated by the United States Environmental Protection Agency (U.S. EPA) and subject to emissions control requirements adopted by federal, state and local regulatory agencies include ozone (O₃), volatile organic compounds (VOCs), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. The National Ambient

Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for each of the monitored pollutants are summarized in **Table 3.3-1, Ambient Air Quality Standards**. The NAAQS and CAAQS have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

**TABLE 3.3-1
 AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ^a		National Standards ^b			
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g	
O ₃ ^h	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry	
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)			
NO ₂ ⁱ	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemi- luminescence	100 ppb (188 µg/m ³)	None	Gas Phase Chemi- luminescence	
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		53 ppb (100 µg/m ³)			Same as Primary Standard
CO	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)	
	8 Hour	9.0 ppm (10mg/m ³)		9 ppm (10 mg/m ³)			
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—			—
SO ₂ ^j	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)	
	3 Hour	—		—			0.5 ppm (1300 µg/m ³)
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ^l			—
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ^l			—
PM ₁₀ ^k	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³		—			
PM _{2.5} ^k	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³ ^k			15 µg/m ³
Lead ^{l,m}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption	
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ^m			
	Rolling 3-Month Average ^m	--		0.15 µg/m ³			Same as Primary Standard

**TABLE 3.3-1
 AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ^a		National Standards ^b		
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
Visibility Reducing Particles ⁿ	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates (SO ₄)	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ^l	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

NOTES:

- a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- b National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m3) is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
- c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- d Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.
- e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- g Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
- h On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- i To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.
- j On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- k On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3.
- l The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- m The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- n In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: CARB, 2016a.

Note that the terms “NO_x” and “NO₂” are sometimes used interchangeably. However, NO_x is a group of compounds containing nitrogen and oxygen, and the primary compounds of air quality concern include NO₂ and nitric oxide (NO). The principle form of NO_x produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO₂. Emissions of NO_x are a precursor to the formation of ground-level ozone. The term “NO_x” is primarily used when discussing emissions, usually from combustion-related activities. The term “NO₂” is primarily used when discussing ambient air quality standards. More specifically, NO₂ is regulated as a criteria air pollutant under the Clean Air Act and subject to the ambient air quality standards, whereas NO_x and NO are not. In cases where the thresholds of significance or impact analyses are discussed in the context of NO_x emissions, it is based on the conservative assumption that all NO_x emissions would oxidize in the atmosphere to form NO₂.

TACs

TACs are known to be highly hazardous to health, even in small quantities. TACs are airborne substances capable of causing short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects (i.e., injury or illness). TACs can be emitted from a variety of common sources, including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations.

Greenhouse Gases (GHGs)

Gases that trap heat in the atmosphere are called GHGs. Both natural processes and human activities emit GHGs. Increases in GHG concentrations can cause global climate change, a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because these different GHGs have different warming potential (the amount of heat trapped by a certain mass of a GHG), and CO₂ is the most commonly referenced gas for climate change, GHG emissions often are quantified and reported as CO₂ equivalents (CO₂e). Large emission sources are reported in million metric tons¹ of CO₂e.

The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2013):

- Warmer and/or fewer cold days and nights over most land areas;
- Warmer and/or more frequent hot days and nights over most land areas;
- Increased frequency and/or duration of warm spells/heat waves over most land areas;

¹ A metric ton is 1,000 kilograms; it is equal to approximately 1.1 U.S. tons and approximately 2,204.6 pounds.

- Increased incidence and/or magnitude of extreme high sea level rise;
- Increased duration and/or intensity of drought; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. Some of the potential effects of global warming in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2008).

Existing Conditions

Existing Air Quality at Nearby Monitoring Stations

Off-Reservation, the air quality monitoring station located closest to the Project site is the South Coast Air Quality Management District (SCAQMD)'s Central San Bernardino Valley 2 Monitoring Station, which is located approximately 4 miles southwest of the Project site at 24302 East 4th Street in San Bernardino. The most recent data available from the SCAQMD for this monitoring site is from years 2012 to 2016. The pollutant concentration data are summarized in **Table 3.3-2**.

Existing/Baseline Project Site Emissions

The existing casino uses within the Project site would not cease during construction or operation of the proposed Project, and existing parking at the southern surface lot would be accommodated within the new parking structure following its construction. Thus, for the purpose of assessing the net change in emissions due to the Project, baseline emissions are assumed to be zero.

Sensitive Receptors

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. For this Project, nearby sensitive receptor locations include the following:

- Residences located approximately 210 feet west of existing casino;
- Residences 110 feet south of the proposed parking structure (across Lynwood Drive);
- Residences 130 feet east of the proposed parking structure (across North Victoria Avenue); and
- Belvedere Elementary School located approximately 500 feet west of the Project site.

**TABLE 3.3-2
 AIR QUALITY DATA SUMMARY (2012 – 2016)**

Pollutant/Standard ^a	2012	2013	2014	2015	2016
O₃ (1-hour)					
Maximum Concentration (ppm)	0.124	0.139	0.121	0.134	0.158
Days > CAAQS (0.09 ppm)	41	22	38	52	70
O₃ (8-hour)					
Maximum Concentration (ppm)	0.109	0.112	0.099	0.117	0.118
4 th High 8-hour Concentration (ppm)	0.068	0.097	0.095	0.105	0.114
Days > CAAQS (0.070 ppm)	74	53	76	79	108
Days > NAAQS (0.070 ppm)	74	53	76	79	108
NO₂ (1-hour)					
Maximum Concentration (ppm)	0.067	0.072	0.073	0.071	0.060
98 th Percentile Concentration (ppm)	0.060	0.055	0.056	0.053	0.051
NO₂ (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.019	0.018	0.018	0.015	16.6
CO (1-hour)					
Maximum Concentration (ppm)	N/A	N/A	4.0	2.3	2.2
CO (8-hour)					
Maximum Concentration (ppm)	1.7	1.7	2.4	1.8	1.7
SO₂ (1-hour)					
Maximum Concentration (ppm)	N/A	N/A	N/A	N/A	N/A
99 th Percentile Concentration (ppm)	N/A	N/A	N/A	N/A	N/A
PM₁₀ (24-hour)					
Maximum Concentration (µg/m ³)	53.0	102.0	140.0	78.0	91.0
Est. Days > CAAQS (50 µg/m ³)	1	3	18	17	33
Est. Days > NAAQS (150 µg/m ³)	0	0	0	0	0
PM₁₀ (Annual Average)					
Annual Arithmetic Mean (20 µg/m ³)	29.2	31.3	34.2	30.7	33.1
PM_{2.5} (24-hour)					
Maximum Concentration (µg/m ³)	34.8	55.3	73.9	53.5	32.5
98 th Percentile Concentration (µg/m ³)	27.1	33.4	28.1	33.6	27.1
Est. Days > NAAQS (35 µg/m ³)	0	1	1	2	0
PM_{2.5} (Annual)					
Annual Arithmetic Mean (12 µg/m ³)	11.8	11.4	11.7	10.7	10.8
Lead					
Maximum 30-day average (µg/m ³)	0.008	0.010	0.012	0.012	0.010

NOTES:

^a ppm = parts per million; µg/m³ = micrograms per cubic meter

^b Exceptional events occurred in 2014 for PM_{2.5} and 2011 for PM₁₀. Exceptional events are not considered violations of an ambient air quality standard and are not included in this table.

SOURCE: SCAQMD, 2017.

Regulatory Setting

The Project would occur on lands that are currently held in trust by the United States Government for the benefit of the Tribe and therefore are not subject to State or local discretionary approvals, standards or ordinances. Because the Tribe has not adopted its own air quality management program, this assessment refers to the federal, California, and local air quality management plans, regulations and guidance that are relevant to the off-Reservation environment.

Federal

Clean Air Act (CAA): 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, U.S. EPA is responsible for implementation of certain portions of the CAA including mobile source requirements. Other portions of the CAA, such as stationary source requirements, are implemented by state and local agencies.

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 sections of the CAA which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria pollutants: O₃; NO₂; CO; SO₂; PM₁₀; and lead. Table 3.3-1 shows the NAAQS currently in effect for each criteria pollutant. The San Bernardino County portion of the Air Basin is designated as non-attainment for O₃ and PM_{2.5}. In accordance with Section 112, the U.S. EPA establishes National Emission Standards for Hazardous Air Pollutants (NESHAPs). The USEPA's list of hazardous air pollutants (HAPs) includes specific compounds that are known or suspected to cause cancer or other serious health effects.

Title II of the CAA pertains to mobile sources, such as cars, trucks, buses, and planes. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_x emissions have been lowered substantially, and the specification requirements for cleaner burning gasoline are more stringent.

The U.S. EPA is authorized to directly implement the CAA in Indian Country. Title V of the CAA requires that all major sources and certain minor sources of air pollution obtain an operating permit. Tribal governments may be delegated authority to issue and monitor Title V permits. The existing casino has a synthetic minor permit issued by the U.S. EPA.

General Conformity Rule: The General Conformity Rule implements Section 176(c) of the CAA, which requires that a federal agency ensure conformity with an approved State Implementation Plan (SIP) for those air emissions that would be generated by an agency action.

Except for federal highway and transit projects, the General Conformity Rule (40 CFR, Part 51, Subpart W) applies to all federal projects. This Project used the General Conformity Rule's De Minimis emission levels as a screening criteria for regional impact analysis.

State

California Clean Air Act (CCAA): The CCAA was signed into law in 1988, it requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. The CAAQS apply to the same criteria pollutants as the CAA but also include State-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. The California Air Resources Board (CARB) has primary responsibility for ensuring the implementation of the CCAA, responding to the CAA planning requirements applicable to the State, and regulating emissions from motor vehicles and consumer products within the State. As shown in Table 3.3-1, the CAAQS currently in effect include more stringent standards than the NAAQS for most of the criteria air pollutants. With respect to attainment status designation for the San Bernardino County portion of the Air Basin, the only difference between federal and State is that PM10 is in attainment for NAAQS but is designated at non-attainment for CAAQS.

California Air Resources Board Air Quality and Land Use Handbook: CARB published the Air Quality and Land Use Handbook in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include avoid siting sensitive receptors within:

- 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day;
- 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and
- 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

California Air Resources Board On-Road and Off-Road Vehicle Rules: In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_x, PM10, and PM2.5 emissions from existing diesel vehicles operating in California. The requirements were amended

in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds.

In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation was adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance by January 1, 2014. The compliance schedule requires that Best Available Control Technology (BACT) turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

SCAQMD

The SCAQMD has jurisdiction over air quality planning for off-Reservation portions of the South Coast Air Basin. The SCAQMD regulates air quality through its permit authority over most types of stationary emissions and through its planning and review activities.

Air Quality Management Plan: The SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the CAAQS and NAAQS. In December 2012, the SCAQMD adopted the 2012 AQMP, which incorporates scientific and technological information and planning assumptions, including growth projections (SCAQMD, 2012). The 2012 AQMP incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, and on-road and off-road mobile sources.

The key undertaking of the 2012 AQMP is to bring the Air Basin into attainment with the NAAQS for the 24-hour PM_{2.5} 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 federal CAA Section 182(e)(5) long-term measures for NO_x and VOC reductions. The 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 and CARB approved the 2016 AQMP in March 2017, but the U.S. EPA has yet to approve it for inclusion in the SIP (SCAQMD, 2017). The strategies included in the 2016 AQMP are intended to demonstrate attainment of the NAAQS for the federal non-attainment pollutants ozone and PM_{2.5} (SCAQMD, 2016). Until the 2016 AQMP is approved by the USEPA, the 2012 AQMP remains the effective AQMP.

SCAQMD Air Quality Guidance Documents: The California Environmental Quality Act (CEQA) Air Quality Handbook was published by the SCAQMD in November 1993 to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts

(SCAQMD, 1993). The CEQA Air Quality Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this ~~Draft~~ Final TEIR analysis. However, the SCAQMD is currently in the process of replacing the CEQA Air Quality Handbook with the Air Quality Analysis Guidance Handbook. While this process is underway, the SCAQMD recommends that lead agencies avoid using the screening tables in Chapter 6 (Determining the Air Quality Significance of a project) of the CEQA Air Quality Handbook, because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory, and the trip generation characteristics of the land uses identified in these screening tables were based on the fifth edition of the Institute of Transportation Engineer's Trip Generation Manual, instead of the most current edition. Additionally, the lead agency should avoid using the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L (EMFAC7EP Emission Factors for Passenger Vehicles and Trucks, Emission Factors for Estimating Material Hauling, and Emission Factors for Oxides of Sulfur and Lead). The SCAQMD instead recommends using other approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod) software, initially released in 2011 and updated in 2016. This TEIR used the most recent version of the CalEEMod software.

The SCAQMD has published a guidance document called the Localized Significance Threshold Methodology for CEQA Evaluations that is intended to provide guidance in evaluating localized effects from mass emissions during construction and operation (SCAQMD, 2008a). The SCAQMD adopted additional guidance regarding PM_{2.5} in a document called Final Methodology to Calculate Particulate Matter (PM)_{2.5} and PM_{2.5} Significance Thresholds (SCAQMD, 2006). This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and Localized Significance Threshold (LST) Methodology. This TEIR voluntarily refers to the SCAQMD CEQA significance thresholds and the LST methodology for analyzing project-specific regional and localized impacts.

3.3.2 Impact Analysis

Thresholds of Significance

Criteria Pollutants

To assess off-Reservation air impacts, the Project's regional impacts were evaluated against the General Conformity Rule's De Minimis emission levels based on the nonattainment status of the SCAB, which are 10 tons per year (tpy) for VOC and NO_x, 100 tpy for CO and PM₁₀, and 70 tpy for SO₂ and PM_{2.5}. In addition, even though this Project is not subject to SCAQMD approvals and rules, this analysis also relied on thresholds established by the SCAQMD to evaluate the Project's impact on the off-Reservation environment.

Table 3.3-3 presents the SCAQMD thresholds for regional impact assessment. In addition, SCAQMD has established mass emission rate look-up tables, or localized significance thresholds (LST) look-up tables that can be used to as screening criteria in determining the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore

not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without project-specific dispersion modeling. The localized significance thresholds are only applicable to NO_x, CO, PM10, and PM2.5. If daily emission rate exceedance is identified through the screening analysis, it does not necessarily mean that the Project impact is significant, rather refined dispersion modeling shall be conducted to compare the Project impact to the localized pollutant concentration significance thresholds. This analysis uses the SCAQMD LST methodology to evaluate impacts from localized emissions.

**TABLE 3.3-3
 SCAQMD REGIONAL AIR QUALITY SIGNIFICANCE THRESHOLDS**

Pollutant	Mass Daily Thresholds (lbs/day)	
	Construction	Operations
NO _x	100	55
VOC	75	55
PM10	150	150
PM2.5	55	55
SO _x	150	150
CO	550	550
Lead ^a	3	3

NOTE:
^a As the Project would not involve the development of any major lead emissions sources, lead emissions will not be analyzed further in this report.

SOURCE: SCAQMD, 2015a.

CO Hotspots

- With respect to the formation of CO hotspots, according to the SCAQMD, the Project may be considered significant if it causes a localized concentration of CO that is above the most stringent state or national 1-hour or 8-hour ambient air standards, which are 20 parts per million (ppm) for one-hour CO and 9.0 ppm for eight-hour CO, respectively.

Toxic Air Contaminants

Also using SCAQMD criteria (SCAQMD, 1993), the Project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following were to occur:

The Project would emit carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0.

Odors

With respect to odors, based on the Compact Checklist, the Project would be considered significant if it created objectionable odors affecting a substantial number of people.

GHG

The Compact does not require analyses of GHG emissions. However, the Tribe has voluntarily chosen to calculate and disclose the Project's potential GHG emissions. Note that the Tribe does not have its own GHG regulations or significance threshold, and, as discussed above in the Regulatory Setting section, there is no adopted numerical GHG emissions significance threshold for commercial land use projects at the federal, State, or local level.

Energy

The Compact does not require analyses of energy demand impact. However, the Tribe has voluntarily chosen to calculate and disclose the Project's potential energy demand. Note that similar to GHG, there is no numerical significance threshold for energy demand impact analysis at the federal, State or local level.

Methodology

The evaluation of potential impacts to regional and local air quality that may result from the construction and long-term operations of the Project is conducted as follows.

Consistency with Air Quality Management Plan

SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of the NAAQS (e.g., ozone and PM_{2.5}).

As required, the 2012 AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Accordingly, projects that are consistent with the assumptions used in the 2012 AQMP do not interfere with attainment because the growth is included in the projections utilized in the formulation of the AQMP. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed SCAQMD's significance thresholds. As noted above, while the 2016 AQMP was adopted by the SCAQMD and CARB, it has not been yet received USEPA approval for inclusion in the SIP. Therefore, until such time as the 2016 AQMP is approved by the USEPA, the 2012 AQMP remains the applicable AQMP.

Construction Emissions and Analysis Methodology

Construction of the Project has the potential to generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment, such as excavators, 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, would result from the use of construction equipment such as graders, dozers and loaders. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing

weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date, assuming all construction equipment would operate 13 hours per day) and applying the mobile source and fugitive dust emissions factors. The emissions are estimated using CalEEMod (Version 2016.3.2) software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is based on outputs from OFFROAD and EMFAC, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on- and off-road vehicles. CalEEMod has separate databases for specific counties and air districts. The San Bernardino County database was used for the Project. The input values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate emissions values for each construction activity. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in the **Appendix C**. Project design features are also incorporated into the construction emissions analysis.

Construction of the Project is estimated to require 29 months, starting as early as the second quarter of 2018. Subphases of construction would include demolition of the paved surfaces on-site, grading, foundations, building construction, paving, landscaping, and architectural coatings. Demolition activities would generate concrete debris and excavation would generate excavated soils, both of which would be recycled and/or balanced on the Reservation. The parking structure, the hotel and new casino areas are planned to have underground parking, the performance center may or may not have underground parking. This analysis assumed all these structures would have underground parking and would be one floor below grade. Heavy-duty equipment and vendor supply trucks would be used during construction activities. The maximum regional emissions from these activities are estimated by construction phase and compared to the U.S. EPA and SCAQMD significance thresholds. The maximum daily regional emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day of Project construction.

The localized effects from the on-site portion of the construction emissions are evaluated by comparing to the construction LSTs for a 5-acre site in the SCAQMD Source Receptor Area (SRA) 34 and at 25-meter off-site receptor distance. Of note, the SCAQMD LST Look-up tables contains thresholds for projects of one acre, two acres and five acres, which has higher thresholds for bigger project size, i.e., the allowed maximum daily emission rates increase as the project size increase from one to five acres. This Project is bigger than five acres, so assumptively the allowed daily emission rates would be greater than the thresholds presented in the LST Look-up tables, but as a screening analysis, we conservatively used the SCAQMD screening criteria for a five-acre site to evaluate impacts from localized operational emissions.

Operational Emissions and Analysis Methodology

Compared to the baseline, the Project operations would result in an increase in emissions from energy use, area sources (e.g., landscape maintenance equipment, consumer products, and architectural coatings used for routine maintenance), mobile sources, and stationary sources. In determining if this increase in emissions results in a significant off-Reservation impact, the incremental increase in emissions from operation of the Project for both Phase 1 and Phase 2 and with and without the cogenerate on facility energy alternative was compared to the regional significance thresholds. As discussed previously, the Project site is partially developed with surface parking lots, therefore does not generate substantial air pollutant emissions and, thus, as a conservative approach, this air quality analysis assumed the baseline emissions are zero.

This TEIR analyzed potential emissions from four different operational scenarios. As described under the Energy Alternatives/Variants section, besides connecting to the SCE grid electricity, this Project might also connect to a future Tribe owned combined heat and power cogeneration facility (Co-Gen) and/or a fuel cell power facility that the Tribe is considering building on the Reservation. At the time of this report, none of these energy alternatives have been selected and/or approved by the Tribe yet. Among those potential energy alternatives, Co-Gen is expected to be the closest to the off-Reservation sensitive receptors, and have the highest potential emissions and impacts. This analysis estimated operational emissions related to energy consumption with and without a Co-Gen facility onsite. In addition, the Project Traffic Study (Appendix E) analyzed two scenarios for the Project, Phase 1 and Phase 2. Phase 1 would include a 500- room hotel, performance venue, 55,000 square feet (sf) of casino gaming, and 35,000 sf for meeting and event space with an operational year of 2020. Phase 2 would include conversion of the meeting and event space and additional back of house space to casino gaming for a total of 100,000 sf of casino gaming with an operational year of 2022, in addition to the same 500-room hotel and performance venue as Phase 1. Therefore, combining those energy alternatives and traffic scenarios, this TEIR analyzed operational emissions for the following four possible Project scenarios:

- Phase 1 with Co-Gen;
- Phase 1 without Co-Gen;
- Phase 2 with Co-Gen; and
- Phase 2 without Co-Gen.

This analysis used the CalEEMod software to forecast the Project's regional emissions from mobile and area sources that would occur during long-term Project operations. Mobile source emissions are based on the trip generation rates provided in the Project's Transportation Study (Appendix E). In calculating mobile-source emissions, the trip length values were based on the distances provided in CalEEMod. Area source emissions are based on architectural coatings, landscaping equipment, and consumer product usage (including paints) rates provided in CalEEMod.

Co-Gen scenarios. At the time of this report, none of those potential stationary sources have been selected. Based on consultation with the Project's energy consultant, for the with Co-Gen scenarios, this analysis assumed two 6 MMBTU/hr natural gas fueled boilers and two natural gas fueled generators (each at 2.6 MW); for the without Co-Gen scenarios, this analysis assumed there would be two natural gas fueled boilers, each would be 10 – 100 MMBTU/hr. Emissions from the boilers were estimated based on natural gas consumptions rates provided by the energy consultant, and the U.S. EPA AP-42 default emission factors for natural gas combustion. Emissions from the generators were estimated based on the natural gas consumptions rates provided by the energy consultant, the vendor quoted power rating and emission factors for VOC, NOx and CO, and the U.S. EPA AP-42's PM and SO₂ emission factors for natural gas engines. Of note, the vendor quoted generators meet the current BACT and the SCAQMD Rule 1110.2 limits for new generators.

The localized effects from the on-site portion of the operational emissions were evaluated at nearby off-Reservation sensitive receptor locations potentially impacted by the Project according to the SCAQMD's Localized Significance Threshold Methodology. Similar to construction, the SCAQMD LST operational screening criteria applicable to a 5-acre site in SRA 34 with sensitive receptors distance of 25 meters was used.

The potential for the Project to cause or contribute to the formation of off-site CO hotspots are evaluated based on prior dispersion modeling of the four busiest intersections in the Air Basin that has been conducted by the SCAQMD for its CO Attainment Demonstration Plan in the AQMP. The analysis compares the intersections with the greatest peak-hour traffic volumes that would be impacted by the Project to the intersections modeled by the SCAQMD. Project-impacted intersections with peak-hour traffic volumes that are lower than the intersections modeled by the SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations compared to the SCAQMD modeled values in its AQMP.

Toxic Air Contaminants Emissions and Analysis Methodology

To assess the risk of potential negative health outcomes (cancer, or other acute or chronic conditions) related to TACs exposure from airborne emissions during the Project's operation, a refined quantitative health risk analysis (HRA) was prepared. The HRA evaluated the potential for increased health risks for off-Reservation sensitive receptors due to the proposed Project activities, including TACs emissions from the natural gas fueled boilers and Co-Gen generators. For this risk assessment, HARP2 model was used to convert AERMOD dispersion model output and TAC emissions into specific cancer risks and non-cancer chronic and acute health hazard impacts. Health impacts addressed operational TAC emissions and the effects on nearby off-Reservation sensitive uses (residential). Appendix C contains the detailed HARP2 modeling, AERMOD dispersion modeling and HRA calculations.

Project Design Features

The Project incorporates many Project design features (PDFs), discussed in Section 2.4 within Chapter 2, Project Description, that would reduce construction emissions and target sustainable site

development, water savings, energy efficiency, green-oriented materials selection, and improved indoor environmental quality. PDFs are part of the Project design, and are not mitigation measures. The PDFs proposed for the Project include, but are not limited to the following:

- Construction Equipment Air Quality Controls: The Project will require all off-road diesel construction equipment greater than 50 horsepower (hp) used for this Project to meet U.S. EPA Tier 3 off-road emission standards or best available control technology, wherever feasible.
- Construction Dust Control: The Project will implement the following fugitive dust control measures:
 - Water spray/mists or similar suppressant (e.g., SoilSeal) shall be used during bulk material handling, earth-moving, construction and demolition activities, and vehicle movement on unpaved roads. Application of water dust suppressant shall occur at least 3 times per day on active areas of disturbance and unpaved roads.
 - To minimize dust on unpaved roads at the site, limit truck speed to 15 miles per hour or less on unpaved roads.
- Low-VOC Paint for Architectural Coating. The Project will use low-VOC paint and coating for architectural coating.
- California Green (CalGreen) Building Standards. The Tribe has adopted the CalGreen building standards applicable to San Bernardino County for this Project.
- Anti-Idling Program. The Tribe will implement an anti-idling policy for this Project. Vendors will be instructed to advise drivers that trucks and other equipment shall not be left idling for more than 5 minutes. Signs informing truck drivers of the anti-idling policy will be posted in the loading docks of the Project.
- Promote Eco-friendly Vehicles Usage. For this Project, the Tribe will pre-wire for EV charging of a portion of the new parking stalls, in accordance with CalGreen standards, as applicable to the County of San Bernardino. The Project will also purchase eco-friendly vehicles for use by the Project.
- Cogeneration Facility Standards. The cogeneration facility will be covered by an air permit issued by the U.S. Environmental Protection Agency and will be designed to meet applicable South Coast Air Quality Management District emissions standards, wherever feasible.

Impact Analysis

A. Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Construction

The Project would result in an increase in short-term employment for construction compared to existing conditions. Although the Project would require many workers over the construction process, these jobs are temporary in nature. Construction jobs under the Project would not

conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include strategies intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The Project would utilize off-road diesel equipment greater than 50 hp that meet U.S. EPA Tier 3 off-road emission standards, as discussed under the *Project Design Features* heading, above. The Project would also control fugitive dust emissions during construction, use low-VOC paint for architectural coating, and minimize short-term emissions from on-road and off-road diesel equipment by limiting idling duration, as discussed under the *Project Design Features* heading, above. Implementation of these PDF requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment, Project construction would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

Operations

The AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP. As discussed in Section 3.1.2, Effects Found Not to be Significant, the Project is anticipated to provide approximately 1,200 jobs for unemployed or “underemployed” persons and for anticipated population growth in nearby cities and the larger region. According to SCAG, the forecast for population growth for the period between 2012 and 2040 for City of San Bernardino, City of Highland, and unincorporated San Bernardino County are 45,500, 13,200, and 48,500, respectively. The estimated number of employees generated by the Project is well within SCAG’s employment growth assumptions for nearby off-Reservation areas. As such, the Project would not generate growth beyond the range of development anticipated within the established SCAG regional forecast. The Project would not increase or induce residential density growth not otherwise anticipated.

As discussed previously, the Project might be powered by fuel cells or a natural gas fueled cogen, both of which are the new technologies recommended by the 2016 AQMP for providing grid services and as potential replacement for backup generation units (SCAQMD, 2015b). Therefore, by aiming to use those energy alternatives, this Project would support the AQMP goals of reducing GHG emissions while addressing the Air Basin’s looming air quality issues.

The Project would not conflict with or obstruct implementation of relevant air quality policies in the Air Quality Management Plan. Therefore, impacts would be less than significant.

B. Would the Project violate any air quality standard or contribute to an existing or projected air quality violation?

Construction

Construction related emissions arise from a variety of activities including: 1) demolition, site preparation, grading, and other earth moving activities; 2) travel by construction equipment and employee vehicles, especially on unpaved surfaces; 3) exhaust from construction equipment and on-road vehicles; 4) architectural coatings; and 5) asphalt paving.

Table 3.3-4 summarizes annual and peak daily construction emissions with implementation of PDFs. As demonstrated, Project’s maximum annual and peak daily construction emissions are below significance thresholds for all criteria pollutants. Based on this, regional construction impacts would be less than significant.

**TABLE 3.3-4
 PROJECT REGIONAL CONSTRUCTION EMISSIONS**

Source	ROG	NOx	CO	SO ₂	PM10	PM2.5
2018 Annual (tpy)	0.3	6.3	7.0	<0.1	1.0	0.6
2019 Annual (tpy)	1.0	9.6	12.6	<0.1	1.2	0.7
2020 Annual (tpy)	2.1	2.7	4.1	<0.1	0.3	0.2
De Minimis Threshold (tpy)	10	10	100	<70	100	70
Exceed Threshold?	No	No	No	No	No	No
2018 Daily (ppd)	5.2	83.7	99.8	0.2	14.6	8.4
2019 Daily (ppd)	27.5	91.6	115.4	0.2	12.2	7.1
2020 Daily (ppd)	40.0	53.0	80.2	0.1	6.9	4.3
SCAQMD Threshold (ppd)	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

NOTES:
 tpy = tons per year; ppd = pounds per day.
 Source: Appendix C

Operations

Table 3.3-5 shows the estimated total unmitigated operational emissions (area sources, energy, on-road vehicle traffic, and stationary sources), which demonstrate that operational emissions would exceed the regional mass emissions thresholds for NOx for all scenarios, all the other criteria pollutant emissions are below the corresponding mass emissions thresholds. Therefore, operation of the Project would potentially result in significant emissions of NOx and the NOx emissions need further analysis.

**TABLE 3.3-5
PROJECT REGIONAL OPERATIONAL CRITERIA POLLUTANT EMISSIONS**

Year	ROG	NOx	CO	SO ₂	PM10	PM2.5
Phase 1 with Co-Gen						
Annual (tpy)	8.5	16.6	37.6	0.2	10.3	4.2
De Minimis Threshold (tpy)	10	10	100	<70	100	70
Exceed Threshold?	No	Yes	No	No	No	No
<hr/>						
Area (ppd)	18	<1	<1	<1	<1	<1
Energy - Natural Gas (ppd)	1	23	19	<1	2	2
Mobile (ppd)	21	99	231	1	58	16
Maximum Daily Total (ppd)	40	122	250	1	59	18
SCAQMD Thresholds (ppd)	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No
<hr/>						
Phase 1 without Co-Gen						
Annual (tpy)	6.4	19.0	36.3	0.1	8.6	2.6
De Minimis Threshold (tpy)	10	10	100	<70	100	70
Exceed Threshold?	No	Yes	No	No	No	No
<hr/>						
Area (ppd)	18	<1	<1	<1	<1	<1
Energy - Natural Gas (ppd)	13	10	26	1	11	11
Mobile (ppd)	21	99	231	1	58	16
Maximum Daily Total (ppd)	52	109	257	1	68	27
SCAQMD Thresholds (ppd)	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No
<hr/>						
Phase 2 with Co-Gen						
Annual (tpy)	9.0	19.4	42.1	0.2	13.0	5.0
De Minimis Threshold (tpy)	10	10	100	<70	100	70
Exceed Threshold?	No	Yes	No	No	No	No
<hr/>						
Area (ppd)	19	<1	<1	<1	<1	<1
Energy - Natural Gas (ppd)	1	23	19	<1	2	2
Mobile (ppd)	23	111	248	1	72	20
Maximum Daily Total (ppd)	43	134	267	1	74	22
SCAQMD Thresholds (ppd)	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No
<hr/>						
Phase 2 without Co-Gen						
Annual (tpy)	6.9	21.8	40.8	0.2	11.4	3.4
De Minimis Threshold (tpy)	10	10	100	<70	100	70
Exceed Threshold?	No	Yes	No	No	No	No
<hr/>						
Area (ppd)	19	<1	<1	<1	<1	<1
Energy - Natural Gas (ppd)	13	10	26	1	11	11
Mobile (ppd)	23	111	248	1	72	20
Maximum Daily Total (ppd)	54	121	275	2	83	30
SCAQMD Thresholds (ppd)	55	55	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No

NOTES:

Phase 1 corresponding to the Phase 1 traffic scenario; Phase 2 correspond to the Phase 2 traffic scenario; tpy = tons per year; ppd = pounds per day.

SOURCE: Appendix C

As Table 3.3-5 demonstrates, the substantial NO_x emissions for all the operational scenarios are mainly attribute to the mobile sources, which are mainly private-owned-vehicles (POVs) and account for 81% to 92% of the total NO_x emissions. In reality, many future employees and visitors of the Project likely already travel within the Basin and generate mobile-source emissions there. As such, the NO_x emissions shown in Table 3.3-5 are based on the highly conservative assumption that operation of the land uses proposed under the Project would result in all net new emissions. It is likely that the actual incremental increase in regional emissions from operation of the land uses proposed under the Project could be substantially lower. In addition, ground-level ozone formation occurs through a complex photo-chemical reaction between NO_x and VOCs in the atmosphere with the presence of sunlight, the impacts of ozone are typically considered on a basin-wide or regional basis instead of a localized basis.

According to CARB, anthropogenic sources of emissions in the Basin emit a total of approximately 514 tons of NO_x per day (CARB, 2016b). Table 3.3-5 indicates that maximum operational emissions from the Project could be up to 0.056 tons (111 pounds) of NO_x per day. This represents approximately 0.01 percent of the Basin's daily NO_x emissions. Given that the Project's emissions would constitute a very small portion of the Basin's emissions and would occur over a relatively large area (primarily due to motor vehicles traveling on regional roadways) and given that meteorological effects, such as wind, would disperse the pollutants, it is unlikely that the exceedance of the NO_x regional threshold from operations would result in a measurable increase in the respective pollutant concentrations in proximity to the Project area or elsewhere in the Basin to a degree that measureable health impacts would result. Nevertheless, air dispersion modeling of operational NO₂ emissions was conducted for comparison to the ambient air quality standards (as mentioned previously, the term "NO_x" and "NO₂" are used interchangeably. "NO_x" is primarily used when discussing emissions, usually from combustion-related activities, versus "NO₂" is primarily used when discussing ambient air quality standards). As confirmed by results shown in **Table 3.3-6**, NO₂ emissions would not result in violations of the most stringent CAAQS or NAAQS and therefore, would not result in a significant impact to regional or localized air quality. Therefore, while NO_x mass emissions (e.g., pounds per day, or tons per year) may exceed the applicable mass emissions thresholds, dispersion modeling has determined that regional and local operational emissions would not violate an actual air quality standard and would not contribute significantly to an existing or projected air quality violation. Project impacts from operation would therefore be less than significant.

**TABLE 3.3-6
 AIR DISPERSION MODELING OF NOX EMISSIONS**

Source	1-hr NO2 (98 th percentile)	1-hour NO2 (Max)	Annual Average
Maximum Project Increase ¹	30.8	35.4	3.1
Background Max ²	124.3	167.5	38.0
Total (Project + Background)	155.1	202.9	41.1
NAAQS Thresholds	188	NA	100
CAAQS Thresholds)	NA	339	53
Exceeds Threshold?	No	No	No

NOTES:
 1. Modeled project operational sources including the Co-Gen, new boilers and the mobile sources for the 2022 traffic scenario (worst-case traffic scenario).
 2. Background max is the max monitoring data for the SCAQMD Central San Bernardino Valley monitoring station (SRA) for 2014, 2015 and 2016.
 3. AERMOD modeling used the SCAQMD pre-processed AERMOD-ready MET data for Redland station, and the San Bernardino O₃ data that was downloaded from U.S.EPA's Air Data Website.

SOURCE: Appendix C

C. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

A significant impact may occur if the Project were to add a cumulatively considerable contribution of a federal or State non-attainment pollutant. The SCAB is currently designated as extreme non-attainment for the federal and State ozone ambient air quality standards, non-attainment for the State PM10 ambient air quality standards, and serious non-attainment for the federal and State PM2.5 ambient air quality standards. Accordingly, if cumulative development consisting of the Project, along with other reasonably foreseeable future projects in the Basin as a whole could violate an air quality standard or contribute to an existing or projected air quality violation, then this is considered to be a significant cumulative impact. With respect to determining the significance of the Project's contribution to regional emissions, SCAQMD neither recommends quantified analyses of cumulative construction emissions nor provides methodologies or thresholds of significance to be used to assess cumulative construction impacts. According to SCAQMD, if an individual project results in air emissions of criteria pollutants (VOC, CO, NO_x, SO_x, PM10, and PM2.5) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard.

As discussed for Impacts A and B above, and Impact D below, the Project's construction emissions are not predicted to exceed SCAQMD regional or local impact threshold and therefore, are not expected to result in ground level concentrations that exceed the NAAQS or CAAQS. Therefore, the Project construction will not result in a cumulatively considerable net increase for

non-attainment pollutants and will result in a less than significant impact. Operational emissions will not exceed the SCAQMD regional or local thresholds and will not be expected to result in ground level concentrations that exceed the NAAQS or CAAQS. Peak daily operational PM10 and PM2.5 emissions were found to exceed the SCAQMD mass rate localized significance threshold, and NOx exceeded the mass rate based regional significance threshold, but refined dispersion modeling was performed using AERMOD for those pollutants, and the results demonstrate that maximum PM 10 and PM2.5 concentration at nearby sensitive receptors are less than the ambient air quality standard set by SCAQMD for Project operation, and NO2 emissions would not result in violations of the most stringent CAAQS or NAAQS. Therefore, while mass emissions (e.g., pounds per day and/or tons per year) of PM10, PM2.5 and NO2 may exceed the thresholds, dispersion modeling has determined that regional and local operational emissions would not violate an actual air quality standard and would not contribute significantly to an existing or projected air quality violation. As a result, the Project will result in a less than significant impact for operational emissions and the Project’s cumulative contribution to non-attainment pollutant is less than significant.

A conservative quantitative analysis of the cumulative impact to air quality from concurrent construction of the Project and the San Bernardino Valley Municipal Water District’s pipeline relocation project was performed and is discussed in Section 4.4.2. The two projects’ cumulative air emissions are below the regional and applicable localized SCAQMD thresholds and therefore cumulatively less than significant.

D. Would the Project expose off-Reservation sensitive receptors to substantial pollutant concentrations?

Localized Construction Emissions

Table 3.3-7 identifies the localized impacts at the nearest off-Reservation sensitive receptor location in the vicinity of the Project area with implementation of PDFs. The localized emissions during construction activity would not exceed any of the SCAQMD’s localized significance thresholds, therefore, impacts would be considered less than significant.

**TABLE 3.3-7
 PROJECT LOCALIZED CONSTRUCTION EMISSIONS WITH PDFs**

Source	NOx	CO	PM10	PM2.5
2018 Maximum (ppd)	79.3	94.9	11.3	7.8
2019 Maximum (ppd)	76.0	95.4	7.6	5.8
2020 Maximum (ppd)	51.9	66.9	3.3	3.3
SCAQMD LST Threshold (ppd)	270	1746	14	8
Exceeds Threshold?	No	No	No	No

NOTES:

ppd = pounds per day; The SCAQMD LSTs are based on SRA34 for a 5-acre site within a 25-meter receptor distance for construction activities.

SOURCE: Appendix C

Localized Operational Emissions

On-site operational sources of emissions would include natural gas combustion at the boilers and the future Tribe owned Co-Gen (if the Co-Gen energy alternative were selected). Buses and/or vendor trucks queuing and idling at the Project site would also generate emissions, but given the nature of the site operations, those mobile sources related emissions cannot be reasonably quantified at this point and are therefore not included in this localized impact analysis. Additionally, vendor truck idling would be limited as discussed under the *Project Design Features* heading, above. Area source emissions from consumer products, architectural coatings and landscaping equipment are included in the analysis. **Table 3.3-8** summarizes the maximum localized operational emissions resulting from Project, along with the SCAQMD localized significance thresholds. As shown, on-site daily emissions of NO_x, CO, PM10, and PM2.5 would be below the SCAQMD screening LSTs without installation of the Co-Gen; however, for the with Co-Gen scenario, PM10 and PM2.5 emissions would exceed the SCAQMD's operational screening LSTs.

TABLE 3.3-8
PROJECT LOCALIZED OPERATIONAL EMISSIONS (POUNDS PER DAY)^a

Source	NO _x	CO	PM10	PM2.5
Without Co-Gen				
Area	<0.1	0.3	<0.1	<0.1
Energy (Natural Gas)	22.9	19.2	1.7	1.7
Maximum Daily Total	22.9	19.5	1.7	1.7
SCAQMD LST Thresholds ^b	270	1,746	4	2
Exceeds Threshold?	No	No	No	No
With Co-Gen				
Area	<0.1	0.3	<0.1	<0.1
Energy (Natural Gas)	10.1	26.5	10.6	10.6
Maximum Daily Total	10.1	26.8	10.6	10.6
SCAQMD LST Thresholds	270	1,746	4	2
Exceeds Threshold?^c	No	No	Yes	Yes
Modeled Maximum 24-hour Average PM concentration at fenceline (µg/m ³)			1.98	1.98
Modeled Maximum 24-hour Average PM concentration at sensitive receptors (µg/m ³)			1.80	1.80
SCAQMD Ambient Air Quality Standard for 24-hour Average PM (µg/m ³)			2.5	2.5
Exceeds Thresholds?^b			No	No

NOTES:

^a Totals may not add up exactly due to rounding in the modeling calculations.

^b The SCAQMD LSTs are based on SRA34 for a 5-acre site within a 25-meter receptor distance for operational activities.

^c Operational PM10 and PM2.5 emissions exceeded the LST mass daily thresholds. Refined dispersion modeling was performed and results indicated PM10 and PM2.5 emissions would not violate the 24-hour ambient air quality standard.

SOURCE: Appendix C

In order to evaluate the impacts of potential PM10 and PM2.5 LST exceedances for the with Co-Gen scenario, refined dispersion modeling was performed using the U.S. EPA AMS/EPA

Regulatory Model (AERMOD). As shown in Table 3.3-8, the refined dispersion modeling results demonstrate that both the 24-hr average PM₁₀ and PM_{2.5} (for the with Co-Gen scenario) would be below 2.5 µg/m³ operational ambient air quality significance standard set by SCAQMD. Therefore, as summarized below, the Project's PM impact and localized operational emissions impacts would be less than significant.

CO "Hot Spot" Analysis

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. Caltrans CO Protocol requires detailed analysis for intersections with LOS E or F. The SCAQMD recommends performing a CO hotspot analysis if a project triggers either of the two criteria: 1) increases the volume to capacity ratio by two percent or more for intersections rated at LOS D or worse, or 2) declines an intersection's LOS from C to D. While construction-related traffic on the local roadways would occur during construction, the net increase of construction worker vehicle trips to the existing daily traffic volumes on the local roadways would be relatively small and would not result in CO hotspots. Additionally, the construction-related vehicle trips would only occur in the short-term, and would cease once construction activities have been completed. During operation, the Project would maximally add a total of 15,400 vehicle trips to the Project site per day, including vehicle trips from 1,200 employees. Based on the Project's Traffic Study (Appendix E) with implementation of proposed transportation mitigation measures, all intersections will operate at LOS D or better, and the Project will not increase the volume to capacity ratio by two percent or more for intersections rated at LOS D. At two intersections – Arden Avenue at Highland Avenue (intersection 10) and Victoria Avenue at Highland Avenue (intersection 13), the proposed Project might decline the LOS from C to D for future year 2020; even though declining to LOS D is acceptable from the traffic impact perspective and does not require mitigation, it warrants a CO hotspot analysis per the SCAQMD criteria. For the other future years (2022 and 2040) analyzed by the Traffic Study, the Project will not change and/or improve the LOS levels of intersections 10 and 13, for example, with the proposed mitigation measures, the Project will improve intersection 10's weekday AM and Saturday PM LOS from E to D. Therefore, the Project will not change or have net benefit for years 2022 and 2040 and a CO hotspot analysis is not needed for those future year scenarios.

The SCAQMD conducted CO attainment demonstration modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at the most congested intersection (Wilshire Boulevard and Veteran Avenue intersection in Los Angeles County) was 4.6 ppm (1-hour average) and 3.2 ppm (8-hour average), with an average daily traffic volume of about 100,000 vehicles per day. This data is used as a basis for the Project-levels analysis in the next paragraph.

Based on the Project's Traffic Study, intersection 10 has more traffic than intersection 13. For the future year 2020 plus Project scenario, intersection 10 would maximally have peak traffic

volumes of approximately 48,450 trip per day.² Based on this peak traffic volume, the maximum CO concentration due to future (2020) plus Project vehicle emissions would be up to 2.2 ppm (1-hour average) and 1.6 ppm (8-hour average). When added to the existing maximum background CO concentrations (as shown in Table 3.3-2) of 4.0 ppm (1-hour average) and 2.4 ppm (8-hour average), the concentrations would be 6.2 ppm (1-hour average) and 4.0 ppm (8-hour average). This level of cumulative traffic at the worst-case intersection associated with the Project is below the traffic levels, and related CO concentrations study in the AQMP as screening levels for further CO hot spot analysis, and well below the most stringent ambient air quality standard of 20 ppm (1-hour average) and 9.0 ppm (8-hour average). As a result, CO concentrations associated with the Project are expected to be less than those estimated in the 2003 AQMP, and would not exceed the significance thresholds. Therefore, this comparison demonstrates that the Project would not contribute considerably to the formation of CO hotspots and no further CO analysis is required. The Project would result in less than significant impacts with respect to CO hotspots.

TACs

Regarding long-term operations, the Project has the potential to expose sensitive receptors to TACs from its onsite boilers and the potential Tribe-owned Co-Gen facility. **Table 3.3-9** summarizes the carcinogenic risk for the maximum impacted sensitive receptors. **Table 3.3-10** summarizes the non-carcinogenic risk for the maximum impacted sensitive receptors. As shown, the maximum incremental increase in cancer risk for both the with Co-Gen scenario and without Co-Gen scenario are well below the SCAQMD significance threshold of 10 in one million. The chronic health risk and acute health risk from the Project are both less than 0.2, well below the significance threshold of 1.0. Emissions from diesel vehicle idling onsite would also contribute to operational health risks, however, given the low risk values shown in Table 3.3-9 and Table 3.3-10, it is unlikely that the overall risk would exceed the SCAQMD significance thresholds. Therefore, the Project health risk would result in a less than significant impact.

**TABLE 3.3-9
 MAXIMUM INCREMENTAL INCREASE IN CARCINOGENIC RISK FOR OFF-SITE SENSITIVE RECEPTORS**

Sensitive Receptor	Maximum Cancer Risk (# in one million) ^a	
	Operations w/ Co-Gen	Operations w/o Co-Gen
Off-Site Receptor	2.6	2.5
Maximum Individual Cancer Risk Threshold	10	10
Exceeds Threshold?	No	No

NOTES:

a. Operational risk was calculated assuming a child is born at the beginning of Project buildout year of 2020 and be exposed to operational impact for 30 years.

See Appendix C for additional details and modeling data.

SOURCE: Appendix C.

² Peak daily traffic at the intersection was calculated by multiplying the peak hourly traffic by 10, per the Federal Highway Administration’s methodology. Time of Day Modeling Procedures: State-of-the-Practice, State-of-the-Art. Available: https://www.fhwa.dot.gov/planning/tmip/publications/other_reports/tod_modeling_procedures/ch02.cfm. Accessed January 3, 2018.

**TABLE 3.3-10
 MAXIMUM INCREMENTAL INCREASE IN HAZARDOUS INDEX FOR OFF-SITE SENSITIVE RECEPTORS**

Sensitive Receptor	Chronic Risk Hazard Index (HI) ^a		Acute Risk Hazard Index	
	Operations with Co-Gen	Operations without Co-Gen	Operations with Co-Gen	Operations without Co-Gen
Off-Site Receptor	0.005	0.001	0.2	0.02
Significance Threshold	1.0	1.0	1.0	1.0
Exceeds Threshold?	No	No	No	No

NOTE:
 a. Chronic risk HI values based on the annual maximum levels of TACs divided by the corresponding TAC reference exposure levels (RELs).

SOURCE: Appendix C.

Overall, construction and operation of the Project would not exceed the SCAQMD localized significance thresholds at off-Reservation sensitive receptors. The Project would not cause or contribute to an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 ppm, respectively. Therefore, CO hotspots impacts would be less than significant. Construction of the Project would not generate emissions of TACs that would result in a significant health impact to off-Reservation sensitive receptors. Operation of the Project would not include permanent sources (equipment, etc.) that would generate substantial long-term TAC emissions in excess of the health risk thresholds. Therefore, construction and operational TAC impacts would be less than significant.

E. Would the Project create objectionable odors affecting a substantial number of people off-Reservation?

While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SCAQMD. The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor. Generally, increasing the distance between the receptor and the source would mitigate odor impacts. Types of land uses that typically pose potential odor problems include agriculture, wastewater treatment plants, food processing and rendering facilities, chemical plants, composting facilities, landfills, waste transfer stations, and dairies. The Project does not include any of these land uses or similar land uses. Therefore, the Project would not create objectionable odors that would affect a substantial number of people, and odor impacts would be less than significant.

3.3.3 Cumulative Impact Analysis

There are a number of cumulative projects in the Project area that have not yet been built or are currently under construction. The San Bernardino Valley Municipal Water District pipe relocation and replacement activities, are expected to occur concurrently with Project construction. The cumulative impact from the District project with the proposed Project were

quantitatively analyzed in Section 4.4.2 and found to be less than significant. Since ~~the~~ The timing or sequencing of the other cumulative projects are not known, and any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative or the location of such projects are too far away to have a cumulative impact with the Project. For this reason, the SCAQMD's recommended methodology to assess the Project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in the ~~Draft~~ Final TEIR. The SCAQMD recommends using two different methodologies: (1) that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality; and (2) that a project's consistency with the current AQMP be used to determine its potential cumulative impacts. This Project's cumulative impact was discussed below using both SCAQMD methodologies.

Construction and Operational Emissions

The SCAQMD uses the same significance thresholds for project specific and cumulative impacts. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. The Project would result in the emission of criteria pollutants during construction and operation for which the region is in non-attainment. Based on the Project-specific level of emissions, the Project's cumulative impacts would be less than significant because its construction and operational emissions, including emissions of non-attainment pollutants of ozone precursors and particulate matter, would be less than significant, as shown in Section 3.3.2.

Consistency with AQMP

Alternatively, the SCAQMD recommended assessing project's cumulative impacts based on whether it is consistent with the AQMP. The Project has incorporated strategies, as applicable, consistent with the AQMP. Construction of the Project would implement fugitive dust control measures which meets the SCAQMD Rule 403 requirements and a PDF enforcing an anti-idling policy to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time similar to the ATCM. In addition, the Project would utilize off-road equipment that meets Tier 3 emissions standards, and use low-VOC paints that meet SCAQMD Rule 1113 for architectural coating. Any off-Reservation construction projects in the Air Basin, which would include the cumulative projects in the Project area, would need to comply with SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures). As such, the Project's cumulative construction impacts to air quality would be less than significant.

The Project's location, design, and land uses also render it consistent with the AQMP. As discussed previously, Project increases in employment would provide a small contribution to anticipated growth to the nearby off-Reservation area as a whole. The anticipated increase in employment is consistent with SCAG's growth projections. Because these same projections form the basis of the 2012 AQMP, it is concluded that the Project would be consistent with the projections in the AQMP. In addition, the Project will meet and/or exceed the 2016 CalGreen standard, and the

Project might be powered by fuel cells or a natural gas fueled Co-Gen, both of which are the new technologies recommended by the 2016 AQMP for providing grid services and as potential replacement for backup generation units. Therefore, the Project would support the AQMP goals of reducing GHG emissions while addressing the Air Basin's looming air quality issues. As such, the Project's cumulative operational impacts to air quality would be less than significant.

3.3.4 GHG Emissions

As discussed above, the Compact does not have checklist question for GHG emissions, and there is no federal, State or local adopted numerical GHG emissions significance thresholds for land use projects. Thus, this ~~Draft~~-Final TEIR voluntarily calculated the GHG emissions associated with the proposed Project activities and the Project's consistency with laws, plans, and policies created to foster GHG reductions.

GHG emissions associated with construction would be short-term and were estimated using CalEEMod. The SCAQMD guidance, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (SCAQMD, 2008b), recognizes that construction-related GHG emissions from projects “occur over a relatively short-term period of time” and that “they contribute a relatively small portion of the overall lifetime project GHG emissions”. The guidance recommends that construction project GHG emissions should be “amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies.” In accordance with that SCAQMD guidance, the estimated construction GHG emissions are amortized assuming a 30-year life of the Project and are summed with operational emissions below. In regards to long-term operations, GHGs would be generated by area, energy, mobile, waste, and water sources. This ~~Draft~~-Final TEIR also analyzed the four possible Project scenarios' GHG emissions, and results of each scenario are summarized in **Table 3.3-11** below.

As shown in Table 3.3-11, the primary sources of GHGs would be from consumption of natural gas and electricity, as well emissions from on-road vehicles (mobile). At this time, a significance threshold for land development projects has not been established by U.S. EPA, CARB, SCAQMD, or other lead agencies. Accordingly, no significance determination can be made.

The Tribe is considering formally establishing environmental regulations and policies, but at this time has not adopted laws, policies, or plans specifically intended to reduce GHGs. The Tribe has adopted CalGreen standards for this Project and committing to EV charging station installations above CalGreen requirements, which would reduce potential GHG emissions. In addition, it is anticipated that the Project will be able to recycle and/or balance the demolition debris and excavated soil on the Reservation, thus reducing haul truck and waste disposal related GHG emissions during Project construction. Furthermore, the Tribe has and would continue to have employee shuttling service for trips within the Reservation, thus reduce mobile source related GHG emissions during Project operation.

**TABLE 3.3-11
CONSTRUCTION AND OPERATIONAL GHG EMISSIONS**

GHG Emissions Sources	CO₂e (metric tons/year)
Phase 1 with Co-Gen	
Area	<1
Electricity	6,243
Natural Gas	20,642
Mobile	9,823
Water	368
Waste	143
Construction (30-year Amortization)	131
Total	37,349
Phase 1 without Co-Gen	
Area	<1
Electricity	20,627
Natural Gas	4,527
Mobile	9,823
Water	368
Waste	143
Construction (30-year Amortization)	131
Total	35,618
Phase 2 with Co-Gen	
Area	<1
Electricity	6,243
Natural Gas	20,642
Mobile	12,484
Water	479
Waste	143
Construction (30-year Amortization)	131
Total	40,123
Phase 2 without Co-Gen	
Area	<1
Electricity	20,627
Natural Gas	4,527
Mobile	12,484
Water	479
Waste	143
Construction (30-year Amortization)	131
Total	38,392

Source: Appendix C

The GHG emissions of the Project alone are not expected to cause a direct physical change in the environment. It is global GHG emissions in their aggregate that contribute to climate change, not any single source of GHG emissions alone. The California Air Pollution Control Officers Association has recognized that GHG emissions are cumulative by nature (2008). Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the Project's annual GHG emissions would cause a measurable change in global GHG emissions sufficient to create a significant Project level impact on global climate change, therefore, the Project's GHG impact would be less than significant.

3.3.5 Energy

As mentioned above, the Compact also does not have checklist questions for energy. Accordingly, this ~~Draft~~ Final TEIR voluntarily includes relevant information and analyses that discloses potential energy impacts of the Project by referring to Appendix F of CEQA checklist. This Energy section represents a summary of the Project's anticipated energy needs and impacts. The energy analysis summarizes the energy consumption during Project construction and for operational Phases 1 and 2 (corresponding to the Traffic Study's Phase 1 and Phase 2 traffic scenarios).

Construction-Related Energy Consumption

The Project construction is planned to start in 2018 and finish in 2020. Construction energy consumption would result primarily from transportation fuels (e.g., diesel and gasoline) used for haul trucks, heavy-duty construction equipment, and construction workers traveling to and from the Project site. This analysis provides the estimated maximum construction energy consumption for the purposes of evaluating the associated impacts on energy resources.

Haul trucks would be used during the demolition and excavation phases of construction. During the entire construction period of approximate two years, a maximum total of approximately 17,364 one-way truck trips would be required to haul the demolition material and excavated soil within the Reservation for recycling and or balancing use, and a maximum total of approximately 18,689 one-way vendor truck trips would be required to deliver concrete, building materials and supplies to the site. Note that by recycling and reusing the demolition debris and excavated soils within the Reservation and avoid hauling off the Reservation, the Project would have much shorter haul trip distance (less fuel consumption) than if hauling all these material off-Reservation for disposal. The diesel fuel consumption by the Project's haul truck and vendor delivery trips during construction was estimated based on the information described above, based on fuel economy calculated with data from the CARB on-road vehicle emissions model, EMFAC2014 (EMFAC).

Heavy-duty construction equipment associated with Project demolition, excavation, grading, foundations, building construction, paving, landscaping, and architectural coatings would include, but not be limited to equipment such as excavators, graders, tractors/loaders/backhoes, dozers, cranes, forklifts, generators, and welders. The majority of the equipment would likely be diesel-

fueled; however, smaller equipment, such as welders and pumps may be electric-, gasoline-, or natural gas-fueled, and tower cranes would likely be electric-fueled. However, this Project energy assessment assumes all equipment would be diesel-fueled, due to the speculative nature of specifying the amounts and types of non-diesel equipment that might be used, and the difficulties in calculating the energy which would be consumed by this non-diesel equipment. The use of diesel fuel for all equipment also represents the most conservative scenario for maximum potential energy use during construction. The diesel fuel consumption for heavy-duty construction equipment was estimated based on the number and type of construction equipment that would be used during Project construction, and the estimated duration of construction activities.

The number of construction workers that would be required would vary based on the phase of construction and activity taking place. The transportation fuel required by construction workers to travel to and from the Project site would depend on the total number of worker trips estimated for the duration of construction activity. This analysis assumed all the worker vehicles would be gasoline fueled and calculated the Project’s total worker gasoline usage based on the fuel economy value calculated using data from EMFAC, and the CALEEMOD estimated total vehicle miles traveled for construction workers.

Table 3.3-12 presents the estimated Project construction fuel consumption. For comparison, EMFAC was used to estimate annual fuel consumption for worker, vendor, and haul truck vehicles classes in the Air Basin.³ As shown in Table 3.3-12, the estimated Project construction fuel consumption would only be a fraction of one percent of the Air Basin.

**TABLE 3.3-12
 ESTIMATED ANNUAL PROJECT CONSTRUCTION FUEL CONSUMPTION**

Source	Fuel Type	Project (gals/yr)	South Coast Air Basin 2017 (gals/yr)	Percent of South Coast Air Basin
Workers	Gasoline	35,498	4,634,495,111	0.0008
Vendors	Diesel	12,472	982,853,653	0.0013
Haul Trucks	Diesel	5,008	22,758,087	0.02

SOURCE: Appendix C.

Electricity from the power grid would be used during Project construction to provide temporary power for lighting, electronic equipment (e.g., computers, etc.), and to power electrical construction equipment; however, the electrical usage during Project construction would generally be assumed minimal since construction would occur during daytime hours, most construction equipment uses diesel fuel, and electronics draw minimal electricity. Thus, Project construction would not result in a substantial temporary increase in on-site electricity use.

³ EMFAC2011 Vehicle Categories, Worker: LDA, LDT1, LDT2; Haul Trucks: T7 Single Construction; EMFAC2007 Vehicle Categories, Vendor: HHDT, MHDT

Therefore, it is expected that Project construction electricity use would generally be considered negligible over the long-term.

Overall, Project construction would use the necessary energy for on-site construction activities and the transport of materials, soil, and debris to and from the Project site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Therefore, construction of the Project would not result in wasteful, inefficient, and unnecessary consumption of energy, and would not preempt opportunities for future energy conservation.

Operation and Maintenance-Related Energy Consumption

Anticipated Energy Consumption

Operational energy consumption would occur from the Project building energy needs, transportation fuels (e.g., diesel and gasoline) used for vehicles traveling to and from the Project site, and natural gas consumption at the proposed Co-Gen. This analysis provides the estimated maximum operational energy consumption for Phase 1 and Phase 2 for the purposes of evaluating the associated impacts on energy resources. According to the Compact, the Project will comply with County of San Bernardino building codes and the California Public Safety Codes, as set forth in titles 19 and 24 of the California Code of Regulation, and thus meet the CALGreen Code and Title 24 energy efficiency requirements.

The daily operation of the Project would generate demand for electricity, natural gas, and water supply, as well as generating wastewater, requiring conveyance, treatment, and disposal off-site, and solid waste, requiring disposal off-site. **Table 3.3-13** presents the estimated Project-specific energy consumption values, which shows that the Project would represent very small percentages of the SCE’s and the Southern California Gas Company’s (a regional utility provider for much of Southern California, including the San Manuel Reservation) network sales.

**TABLE 3.3-13
 ESTIMATED DIRECT PROJECT OPERATIONAL ENERGY USAGE**

Energy Type	Natural Gas Per Year ^a (million kBtu)	SCE Electricity Per Year ^a (million kWh)
Project Without Co-Gen	85	65
Project With Co-Gen	388	20
Local Utility Providers 2016 Network Sales - SoCal Gas/ SCE	300,000 ^b	85,977 ^c
Percent of Local Utility Providers– Without Co-Gen	0.03	0.08
Percent of Local Utility Providers– With Co-Gen	0.13	0.02

NOTES:

^a Natural gas and electricity usage prediction was provided by the Tribe’s energy consultant.

^b So Cal Gas 2016 Annual Report.

^c So Cal Edison 2016 Annual Report.

SOURCE: Appendix C.

Operational Transportation Energy Consumption

Project operation would result in transportation energy use. Transportation fuels, primarily gasoline and diesel, would be provided by local or regional suppliers and vendors. **Table 3.3-14** presents the estimated Project-specific transportation fuel consumption values, which demonstrates that fuel consumed by Project patron vehicles would require a fraction of a percent of the California State’s transportation fuel consumption.

**TABLE 3.3-14
 ESTIMATED PROJECT OPERATIONAL TRANSPORTATION FUEL USAGE**

Fuel Type	Gasoline Fuel (Gallons of Per Year ^a)		Gallons of Diesel Fuel Per Year ^a	
Scenario	Phase 1	Phase 2	Phase 1	Phase 2
Project	845,552	1,127,130	232,250	309,592
Statewide 2020 Fuel Usage (Transportation Sector)	13,877,797,039	13,877,797,039	3,372,533,262	3,372,533,262
Percent of Statewide	0.006	0.008	0.007	0.009

NOTES:

^a Project transportation fuel usage was estimated based on CALEEMOD output.

^b California state-wide transportation fuel consumption was based on EMFAC2014 estimate for calendar year 2020.

SOURCE: Appendix C.

Upon occupancy, Project operations would demand energy for on-site activities and off-site transportation associated with vehicles traveling to and from the Project site. The amount of energy used would not represent a substantial percentage of the available energy supply in terms of equipment and transportation fuels. In addition, the Tribe owned Co-Gen and/or fuel cell energy alternative may support the Project’s electricity demand which would reduce demand from SCE. Therefore, operation of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy and would not preempt opportunities for future energy conservation. Thus, the Project would have a less than significant impact on energy consumption.

3.4 Biological Resources

This section discusses the environmental setting and potential impacts to biological resources from the Project within the off-Reservation environment. While State and local regulations are not applicable to the Reservation, they are discussed as relevant to the off-Reservation environment. This section references “the proposed areas of development,” which includes the pink areas numbered 5 through 9 on Figure 2-1.

3.4.1 Setting

Environmental Setting

Study Methods

Biological resources within the Project site vicinity were characterized based on site review, aerial photo interpretation, review of pertinent literature and database queries. Sources of data referenced for this study included the following:

- California Natural Diversity Database (CNDDDB) (California Department of Fish and Wildlife [CDFW], 2016);
- Inventory of Rare and Endangered Plants (California Native Plant Society [CNPS], 2017);
- Special Plants List (CDFW, 2017a; U.S. Fish and Wildlife Service [USFWS], 2017); and
- Special Animals List (CDFW, 2017b; USFWS, 2017).

Regional Setting

The area has mild, semi-wet winters and hot, dry summers. Mean level of precipitation in the vicinity averages about 16 inches (Western Regional Climate Center, 2017). The majority of this precipitation falls as rain during the period of December through March, with spring storms dwindling off by the end of May. However, late summer monsoonal rainstorms are not uncommon.

The Project site is located in the San Bernardino Valley near the base of the San Bernardino Mountains. Elevations within the Project site range between 1,420 to 1,453 feet above mean sea level in the southern portion of the Project site to about 1,680 feet above mean sea level at the northern surface parking lot. The Project site is developed/disturbed with the existing gaming facility buildings, parking, landscaping, roadways and engineered slopes onsite.

Plant Communities

Plant communities are assemblages of plant species that occur together in the same area and are defined by both species composition and relative abundance. The proposed areas of development are disturbed and do not contain natural plant communities. Similarly the nearest off-Reservation areas to the Project site construction are developed with residential uses and stormwater facilities and do not include natural plant communities.

Wildlife Habitats

A sensitive natural wildlife community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, state, or federal agencies. The proposed areas of development and off-Reservation areas near the Project construction do not contain sensitive natural wildlife communities.

Wetlands and Other Waters of the U.S.

The definition of federally protected wetlands and other waters of the U.S., pursuant to the Clean Water Act, is described under the Section 404 of the Clean Water Act discussion in the Regulatory Setting below. Off-Reservation wetlands or waters of the U.S. in the vicinity of the Project site include the improved stormwater drainage channel south of the Project site which has connectivity to the Santa Ana River.

Special-Status Species

The Project site falls within the general geographic range of a number of “special-status” species (CDFW, 2016; CNPS, 2017; USFWS, 2017). In this assessment, special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies. State protected species include those species listed, or proposed for listing under the California Endangered Species Act (14 California Code of Regulations [CCR] 670.5), species considered rare or of special concern, or fully protected animals, as defined by the State of California (CDFW Code Section 3511, 4700, and 5050), or plants listed as rare or endangered under the California Native Plant Protection Act (CDFW Code Section 1900 et seq.). Federally protected species include those species listed, proposed for listing, and candidates for listing under the Federal Endangered Species Act (50 Code of Federal Regulations [CFR] 17.11-17.12), and species identified as rare or of special concern by USFWS.

Regionally, special-status species such as least bell’s vireo, coastal gnatcatcher, southwestern willow flycatcher and San Bernardino kangaroo rat occur in undeveloped riparian habitats and alluvial fans/floodplains. The proposed areas of development are currently used for parking and circulation and do not provide suitable habitat for any special-status species. Off-Reservation areas near the Project construction are developed with residential uses and stormwater conveyance facilities. Immediately south of the Reservation, the stormwater conveyance includes a cement bottom and eventually a steep gravel-lined ditch which flows into Patton Basin. There are unpaved areas on both sides of the ditch which provide maintenance access and staging areas. This ditch lacks natural habitat (such as a gently sloping alluvial fan/floodplain) or vegetation to support special-status species and the surrounding unpaved area is subject to disturbance from on-going maintenance.

Regulatory Setting

The following discussion includes the regulatory setting applicable to the off-Reservation environment.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918, as amended, is designed to protect birds that migrate and cross state lines to provide management of migratory birds at a federal level.

Federal Endangered Species Act (FESA)

The USFWS administers the Federal Endangered Species Act (16 United States Code [U.S.C.] Section 153 et seq.) and thereby has jurisdiction over federally-listed threatened, endangered, and proposed species. Projects that may result in “take” of a listed species must consult with the USFWS.

Section 404 of the Clean Water Act

The U.S. Army Corps of Engineers is the agency responsible for regulating the discharge of dredged or fill material into jurisdictional wetlands and other waters of the U.S. under Section 404 of the Clean Water Act. The federal government defines wetlands as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR Section 328.3(b) and 40 CFR Section 230.3). “Other waters of the U.S.” refer to aquatic features that are regulated by the Clean Water Act but are not wetlands (33 CFR Section 328.3).

California Endangered Species Act (CESA)

The CESA is similar in many ways to the FESA. CESA is administered by the CDFW on off-Reservation lands. CESA provides a process for CDFW to list species as threatened or endangered in response to a citizen petition or by its own initiative (Fish and Game Code § 2070 et seq.). Section 2080 of CESA prohibits the take of species listed as threatened or endangered pursuant to the Act (Fish and Game Code § 2080).

Regional Habitat Conservation Plans (HCPs)

The Upper Santa Ana River Wash Land Management and Habitat Conservation Plan is a proposed plan that includes the Santa Ana River Wash between Highland and Redlands that has not been officially adopted by the San Bernardino Valley Water Conservation District (the lead agency for the HCP) or other agencies. This proposed HCP provides for conservation of three federally endangered species: San Bernardino kangaroo rat, Santa Ana River woolly-star, and the slender-horned spine flower, one federally threatened species: the coastal California gnatcatcher, and the cactus wren. The Project site does not occur within the boundaries of this proposed HCP.

The West Valley Habitat Conservation Plan (WVHCP) was prepared by the City of Colton to provide incidental take coverage for the federally endangered Delhi sands flower-loving fly (RBF Consulting, 2014). Suitable habitat for this species include availability of clean, Aeolian deposited Delhi sands, which may occur in various areas including coastal sage scrub, disturbed non-native grasslands, and landscaped/ornamental areas. The Project does not occur within the boundaries of this HCP.

3.4.2 Impact Analysis

- A. Would the Project have a substantial adverse impact, either directly or through habitat modifications, on any special-status species identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Construction and operation of the Project would not directly impact special-status species or modify natural habitat which could support special-status species as the proposed areas of development are already disturbed and used currently for parking and roadways. Any off-site infrastructure improvements would occur within developed right-of-way. The on-Reservation areas adjacent to existing parking are currently subject to indirect lighting and noise impacts from private vehicles and buses. The nearest off-Reservation areas to the Project site are currently directly and indirectly impacted by existing off-Reservation residential development, stormwater facilities, and roadways. As such, Project impacts to special-status species would be less than significant.

- B. Would the Project have a substantial adverse effect on any off-Reservation riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

As described in Impact A, above, construction and operational activities would be limited to disturbed areas on the Reservation which are used currently for parking and roadways. Any off-site infrastructure improvements would occur within developed right-of-way. The nearest off-Reservation areas to the Project site are currently directly and indirectly impacted by existing off-Reservation residential development, stormwater facilities, and roadways. As such, Project impacts to off-Reservation natural communities would be less than significant.

- C. Would the Project have a substantial adverse effect on federally protected off-Reservation wetlands as defined by Section 404 of the Clean Water Act?**

The Project would not result in direct disturbance to any federally protected off-Reservation wetlands as construction activities are limited to previously disturbed portions of the Reservation. Implementation of the Stormwater Pollution Prevention Plan would prevent indirect off-Reservation impacts from stormwater runoff as described in Water Resources Section 3.12.2, Impact Analysis. As such, both direct and indirect effects to federally protected off-Reservation wetlands would be less than significant.

- D. Would the Project interfere substantially with the off-Reservation movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

Project construction and operational activities would be limited to developed portions of the Reservation which are currently used for parking and roadways. Any off-Reservation infrastructure improvements would occur within developed right-of-way. The nearest off-

Reservation areas to the Project site are developed with residential development, stormwater facilities, and roadways and do not serve as migratory wildlife corridors or wildlife nursery sites. As there are no off-Reservation migratory corridors or wildlife nursery sites near the Project construction and operational areas, the Project would have a less than significant effect on these types of resources.

E. Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project does not fall within the boundaries of any adopted HCP or natural community conservation plan. Thus, there would be no conflict or impact with respect to HCPs.

3.5 Geology and Soils

This section summarizes information from a site-specific geotechnical study conducted to evaluate geology and soils on the Project site prepared by CHJ Consultants (2017). This section references “the proposed areas of development,” which includes the pink areas numbered 5 through 9 on Figure 2-1.

3.5.1 Setting

Environmental Setting

Topography

Project site relief slopes southwest from the steep mountain front of the San Bernardino Mountains with large flat developed areas which include the existing casino and parking areas. Elevations within the Project site range between 1,420 to 1,453 feet above mean sea level in the southern portion of the Project site to about 1,680 feet above mean sea level at the northern surface parking lot.

Geology

The Project site is located at the base of the foothills of the San Bernardino Mountains. The San Bernardino Mountains are predominantly comprised of Mesozoic igneous (i.e., granitic rocks), and older sedimentary rocks. The San Bernardino Mountains in the Project site vicinity form the northeastern margin of the San Bernardino Basin. Lowlands of the San Bernardino Basin are filled with sand and gravel derived from surrounding highlands over the last several million years.

The Project site is adjacent to the San Andreas Fault Zone (SAFZ). The mountain front in the San Bernardino area roughly demarcates the presently active trace of the San Andreas fault (South Branch). The SAFZ includes multiple named segments that can rupture singularly or simultaneously with other segments. The SAFZ forms a major geographic boundary in the San Bernardino region that separates the Transverse Ranges geomorphic province from the Peninsular Ranges geomorphic province. The Transverse Ranges include the Santa Monica, San Gabriel and San Bernardino Mountains and is characterized by east-west trending ranges. The Peninsular Ranges encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California.

Seismicity

The Project site and surrounding area are seismically active areas of Southern California. The site is adjacent to the active north and south branches of the San Andreas Fault.¹ The last major

¹ An “active” fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 11,000 years). A “potentially active” fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. “Sufficiently active” is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches (Hart et al., 2007).

earthquake along the south branch of the San Andreas was the 1857 Fort Tejon earthquake, estimated at a Richter magnitude of 8.0 plus. The San Andreas Fault is capable of generating an earthquake magnitude of up to 8.3 on the Richter scale. Regional faults that may also produce strong ground shaking include the San Jacinto fault zone, Cucamonga fault, Crafton Hills faults, Elsinore fault, and North Frontal fault zone located approximately 6 miles southwest, 12 miles west, 9 miles southeast, 30 miles southwest, and 20 miles northeast, respectively (CHJ Consultants, 2017).

Soils

The Project site is situated on the young alluvial fan deposits derived from rock and soil debris transported from the mouth of Sand Canyon by Sand Creek. Prior geologic mapping of the site depicts the native sediments beneath the site as middle Holocene-age alluvial-fan deposits.

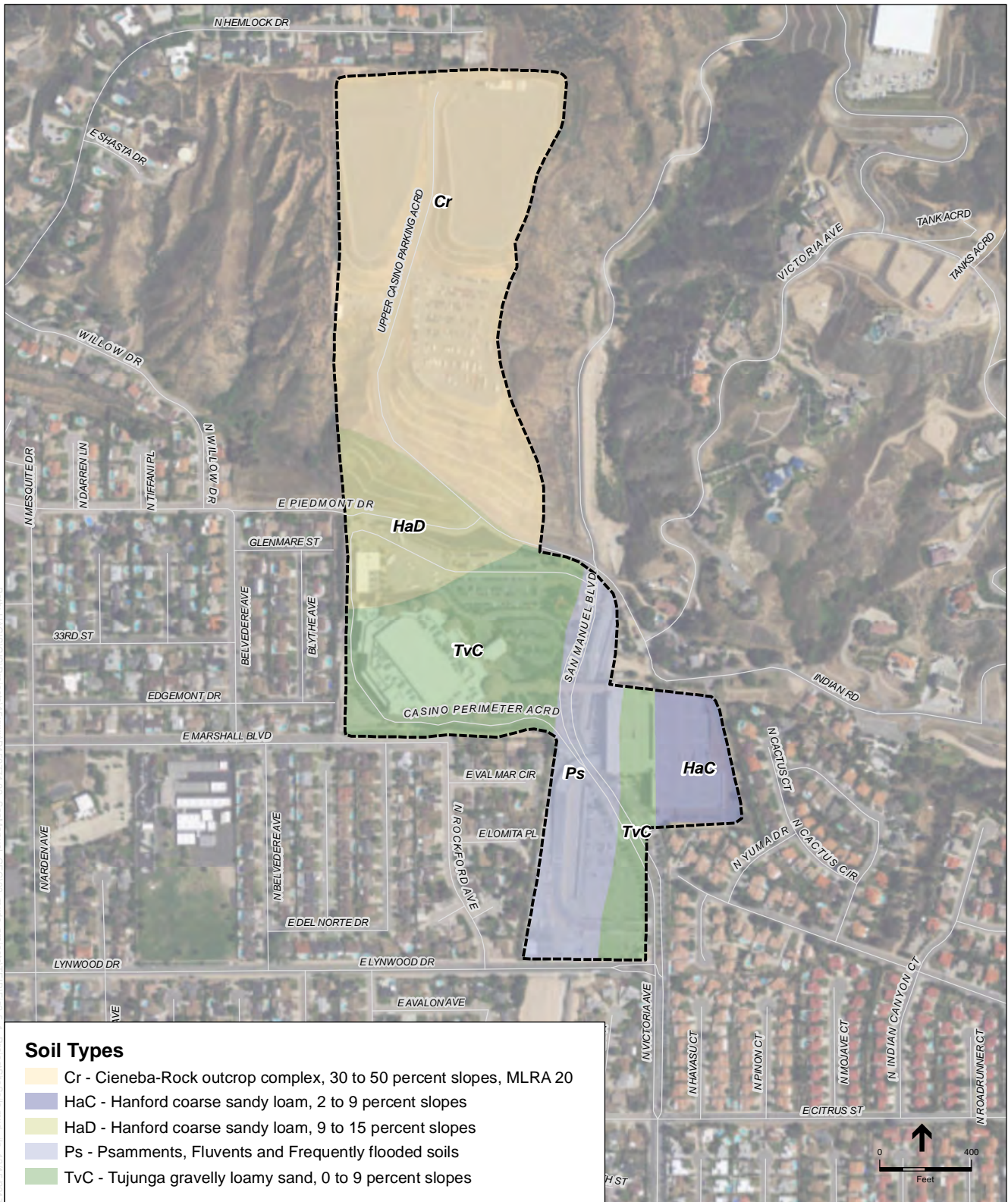
Soils for the Project site are shown on **Figure 3.5-1** as mapped by the United States Department of Agriculture, Natural Resource Conservation Service's (NRCS, 2017) Soil Survey database. Soils in the vicinity of the proposed hotel and casino expansion and the eastern portion of the proposed parking structure site are predominately Tujunga soils (0 to 9 percent slopes). Tujunga soils are characterized as somewhat excessively drained soils with rare flooding and a generally gravelly loamy sand composition. Soils in the vicinity of the proposed performance venue and cogeneration facility energy alternative are as Hanford type soils (9 to 15 percent slopes). Hanford soils are characterized as being well drained soils with coarse sandy loam composition. Psammets soils are mapped along the Sand Creek channel and the western portion of the proposed parking structure site. Psammets soils are characterized by high drainage capacity and shallow slopes (zero to five percent), with gravelly sand to gravelly loam composition. Around the proposed substation energy alternative site, soils are mapped as Cieneba-Rock outcrop complex (30 to 50 percent slopes). These types of soils are characterized as somewhat excessively drained with sandy loam composition.

The site-specific geotechnical study for the area around the existing casino evaluated the soils beneath the Project site and determined they generally consist of loose to medium dense sands with silt and gravel and silty sands with gravel and some cobbles generally becoming dense to very dense with depth (CHJ Consultants, 2017). The gravel encountered on the site was on the order of 1 to 3 inches in largest diameter; cobbles were on the order of 5 to 6 inches in largest diameter.

Geologic Hazards from Seismic Groundshaking

Liquefaction

Liquefaction is a process in which strong ground shaking (applied stress) causes saturated or partially saturated soils to lose strength or stiffness and behave as a fluid. Ground failure associated with liquefaction can result in severe damage to structures. The geologic conditions for increased susceptibility to liquefaction are: 1) shallow groundwater (generally less than 50 feet in depth); 2) the presence of unconsolidated sandy alluvium, typically Holocene in age; and 3) strong ground shaking. All three of these conditions must be present for liquefaction to occur. Based on historic groundwater levels in the area of the site, liquefaction is not considered a hazard at the site.



SOURCE: ESRI; USDA Natural Resources Conservation Service

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Figure 3.5-1
Project Site Soils

Severe seismic shaking may cause dry and non-saturated sands to densify, resulting in settlement expressed at the ground surface. Seismic settlement in dry soils generally occurs in loose sands and silty sands, with cohesive soils being less prone to significant settlement.

Landslides

The proposed areas of development are relatively level areas that do not include significant slopes. Engineered slopes between the northern surface parking lot and casino have been designed to prevent landslide. As such, landslides are not considered a hazard to the site.

Erosion

Erosion is the process by which the land surface is carried away through either wind or moving water. Soils with a low permeability and/or a high amount of runoff are particularly susceptible to water erosion and soils consisting of fine particles, as well as drained alluvial surfaces, are susceptible to wind erosion. Erosion removes the smaller and/or lighter soil particles first, which are typically humus and clay particles, leaving the coarse, sandy soils. The underlying surficial geology in the Project area is predominantly composed of well-drained sandy loams, loamy sand and gravelly loams which are subject to erosion. Soil on steeper, exposed areas are at greater risk for erosion.

Regulatory Setting

Federal Regulations

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1997 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). The NEHRP designates the Federal Emergency Management Agency as the lead agency of the program and assigns it with several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

Occupational Safety and Health Administration Regulations

The Occupational Safety and Health Administration’s (OSHA) Excavation and Trenching standard, Title 29 of the Code of Federal Regulations (CFR), Part 1926.650, covers requirements for excavation and trenching operations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act) requires delineation of zones along active faults in California, in order to regulate off-Reservation development on or near active fault traces. As a result of implementation of the Act, cities and counties are required to regulate development projects within fault zones. While Alquist-Priolo Zones are intended to identify active fault traces, rupture of surface faults and other seismic activities are not necessarily restricted to the Alquist-Priolo Zones.

California Building Code

Under the Tribal-State Compact, the Tribe adheres to the California Building Code and the California Public Safety Code applicable to the County of San Bernardino, as set forth in Titles 19 and 24 of the California Code of Regulations (collectively referred to herein as the CBC).

3.5.2 Impact Analysis

A. Would the Project expose off-Reservation people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving (1) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, or (2) strong seismic ground shaking?

Ground motion during an earthquake is an unavoidable hazard for structures in this region. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. The site could be subjected to significant shaking in the event of a major earthquake on any of the regional faults or other faults in the southern California region.

The proposed areas of development are not located on an active fault (CHJ Consultants, 2017; USGS, 2017). The proposed substation/fuel cell facilities energy variant/alternative site lies south of the Mills Creek Fault, a branch of the San Andreas Fault (USGS, 2017). The design of all elements of the Project will conform to CBC requirements and the recommendations of the Project Geotechnical Investigation (CHJ Consultants, 2017) as discussed in Section 2.4 within Chapter 2, Project Description, which would ensure impacts remain less than significant.

B. Would the Project expose off-Reservation people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Seismic settlement occurs when loose to medium dense granular soils densify during seismic events. The Geotechnical Investigation determined that the soil materials on the Project site were generally granular and considered to be non-critically expansive. During subsurface investigation, groundwater was encountered at two different borings at 94 and 70 feet below ground surface, respectively. As a result of these findings, the potential for liquefaction or other shallow groundwater-related hazards is considered low (CHJ Consultants, 2017). As design of all

elements of the Project will conform to CBC requirements and risk at the Project site for seismic-related ground failure is low, this impact is considered less than significant.

C. Would the Project expose off-Reservation people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

According to the County of San Bernardino General Plan Hazard Overlay Map FH23C (County of San Bernardino, 2010), the site is not located in an area identified as having a potential for landslides. Proposed areas of development are relatively flat and do not include significant slopes. There is an engineered slope between the northern surface parking lots and existing casino which is stabilized to prevent landslide. As such, landslides are not considered a hazard to the site, and this impact would be less than significant.

D. Would the Project result in substantial off-Reservation soil erosion or the loss of topsoil?

Construction of the Project would require site preparation which could expose surface soil materials to rainfall, potentially resulting in the removal and transport of these materials to local waterways, such as Sand Creek. The Project would require a Storm Water Pollution Prevention Plan, as discussed in Section 2.4, that will outline erosion and sediment control measures and ensure that impacts remain less than significant.

3.6 Hazards and Hazardous Materials

3.6.1 Setting

This section addresses whether hazards and hazardous materials issues related to the Project would have the potential to affect the off-Reservation environment.

Environmental Setting

Potential Receptors/Exposure

The sensitivity of potential receptors in the areas of known or potential hazardous materials contamination is dependent on several factors, the primary factor being the potential pathway for human exposure. Exposure pathways include external exposure, inhalation, and ingestion of contaminated soil, air, water, or food. The magnitude, frequency, and duration of human exposure can cause a variety of health effects, from short term acute symptoms to long-term chronic effects.

Database Searches

The State Water Resources Control Board maintains the Geotracker database, which contains records for sites that require cleanup, such as Leaking Underground Storage Tank Sites, Department of Defense Sites, and Cleanup Program Sites. There are no sites identified within or adjacent to the Project site in the Geotracker database (SWRCB, 2017).

The Department of Toxic Substances Control's (DTSC's) Envirostor database tracks cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further; this includes Federal Superfund sites, State Response sites, Voluntary Cleanup Sites, School Cleanup Sites, and Corrective Action Sites. There are no sites identified within or adjacent to the Project site in the Envirostor database (DTSC, 2017).

Schools

Schools within one-quarter mile of the Project site include the Belvedere Elementary School, located approximately 500 feet west of the Project site.

Wildland Fire

The Reservation and surrounding areas are susceptible to wildland fires due to steep terrain, highly flammable chaparral vegetation and high winds that correspond with seasonal dry periods. The California Department of Forestry and Fire Protection (CAL FIRE) identifies wildfire hazard zones based on factors such as fuel (material that can burn), slope and the expected chance of burning. Portions of the Project site are considered a Very High Fire Hazard Severity Zone. Areas adjacent to the Project site are also considered a Very High Fire Hazard Severity Zone, with the exception of developed urban areas to the southwest (CAL FIRE, 2008).

In 2011, a Community Wildfire Protection Plan (CWPP) was prepared for the San Manuel Fire Department. The CWPP provides a comprehensive, scientifically based analysis of wildfire-related hazards and risks within the San Manuel Reservation. The CWPP was updated in collaboration with the San Manuel Fire Department in 2017 to document any significant changes relevant to the area-wide fire protection planning efforts between 2011 and 2017 (Anchor Point Group, 2017).

The CWPP provides an analysis of the needs to protect key values of the community including life safety, homes and property, infrastructure, recreation, lifestyle, and environmental resources from wildfire impacts. Multiple agencies and organizations participated in the preparation of the CWPP, including the San Manuel Fire Department, CAL FIRE, the San Bernardino National Forest, the U.S. Bureau of Indian Affairs, and the San Bernardino County Fire Department. The existing San Manuel Casino, parking structure and southern parking lot are separated from wildland fuels by paving/roads on all sides. Concrete stucco siding and non-combustible roofing materials also work to minimize the risk of ignition. Fuel sources are reduced around the edges of the northern parking lots to create a defensible space and to reduce wildfire risk (Anchor Point Group, 2011). The 2017 update recommended to continue these maintenance activities to reduce fuels near the San Manuel Casino.

The San Manuel Fire Department is trained and has equipment for a variety of emergencies, including wildfire. The San Manuel Fire Department participates in interagency wildland fire training with CAL FIRE, the U.S. Forest Service and San Bernardino County Fire.

Regulatory Setting

Federal, state and local laws regulate the off-Reservation use, storage, transport, or disposal of hazardous materials. Accordingly, for purposes of determining the impact of the Project on the off-Reservation environment, a material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous waste is any hazardous material that is discarded, abandoned, or to be recycled. The criteria that render a material hazardous also apply to wastes that are determined to be hazardous. Factors that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility. The Project site was included within a regulatory database search for known hazards. The Project site was not listed on the Geotracker or Envirostor databases as having environmental concerns.

3.6.2 Impact Analysis

A. Would the Project create a significant hazard to the off-Reservation public or the off-Reservation environment through the routine transport, use, or disposal of hazardous materials?

Temporary construction activities associated with the Project will involve the transport and use of small amounts of hazardous materials, including limited quantities of miscellaneous hazardous

substances such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, and paints. Operations would use limited quantities of hazardous materials already used at the casino such as cleaning supplies. These materials will be transported along roadways. Due to federal (Resource Conservation Recovery Act) and state laws and the regulations associated with transporting hazardous materials in the State's jurisdiction, as well as the mechanisms in place to respond and clean up any spills along the roadways, the potential for off-Reservation impacts related to hazardous materials transport is less than significant.

B. Would the Project create a significant hazard to the off-Reservation public or the off-Reservation environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Temporary construction activities associated with the Project will involve the use of hazardous materials at the site, including limited quantities of miscellaneous hazardous substances such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, and paints. These materials will be handled in accordance with all applicable laws and regulations, and any spills will be immediately cleaned up and disposed in the appropriate manner. The Tribe has the only Type 1 Hazardous Materials Response Team in the region and thus is equipped to address any unforeseen release of hazardous materials into the environment (Michael J. Smith, Fire Chief, SMFD, pers. comm., 2017). Based on the search of the Geotracker and Envirostor databases, there are no identified releases of hazardous materials within or in proximity to the Project site. Thus, it is not anticipated that construction activities would disturb any previous spills or leaks of hazardous materials. Therefore, impacts related to the release of hazardous materials would be less than significant.

C. Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed off-Reservation school?

The Project does not involve operational activities that would result in hazardous emissions or the handling of hazardous or acutely hazardous materials at a level which could affect off-Reservation schools. Localized air quality impacts from construction and operation were evaluated for residences adjacent to the Reservation (closer in proximity to the Project than the nearest school) in Section 3.3, Air Quality, Energy and Greenhouse Gas Emissions, and Project emissions would be below applicable significance thresholds. Therefore, impacts would be less than significant.

D. Would the Project expose off-Reservation people or structures to a significant risk of loss, injury or death involving wildland fires?

The Project site is primarily paved and lacks sufficient fuels for hazardous conditions in regards to wildland fires. The 2011 CWPP and subsequent 2017 update for the San Manuel Fire Department identifies measures to minimize risk of wildfire impacts to the San Manuel Reservation. Additionally, after the wildfires of 2003 in the area, the Tribe developed a "Reservation Evacuation Plan" to ensure a timely evacuation of the Reservation and casino, in a manner that neither impedes the evacuation of adjacent neighborhoods nor inhibits the ingress of

emergency vehicles to the Project site. This plan is reviewed periodically with internal and external stakeholders, including the California Highway Patrol, the San Bernardino Police Department, the Highland Police Department, and the California Department of Transportation. The Project design would be built according to the standards of the California Building Code, including fire code requirements for fire-resistant construction, fire sprinklers, and adequate fire flow. These factors would reduce the risk of the Project contributing to off-Reservation wildland fires to a less-than-significant level.

3.7 Land Use

3.7.1 Setting

Environmental Setting

The Project is located on the Tribe's Reservation in San Bernardino County, California, adjacent to the City of San Bernardino and approximately one mile north of the City of Highland. The Project site is developed with existing San Manuel Casino facilities, including parking areas, roadways, landscaped areas and engineered slopes.

The Project site is surrounded by undeveloped portions of the Reservation and on- and off-Reservation residential development. To the north of the Project site for approximately 500 feet is off-Reservation residential development (Belvedere neighborhood); beyond 500 feet are undeveloped portions of the Reservation. The Project site is bounded on the east and west by undeveloped portions of the Reservation and on- and off-Reservation residential development (Amber Hills neighborhood). To the south of the Project site are off-Reservation areas containing residential development (Belvedere and Amber Hills neighborhoods) and a stormwater channel.

In the vicinity of the Project, off-Reservation areas within the City of San Bernardino and its Sphere of Influence have a land use designation of Single-Family Residential (SFR) with the exception of the stormwater channel which has a designation of Public Facility/Quasi-Public (PF) (City of San Bernardino, 2005). Similarly, the applicable City zoning is Residential Low (RL, 3.1 dwelling units per acre) Residential Suburban (RS, 4.6 dwelling units per acre), with the exception of the stormwater channel which is Public Facility (PF); generally, areas north of Piedmont Drive and Foothill Drive have a Foothill Fire Zone/Hillside overlay (City of San Bernardino, 2016).

Regulatory Setting

Land use on the Reservation is determined by the Tribe and is exempt from local land use and zoning policies. Land use off-Reservation within the City of San Bernardino is guided by the City's General Plan (2005) while land use located within unincorporated San Bernardino County is guided by the County of San Bernardino General Plan (2007).

County of San Bernardino General Plan

The San Bernardino County Board of Supervisors adopted the General Plan for the County in March 2007, and it came into effect in April 2007. This Board of Supervisors has adopted several amendments to the General Plan since its initial adoption in 2007, with the recent amendment adopted in 2014 regarding changes to the Safety Element section of the Plan. The Land Use Element of this General Plan designates the general distribution and intensity of all land uses within San Bernardino County, providing standards as well as general policy level direction for approaching land use-related issues. The County of San Bernardino is currently undergoing an effort to comprehensively update the General Plan through the development of a Countywide Plan, with a target adoption date of 2018.

City of San Bernardino General Plan

The City of San Bernardino General Plan was adopted in 2005 and serves as the overall guiding policy for the physical, economic, social, and environmental growth within the City of San Bernardino.

While the Project site is not subject to the regulations of the City of San Bernardino because it occurs on Tribal land, the General Plan states that cooperative efforts between the City and local tribes are important to ensure compatibility and coordination of land use planning efforts, as well as address future needs and developments in the area surrounding tribal lands.

Regional Habitat Conservation Plans

The proposed Upper Santa Ana River Wash Land Management and Habitat Conservation Plan (HCP) is a proposed plan that includes the Santa Ana River Wash between Highland and Redlands. The Project site does not occur within the boundaries of this proposed HCP and it has not been officially adopted by the San Bernardino Valley Water Conservation District (the lead agency for the HCP) or other agencies. The West Valley HCP was prepared by the City of Colton to provide incidental take coverage for the federally endangered Delhi sands flower-loving fly. The Project is approximately nine miles from the boundaries of this HCP. Additional information regarding these HCPs is provided in Section 3.4, Biological Resources.

3.7.2 Impact Analysis

A. Would the Project conflict with any off-Reservation land use plan, policy, or regulation of an agency adopted for the purpose of avoiding or mitigating an environmental effect?

The Project would occur in previously disturbed areas that are held in trust by the U.S. Government for the benefit of the Tribe and therefore are not subject to local discretionary approvals, standards, or ordinances. Off-Reservation infrastructure improvements, if needed, would be subject to further review by the local jurisdictions. These improvements are not anticipated to result in significant, environmental effects or conflict with City of San Bernardino and San Bernardino County land use planning as they include improvements in disturbed right-of-way which already contain utility infrastructure.

The ~~Draft-Final~~ TEIR utilizes applicable off-Reservation standards to assess the potential for off-Reservation environmental impacts for air quality, noise and traffic analysis. The Project would be consistent with local standards with project design features and the incorporation of traffic mitigation. Therefore, the Project would not conflict or impact off-Reservation plans, policies, or regulations related to avoiding or mitigating environmental effects.

B. Would the Project conflict with any applicable habitat conservation plan or natural communities conservation plan covering off-Reservation lands?

As discussed in Section 3.4, Biological Resources, and previously in this section, the Project site does not fall within the boundaries of any adopted habitat conservation plan (HCP) or natural

community conservation plan. Thus, there would be no conflict or impact with respect to off-Reservation HCPs or natural communities conservation plans.

3.8 Noise

This section addresses Project impacts related to ambient noise levels and the exposure of off-Reservation sensitive receptors to construction and operational noise.

3.8.1 Setting

Environmental Setting

Noise Exposure and Community Noise

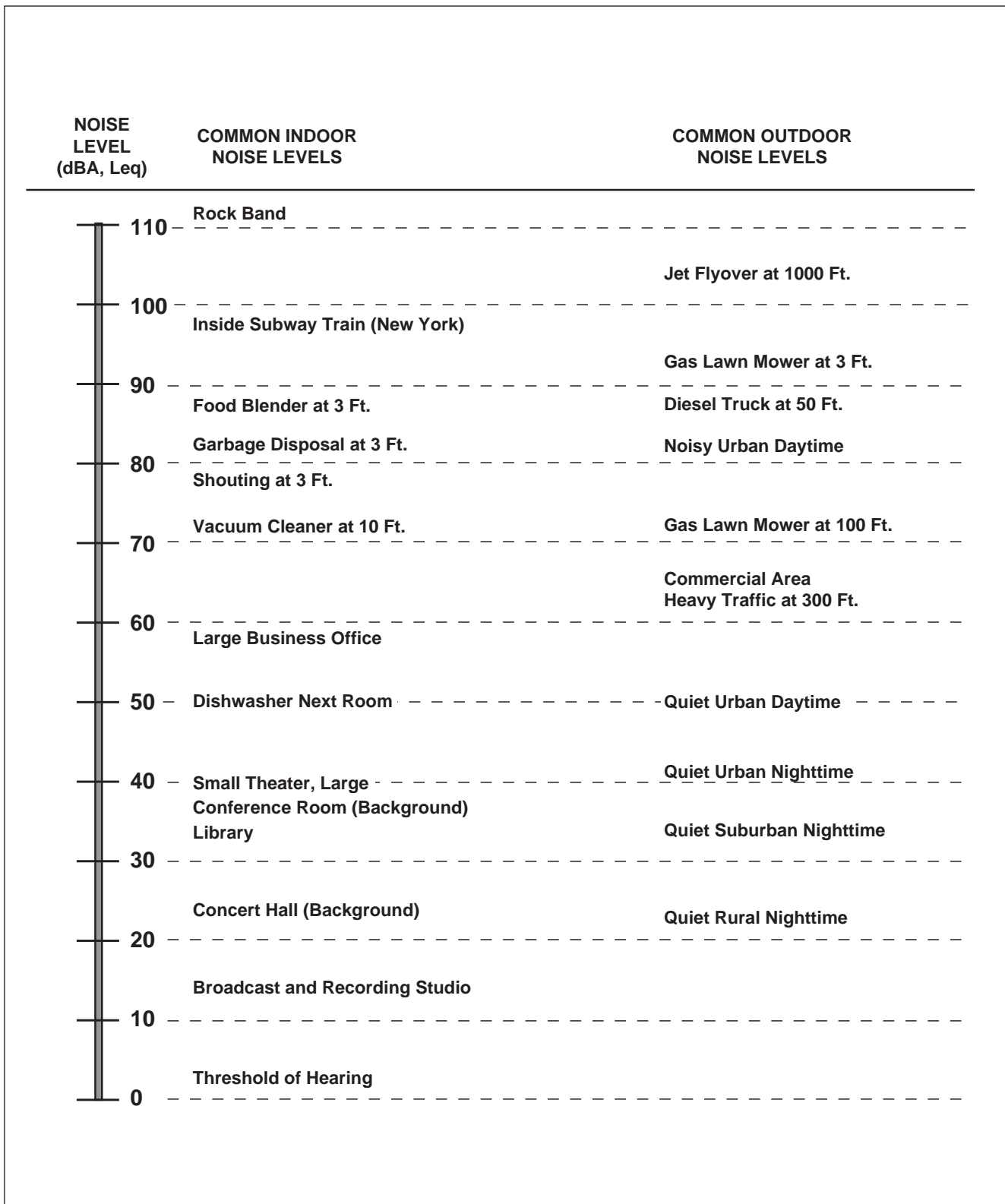
Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ears decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment.

Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual. See **Figure 3.8-1**, Decibel Scale and Common Noise Sources.

These successive additions of sound to the community noise environment vary the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{eq} : the energy-equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).



SOURCE: ESA 2017

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Figure 3.8-1
 Decibel Scale and Common Noise Sources

L_{\max} : the instantaneous maximum noise level for a specified period of time.

L_{dn} : 24-hour day and night A-weighted noise exposure level which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: similar to L_{dn} , the Community Noise Equivalent Level (CNEL) adds a 5-dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

As a general rule, in areas where the noise environment is dominated by traffic, the L_{eq} during the peak-hour is generally within one to two decibels of the L_{dn} at that location.

Effects of Noise on People

A way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans, 2013):

- except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- a change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- a 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed.¹

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees.

¹ Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans, 2013).

Fundamentals of Vibration

As described in the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* (FTA, 2006), ground-borne vibration can be a concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration assessment include structures (especially older masonry structures), people who spend a lot of time indoors (especially residents, students, the elderly, and sick), and vibration sensitive equipment such as hospital analytical equipment and equipment used in computer chip manufacturing.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV (FTA, 2006).

Existing Noise Environment and Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than are commercial (other than lodging facilities) and industrial land

uses. The nearest noise-sensitive uses are single-family homes located adjacent to the Reservation boundary. This includes residences east and south of the existing parking structure; residences east, south and west of the proposed parking structure (existing surface parking); and residences south and west of the existing casino and Central Plant, which houses mechanical equipment. There are also residences north of the northern surface lot which are approximately 700 feet north of the potential substation/fuel cell facilities.

The Tribe has installed and continues to maintain sound walls between the casino property and adjacent residential uses. These walls screen and reduce noise levels emitted from the casino property in order to minimize noise impact in adjacent residential neighborhoods.

Existing Ambient Noise Levels

The predominant existing noise source in off-Reservation areas surrounding the Project site is roadway noise from Victoria Avenue. Secondary noise sources include general residential-related activities, such as landscape and refuse service activities.

To establish baseline noise conditions, existing ambient noise levels were monitored at seven locations, representing the nearby land uses in the vicinity of the Project site. The ambient noise measurements were conducted using the Larson-Davis 820 Precision Integrated Sound Level Meter (SLM). The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute S1.4. All instruments were calibrated and operated according to the applicable manufacturer specification. The microphone was placed at a height of five feet above the local grade, at the following locations as shown in **Figure 3.8-2**, Noise Measurement Locations:

- **R1:** represents the existing noise environment of single-family residential uses at the intersection of Victoria Avenue and Lynwood Drive. Data was collected for 24 hours by placing the SLM at the intersection of Victoria Avenue and Lynwood Drive, approximately 75 feet west of residential uses to the east of Victoria Avenue and approximately 70 feet to the north of residential uses to the south of Lynwood Drive. Residential uses along Victoria Avenue and Lynwood Drive at this location are bound by existing sound walls.
- **R2:** represents the existing noise environment of the current San Manuel Casino parking structure. Data was collected for 24 hours by placing the SLM near the parking structure entrance via Victoria Avenue. This measurement location represents existing on-site noise levels and is not representative of the existing noise environment at sensitive receptors, nor the off-Reservation environment.
- **R3:** represents the existing noise environment of single-family residential uses located approximately 230 feet to the west of the proposed parking structure. Data was collected for 15 minutes by placing the SLM at the eastern terminus of Lomita Place, adjacent to the proposed parking structure site and on-site access roads. Existing sound walls currently bound the proposed parking structure site, providing separation from residential uses to the west.



SOURCE: ESA, 2017

San Manuel Band of Mission Indians Final TEIR
Figure 3.8-2
 Noise Measurement Locations

- **R4:** represents the existing noise environment of single-family residential uses located approximately 430 feet south of the proposed casino expansion and approximately 230 feet to the west of the proposed parking structure. Data was collected for 15 minutes by placing the SLM at the eastern terminus of Val Mar Circle. Existing sound walls currently bound the proposed parking structure site and the existing casino site, providing separation from residential uses to the west and south.
- **R5:** represents the existing noise environment of single-family residential uses located west of the casino's existing Central Plant, approximately 200 feet west of the proposed cogeneration building. Data was collected for 15 minutes by placing the SLM at the eastern terminus of Glenmare Street. Existing sound walls currently provide separation between the existing casino and residential uses located to the west.
- **R6:** represents the existing noise environment of single-family residential uses located north of the casino's existing surface parking lots to the north of the existing casino. Data was collected for 15 minutes by placing the SLM at the northern terminus of the parking access road, south of residential uses located on Hemlock Drive.
- **R7:** represents the existing noise environment of single-family residential uses located approximately 145 feet to the east and south of the casino's existing parking structure. Data was collected for 15 minutes by placing the SLM at the intersection of Cactus Court and Yuma Drive, east of the existing parking structure.

A summary of noise measurement data is provided in **Table 3.8-1**, Summary of Ambient Noise Measurements. Average daytime noise levels at the long-term noise measurement locations ranged from approximately 58 dBA to 63 dBA L_{eq} at the intersection of Victoria Avenue and Lynwood Drive (R1). Peak hour noise levels at the short-term noise measurement locations were 43 dBA L_{eq} (R3) and 50 dBA L_{eq} (R4) to the west of the proposed parking structure, 57 dBA L_{eq} west of the casino's existing mechanical building (R5), 52 dBA L_{eq} at the existing surface parking lot to the north of the casino (R6), and 42 dBA L_{eq} at the intersection of Cactus Court and Yuma Drive (R7).

Existing Roadway Noise Levels

Existing roadway noise levels were calculated for 11 roadway segments located in the vicinity of the Project site. The roadway segments selected for analysis are considered to be those that are expected to be the most directly impacted by Project-related traffic, which, for the purpose of this analysis, include the roadways that are located near and lead to the Project site. These roadways, when compared to roadways located further away from the Project site, would experience the greatest percentage increase in traffic generated by the Project (as distances are increased from the Project site, traffic is spread out over a greater geographic area and its effects are reduced).

Existing roadway noise levels were calculated using the California Department of Transportation (Caltrans) Technical Noise Supplement (TeNS) method based on the existing roadway traffic volume data and traffic volumes at the study intersections analyzed in the Project's traffic study (**Appendix D**). The model calculates the average existing noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. The average daily noise levels along these roadway segments are presented in **Table 3.8-2**, Existing Roadway Noise Levels.

**TABLE 3.8-1
SUMMARY OF AMBIENT NOISE MEASUREMENTS**

Location, Duration, Existing Land Uses and, Date of Measurements	Measured Ambient Noise Levels ^a (dBA)			
	Daytime (7 A.M. to 10 P.M.) Hourly L _{eq}	Daytime Average Hourly L _{eq}	Nighttime (10 P.M. to 7 A.M.) Hourly L _{eq}	Nighttime Average Hourly L _{eq}
R1 (On-Reservation Near Boundary)				
11/29/17 (12:00 P.M. to 11:59 P.M.)/ Wednesday	58 – 63	60	56 – 63	58
11/30/17 (12:00 A.M. to 10:59 A.M.)/ Thursday				
R2 (On-Reservation)				
11/29/17 (12:00 P.M. to 11:59 P.M.)/ Wednesday	58 – 64	61	57 – 61	59
11/30/17 (12:00 A.M. to 10:59 A.M.)/ Thursday				
R3 (Off-Reservation Near Boundary)				
11/29/17 (9:39 A.M. to 9:54 A.M.)/ Wednesday	43	N/A	N/A	N/A
R4 (Off-Reservation Near Boundary)				
11/29/17 (9:57 A.M. to 10:12 A.M.)/ Wednesday	50	N/A	N/A	N/A
R5 (Off-Reservation Near Boundary)				
11/29/17 (10:15 A.M. to 10:30 A.M.)/ Wednesday	57	N/A	N/A	N/A
R6 (On-Reservation Near Boundary)				
11/29/17 (10:36 A.M. to 10:51 A.M.)/ Wednesday	52	N/A	N/A	N/A
R7 (Off-Reservation)				
11/29/17 (11:00 A.M. to 11:15 A.M.)/ Wednesday	42	N/A	N/A	N/A

NOTES:

a. Detailed measured noise data, including hourly Leq levels, are included in Appendix D.

SOURCE: ESA, 2017.

**TABLE 3.8-2
EXISTING ROADWAY NOISE LEVELS**

Roadway Segment	Modeled Distance (feet) ^a	Existing Noise Level	
		Peak Hour dBA Leq	dBA CNEL
Victoria Avenue			
Between Road A and Road B (On-Reservation)	35	55.2	55.5
Between Road B and Driveway C (On-Reservation)	35	61.1	61.4
Between Driveway C and Driveway D (On-Reservation)	35	63.7	64.0
Between Driveway D and Lynwood Drive (On-Reservation)	45	65.4	65.7
Between Lynwood Drive and Mirada Road (Off-Reservation)	40	67.7	68.0
Between Mirada Road and Date Street (Off-Reservation)	40	68.7	69.0
Between Date Street and Highland Avenue (Off-Reservation)	45	68.3	68.6
Between Highland Avenue and Pacific Street (Off-Reservation)	40	66.9	67.2
Highland Avenue			
Between Sterling Avenue and SR-210 SB Off-Ramp (Off-Reservation)	55	69.5	69.8
Between SR-210 NB Off-Ramp and Victoria Avenue (Off-Reservation)	50	72.8	73.1
Between Victoria Avenue and Palm Avenue (Off-Reservation)	50	70.6	70.9

NOTES:

a. Calculated distance for each roadway segment is based on the distance of the nearest receptor property line to the roadway centerline.

SOURCE: ESA, 2017.

Regulatory Setting

Relevant regulations for the off-Reservation environment are discussed below. The Reservation is not subject to the State and local regulations.

Federal Regulations

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR Part 205, Subpart B. The federal truck pass-by noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

California Regulations

The California Code of Regulations has guidelines for evaluating the compatibility of various off-Reservation land uses as a function of community noise exposure. The State also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by State and local law enforcement officials.

Local Regulations

City of San Bernardino General Plan

The City of San Bernardino's off-Reservation noise standards are correlated with land use zoning classifications in order to maintain identified ambient noise levels and to limit, mitigate, or eliminate intrusive noise that exceeds the ambient noise levels within a specified zone. The City's noise/land use compatibility guidelines from General Plan Noise Element are shown in **Table 3.8-3**, City of San Bernardino Land Use Compatibility for Community Noise.

In accordance with the Noise Element of the City of San Bernardino General Plan, a noise exposure of up to 60 dBA Ldn or CNEL is considered to be the most desirable target for the exterior of sensitive receptors such as single family homes and 65 dBA Ldn or CNEL is most desirable for the exterior of sensitive receptors such as multiple family homes and hotels.

**TABLE 3.8-3
 CITY OF SAN BERNARDINO LAND USE COMPATIBILITY FOR COMMUNITY NOISE**

Land Use Category	Community Noise Exposure Ldn or CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density Single Family, Duplex, Mobile Homes	Under 60	55–70	70–75	Above 75
Residential – Multiple Family	Under 65	60-70	70-75	Above 75
Transient Lodging - Motels, Hotels	Under 65	60–70	70–80	Above 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	Under 70	60–70	70–80	Above 80
Auditoriums, Concert Halls, Amphitheaters	--	Under 70	Above 65	--
Sports Arenas, Outdoor Spectator Sports	--	Under 75	Above 70	--
Playgrounds, Neighborhood Parks	Under 70	—	70–75	Above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Under 75	—	70–80	Above 80
Office Buildings, Business Commercial and Professional	Under 70	70–75	Above 75	--
Industrial, Manufacturing, Utilities, Agriculture	Under 75	70–80	--	Above 75

NORMALLY ACCEPTABLE: Specified land use is satisfactory assuming all buildings involved are of conventional construction, without special noise insulation requirements.

CONDITIONALLY ACCEPTABLE: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is conducted, and needed noise attenuation features are included in the construction or development.

NORMALLY UNACCEPTABLE: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be conducted and needed noise attenuation features shall be included in the construction or development.

CLEARLY UNACCEPTABLE: New construction or development shall not be undertaken.

SOURCE: City of San Bernardino, General Plan Noise Element, 2005.

City of San Bernardino Development Code

Section 19.20.030 of the City of San Bernardino Development Code establishes general noise and vibration control standards to regulate noise and vibration within the City’s Jurisdiction. The following sections from Section 19.20.030 are relevant to the off-Reservation Project area.

Section 19.20.030.15 Noise

No loudspeaker, bells, gongs, buzzers, mechanical equipment or other sounds, attention-attracting, or communication device associated with any use shall be discernible beyond any boundary line of the parcel, except fire protection devices, burglar alarms and church bells. The following provisions shall apply:

- A. In residential areas, no exterior noise level shall exceed 65 dBA.
- C. The minimum acceptable surface weight for a noise barrier is four pounds per square feet (equivalent to 3/4 –inch plywood). The barrier shall be of a continuous material which is resistant to sound including:

1. Masonry block
2. Precast concrete
3. Earth berm or a combination of earth berm with block concrete.

D. Noise barriers shall interrupt the line-of-sight between noise source and receiver.

Section 19.20.030.28 Vibration

No vibration associated with any use shall be permitted which is discernible beyond the boundary line of the property.

City of San Bernardino Municipal Code

Chapter 8.54 of the San Bernardino Municipal Code establishes citywide standards to regulate noise. The following sections from Chapter 8.54 are relevant to the off-Reservation Project area.

Section 8.54.070 Disturbances from Construction Activity

No person shall be engaged or employed, or cause any other person to be engaged or employed, in any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours of 7:00 a.m. and 8:00 p.m.

County of San Bernardino General Plan

The County of San Bernardino General Plan's primary goal with regard to community noise is to protect the community from exposure to excessive noise levels. The County's noise level standards are shown in **Table 3.8-4**, County of San Bernardino Noise Level Standards.

In accordance with the Noise Element of the County of San Bernardino General Plan, a noise exposure of up to 60 dBA Ldn or CNEL is considered to be the most desirable target for the exterior of sensitive receptors such as single family homes and 65 dBA Ldn or CNEL is most desirable for the exterior of sensitive receptors such as multiple family homes and hotels, consistent with the City of San Bernardino's standards.

TABLE 3.8-4
COUNTY OF SAN BERNARDINO NOISE LEVEL STANDARDS

Land Use Category	Community Noise Exposure Ldn or CNEL, dBA							
	55	60	65	70	75	80	85	
Residential – Single Units, Mobile homes	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Residential – Multiple Units, Group Living, Mixed Commercial/Residential Use	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Transient Lodging - Motels, Hotels, Transient Housing	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Institutional, Schools, Libraries, Churches, Hospitals, Nursing Facilities	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Auditoriums, Concert Halls, Amphitheaters	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Sports Arena, Outdoor Spectator Sports	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Open Space, Playgrounds, Parks, Natural Resources Preservations	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Commercial Services, Office, Research and Development, Retail Sales, Vehicle Sales	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
Industrial, Manufacturing, Wholesale, Storage, Utilities, Extractive, Agriculture	White	Light Gray	Medium Gray	Dark Gray	Black	Black	Black	
	White	NORMALLY ACCEPTABLE: Specified land use is satisfactory assuming all buildings involved are of conventional construction, without special noise insulation requirements.						
	Light Gray	CONDITIONALLY ACCEPTABLE: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is conducted, and needed noise attenuation features are included in the construction or development.						
	Medium Gray	NORMALLY UNACCEPTABLE: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be conducted and needed noise attenuation features shall be included in the construction or development.						
	Dark Gray	CLEARLY UNACCEPTABLE: New construction or development shall not be undertaken.						

SOURCE: County of San Bernardino, General Plan Noise Element, 2007.

County of San Bernardino Development Code

Chapter 83.01 of the County of San Bernardino Development Code establishes general noise and vibration standards concerning acceptable noise and vibration levels. The following sections from Chapter 83.01 are relevant to the off-Reservation Project area.

Section 83.01.080 Noise

(c) Noise standards for stationary noise sources

- (1) **Noise standards.** [Table 3.8-5] (Noise Standards for Stationary Noise Sources) describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties:

**TABLE 3.8-5
SAN BERNARDINO COUNTY NOISE STANDARDS FOR STATIONARY NOISE SOURCES**

Affected Land Uses (Receiving Noise)	7:00 a.m. – 10:00 p.m. Leq	10:00 p.m. – 7:00 a.m. Leq
Residential	55 dB(A)	45 dB(A)
Professional Services	55 dB(A)	55 dB(A)
Other Commercial	60 dB(A)	60 dB(A)
Industrial	70 dB(A)	70 dB(A)

SOURCE: County of San Bernardino Development Code. Section 83.01.080, Table 83-2

- (2) **Noise Limit Categories.** No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:
- (A) The noise standard for the receiving land use as specified in Subsection B (noise-impacted areas), above, for a cumulative period of more than 30 minutes in any hour.
 - (B) The noise standard plus 5 dB(A) for a cumulative period of more than 15 minutes in any hour.
 - (C) The noise standard plus 10 dB(A) for a cumulative period of more than five minutes in any hour.
 - (D) The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.
 - (E) The noise standard plus 20 dB(A) for any period of time.
- (d) **Noise standards for adjacent mobile sources.** Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the [Table 3.8-6, below] (Noise Standards for Adjacent Mobile Noise Sources).

**TABLE 3.8-6
 SAN BERNARDINO COUNTY NOISE STANDARDS FOR ADJACENT MOBILE NOISE SOURCES**

Land Use		Ldn (or CNEL) dB(A)	
Categories	Uses	Interior ¹	Exterior ²
Residential	Single and multi-family, duplex, mobile homes	45	60 ³
Commercial	Hotel, motel, transient housing	45	60 ³
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	N/A	65

NOTES:

- 1 The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.
- 2 The outdoor environment shall be limited to:
 - Hospital/office building patios
 - Hotel and motel recreation areas
 - Mobile home parks
 - Multi-family private patios or balconies
 - Park picnic areas
 - Private yard of single-family dwellings
 - School playgrounds
- 3 An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

SOURCE: County of San Bernardino Development Code. Section 83.01.080, Table 83-3

(e) Increases in allowable noise levels. If the measured ambient level exceeds any of the first four noise limit categories in Subsection (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subsection (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

(g) Exempt Noise. The following sources of noise shall be exempt from the regulations of this Section:

- (1) Motor vehicles not under the control of the commercial or industrial use.
- (2) Emergency equipment, vehicles, and devices.
- (3) Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

3.8.2 Impact Analysis

Methodology

While projects located on Reservation lands are exempt from local noise-related standards and policies, a discussion of local noise standards and policies is appropriate for potential off-Reservation noise impacts. Specifically, the City of San Bernardino’s and County of San Bernardino’s respective General Plan Noise Elements and Development Codes establish desired

maximum noise levels by land use type. Adjacent noise-sensitive single family receptors are located within unincorporated County and incorporated City areas. Noise level thresholds and standards applied to studied receptors would be in accordance with the jurisdiction within which they are located and specified for reference within the impact analysis.

Noise impacts are assessed based on a comparative analysis of the anticipated noise levels resulting from the Project and the noise levels under baseline or existing conditions. Analysis of temporary construction noise effects is based on typical construction phases and equipment noise levels and attenuation of those noise levels due to distances between sensitive receptors in the Project vicinity and the construction activity. Although both the City and County exempt construction noise occurring within allowable hours, for purposes of this analysis, construction noise impacts related to exceedance of noise standards would be considered significant if construction noise would exceed 65 dBA for receptors located within City boundaries and 60 dBA for receptors located within unincorporated County areas. An increase in noise of 5 dBA over the ambient environment would be readily perceptible to those hearing the sound. However, construction is an inherently noisy activity and unless occurring at night the use of a 5 dBA increase is not realistic. To determine if the Project would result in a substantial temporary increase in noise levels in the Project vicinity above levels existing without the Project, increase construction noise exceeding the Clearly Unacceptable noise level of 75 dBA (see Table 3.8-3 and Table 3.8-4) is considered a substantial temporary increase warranting implementation of construction noise control measures.

Non-transportation-related noise impacts were assessed by examining the proposed uses onsite. For this analysis, the impact of non-transportation-related noise impacts would thus be considered significant if noise levels exceed 55 dBA for stationary sources (such as an emergency generator) and 60 dBA for other on-site sources (vehicles in the parking lot, human conversation, etc.) for receptors located within unincorporated County areas and 60 dBA for receptors located within City boundaries. Permanent increases in ambient noise would be considered significant if ambient noise is anticipated to increase by 5 dBA.

Traffic noise impacts were estimated using Caltrans TeNS methodology and the Project traffic volumes (**Appendix E**). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. Residential and commercial uses along with existing casino operations currently contribute to existing traffic noise levels in the Project vicinity. Table 3.8-2 shows that existing traffic noise levels exceed 60 dBA, which is considered Normally Acceptable for a residential noise environment (see Table 3.8-3 and Table 3.8-4) along off-Reservation segments of Victoria Avenue and Highland Avenue. Therefore, in order to determine the significance of Project-related traffic on the existing traffic noise environment, a perceptible change in ambient noise is considered. According to Caltrans, a change in ambient noise levels of 5 dBA is considered to be readily perceivable. For this analysis, the impact of traffic noise on residential receptors would be considered significant if traffic noise is anticipated to increase by 5 dBA.

Vibration from construction can be evaluated for potential impacts at sensitive receptors. Typical activities evaluated for potential building damage due to construction vibration include demolition, and drilling or excavation in close proximity to structures. The ground-borne vibration can also be evaluated for perception to eliminate annoyance. For the purposes of this assessment, the methodology described in the FTA's Transit Noise and Vibration Impact Assessment was used to evaluate Project-related vibration effects to nearby sensitive land uses. No impact pile driving is anticipated to occur during construction of the Project. Other than construction, there are no appreciable sources of vibration proposed in the final development of the Project. As a result, only construction-related vibration impacts were assessed. The Project would result in a significant vibration impact if off-Reservation buildings would be exposed to the FTA vibration threshold level of 0.2 in/sec PPV for building damage or if sensitive receptors would be exposed to a vibration level of 80 VdB for residential land uses. These criteria are for "infrequent" events. Although more stringent criteria are recommended for "frequent" or "occasional" events, these are not used since construction activities would occur during the daytime and would not be permanent.

Project Design Features

The Project incorporates many Project design features (PDFs), discussed in Section 2.4 within Chapter 2, Project Description, that would reduce construction noise. PDFs are part of the Project design, and are not mitigation measures. The PDFs proposed for the Project include, but are not limited to the following:

Construction Noise Control:

- Equipment and trucks used for Project construction will use the industry standard noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible). Idling of equipment and vehicles which are not in use will be limited to the extent feasible.
- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction will be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust will be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves will be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, will be used whenever feasible.
- Stationary noise sources will be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.
- The Tribe shall require construction contractors to limit exterior construction to the hours of 7:00 a.m. through 8:00 p.m.

Impact Analysis

A. Would the Project result in exposure of off-Reservation persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

It is anticipated that the Project will consist of three phases of construction: Phase 1 includes construction of the parking structure, Phase 2 includes construction of the performance venue, and Phase 3 includes construction of the hotel, meeting and event space and the additional gaming area which may overlap such that work on more than one phase may be ongoing for a period of time. The nearest off-Reservation residential receptors are shown in Figure 3.8-2 and described above under *Existing Noise Environment and Sensitive Receptors*. Due to the size of the Project site and the various components of the Project, a refined analysis of construction noise impacts based on the proximity of each construction activity area to neighboring receptors has been conducted taking into consideration overlapping phases. Typical noise levels provided by various types of construction equipment are shown in **Table 3.8-7**, Typical Noise Levels from Construction Equipment.

**TABLE 3.8-7
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT**

Type of Equipment	L _{max} , dBA	Hourly L _{eq} , dBA/% Use
Dump Truck	84	80/40%
Air Compressor	80	76/40%
Concrete Mixer (Truck)	85	81/40%
Scraper	85	81/40%
Jack Hammer	85	78/20%
Dozer	85	81/40%
Paver	85	82/50%
Generator	82	79/50%
Backhoe	80	76/40%

SOURCE: Federal Highway Administration (FHWA), Roadway Construction Noise Model User's Guide, 2006.

Noise from construction activities attenuate at a rate of 6 dBA per doubling of distance and thus sensitive receptors located further away from the Project vicinity would be exposed to construction noise at incrementally lower levels. Additionally, noise shielding is provided by existing sound walls and existing structures, blocking the line-of-sight to construction activity. A noise reduction credit of 5 dBA has been given for construction activity occurring adjacent to each receptor and a reduction credit of 10 dBA has been given for construction activity that would be blocked by intervening structures and barriers. PDFs, as discussed under the *Project Design Features* heading, above, include the use of industry standard noise control techniques

and exhaust mufflers to reduce the impact of construction equipment noise, construction noise would be lowered by up to 10 dBA. Therefore, an additional 10 dBA reduction credit has been included in the construction noise calculations (see Appendix D). Maximum construction noise levels are summarized in **Table 3.8-8**, Maximum Off-Reservation Construction Noise Levels. As shown in Table 3.8-8, construction noise would not exceed the applicable off-Reservation threshold for each of the studied receptors. Impacts would be less than significant.

**TABLE 3.8-8
 MAXIMUM OFF-RESERVATION CONSTRUCTION NOISE LEVELS**

Receptor ^a	Applicable Threshold ^b (dBA Leq)	Maximum Noise Level ^c (dBA Leq)	Exceeds Threshold?
R1	65	64	No
R3	65	58	No
R4	65	60	No
R5	60	58	No

NOTES:

- a. Due to the distance of R6 and R7 from construction activity, impacts to R6 and R7 have not been analyzed. R2 represents the existing casino parking structure and is therefore not considered a sensitive receptor.
- b. R1, R3, and R4 are located within the City of San Bernardino and R5 is located within the County of San Bernardino.
- c. See Appendix D for calculations.

SOURCE: ESA, 2017

Operations

The Project includes the construction of parking structure, performance venue, hotel, and additional gaming areas. The performance venue and additional gaming areas would be enclosed structures and would not include any exterior noise-generating activity. The proposed hotel would include an outdoor pool area, which would be situated within the interior of the Project site and surrounded by existing and proposed structures. Thus, existing and proposed structures would provide noise shielding and pool area noise reaching surrounding off-Reservation receptors would be minimal and impacts associated with these operational uses would be less than significant.

On-site operations that may cause operational noise impacts consist primarily of new mechanical equipment and passenger vehicles entering and exiting the proposed parking structure. Impacts associated with these two primarily noise sources are discussed below.

On-Site Mechanical Equipment Noise

The Project is expected to continue to obtain power from Southern California Edison via existing lines and/or development of a customer dedicated substation and requisite transmission lines. The Project may connect to a future Tribal-owned combined heat and power cogeneration facility that may be built adjacent to the existing Central Plant, which currently houses six generators, one fire pump, two water heaters, and three boilers. The potential cogeneration facility would include two generators and two boilers, all enclosed within a building.

Also as part of the Project, new mechanical equipment (e.g., air conditioners, fans, and related equipment) would be located on the Project site. Project mechanical equipment would likely be located on building rooftops and shielded from nearby land uses to attenuate noise and avoid conflicts with adjacent uses.

An upper-end conservative reference exterior noise level for air condenser units, the primary source of noise from fixed mechanical equipment, is 81.9 dBA L_{eq} measured at a distance of 5 feet based on a review of noise data from several large shopping center projects in Southern California (City of Moreno Valley, 2015:71, Table 9-1; City of Pomona, 2014:4.4-33, Table 4.4-5). Noise control devices, such as sound attenuators, acoustics louvers, or sound screen/parapet walls and the enclosure of cogeneration equipment within a building would achieve a reduction of 10 dBA or more from blocking the line-of-sight completely. The nearest sensitive receptor to either the cogeneration facility, performance venue, or hotel and additional gaming facility is located approximately 200 feet to the west of the cogeneration facility (R5). At this distance, the noise level would attenuate to 49.9 dBA, not taking into consideration a 10 dBA reduction in noise level due to noise shielding from the cogeneration enclosure and the presence of the existing intervening structures. This would not exceed allowable exterior noise levels of 60 dBA or 55 dBA for receptors within the City or County, respectively. Therefore, operation of mechanical equipment would not exceed the respective City or County threshold of significance and off-Reservation impacts would be less than significant.

Parking Lot Noise

Vehicle access to the proposed parking structure on the Project site would be provided via the existing driveway on Victoria Avenue. Sources of noise associated with parking facilities typically include engines accelerating, doors slamming, car alarms, tire squeals, and people talking. Noise levels at these facilities would fluctuate throughout the day with the amount of vehicle and human activity. Noise levels would generally be the highest in the weekday morning and evening peak traffic hours and the weekend evening peak hour when the largest number of automobiles would enter and exit the parking facility.

For the purpose of providing a conservative, quantitative estimate of the noise levels that would be generated from vehicles entering and exiting the Project's proposed parking structure, the methodology recommended by FTA for the general assessment of stationary transit noise sources is used. Using this methodology, the Project's peak hourly noise level that would be generated by the onsite parking levels was estimated using the following FTA equation for a parking lot:

$$L_{eq}(h) = SEL_{ref} + 10\log(NA/1000) - 35.6$$

Where:

$L_{eq}(h)$ = hourly L_{eq} noise level at 50 feet

SEL_{ref} = reference noise level for stationary noise source represented in sound exposure level (SEL) at 50 feet

N_A = number of automobiles per hour

Based on the Project’s traffic study (Appendix E), the Project at full buildout is forecasted to generate 12,300 total weekday and 15,400 weekend daily vehicle trips, including an anticipated 628 trips, 815 trips, and 1,076 trips during the weekday a.m., weekday p.m., and weekend p.m. peak hours, respectively upon project completion. Using the FTA’s reference noise level of 92 dBA SEL (FTA, 2006) at 50 feet from the noise source for a parking lot, it was determined that the Project’s highest peak hour vehicle trips, which would be 1,076 trips during the weekend p.m. peak hour, would generate noise levels of approximately 57 dBA at 50 feet from the Project’s parking structure entrance. This calculated noise level assumes no noise attenuation from walls, partial screens, or other barriers and thus reflects a conservative estimate. The nearest noise sensitive use to the parking structure entrance on Victoria Avenue north of Lynwood Drive would be approximately 75 feet to the east (R1). Based on this distance, the vehicle related noise levels would be approximately 53 dBA. This would not exceed allowable exterior noise levels of 65 dBA or 60 dBA for receptors within the City or County, respectively. All other noise sensitive uses would experience lower parking structure noise levels due to increased distances from the entrance. This estimate represents a conservative analysis because potential noise reductions provided by the existing sound walls shielding residential uses along Victoria Avenue are not accounted for in this calculation. Therefore, the Project’s parking structure would not result in the generation of noise levels in excess of City or County standards. This off-Reservation impact would thus be less than significant.

B. Would the Project result in exposure of off-Reservation persons to excessive groundborne vibration or groundborne noise levels?

The nature and extent of ground-borne vibration would depend on a number of factors, including the type of equipment used, the type of activity, the depth of construction, and the type and conditions of geologic materials. Although these specific factors are not known, vibration levels for large bulldozers and loaded trucks are assessed in **Table 3.8-9**, Vibration Velocities for Construction Equipment. Under normal propagation conditions, vibration levels at the nearest residences would be below the FTA threshold of 0.20 in/sec PPV and 80 RMS; resulting in a less-than-significant off-Reservation impact.

**TABLE 3.8-9
 VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT**

Equipment/Activity	Structural Damage			Human Annoyance		
	PPV at 25 ft (in/sec)	PPV at Nearest Receptor (in/sec) ^a	Threshold (in/sec) ^b	RMS at 25 ft (Vdb)	RMS at Nearest Receptor (Vdb) ^a	Threshold (Vdb) ^c
Large Bulldozer	0.089	0.0111	0.20	87	69	80
Loaded Trucks	0.076	0.0095	0.20	86	68	80

NOTES:

- a. The nearest receptor was assumed to be 100 feet (R1).
- b. Buildings can be exposed to ground-borne vibration levels of 0.2 PPV without experiencing structural damage.
- c. The human annoyance response level is 80 RMS.

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

C. Would the Project result in a substantial permanent increase in ambient noise levels in the off-Reservation vicinity of the project?

Roadway Traffic Noise

To assess the impact of Project-related traffic on roadside noise levels, noise level projections were made using the Caltrans TeNS methodology for roadway segments that would experience the greatest increase in traffic volume and/or that would pass through residential areas. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. The results of the modeling effort are shown in **Table 3.8-10**, Existing Roadway Traffic Noise Impacts and **Table 3.8-11**, Future 2040 Roadway Traffic Noise Impacts. The modeled traffic-related noise would be to the exterior (outside) noise environment of the residences and a traffic noise increase of 5 dBA would be considered a significant off-Reservation impact.

**TABLE 3.8-10
EXISTING ROADWAY TRAFFIC NOISE IMPACTS**

Roadway Segment	Modeled Distance (feet) ^a	dBA CNEL		
		Existing	Existing Plus Project	Project Increment
Victoria Avenue				
Between Road A and Road B (On-Reservation)	35	55.5	57.4	1.9
Between Road B and Driveway C (On-Reservation)	35	61.4	63.5	2.1
Between Driveway C and Driveway D (On-Reservation)	35	64.0	66.7	2.7
Between Driveway D and Lynwood Drive (On-Reservation)	45	65.7	68.6	2.9
Between Lynwood Drive and Mirada Road (Off-Reservation)	40	68.0	70.5	2.5
Between Mirada Road and Date Street (Off-Reservation)	40	69.0	70.8	1.8
Between Date Street and Highland Avenue (Off-Reservation)	45	68.6	70.4	1.8
Between Highland Avenue and Pacific Street (Off-Reservation)	40	67.2	67.3	0.2
Highland Avenue				
Between Sterling Avenue and SR-210 SB Off-Ramp (Off-Reservation)	55	69.8	70.1	0.3
Between SR-210 NB Off-Ramp and Victoria Avenue (Off-Reservation)	50	73.1	74.2	1.1
Between Victoria Avenue and Palm Avenue (Off-Reservation)	50	70.9	71.1	0.2

NOTES:

a Calculated distance for each roadway segment is based on the distance of the nearest receptor property line to the roadway centerline.

SOURCE: ESA, 2017.

**TABLE 3.8-11
 FUTURE 2040 ROADWAY TRAFFIC NOISE IMPACTS**

Roadway Segment	Modeled Distance (feet) ^a	dBA CNEL		
		Future Without Project	Future Plus Project	Project Increment
Victoria Avenue				
Between Road A and Road B (On-Reservation)	35	55.5	57.4	1.9
Between Road B and Driveway C (On-Reservation)	35	61.4	63.5	2.1
Between Driveway C and Driveway D (On-Reservation)	35	64.0	66.7	2.7
Between Driveway D and Lynwood Drive (On-Reservation)	45	66.4	68.9	2.5
Between Lynwood Drive and Mirada Road (Off-Reservation)	40	69.0	70.8	1.9
Between Mirada Road and Date Street (Off-Reservation)	40	69.6	71.3	1.6
Between Date Street and Highland Avenue (Off-Reservation)	45	69.3	70.8	1.6
Between Highland Avenue and Pacific Street (Off-Reservation)	40	67.9	68.0	0.1
Highland Avenue				
Between Sterling Avenue and SR-210 SB Off-Ramp (Off-Reservation)	55	70.8	71.0	0.2
Between SR-210 NB Off-Ramp and Victoria Avenue (Off-Reservation)	50	73.8	74.7	0.9
Between Victoria Avenue and Palm Avenue (Off-Reservation)	50	71.7	71.9	0.2

NOTES:

a Calculated distance for each roadway segment is based on the distance of the nearest receptor property line to the roadway centerline.

SOURCE: ESA, 2017.

The greatest effect on traffic noise levels under existing conditions would occur along Victoria Avenue between Driveway D and Lynwood Drive where traffic noise would increase by 2.9 dBA. Under Future 2040 conditions, the greatest increase in traffic noise levels is 2.7 dBA, which occurs along Victoria Avenue between Driveway C and Driveway D. All other roadway segments analyzed would experience lesser increases in traffic noise. Thus, the off-Reservation noise increases associated with increased traffic noise at residences along the roadway network within the Project vicinity would be less than the significance threshold of 5 dBA. The Project's off-Reservation impact would therefore be considered less than significant. In addition, the existing sound walls erected by the Tribe will further reduce noise to nearby sensitive receptors.

Composite Operational Noise

An evaluation of the combined noise levels from the Project's various operational noise sources (i.e., composite noise level) was conducted to conservatively ascertain the potential maximum Project-related noise level increase that may occur at the nearest off-Reservation noise-sensitive receptors considered in this analysis. Operational noise sources associated with the Project include parking structure activity and on-site mechanical equipment.

The maximum composite noise impacts would generally be expected at the Project site boundary, since with the exception of the Project's incremental contribution to roadway traffic noise, the Project's noise sources would be located on the Project site. Due to the size of the Project site and the configuration of Project components, not all analyzed sensitive receptors would be exposed to the same degree of noise. For example, the amount of vehicle noise from the parking structure entrance at the southeastern portion of the Project site experienced at R5 at the northwestern portion of the Project site would likely be negligible due to intervening structures and distance. Similarly, noise from the potential cogeneration facility at the northwestern portion of the Project site would likely be negligible at R1 at the southeastern portion of the Project site. However, in order to provide a conservative analysis, noise from the parking structure and on-site mechanical equipment has been calculated assuming the nearest potential location of the noise source and without consideration of intervening structures. The distance used to calculate the parking noise level reaching all receptors is measured from the nearest parking structure façade. Similarly, the source of mechanical equipment noise is conservatively assumed to be located at the nearest façade of the proposed casino expansion and hotel building.

As shown in **Table 3.8-12**, Composite Operational Noise Levels, relative to the existing noise environment, the Project is estimated to increase the ambient noise level by a maximum of approximately 4.2 dBA at R3, which is less than the significance threshold of a 5 dBA increase. Composite noise level increases at all other receptor locations are expected to be less than significant as well, given their distance from the Project site. As such, the composite noise level off-Reservation impact on neighboring sensitive receptors due to the Project's future operations would be less than significant.

TABLE 3.8-12
COMPOSITE OPERATIONAL NOISE LEVELS

Operational Noise Source	Noise Levels, dBA				
	R1	R3	R4	R5	R7
(A) Existing Ambient Noise Level at Location	60	43	50	57	42
Project Composite Noise Sources					
Fixed Mechanical Equipment	35.1	39.9	46.3	49.9	34.6
Parking Structure	53.5	43.7	43.7	26.5	34.3
(B) Project Composite Noise Level^b	53.6	45.2	48.2	49.9	37.5
(C) Existing Plus Project Composite Noise Level^b	60.9	47.2	52.2	57.8	43.3
Project Increment (C-A)	0.9	4.2	2.2	0.8	1.3
Threshold	5.0	5.0	5.0	5.0	5.0
Exceeds Off-Reservation Thresholds?	No	No	No	No	No

NOTES:

a Impacts not analyzed for R2 (existing parking structure) because this location is a part of the existing casino or for R6 because this location is adjacent to the construction staging area and will not experience operational impacts.

b Noise levels are added and subtracted logarithmically.

SOURCE: ESA, 2017

D. Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the off-Reservation vicinity of the project?

Construction activity noise levels at and near the Project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction activities associated with the Project would involve excavation, grading, and earth movement. As previously stated, the construction of the Project would result in the temporary elevation of ambient noise levels at nearby noise-sensitive land uses. The expected noise levels at these noise-sensitive land uses are shown in Table 3.8-8. Construction noise levels, with implementation of project design features, could temporarily elevate ambient noise levels; however, temporary construction noise would not cause substantial increases in ambient noise that would exceed the Clearly Unacceptable noise level of 75 dBA (see Table 3.8-3 and Table 3.8-4). Therefore, impacts would be less than significant.

3.9 Public Services

This section describes the public services within the vicinity of the Project, including fire protection and emergency medical services, law enforcement services and schools. This section also discusses the potential for the Project to cause off-Reservation impacts to these services. Recreation, including parks, is discussed in Section 3.1.2, Effects Found Not to be Significant.

3.9.1 Setting

Environmental Setting

Fire Protection and Emergency Medical

The Tribe's Reservation, including the existing casino facilities, receives primary fire protection and emergency medical services from the San Manuel Fire Department (SMFD). SMFD is led by Chief Michael J. Smith who is accredited as a Chief Fire Officer by the Commission on Professional Credentialing (Center for Public Safety Excellence) and is one of only thirty-seven persons currently certified by the California Office of the State Fire Marshal as a "Certified Fire Chief." SMFD is trained to respond to emergency medical calls at the Advanced Life Support (paramedic) level, structural and wildland fires, rescues, mass casualty incidents, and hazardous material incidents. All first responders within the SMFD are California-licensed paramedics or Emergency Medical Technicians. The San Manuel Fire Chief heads SMFD and its current approximately 35 full-time employees including administrative staff. The Tribe has a 105-foot ladder truck, among other equipment, and also provides ladder truck services to the City of Highland. Automatic external defibrillators (AEDs) are distributed throughout the existing casino facility. The average response time for fire protection services to the existing casino is 3 minutes and 22 seconds, while the industry standard is 5 minutes. SMFD responds to 99% of the calls to the existing casino (Michael J. Smith, Fire Chief, SMFD, pers. comm., 2017).

SMFD has automatic aid and mutual aid agreements with the San Bernardino County Fire District, the City of Highland, and the State of California. Through aid agreements, outside agencies provided responses to the existing casino facilities and SMFD provided responses to outside agencies as depicted in **Table 3.9-1**.

The Tribe is the only Type 1 Hazardous Materials Response Team in the region and also provides Mass Casualty Unit services for the region. The Tribe provides ladder truck response services to the City of Highland, since they do not possess this critical piece of staffed fire apparatus.

The two closest San Bernardino County Fire District stations are Station 228 located at 3396 East Highland Avenue in San Bernardino approximately 1 mile southeast of the Project site and Station 226 located at 1920 Del Rosa Avenue North in San Bernardino approximately 1.5 miles southwest of the Project site.

**TABLE 3.9-1
 AUTOMATIC AND MUTUAL AID RESPONSES FROM FIRE AGENCIES**

Year	Off-Reservation Calls Responded to by SMFD	On-Reservation Calls Responded to by Off-Reservation Agencies
2004	600	12
2005	1240	3
2006	1100	3
2007	840	2
2008	998	4
2009	591	4
2010	908	4
2011	892	5
2012	1104	6
2013	1795	4
2014	1727	7
2015	1601	3
2016	1210	8

SOURCE: Michael J. Smith, Fire Chief, SMFD, pers. comm., 2017.

The Tribe has an agreement for American Medical Response (AMR) to provide ambulance service to the Reservation. The nearest hospital with emergency medical services is St. Bernardine Medical Center, located at 2101 North Waterman Avenue in San Bernardino, approximately 3 miles southwest of the Project site.

Police Protection and Public Safety Services

The Tribe’s Department of Public Safety (DPS) provides public safety services on the San Manuel Reservation, including the existing casino. Emergency calls from the existing casino are received by DPS dispatch who coordinates with SMFD and DPS. DPS typically responds to all service calls, including those responded to by SMFD. All 911 calls originating from the casino go to DPS (either directly if 911 is called from a landline phone in the casino, or indirectly when routed to DPS by County emergency dispatch when 911 is called regarding the casino from all other phones). DPS first responders are trained in CPR, first aid and AED use. DPS currently includes approximately 400 staff including dispatch, investigations, patrol, management, community relations, training and casino operations. The existing casino and parking areas are monitored by DPS on a 24/7 basis. (Billy Huddy, Director, San Manuel Department of Public Safety, pers. comm., 2017).

The Tribe has an agreement with the San Bernardino County Sheriff’s Department to provide additional law enforcement and public safety services to the Reservation. The Tribe provides funding for two deputies to provide 24/7 coverage at the existing casino. In addition, the Tribe

currently funds two County Sheriff’s Deputies to supplement existing public safety coverage at the casino for three 12-hour shifts (7:00 p.m. to 7:00 a.m.), beginning 7:00 p.m. each Thursday and ending at 7:00 a.m. on Sunday. The Tribe also funds additional marked patrol units and provides funding to the Office of the District Attorney. Deputies are permitted to leave the casino to respond to high priority service calls in the area.

Schools

The Project area is within the San Bernardino City Unified School District (SBCUSD). The SBCUSD serves 53,365 students and includes 49 elementary schools, 11 middle schools, 10 high schools, and 12 charter schools. The following off-Reservation SBCUSD public schools are located in the vicinity of the Project site: Belvedere Elementary School at 2501 Marshall Boulevard (approximately 500 feet from the Project site); Serrano Middle School at 3131 Piedmont Drive (approximately 1 mile from the Project site); Del Vallejo Middle School at 1885 East Lynwood Drive (approximately 1.5 miles from the Project site); Barton Elementary School at 2214 Pumalo Street (approximately 2 miles from the Project site); and San Gorgonio High School at 2299 Pacific Street (approximately 2 miles from the Project site). **Table 3.9-2** provides enrollment data for the 2016-2017 school year for the schools that serve the immediate Project vicinity.

**TABLE 3.9-2
 EXISTING SBCUSD SCHOOLS SERVING THE OFF-RESERVATION AREA**

School/Type	Location	Grade Level	Enrollment (2016-2017)
Belvedere Elementary School	2501 East Marshall Blvd. Highland, CA 92346	K through 6	681
Barton Elementary School	2214 Pumalo St. San Bernardino, CA 92404	7 through 8	500
Del Vallejo Middle School	1885 East Lynwood Dr. San Bernardino, CA 92404-3269	6 through 8	562
Serrano Middle School	3131 Piedmont Dr. Highland, CA 92346	K through 6	839
San Gorgonio High School	2299 East Pacific Ave. San Bernardino, CA 92404	9 through 12	2,076

SOURCE: California Department of Education, 2017.

3.9.2 Impact Analysis

- A. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered off-Reservation governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for off-Reservation fire protection and emergency medical services?**

Although operation of the Project would result in increased demands on fire protection and emergency medical services due to the increased amount of patrons and employees onsite and in

the Project vicinity, the Project would include the following measures regarding fire protection and emergency medical services:

- The Project would be built according to the standards of the California Building Code and the California Public Safety Code applicable to San Bernardino County, as set forth in titles 19 and 24 of the California Code of Regulations, as those regulations may be amended during the term of this Compact, including, but not limited to, codes for building, electrical, energy, mechanical, plumbing, fire, and safety. These standards include requirements for fire-resistant construction, fire sprinklers, emergency access, and adequate fire flow.
- The Tribe will add additional staff to their Fire Department to accommodate projected increased demand from the Project (Michael J. Smith, SMFD Fire Chief, pers. comm., 2017). The number of staff needed to address the increase demand from the Project will be determined by the Tribe based on the recommendations from the SMFD Fire Chief and is currently anticipated to include 12 additional staff.

Primary fire and emergency medical response to the Project would be provided by SMFD. Currently, the San Manuel Fire Department maintains a response time of 3 minutes and 22 seconds, which is faster than the industry standard of five minutes. The existing ladder truck would adequately serve the proposed facilities.

The Tribe and surrounding areas participate in mutual/automatic aid agreements and thus secondary response would be provided from local agencies, such as the San Bernardino County Fire Department and City of Highland. SMFD responds to 99% of calls requiring fire, emergency medical, or hazardous materials response at the existing casino. As described previously, the Tribe also provides significant assistance to off-Reservation areas including 1,210 responses in 2016 and 716 responses in 2017 (Michael J. Smith, SMFD Fire Chief, pers. comm., 2018).

Based on the proposed increase in SMFD staffing and the current level of service provided both on- and off-Reservation by SMFD, it is anticipated that increased fire and emergency medical demands for the Project would be met by the Tribe and would not result in significant impacts to off-Reservation agencies.

B. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered off-Reservation governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for off-Reservation police protection services?

Although operation of the Project would result in increased demands on public safety and law enforcement services due to the increased amount of patrons and employees onsite and in the Project vicinity, the Tribe plans to increase DPS staffing to serve the Project which responds to all emergency calls from the existing casino. In addition, the Tribe funds the additional Sheriff services and Office of the District Attorney discussed above.

Based on the proposed increase in DPS staffing and the current level of service provided by DPS, it is anticipated that increased public safety and law enforcement demands would be met by the

Tribe, either directly or through the Tribe's funding of the above-discussed Sheriff's services. For these reasons, the Project would not result in significant impacts to off-Reservation agencies.

C. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered off-Reservation governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for off-Reservation public school services?

The Project, as discussed in Section 3.1.2, Effects Found Not to be Significant, is not anticipated to induce population growth; thus, the Project is not anticipated to increase demands on off-Reservation school facilities. This impact is considered to be less than significant.

3.10 Transportation and Traffic

This section provides an evaluation of the potential for the Project to significantly affect off-Reservation traffic operations in the Project area. For impacts to roadways, this analysis summarizes the Traffic Impact Analysis (TIA) prepared by Linscott, Law and Greenspan, Engineers (LLG, 2018), which is included as **Appendix E** of this TEIR.

3.10.1 Setting

Environmental Setting

Existing Roadway Network

The Project study area includes the major signalized and unsignalized intersections and street segments that provide local and regional access to the Project site and would likely be most affected by Project traffic volumes. The Project study area was developed in accordance with the off-Reservation standards of the County of San Bernardino, the City of San Bernardino, and the City of Highland, and the vehicle trip thresholds outlined in the *Congestion Management Plan (CMP) for San Bernardino County* (i.e., greater than 50 vehicles per hour on arterial street segments). **Figure 3.10-1** illustrates the roadways and intersections analyzed. Descriptions of each roadway are included in Appendix E.

Existing Bus Transit Facilities

The Project study area is served by Omnitrans, which provides public bus transit in the San Bernardino Valley on 28 fixed-route bus lines. Route 1, which serves Colton and San Bernardino, provides direct access to the Project site with a stop at the intersection of E. Lynwood Drive and N. Victoria Avenue. It operates on 15- to 30-minute headways during weekdays and on 30-minute headways on weekends (Omnitrans, 2017). San Manuel Casino also charters daily shuttles to and from Lancaster, Barstow, and multiple communities in Los Angeles County.

Bicycle and Pedestrian Facilities

There are not currently any bicycle facilities located in the off-Reservation study area (San Bernardino Associated Governments [SANBAG], 2015). Sidewalks are located on both sides of E. Lynwood Drive and N. Victoria Avenue.

Analysis Methodologies

Level of Service Analysis

Level of Service (LOS) is the term used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst

operating conditions. LOS designation is reported differently for signalized, unsignalized intersections, and roadway segments, as described below.

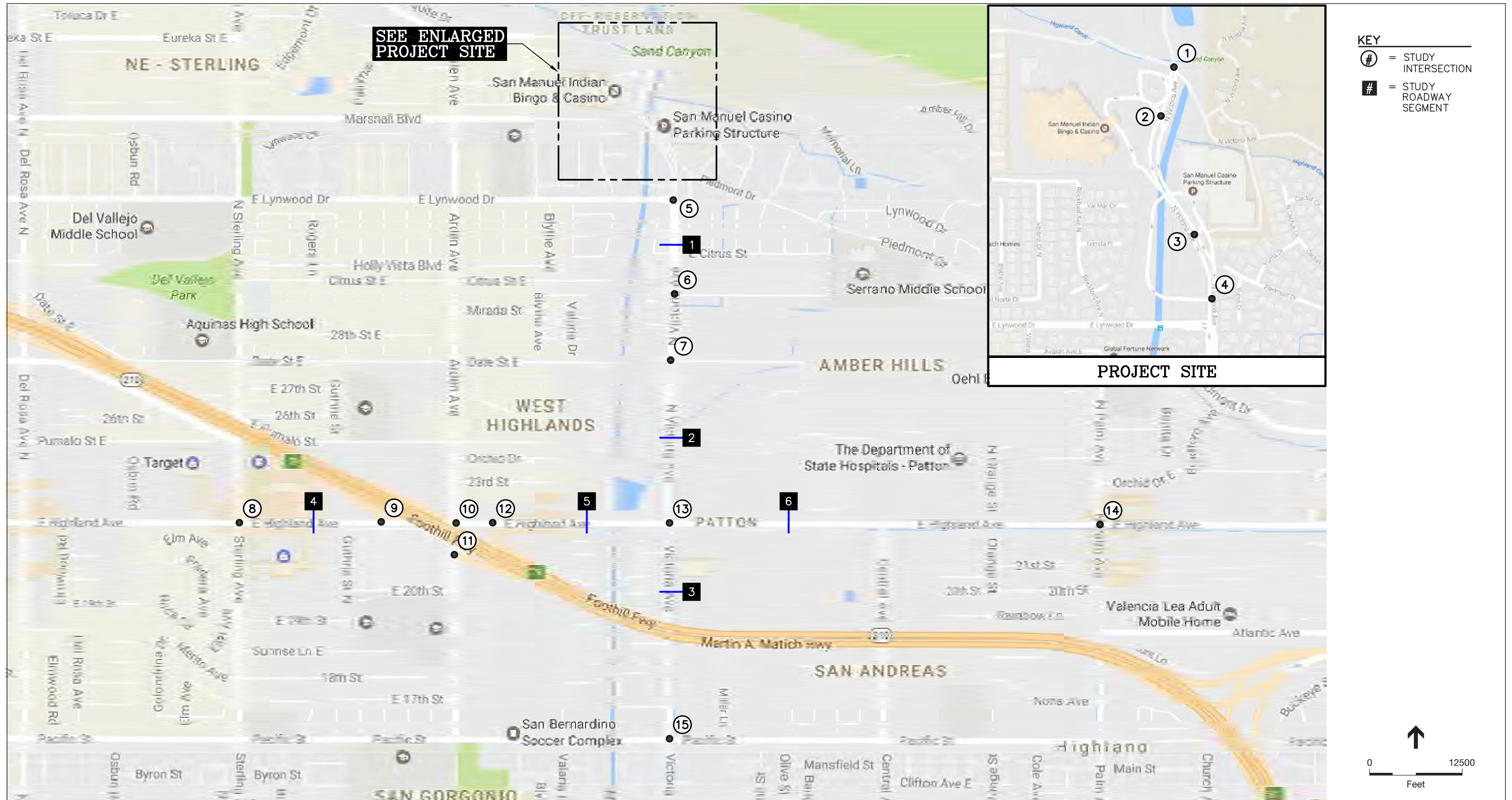
Intersection Assessment

Existing Weekday AM, Weekday PM, and Saturday PM peak hour operating conditions for the fifteen (15) key study intersections were evaluated using the methodology outlined in Chapter 19 of the Highway Capacity Manual, 6th Edition (HCM 6) for signalized intersections, the methodology outlined in Chapter 20 of the HCM 6 for two-way stop-controlled intersections, and the methodology outlined in Chapter 21 of the HCM 6 for all-way stop-controlled intersections. The LOS thresholds established for the automobile mode at a signalized intersection are shown in **Table 3.10-1**. The HCM control delay value ranges for two-way and all-way stop-controlled intersections are shown in **Table 3.10-2**.

**TABLE 3.10-1
 LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS**

Level of Service (LOS)	Control Delay per Vehicle (seconds/vehicle)	Description
A	≤ 10.0	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent occurrences.
F	> 80.0	Severe congestion This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

SOURCE: Transportation Research Board, Highway Capacity Manual 6th Edition, Chapter 19: Signalized Intersections, 2016.



**TABLE 3.10-2
 LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS**

Level of Service (LOS)	HCM Delay per Vehicle (seconds/vehicle)	Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

SOURCE: Transportation Research Board, Highway Capacity Manual 6th Edition, Chapter 20 (Two-Way Stop-Controlled Intersections) and Chapter 21 (All-Way Stop-Controlled Intersections, 2016).

Roadway Segment Assessment

Daily operating conditions for the six (6) key study roadway segments were analyzed using the Volume to Capacity (V/C) Ratio Methodology. Daily operating conditions for the key study roadway segments were evaluated according to the V/C ratio of each roadway segment. The V/C relationship is used to estimate the LOS of the roadway segment with the volume based on the 24-hour traffic volumes and the capacity based on the City’s classification of each roadway. The six qualitative categories of LOS have been defined along with the corresponding V/C value range and are shown in **Table 3.10-3**. In addition, to determine if the Project creates a significant impact, segments that indicated an unacceptable LOS under the V/C Ratio Methodology were further analyzed under peak hour conditions to determine if there are any peak hour deficiencies in the LOS with the implementation of Phase 1 and Phase 2 of the Project. Because the typical daily traffic flow assumes significantly less hourly traffic volume during the non-peak hours compared to the typical peak hours (i.e. 7-9 AM and 4-6 PM), any roadway segment that experiences greater than normal hourly traffic flow during the non-peak hours may show an unacceptable ADT level of service (LOS) without the impacted roadway segment actually operating at an unacceptable LOS on a peak hour basis, which is the critical analysis time frame. Therefore, in order to confirm whether the roadway segment will operate at an unacceptable LOS consistent with the daily analysis, a peak hour analysis is required.

Caltrans Freeway Assessment

Caltrans freeway mainline segments and ramp merge/diverge segments were analyzed using HCM 6 Chapters 12 and 14, respectively. Freeway segment and ramp merge/diverge segment LOS is determined by traffic density. **Table 3.10-4** presents the correlation between LOS and density in terms of passenger cars per mile per lane (pc/mi/ln) for freeway segments. **Table 3.10-5** presents the correlation between LOS and density (pc/mi/ln) for freeway merge and diverge segments.

Existing Traffic Volumes and Levels of Service

Existing Weekday AM, Weekday PM and Saturday PM peak hour traffic volumes for the fifteen (15) study intersections and Weekday daily and Saturday daily two-way traffic volumes for the six (6) roadway segments were collected in December 2016. The existing traffic volumes are comprised of passenger vehicles, large 2-axle trucks, 3-axle trucks and 4+-axle trucks. The truck traffic volumes were converted to passenger car equivalents (PCE's) using SANBAG-approved factors. In addition, existing traffic count data for the analyzed freeway segments was obtained from the Caltrans website. Appendix E contains the existing intersection turning movement and roadway segment traffic count data.

**TABLE 3.10-3
 LEVEL OF SERVICE CRITERIA FOR ROADWAY SEGMENTS**

Level of Service (LOS)	Volume-to-Capacity Ratio (V/C)	Description
A	≤ 0.600	EXCELLENT. Describes primarily free flow operations at average travel speeds, usually about 90% of the free flow speed for the arterial class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.
B	0.601 – 0.700	VERY GOOD. Represents reasonably unimpeded operations at average travel speeds, usually about 70% of the free flow speed for the arterial class. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.
C	0.701 – 0.800	GOOD. Represents stable conditions; however, ability to maneuver and change lanes in mid-block location may be more restricted than in LOS B, and longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50% of the average free flow speed for the arterial class. Motorists will experience appreciable tension while driving.
D	0.801 – 0.900	FAIR. Borders on a range in which small increases in flow may cause substantial increases in approach delay and, hence, decreases in arterial speed. This may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these. Average travel speeds are about 40% of free flow speed.
E	0.901 – 1.000	POOR. Characterized by significant approach delays and average travel speeds of one-third the free flow speed or lower. Such operations are caused by some combination of adverse progression, high signal density, extensive queuing at critical intersections, and inappropriate signal timing.
F	> 1.000	FAILURE. Characterizes arterial flow at extremely low speeds below one-third to one-quarter of the free flow speed. Intersection congestion is likely at critical signalized locations, with resultant high approach delays. Adverse progression is frequently a contributor to this condition.

NOTES:

^a LOS F applies whenever the flow rate exceeds the segment capacity.

SOURCE: Highway Capacity Manual 2000.

**TABLE 3.10-4
 FREEWAY SEGMENT LEVEL OF SERVICE CRITERIA**

Level of Service (LOS)	Freeway Segment Density (pc/mi/ln)
A	≤ 11.0
B	> 11.0 and ≤ 18.0
C	> 18.0 and ≤ 26.0
D	> 26.0 and ≤ 35.0
E	> 35.0 and ≤ 45.0
F	> 45.0

SOURCE: Highway Capacity Manual 6th Edition, Chapter 12: Basic Freeway and Multilane Highway Segments, 2016.

**TABLE 3.10-5
 LEVEL OF SERVICE CRITERIA FOR FREEWAY UNSIGNALIZED INTERSECTIONS**

Level of Service (LOS)	Freeway Ramp Density (pc/mi/ln)	Description
A	≤ 10.0	Unrestricted operations
B	> 10.0 – 20.0	Merging and diverging maneuvers noticeable to drivers
C	> 20.0 – 28.0	Influence area speeds begin to decline
D	> 28.0 – 35.0	Influence area turbulence becomes intrusive
E	> 35.0	Turbulence felt by virtually all drivers
F	Demand exceeds capacity	Ramp and freeway queues form

SOURCE: Transportation Research Board, Highway Capacity Manual 6th Edition, Chapter 14: Freeway Merge and Diverge Segments, 2016.

Study Intersections

Table 3.10-6 summarizes the peak hour LOS results at the fifteen (15) study intersections for existing traffic conditions. For both the City of San Bernardino and the City of Highland, as well as the County of San Bernardino, any intersection operating at LOS D is acceptable and any intersection operating at LOS E or LOS F is considered deficient. As shown in the table, all fifteen (15) study intersections currently operate at acceptable levels of service during the Weekday AM, Weekday PM, and Saturday PM peak hours when compared to the applicable LOS standards.

**TABLE 3.10-6
 EXISTING INTERSECTION OPERATIONS**

Intersection	Control Type ^a	Peak Hour	Existing	
			Delay (s/v) ^b	LOS ^c
1. Victoria Ave / Road "A"	AWSC	AM	8.0	A
		PM	8.0	A
		Saturday	8.4	A
2. Victoria Ave / Road "B"	TWSC	AM	9.7	A
		PM	12.5	B
		Saturday	12.2	B
3. Victoria Ave / Road "C"	AWSC	AM	8.3	A
		PM	9.1	A
		Saturday	10.1	B
4. Victoria Ave / Road "D"	TWSC	AM	8.7	A
		PM	10.2	B
		Saturday	10.5	B
5. Victoria Ave / Lynwood Dr	Signal	AM	21.6	C
		PM	20.9	C
		Saturday	12.8	B
6. Victoria Ave / Mirada Rd	Signal	AM	9.6	A
		PM	3.9	A
		Saturday	2.8	A
7. Victoria Ave / Date St	TWSC	AM	14.3	B
		PM	14.4	B
		Saturday	14.7	B
8. Sterling Ave / Highland Ave	Signal	AM	32.3	C
		PM	31.9	C
		Saturday	30.9	C
9. SR-210 EB Off-Ramp / Highland Ave	Signal	AM	21.8	C
		PM	18.6	B
		Saturday	19.8	B
10. Arden Ave / Highland Ave	Signal	AM	43.0	D
		PM	30.2	C
		Saturday	28.2	C
11. Arden Ave / SR-210 EB On-Ramp	Signal	AM	11.3	B
		PM	14.9	B
		Saturday	15.5	B
12. SR-210 WB Off-Ramp / Highland Ave	Signal	AM	12.7	B
		PM	13.9	B
		Saturday	16.4	B

**TABLE 3.10-6
 EXISTING INTERSECTION OPERATIONS**

Intersection	Control Type ^a	Peak Hour	Existing	
			Delay (s/v) ^b	LOS ^c
13. Victoria Ave / Highland Ave	Signal	AM	26.5	C
		PM	26.6	C
		Saturday	29.2	C
14. Palm Ave / Highland Ave	Signal	AM	27.8	C
		PM	22.8	C
		Saturday	21.5	C
15. Victoria Ave / Pacific St	Signal	AM	33.6	C
		PM	29.6	C
		Saturday	29.4	C

NOTES:

a. TWSC = two-way stop-controlled intersection; AWSC = all-way stop-controlled intersection

b. s/v = seconds per vehicle

c. LOS = Level of Service

SOURCE: Appendix E (LLG, 2018)

Study Roadway Segments

Table 3.10-7 summarizes the daily level of service results at the six (6) study roadway segments during a “typical” weekday and Saturday for existing traffic conditions. All study area roadway segments are within the jurisdiction of the City of San Bernardino, which considers LOS C to be the minimum acceptable LOS for all roadway segments. It should be noted that the City of Highland and the County of San Bernardino consider LOS D to be the minimum acceptable LOS for all roadway segments. As shown in the table, three of the six study roadway segments currently operate at unacceptable levels of service on a weekday daily basis and Saturday daily basis when compared to the LOS standards of the City of San Bernardino using the V/C Ratio Methodology. As discussed below in the Impact Analysis, to determine if the Project creates a significant impact, roadway segments showing an unacceptable LOS under the V/C Ratio Methodology were further analyzed for peak hour deficiencies. The remaining three study roadway segments currently operate at acceptable levels of service on a weekday daily basis and Saturday daily basis. The roadway segments operating at unacceptable levels of service are:

1. *Victoria Avenue between Lynwood Drive and Mirada Road* – LOS E on the weekday and LOS F on Saturday.
2. *Victoria Avenue between Date Street and Highland Avenue* – LOS E on the weekday and LOS F on Saturday.
5. *Highland Avenue between SR-210 WB Off-Ramp and Victoria Avenue* – LOS F on both the weekday and on Saturday.

**TABLE 3.10-7
 EXISTING DAILY ROADWAY SEGMENT CAPACITY ANALYSIS**

Roadway Segment	Time Period	Existing		
		Daily Volume	V/C Ratio ^a	LOS ^b
Victoria Avenue				
Lynwood Drive to Mirada Avenue	Weekday	28,849	0.962	E
	Saturday	35,638	1.188	F
Date Street to Highland Avenue	Weekday	27,922	0.931	E
	Saturday	32,728	1.091	F
Highland Avenue to Pacific Street	Weekday	12,936	0.431	A
	Saturday	11,752	0.392	A
Highland Avenue				
Sterling Avenue to SR-210 EB Off-Ramp	Weekday	19,622	0.491	A
	Saturday	19,988	0.500	A
SR-210 WB Off-Ramp to Victoria Avenue	Weekday	46,792	1.170	F
	Saturday	50,427	1.261	F
Victoria Avenue to Central Avenue	Weekday	23,381	0.585	A
	Saturday	22,302	0.558	A

NOTES:

Bold values indicate unacceptable conditions per the City's standards.

a. V/C = volume-to-capacity

b. LOS = Level of Service

SOURCE: Appendix E (LLG, 2018)

Caltrans Facilities

Table 3.10-8 summarizes the peak hour level of service results at the four Caltrans freeway segments analyzed for existing traffic conditions. As shown in the table, all four freeway segments currently operate at an acceptable LOS D (the standard set by Caltrans) or better during the AM and PM peak hours under the existing traffic conditions based on the applicable LOS standards.

Table 3.10-9 summarizes the peak hour level of service results at the four freeway merge and diverge segments for existing traffic conditions. As shown in the table, all four freeway merge and diverge segments currently operate at an acceptable LOS D (the standard set by Caltrans) or better under existing traffic conditions based on the applicable LOS standards.

Regulatory Setting

Relevant regulations for the surrounding off-Reservation area are discussed below. The Reservation is not subject to such regulations.

**TABLE 3.10-8
EXISTING PEAK HOUR FREEWAY SEGMENT CAPACITY ANALYSIS**

Roadway Segment	Peak Hour	Existing		
		Peak Hour Volume	Density (pc/mi/ln) ^a	LOS ^b
1. SR-210 Eastbound, west of Highland Avenue	AM	4,144	21.5	C
	PM	3,581	18.3	C
2. SR-210 Eastbound, east of Highland Avenue	AM	3,484	28.9	D
	PM	3,010	23.8	C
3. SR-210 Westbound, east of Highland Avenue	AM	2,577	19.9	C
	PM	2,921	22.9	C
4. SR-210 Westbound, west of Highland Avenue	AM	3,325	17.0	B
	PM	3,771	19.4	C

NOTES:

- a. pc/mi/ln = passenger cars per mile per lane
- b. LOS = Level of Service

SOURCE: Appendix E (LLG, 2018)

**TABLE 3.10-9
EXISTING PEAK HOUR FREEWAY RAMP MERGE AND DIVERGE ANALYSIS**

Roadway Segment	Peak Hour	Existing			LOS ^b
		Freeway Volume	Ramp Volume	Density (pc/mi/ln) ^a	
1. SR-210 EB Off-Ramp to Highland Avenue	AM	4,144	1,027	17.5	B
	PM	3,581	1,000	14.6	B
2. SR-210 EB On-Ramp from Arden Avenue	AM	3,117	367	30.3	D
	PM	2,581	429	26.3	C
3. SR-210 WB Off-Ramp to Highland Avenue	AM	2,577	397	26.3	C
	PM	2,921	363	29.5	D
4. SR-210 WB On-Ramp from Highland Avenue	AM	2,180	1,145	20.8	C
	PM	2,558	1,213	23.2	C

NOTES:

- a. pc/mi/ln = passenger cars per mile per lane
- b. LOS = Level of Service

SOURCE: Appendix E (LLG, 2018)

Congestion Management Program

The purpose of the state-mandated Congestion Management Program (CMP) is to monitor roadway congestion and assess the overall performance of the region's transportation system. SANBAG is the local agency responsible for the development and adoption of the CMP in San Bernardino County, and the latest CMP was adopted in June 2016 (SANBAG, 2016).

County of San Bernardino General Plan

The Circulation and Infrastructure Element of the General Plan lays the groundwork for and promotes the development of a coordinated, multi-modal countywide transportation system and infrastructure capacity to meet the needs of all people living, working, or visiting the County and all economic segments of the community.

Local General Plans

The City of San Bernardino and Highland General Plans serve as the overall guiding policy for the physical, economic, social, and environmental growth within the respective city jurisdiction. Both the City of San Bernardino and City of Highland General Plan Circulation Elements consider LOS D as the minimum acceptable condition that should be maintained for intersections during the peak commute hours.

3.10.2 Impact Analysis

Methodology

The TIA analyzed the following scenarios:

- Existing with Phase 1
- Existing with Phase 2
- Year 2020 without Project
- Year 2020 with Phase 1
- Year 2022 without Phase 2 (includes Phase 1)
- Year 2022 with Phase 2
- Year 2040 without Project
- Year 2040 with Phase 1
- Year 2040 with Phase 2

The Existing with Project condition represents the effect of Project traffic on the existing street network, at the time of traffic data collection (December 2016) without assuming either additional cumulative projects or additional road improvements in the baseline condition. Project traffic volumes for Phase 1 and Phase 2 were added to the Existing baseline volumes for both the Weekday and Saturday periods to represent Existing with Phase 1 and Existing with Phase 2 conditions.

Near-term future traffic volumes (Year 2020 and Year 2022) were forecasted for the study area using an ambient annual growth factor and the new vehicle trips expected to be generated by related projects. The ambient growth factor is intended to include unknown and future related projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area.

The application of a two percent annual growth rate to baseline traffic volumes results in a six percent and ten percent growth in existing baseline volumes in Year 2020 and Year 2022, respectively. Six related projects were identified within the Project study area, five within the City of San Bernardino and one within the City of Highland. The related projects are expected to generate 2,280 weekday AM peak hour, 3,257 weekday PM peak hour, and 3,770 Saturday PM peak hour trips. It should be noted that by including both an ambient growth factor and vehicle trips expected to be generated by related projects, the analysis is highly conservative and would tend to overstate cumulative traffic impacts.

The Year 2040 traffic volume forecasts were obtained from the San Bernardino County Transportation Analysis Model (SBTAM). Since volumes from a General Plan-level model are not specifically developed for analysis of individual intersection turning movements, each projected volume was reviewed carefully and adjustments were applied as warranted based on local conditions and professional judgment.

The planned improvements from the SR-210 Mixed-Flow Lane Project were assumed to be in-place for all future year traffic analyses (Year 2020, Year 2022, and Year 2040). The SR-210 Mixed-Flow Lane Project proposes to widen a portion of the SR-210 with one mixed-flow lane in each direction. In addition, a deceleration lane on eastbound SR-210 between Sterling Avenue undercrossing and the proposed two-lane off-ramp at Highland Avenue are assumed in operation by the 2020 opening of Phase I. Both the SR-210 Mixed-Flow Lane Project and Highland deceleration project are approved projects scheduled to be in operation by or in 2020.

In 2011, the San Manuel Band of Mission Indians entered into a three-party agreement with the City of Highland and the Inland Valley Development Agency for a Project Design Review of a possible interchange at SR-210 at Victoria Ave. In May 2017, San Manuel committed funding of \$1.5 million to further study the interchange as part of its Community Credit Fund grant program. The Tribe is working with the City of Highland, the Inland Valley Development Agency and the City of San Bernardino to create a cooperative agreement to fund the project assessment and engineering design study and has consulted with Caltrans, the County of San Bernardino, the Southern California Association of Governments and the San Bernardino County Transportation Authority. The cooperative agreement is expected to be complete in 2018. Upon execution of the agreement, San Manuel will issue the \$1.5 million grant.

The following Project-specific improvements, to be completed as part of the Project, have been assumed for the “with” Project scenarios and the Year 2022 Without Phase 2 for the intersections listed below:

3. *Victoria Avenue at Driveway “C”*: Restripe exclusive northbound left-turn lane to a shared through-left-turn lane, exclusive northbound through lane to a shared through-right-turn lane, and northbound shared through-right-turn lane to an exclusive right-turn lane. Remove southbound right-turn lane. Construction of new entrance to proposed parking structure with an eastbound shared through-left-right-turn lane and an exclusive right-turn lane. Remove crosswalks on north and east legs and stripe a crosswalk on the south leg.

4. *Victoria Avenue at Driveway "D"*: Remove one northbound through lane.

Further discussion of assumptions and adjustments made to develop Near-Term and 2040 traffic volumes is included in Appendix E.

Project Trip Generation

Trip generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the *Trip Generation Manual, 9th Edition* (Institute of Transportation Engineers [ITE], 2012), and *Traffic Needs Assessment of Tribal Development Projects in the San Diego Region* (San Diego Association of Governments, 2013). As described in Chapter 2, Project Description, Phase 1 includes the development of 55,000 square feet of additional gaming area, a 500-room resort hotel, 35,000 square feet of meeting and event space, and a 4,000 seat performance venue. Phase 2 would convert the 35,000 square feet of meeting and event space and back of house area developed as part of Phase 1 for up to 45,000 square feet of additional gaming area. Trip generation for Phase 1 and Phase 2 are summarized below, while additional detail on the trip generation for each specific land use can be found in Appendix E.

Phase 1

Phase 1 is expected to generate 447 (264 inbound, 183 outbound) weekday AM peak hour trips, 632 (321 inbound, 311 outbound) weekday PM peak hour trips, and 936 (499 inbound, 437 outbound) Saturday PM peak hour trips. The trip generation for Phase 1 does not reflect the reduced vehicle trips resulting from casino-operated charter bus shuttles, public transit access, carpooling, bicycling, and walking.

Phase 2

Phase 2 (which includes Phase 1) is expected to generate 628 (381 inbound, 247 outbound) weekday AM peak hour trips, 815 (427 inbound, 388 outbound) weekday PM peak hour trips, and 1,076 (586 inbound, 490 outbound) Saturday PM peak hour trips.

Project Trip Distribution and Assignment

The directional trip distribution patterns for both Phase 1 and Phase 2 components of the Project are presented in Appendix E (Figure 5-1). Project traffic volumes, both entering and exiting the site, were distributed and assigned to the adjacent street system based on the following considerations:

- the Project site's proximity to major traffic carriers (i.e. SR-210 Freeway, etc.);
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals;
- the traffic-carrying capacity and travel speed available on roadways serving the Project site;
- existing intersection traffic volumes; and

- ingress/egress availability at the Project site.

Overall, approximately 65 percent of trips generated by the Project would use SR-210, 15 percent would use Highland Avenue, and the remaining 20 percent would use other local roadways.

Thresholds of Significance

Intersections

All study area intersections are within either the City of San Bernardino or the City of Highland jurisdiction.

According to the City of San Bernardino, LOS D is the minimum acceptable condition that should be maintained for intersections during the peak commute hours. Therefore, any intersection operating at LOS E or LOS F is considered deficient/unsatisfactory.

The *City of Highland General Plan Circulation Element* states the City of Highland considers LOS D to be the minimum acceptable LOS for all intersections for peak operating periods. Therefore, any intersection operating at LOS E or LOS F is considered deficient.

A significant Project impact would occur if the addition of Project-generated vehicle trips would increase the delay at a study intersection forecast to operate at LOS E or F.

Roadway Segments

All study area roadway segments are within the City of San Bernardino jurisdiction. The City of San Bernardino considers LOS C to be the minimum acceptable LOS for all roadway segments. It should be noted that the City of Highland and the County of San Bernardino consider LOS D to be the minimum acceptable LOS for roadway segments. To determine if the Project creates a significant impact, any adverse roadway segments showing a LOS below LOS C under the V/C Ratio Methodology are further analyzed under peak hour conditions to determine if there are any peak hour deficiencies.

Caltrans Facilities

Caltrans District 8 has established that LOS D is the operating standard for all Caltrans facilities. Caltrans has determined that all State-owned facilities that operate below LOS D should be identified and improved to an acceptable LOS although specific criteria to identify Project related impacts is not specified in the *Caltrans Traffic Impact Study Guidelines*.

Off-Reservation Pedestrian Compatibility and On-Reservation Queuing

The Project site plan was reviewed for vehicle-pedestrian compatibility and internal (on-Reservation) vehicle queuing/stacking was reviewed to further review the ability for motorist to enter and exit the Project site from the intersection of Victoria Avenue and Lynwood Drive.

Impact Analysis and Mitigation Measures

- A. Would the Project cause an increase in off-Reservation traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?**

Existing plus Project Traffic Conditions

Phase 1

Appendix E (Tables 7-1 through 7-4) summarizes the Existing plus Project weekday and Saturday intersection and roadway segment operations. With implementation of Phase 1 of the Project, all fifteen study intersections are forecast to operate at acceptable levels of service during the weekday AM and PM peak hours, and the Saturday PM peak hour when compared to the applicable LOS standards. Three of the six study roadway segments are forecast to operate at LOS F during the weekday and on Saturday using the V/C Ratio Methodology. The roadway segments operating at unacceptable levels of service under the V/C Ratio Methodology are:

1. Victoria Avenue between Lynwood Drive and Mirada Road
2. Victoria Avenue between Date Street and Highland Avenue
3. Highland Avenue between SR-210 WB Off-Ramp and Victoria Avenue

To determine if implementation of Phase 1 of the Project would result in a significant impact, these roadway segments were further analyzed under peak hour conditions to determine if there are any peak hour deficiencies. These study roadway segments are forecast to operate at LOS A during the weekday AM and PM peak hours, and during the Saturday PM peak hours. Therefore, Phase 1 would result in a less-than-significant impact at the study roadway segments and no mitigation measures are required.

Appendix E (Tables 14-1 and 14-2) summarizes the Existing plus Project AM and PM peak hour freeway segment and merge/diverge capacity analysis. Implementation of Phase 1 of the Project would result in a less-than-significant impact at all four of the freeway study segments and all four of the study freeway merge and diverge segments.

Phase 2

Appendix E (Tables 7-1 through 7-4) summarizes the Existing plus Project weekday and Saturday intersection and roadway segment operations. With implementation of Phase 2 of the Project, 14 of the 15 study intersections are forecast to operate at acceptable levels of service during the weekday AM and PM peak hours, and the Saturday PM peak hour when compared to the applicable LOS standards. The following intersection would operate at an unacceptable level of service (LOS E) during the weekday AM peak hour:

10. Arden Avenue / Highland Avenue

Based on the City of San Bernardino's intersection thresholds of significance, the implementation of Phase 2 of the Project would result in a significant impact at this intersection. The

implementation of Mitigation Measure 3.10-1, below, would mitigate this impact to a less-than-significant level.

The analysis and impact conclusion for the study roadway segments and Caltrans facilities (freeway segments and freeway merge/diverge segments) with the implementation of Phase 2 of the Project is the same as the discussion above for Phase 1. Therefore, Phase 2 would result in a less-than-significant impact at the study roadway segments and Caltrans facilities, and no mitigation measures are required.

Year 2020 plus Phase 1 Traffic Conditions

Appendix E (Tables 8-1 through 8-3) summarizes the Year 2020 plus Phase 1 weekday and Saturday intersection and roadway segment operations. Appendix E (Tables 15-1 and 15-2) summarizes the Year 2020 plus Phase 1 AM and PM peak hour freeway segment and merge/diverge capacity analysis.

The analysis and impact conclusion for the study intersections, study roadway segments, and Caltrans facilities (freeway segments and freeway merge/diverge segments) with the implementation of Phase 1 of the Project in Year 2020 is the same as the discussion above for Existing plus Project (Phase 1). Therefore, impacts to study intersections, roadway segments, and Caltrans facilities would be less than significant in Year 2020, and no mitigation measures are required.

Year 2022 plus Phase 2 Traffic Conditions

Appendix E (Tables 9-1 through 9-3) summarizes the Year 2022 plus Phase 2 weekday and Saturday intersection and roadway segment operations. Appendix E (Tables 16-1 and 16-2) summarizes the Year 2022 plus Phase 2 AM and PM peak hour freeway segment and merge/diverge capacity analysis.

The analysis and impact conclusion for the study intersections, study roadway segments, and Caltrans facilities (freeway segments and freeway merge/diverge segments) with the implementation of Phase 2 of the Project in Year 2022 is similar to the discussion above for Existing plus Project (Phase 2). The only difference is that the AM peak hour impact identified at Intersection No. 10 (Arden Avenue / Highland Avenue) would also occur during the Saturday PM peak hour in Year 2022. However, with the implementation of Mitigation Measure 3.10-1, the significant impact during both the AM peak hour and the Saturday PM peak hour at Intersection No. 10 (Arden Avenue / Highland Avenue) in Year 2022 would be mitigated to a less-than-significant level. Impacts to study roadway segments and Caltrans facilities would be less than significant in Year 2022, and no mitigation measures are required.

Year 2040 plus Phase 1 and Year 2040 plus Phase 2 Traffic Conditions

Appendix E (Tables 10-1, 10-2, and 10-4) summarizes the weekday and Saturday intersection and roadway segment operations for the Year 2040 plus Phase 1 and Year 2040 plus Phase 2 scenarios. Appendix E (Tables 17-1 and 17-2) summarizes the AM and PM peak hour freeway

segment and merge/diverge capacity analysis for the Year 2040 plus Phase 1 and Year 2040 plus Phase 2 scenarios.

The analysis and impact conclusion for the study intersections, study roadway segments, and Caltrans facilities (freeway segments and freeway merge/diverge segments) with the implementation of either Phase 1 or Phase 2 of the Project in Year 2040 is similar to the discussion above for Existing plus Project (Phase 2). The only difference is that the weekday AM peak hour impact identified at Intersection No. 10 (Arden Avenue / Highland Avenue) would also occur during the weekday PM peak hour and the Saturday PM peak hour in Year 2040. However, with the implementation of Mitigation Measure 3.10-1, the significant impact during the weekday AM and PM peak hours, and the Saturday PM peak hour at Intersection No. 10 (Arden Avenue/ Highland Avenue) in Year 2040 would be mitigated to a less-than-significant level. Impacts to study roadway segments and Caltrans facilities would be less than significant in Year 2040, and no mitigation measures are required.

Mitigation Measure 3.10-1: *Arden Avenue/Highland Avenue Intersection Improvements* – the Applicant shall pay a fair-share contribution to stripe the northbound through lane to a second northbound left-turn lane and restripe the northbound right-turn lane to a northbound shared through-right-turn lane on Arden Avenue; and modify the existing traffic signal and include the northbound and southbound left-turn movements as lead-lag to avoid conflict.

B. Would the Project exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated off-Reservation roads or highways?

Per the adopted level of service target of LOS E, a deficiency plan is required when a CMP facility falls below this LOS standard. Preparation of a deficiency plan is the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency also will be required to coordinate with the development of the plan. The plan must contain mitigation measures, including Transportation Demand Management strategies and transit alternatives, and a schedule of mitigating the deficiency. To ensure that the CMP facility is appropriately monitored to reduce the occurrence of CMP deficiencies, it is the responsibility of local agencies, when reviewing and approving development proposals, to consider the traffic impacts on the CMP facility. The Tribe as the lead agency for the Project has conducted a Traffic Impact Analysis, which included consideration of the local jurisdictions standards regarding the extent of the analysis, modeling and cumulative projects to be considered. As such, the Project is determined to be consistent with the CMP.

C. Would the Project substantially increase hazards to an off-Reservation design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Located at 777 San Manuel Boulevard, the San Manuel Casino is accessed from the intersection of Victoria Street at Lynwood Drive. Regionally, the San Manuel Casino can be accessed from the Highland Avenue exit off of the SR-210 Freeway. The on-site and off-site circulation was

evaluated in terms of vehicle-pedestrian conflicts. Based on a review of the preliminary site plan, the overall layout does not create significant vehicle-pedestrian conflict points and the driveway throat lengths are sufficient such that access to the parking structures, hotel, and casino areas are not impacted by internal vehicle queuing/stacking. Project traffic is not anticipated to cause significant queuing/stacking at the internal (on-site) intersections. The alignment, spacing and throat length of the internal (on-site) intersections are also deemed adequate. Turning movements into and out of the Project site at Intersection No. 5 (Victoria Avenue / Lynwood Drive) are anticipated to operate at an acceptable service level. As such, motorists entering and exiting the Project site from this intersection will be able to do so comfortably, safely, and without undue congestion or pedestrian conflicts.

Any off-Reservation design features would be required to be designed consistent with City standards, including street design. Review and compliance with City standards would ensure that off-Reservation streets are designed to substantially decrease hazards or dangerous design features. Additionally, the Project does not introduce a land use which is incompatible with City roadways. Thus, the Project would have a less-than-significant impact.

D. Would the Project result in inadequate emergency access for off-Reservation responders?

As stated above, the alignment, spacing and throat length of the internal (on-site) intersections are deemed adequate to accommodate vehicular access. Further, vehicles entering and exiting the Project site at Intersection No. 5 (Victoria Avenue/Lynwood Drive) would be able to do so without significant delays. The Tribal-State Compact requires compliance with building standards that meet or exceed the California Building Code and Safety Code which includes standards for emergency access. With adherence to these standards, the impact to access for off-Reservation responders would be less than significant.

3.11 Utilities and Service Systems

3.11.1 Setting

Water Supply

Water for the existing casino facilities is supplied by the East Valley Water District (EVWD). The EVWD serves the City of Highland, areas of unincorporated San Bernardino County, and portions of the City of San Bernardino. EVWD's main source of water for its customers is from groundwater wells located in the Bunker Hill Groundwater Basin (Water Systems Consulting, Inc., 2016). This source of water consists of a giant underground basin made up of soil, sand and gravel saturated by water. Another source of water for EVWD is the Santa Ana River, via the North Fork Water Company, through which EVWD has water rights to 5 MGD or 4,500 acre feet per year (Water Systems Consulting, Inc., 2016).

When water supplies are short, EVWD has the option of obtaining supplemental water from the State Water Project through the San Bernardino Valley Municipal Water District. Water from the State Water Project is imported from Northern California and is made available to San Bernardino Valley water agencies. Local water, however, acquired from the Santa Ana River and the Bunker Hill Groundwater Basin, is the preferred source of water for the community (EVWD, 2016).

EVWD water demands are anticipated to be 31,609 acre feet (AF) in 2020 and 36,203 AF in 2040. EVWD's water supply is anticipated to exceed demand under normal, single dry year and multiple dry year conditions (Water Systems Consulting, Inc., 2016).

Wastewater

Wastewater for the existing casino facilities is conveyed via the Victoria Avenue Trunk Sewer to the San Bernardino Water Reclamation Plant (SBWRP). This facility is managed by the San Bernardino Municipal Water Department and is a 33 million gallon per day (MGD) Regional Secondary Treatment facility (Black and Veatch, 2013). The average dry weather flow (ADWF) at SBWRP in 2013 was observed to be 12.7 MGD (Black and Veatch, 2013). Because the SBWRP operates within the Santa Ana River Watershed, it is within the San Ana Regional Water Quality Control Board's (SARWQCB) jurisdiction. Modelling indicates that the Victoria Avenue Trunk Sewer is at sufficient capacity under existing conditions to handle both dry and wet conditions flows (Black and Veatch, 2013).

EVWD is currently in planning for a new wastewater treatment plant to create recycled water for wastewater generated within its service area; this project is to capture 6 MGD (approximately 8,000 AFY) of wastewater that currently goes to SBWRP (Water Systems Consulting, Inc., 2016). The estimated volume of wastewater collected by EVWD in 2015 was 6,721 acre feet (5 MGD) (Water Systems Consulting, Inc., 2016).

Stormwater Drainage

Project facilities would be limited to previously paved areas, most of which are used for existing surface parking. Stormwater from these areas is currently collected and routed off-Reservation via an existing stormwater system.

3.11.2 Impact Analysis

A. Would the Project exceed off-Reservation wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The Project would expand existing commercial development, which would increase the amount of wastewater produced within the Project site. Wastewater generated by the Project would be treated by a wastewater treatment facility with a National Pollutant Discharge Elimination System permit issued by the SARWQCB. Waste discharge requirements for the facility would be based on all applicable State and federal regulations, policies, and guidance, and include limitations on effluent discharge and receiving water. Generally, effluent discharge requirements include specifications for adequate disinfection treatment and limitations regarding pollutant concentrations, sediments, pH, temperature, and toxicity.

The land uses proposed by the Project would generally not discharge wastewater that contains harmful levels of toxins that are regulated by the SARWQCB (such as large quantities of pesticides, herbicides, oil, grease, and other chemicals that are more typical in agricultural, commercial, and industrial uses) and all effluent would comply with the wastewater treatment standards of the SARWQCB. Therefore, the Project would result in less than significant impacts related to the wastewater treatment requirements of the SARWQCB.

B. Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant off-Reservation environmental effects?

Water

Water for the Project would be supplied by EVWD. The Project's estimated average and peak water demands are summarized in **Table 3.11-1**. The Project is estimated to have a peak daily water demand of 141,000 gallons per day for hotel and casino elements. A cogeneration facility would increase peak daily water demands by an additional 78,600 gallons per day, while both the substation and fuel cell energy¹ alternatives would have negligible water demands. The Project is estimated to have an annual demand of 41.2 million gallons (MG) without the cogeneration facility or 64.2 MG with the cogeneration facility.

The *2015 San Bernardino Valley Regional Urban Water Management Plan* addresses future growth of the area and outlines supplemental water sources and the construction of additional wells based on future water demands. The Plan demonstrates that the EVWD has water supplies

¹ The fuel cell technology under consideration is a solid oxide fuel cell. The electrochemical process produces water which would be reused in fuel cell operations.

available to meet demands in its service area over a 20-year planning period (2020-2040), including normal year, single dry year and multiple dry year scenarios. Estimated excess supply is lowest in 2020 with an excess of 12,636 AF (4,118 MG) in a normal year scenario and 7,063 AF (2,302 MG) in a dry year or multiple dry year scenario.²

**TABLE 3.11-1
 PROJECT WATER DEMANDS**

Component	Unit Count	Peak Daily Use Rate	Peak Daily Water Demand (gpd) ¹	Average Daily Water Demand (gpd) ⁴	Annual Water Demand (MG)
Hotel ¹	500 rooms	150 gpd/room	75,000	60,000	21.9
Performance Venue*	4,000 seats	4 gpd/seat	16,000	12,800	4.7
Expanded Gaming Area	100,000 s.f.	0.50 gpd/s.f.	50,000	40,000	14.6
Subtotal			141,000	112,800	41.2
Energy Alternative²					
Cogeneration	10,000 s.f./ 6MW	Varies by component	78,600	62,880	23.0

NOTES:

- 1 Water demand estimates are for peak daily demand (assumes 100% occupancy and daily use)
- 2 Both the Fuel Cell Alternative and Substation would have negligible water demands and thus are not included in this table.
- 3 There would be some reduction of existing water use due to replacement of function of the existing boiler system however, this analysis is conservative and does not discount for the potential reduction due to increased efficiency.
- 4 Average use assumes 80% of peak water use.

SOURCE: R.G. Vanderweil Engineers, 2018; ESA, 2017.

Based on the Project annual water demand of between 41.2 and 64.1 MG, there is sufficient anticipated future water supply for the Project during normal and dry-year scenarios and thus the Project is not anticipated to require the construction of new water facilities or expansion of existing facilities. This impact is considered less than significant.

Wastewater

Prior to Project opening it is anticipated that wastewater service would be provided by EVWD with treatment at the SBWRP within the City of San Bernardino or the proposed Sterling Natural Resource Center in the City of Highland. The Project’s estimated average and peak wastewater demands are assumed to be similar to the water demands discussed above. This is conservative as the water use would be subject to evaporation and other operational losses.

As discussed above, the SBWRP currently has sufficient remaining capacity (over 20 MGD). The development of the proposed Sterling Natural Resource Center would result in an additional 10 MGD of regional capacity. Based on the peak Project wastewater flows of between 0.1 to 0.2 MGD, there is sufficient anticipated future capacity for the Project and thus the Project is not anticipated to require the construction of new wastewater facilities or expansion of existing facilities. This impact is considered less than significant.

² 1 AF= 325,900 gallons

C. Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant off-Reservation environmental effects?

The Project would be constructed on paved areas which are primarily used for surface parking. As the Project would not increase impervious surfaces, there would be a negligible change in the quantity or rate of stormwater flow from the Project site. The Project would not require the construction of new stormwater facilities or expansion of existing stormwater facilities the construction of which could cause significant off-Reservation environmental effects and thus there would be no impact.

D. Would the Project result in a determination by an off-Reservation wastewater treatment provider (if applicable), which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

As discussed in Impact B above. Both the SBWRP and EVWD proposed wastewater treatment plant would have adequate capacity to serve the Project in addition to existing commitments. Thus, impacts with respect to wastewater treatment capacity would be less than significant.

3.12 Water Resources

This section describes the water resources within and in the vicinity of the Project site, including impacts related to hydrology, water quality, and flooding.

3.12.1 Setting

Environmental Setting

Annual precipitation in the vicinity averages about 14 inches (Western Regional Climate Center, 2016). Precipitation in the Project site primarily falls as rainfall between November and April. Water resources in the Project area include Sand Creek which runs north to south through the Project site.

Regional Surface Hydrology

The Project site is located within the Santa Ana River watershed and off-Reservation areas are under the jurisdiction of the Santa Ana Regional Water Quality Control Board (SARWQCB). The Santa Ana River watershed drains approximately 2,650 square miles, including parts of San Bernardino, Riverside, Orange, and Los Angeles Counties. The length of the River, including its major tributaries, is around 700 miles. Major tributaries include Lytle Creek, Bear Creek, City Creek, and Mill Creek. The Santa Ana River originates in the San Bernardino Mountains, flowing generally westerly down the steep gorges and then into the interior basin of San Bernardino County and Riverside County. The Santa Ana River then flows in a southwesterly direction past the City of Riverside then through Orange County before it eventually discharges into the Pacific Ocean between Huntington Beach and Costa Mesa.

Sand Creek is located approximately 350 feet east of the northern surface parking lots within the Project site. Sand Creek is characterized as an intermittent drainage channel with a catchment area of approximately 3.1 square miles (U.S. Geological Survey [USGS], 2013). Sand Creek has been channelized into a cement lined storm drain starting from above the existing casino parking structure and flows downstream and off-Reservation to Patton Basin. Approximately two miles downstream of the Project area, Sand Creek empties into Warm Creek, which in turn feeds into the Santa Ana River. During the period of record since 2008, peak flows in Sand Creek, as recorded at the gauging station upstream of the Project site, have ranged from a maximum discharge of 36 cubic feet per second to at times no measurable flow (USGS, 2017). Typically, the flow is highest during the winter and spring months and lowest in the summer and late fall.

Project Site Surface Hydrology

Project facilities would be limited to previously paved areas, most of which are used for existing surface parking. Stormwater from these areas is currently collected and routed off-Reservation via an existing stormwater system.

Surface Water Quality

Common sources of surface water pollutants in the vicinity of the Project area are generally parking lots and streets, rooftops, landscaped areas, and natural erosion from the foothills north of the Project area. Erosion can result in sedimentation that ultimately flows into surface waters. Other contaminants in urban runoff include sediment, hydrocarbons, metals, pesticides, bacteria, and trash. Flows into waterways during the dry season may be entirely comprised of nonpoint-source runoff. Nonpoint sources are sources of pollution that are not produced by a particular source (such as an outfall) but are spread over a broader area (such as sediment discharge from a construction site or oil and grease from parking lots). During the wet season, stormwater discharge conveys precipitation from areas of saturation or impermeable surfaces to low lying collection areas and drainages. “First flush” storm events (during which pollutants that have accumulated throughout the dry season are concentrated with little dilution by the initial storm of the season) have the largest impact on receiving waters.

The State Water Resources Control Board (SWRCB), in compliance with the Clean Water Act (CWA), Section 303(d), has prepared a list of impaired water bodies in the State of California. The list includes a priority schedule for the development of total maximum daily loads (TMDLs) for each contaminant or “stressor” impacting the water body. A stretch of the upper Santa Ana River just downstream of the Project area was identified in the 2010 California Section 303(d) List and TMDL Priority Schedule as impaired for pathogens. Other reaches further downstream along the Santa Ana River were identified as impaired for copper (during wet season only) and lead.

The SARWQCB lists water quality objectives for inland surface waters that must be protected against degradation. **Table 3.12-1** shows the water quality objectives for the Sand Creek.

**TABLE 3.12-1
 WATER QUALITY OBJECTIVES FOR INLAND SURFACE WATERS WITHIN SAND CREEK**

Constituent	Sand Creek¹
Total Dissolved Solids (TDS)	200
Hardness	100
Sodium	30
Chloride	10
Total Inorganic Nitrogen	1
Nitrate (as N)	10
Sulfate	20
Chemical Oxygen Demand	5
Boron	0.75
Color Units	15
Methylene Blue-Activated Substances	0.05

NOTES:
 1. mg/L or as noted
 SOURCE: SARWQCB, 2016.

Groundwater Hydrology

The Project area is within the San Bernardino Basin, specifically within the Bunker Hill Subbasin. This Subbasin extends from the San Gabriel Mountains in the northwest, the San Bernardino Mountains to the northeast, the Crafton Hills on the east, and on the south by the San Timoteo Badlands (Upper Santa Ana River Watershed IRWMP, 2015). The Bunker Hill Subbasin extends 140 square miles and has a groundwater capacity of 5.98 million acre-feet. Groundwater flows generally in a southwesterly direction (IRWMP, 2015). Major fault lines form the boundaries of this groundwater basin, constraining the flow of groundwater and in some areas of the basin creating areas of high water tables. The San Jacinto fault runs perpendicular to the flow of groundwater, acting as a groundwater dam (San Bernardino Valley Municipal Water District, 2009). Historically groundwater recharge to this Subbasin has been from infiltration of runoff from both the San Gabriel and San Bernardino Mountains, but now there is intentional groundwater recharge using imported surface water. Areas around the base of the San Bernardino Mountains can experience drastic changes in groundwater levels, which can fall as much as 200 feet during times of greater groundwater extraction rates in drought conditions (USGS, 2005).

Groundwater Quality

The groundwater quality in the San Bernardino Basin varies widely. Most groundwater is of suitable quality for use in municipal and agricultural use, although groundwater contamination from agricultural practices and urban development has caused various water-quality concerns throughout the Basin. Common contaminants to the groundwater basin include nitrate, pesticides, and volatile organic compounds like trichloroethylene and tetrachloroethylene.

Imported water used for groundwater recharge typically contains higher dissolved solids than the existing groundwater and there is potential for an increase in groundwater salt concentration with greater use and reuse of imported water supplies to the basin (USGS, 2005). In certain areas of the basin, levels of groundwater nitrate concentrations exceeding the public drinking water standard of 10mg/L has prompted closures of some drinking water wells in the basin. Generally, there is a correlation between groundwater nitrate concentrations and groundwater depth, with nitrate concentrations in excess of drinking water standards more commonly found in shallower groundwater and less concentrations found in deeper depths of groundwater (USGS, 2005).

There are several major plumes of groundwater contamination by volatile organic compounds identified in the San Bernardino Groundwater Basin. Most of these known major contamination plumes are located approximately four to five miles away from the Project area, including the Newmark and Muscoy EPA Superfund sites located west of the project area and the groundwater contamination plume near the former Norton Air Force Base located south of the Project area (USGS, 2005).

Beneficial Uses and Water Quality Objectives

The SARWQCB is responsible for the protection of beneficial uses of off-Reservation water resources within the Santa Ana Watershed. Beneficial uses are the desired resources, services, and qualities of the aquatic system that are supported through achieving and maintaining certain

thresholds of water quality. The SARWQCB uses planning, permitting, and enforcement authorities to meet this responsibility, and adopted the Water Quality Control Plan (Basin Plan) for the Santa Ana River Basin to implement plans, policies, and provision for off-Reservation water quality management (SARWQCB, 2016). Beneficial uses are described in the Basin Plan and are designated for surface waters and their tributaries as well as groundwater.

Beneficial uses of surface waters of the Santa Ana River basin include municipal supply, agricultural irrigation; groundwater recharge; water contract recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; and rare, and threatened or endangered species habitat.

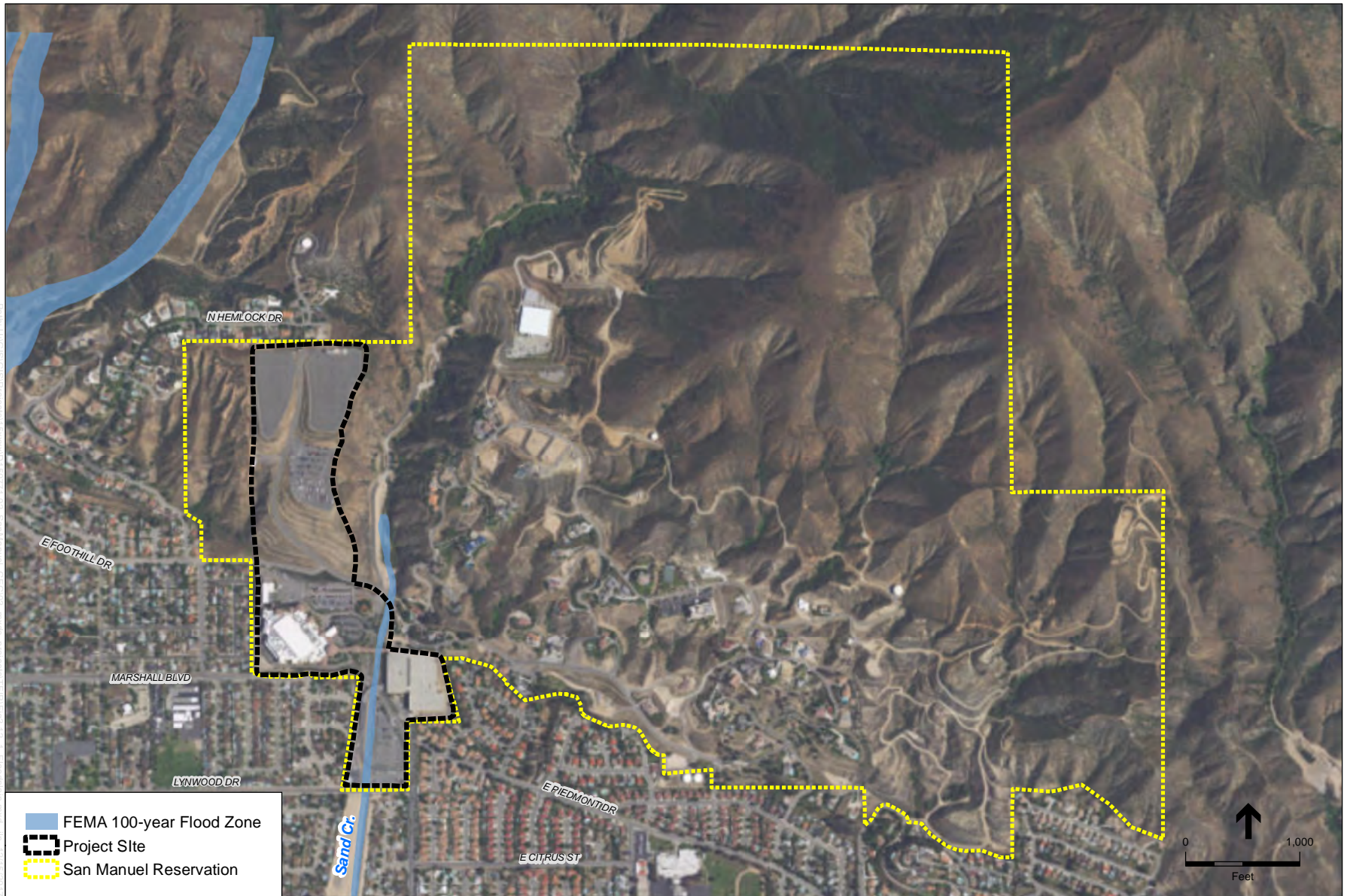
Water quality operatives for surface waters in the basin have been set regarding bacteria, total dissolved solids, hardness, sodium, chloride, total inorganic nitrogen, sulfate, and chemical oxygen demand. Water quality objectives for groundwater include standards for arsenic, coliform bacteria, barium, boron, chloride, color, cyanide, total dissolved solids, total filterable residue, fluoride, hardness, metals, methyl blue-activated substances, nitrate, oil and grease, pH, radioactivity, sodium, sulfate, taste and odor, total dissolved solids, and toxic substances (SARWQCB, 2008).

Flooding

The Federal Emergency Management Agency (FEMA) is responsible for delineating areas that are expected to be subject to flooding during a 100-year flood event. A 100-year flood event is defined as the area that is expected to be inundated by flood flows during a rainfall event that would have an annual probability of occurrence of one percent. FEMA creates and maintains Flood Insurance Rate Maps (FIRMs) which identify areas located within a 100-year floodplain boundary area. Designated floodplains in the Project site vicinity are shown in **Figure 3.12-1**. Based on FEMA flood mapping, the Project site is located within an area of “minimal flood hazard.” Immediately south of the Project site is an area categorized as 0.2% Annual Chance Flood Hazard (i.e., 500-year floodplain). FEMA flood maps also indicate a strip of land approximately 50-75 feet in width along Sand Creek, would be inundated during a 100-year flood event.

Dams

The Seven Oaks Dam located northeast of the City of Highland in an unincorporated area of San Bernardino occurs within proximity of the Project area. This dam was designed to withstand an earthquake measuring 8.0 on the Richter scale, but in the event of a failure, the Project Area is located outside the dam inundation area (City of San Bernardino, 2005).



SOURCE: NAIP, 2014; FEMA, 2008; San Bernardino County, 2015; ESA, 2017

San Manuel Band of Mission Indians Final TEIR
Figure 3.12-1
 FEMA 100-year Flood Zone

Regulatory Setting

Clean Water Act

The CWA (CWA, 33 USC 1251-1376) is the major federal legislation governing water quality. The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) Program. Construction activities disturbing over one acre of land are required to obtain coverage under an NPDES stormwater permit and implement Stormwater Pollution Prevention Plans (SWPPP) that reduce or prevent discharge of pollutants into receiving waters. The U.S. Environmental Protection Agency (EPA) is the administrating authority for Tribal land in California.

3.12.2 Impact Analysis

A. **Would the Project:**

- (i) **violate any water quality standards or waste discharge requirements,**
- (ii) **substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation off-site,**
- (iii) **substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding off-site, or**
- (iv) **create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff off-Reservation?**

Construction

Construction activities would involve soil disturbance, excavation, cut/fill, and stockpiling. These activities would temporarily disturb surface sediments, which could become entrained in stormwater during a storm event. Additionally, oils, greases, fuels, and other construction-related fluids could be released during construction, become entrained in stormwater flows, and contribute to water quality degradation.

In response to general concerns regarding impacts to water quality from construction, the EPA has adopted a NPDES Construction General Permit for construction activities in accordance with Section 402 of the CWA. As discussed in Chapter 2, Project Description, prior to construction the Tribe would develop a SWPPP which would be followed throughout the duration of construction. The SWPPP would include measures targeting minimization of construction water quality pollution by deploying construction period Best Management Practices for stormwater management. With implementation of the SWPPP, impacts related to water quality and polluted runoff would be less than significant during construction.

Operation

The Project will be constructed on paved areas which are primarily used for surface parking. The Project would not increase impervious surfaces or introduce new substantial sources of polluted runoff. The Project would utilize existing stormwater facilities and thus does not propose to alter drainage patterns. For these reasons, impacts related to water quality, polluted runoff and drainage patterns would be less than significant during operation.

B. Would the Project substantially deplete off-Reservation groundwater supplies or interfere substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

The Project will be constructed on paved areas which are currently impervious and thus the Project will not affect groundwater recharge. The Project will not utilize private groundwater wells and thus would not affect the aquifer or groundwater table from increased water demand. For these reasons the Project would not impact groundwater resources. Impacts to public water service providers from increased demands are discussed in Section 3.11, Utilities and Service Systems.

C. Would the Project:

- (i) place structures within a 100-year flood hazard area, which would impede or redirect off-Reservation flood flows, or**
- (ii) expose off-Reservation people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

No new structures would be located within a 100-year floodplain and therefore, the Project would not be expected to significantly impede or redirect off-Reservation flood flows. Additionally, the Project site is not located in an area subject to inundation due to dam or levee failure. As such, the Project would not expose people or structures to a significant risk of loss, injury or death involving flooding. This impact is considered to be less than significant.

CHAPTER 4

Other Considerations

4.1 Significant Effects Which Cannot Be Avoided

The Project, including the project design features set forth in Section 2.4, within Chapter 2, Project Description, would be constructed within the San Manuel Reservation. Off-Reservation impacts of such Project are summarized in Table ES-1, within the Executive Summary of this TEIR. Potentially significant impacts, prior to the implementation of recommended mitigation, would be limited to off-Reservation impacts to transportation and traffic. The mitigation measure, summarized in Chapter 5, Mitigation Measures has been proposed to reduce or avoid the identified impact. With implementation of mitigation, the significant effects would be reduced to a less-than-significant level for transportation and traffic and the Project as designed would not have any significant off-Reservation effects which cannot be avoided.

4.2 Irreversible Significant Effects

Significant irreversible environmental changes include, for example, the use of nonrenewable natural resources during the initial and continued phases of a project, should this use result in the unavailability of these resources in the future. Primary impacts and, particularly, secondary impacts generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with projects.

The Project would require the use of energy for construction, operations, and maintenance. Some of this energy would be from non-renewable sources, primarily fossil fuels. The energy consumed in developing and maintaining the site may be considered a permanent investment. The Project would not use nonrenewable fossil fuels at a greater rate than other commercial projects and incorporates several measures to decrease reliance on fossil fuels. These measures include adhering to CalGreen building standards as applicable to the County of San Bernardino, and purchasing eco-friendly vehicles for the Project. Adherence to CalGreen standards includes energy and water saving measures and pre-wiring a portion of new parking stalls for electric vehicles. The Project would not result in the substantial depletion of any nonrenewable resource and, accordingly, the Project would not result in irreversible significant off-Reservation effects.

4.3 Growth-Inducing Effects

A project's potential to induce growth does not automatically mean that it will result in growth. The potential for growth is affected by and the nature of the resulting growth (i.e., the location,

size and type of the development) is also typically the result of numerous factors including local government planning, availability of public services, natural resources, the economic conditions, unemployment rate, as well as, local political and environmental concerns. Consequently, these factors can have an important role in determining the extent of a project's potential growth-inducing impacts.

Typically, the growth-inducing potential of a project would be considered significant if it stimulates human population growth or a population concentration above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth potential could also occur if a project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies. As discussed below, this analysis evaluates whether the Project would directly or indirectly induce growth in the surrounding environment.

4.3.1 Direct Growth-Inducing Effects

A project would directly induce growth if it would remove barriers to population growth. The Project does not propose housing or changes that would allow for more housing in off-Reservation areas and, thus, does not remove barriers to population growth. The Project would provide new employment opportunities. As described in Section 3.1.2, the Project is anticipated to provide jobs for unemployed or "underemployed" persons and the forecasted population growth in the region. Most workers associated with construction and operation are expected to come from within San Bernardino County and will benefit from the employment opportunities provided by the Project. Since the new employment opportunities are anticipated to be filled by existing or planned growth in population, the Project does not have direct off-Reservation growth-inducing impacts.

4.3.2 Indirect Growth-Inducing Effects

A project would indirectly induce growth if it would increase the capacity of infrastructure beyond that needed to meet existing demand. The Project does not propose to increase the capacity of infrastructure beyond that needed to meet the demand of the Project and planned development. Off-Reservation infrastructure improvements, if needed, would include 1) upgrades to existing power poles for the substation energy alternative/variant, 2) upgrades to the existing sewer line within the existing utility trench and disturbed right-of-way of Marshall Boulevard (between Arden Avenue and North Victoria Avenue), and/or 3) installation of a natural gas line within the existing utility trench and disturbed right-of-way of North Victoria Avenue (between the Reservation and Highland Avenue) if the fuel cell and/or cogeneration facility energy alternatives/variants are implemented. A new natural gas line along North Victoria Avenue is not currently anticipated to be needed but may be necessary under the fuel cell and/or cogeneration facility energy alternatives/variants. These upgrades are not anticipated to provide additional off-Reservation capacity and, thus, the Project does not have indirect growth-inducing effects to the off-Reservation area.

4.4 Cumulative Impacts

“Cumulative impacts” refers to the effects of two or more projects that, when combined, are considerable or compound other environmental effects. Pursuant to the Tribal-State Compact, this section discusses whether the impacts of the Project are individually limited but cumulatively considerable off-Reservation. “Cumulatively considerable” means “that the incremental effects of an individual Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” The cumulative discussion is primarily based on proposed projects and buildout information obtained in coordination with local jurisdictions for the Traffic Impact Analysis (**Appendix D**) which assumes growth through 2040.

Construction of Tribal projects other than the Hotel and Casino Expansion Project will occur on the Reservation during the time that the Hotel and Casino Expansion Project will be constructed, including, but not limited to, residential housing, tribal government and infrastructure projects that serve the Reservation. Fill from the construction of the Project would be used to develop a pad for a Tribal administrative building adjacent to the existing northern surface parking lot. These Tribal projects are not anticipated to have a cumulative impact due to the location, nature, timing and/or size of such projects.

It is anticipated that the approximately 45-year-old mostly single welded pipeline owned by the San Bernardino Valley Municipal Water District will be replaced and relocated adjacent to the existing casino. This pipeline does not provide water to casino facilities. The new pipeline will be double welded and concrete encased or reinforced in certain areas. Construction associated with the District pipeline relocation is predicted to overlap with the first six months of Project construction. Potential cumulative impacts from the concurrent implementation of the two projects are discussed below in Section 4.4.2.

For Agricultural and Forest Resources, Cultural Resources, Mineral Resources, Population and Housing and Recreation, the Project has been determined not to have an impact on the off-Reservation environment and thus would not contribute to any potential cumulative effects for these environmental issues areas. Cumulative impacts for the environmental issue areas discussed in Sections 3.2 through 3.12 of the ~~Draft-Final~~ TEIR are discussed below.

4.4.1 Aesthetics

As discussed in Section 3.2, Aesthetics, the Project site and vicinity already include several manmade features within an urban area. The Project includes shielded lighting and off-Reservation projects are required to adhere to the provisions of City and County lighting standards. With these considerations in mind, the Project’s contribution to cumulative aesthetic conditions would be less than cumulatively considerable.

4.4.2 Air Quality

Cumulative air quality impacts are discussed in Section 3.3, Air Quality Impact C. If cumulative development, including the Project, along with other reasonably foreseeable future projects in the Basin as a whole could violate an air quality standard or contribute to an existing or projected air quality violation, then this is considered to be a significant cumulative impact. With respect to determining the significance of the Project's contribution to regional emissions, the South Coast Air Quality Management District (SCAQMD) neither recommends quantified analyses of cumulative construction emissions nor provides methodologies or thresholds of significance to be used to assess cumulative construction impacts. According to SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard. The Project does not exceed any project-specific thresholds and thus, the Project's contribution to cumulative air quality conditions would be less than cumulatively considerable. Nevertheless, a quantitative analysis of the cumulative impact to air quality from concurrent construction of the Project and the San Bernardino Valley Municipal Water District's pipeline relocation project was performed. As the results in Table 4-1 show, the two projects' cumulative air emissions are below the regional and applicable localized SCAQMD thresholds and therefore cumulatively less than significant.

TABLE 4-1
CUMULATIVE CONSTRUCTION AIR QUALITY IMPACT FROM PROJECT AND VALLEY DISTRICT PIPELINE RELOCATION

	Regional Emission (lbs/day)						Localized Emissions (lbs/day)			
	ROG	NO _x	CO	SO ₂	PM10	PM2.5	NO _x	CO	PM10	PM2.5
Daily Maximum Overlapping Emissions ^a	<u>4.3</u>	<u>66.7</u>	<u>68.7</u>	<u><1</u>	<u>11.1</u>	<u>7.1</u>	<u>58.5</u>	<u>66.4</u>	<u>10.6</u>	<u>6.9</u>
SCAQMD Regional Threshold	<u>75</u>	<u>100</u>	<u>550</u>	<u>150</u>	<u>150</u>	<u>55</u>	<u>270</u>	<u>1746</u>	<u>14</u>	<u>8</u>
Exceeds Threshold?	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>

NOTE:

a. Construction air emissions from the Valley District's pipeline relocation project were estimated using the Sacramento Metropolitan Air Quality Management District's Roadway Construction Emissions Model (version 8.1.0) – an SCAQMD approved model for estimating pipeline construction emissions for CEQA projects, and then combined with the Project's construction emissions based on the estimated construction schedule and overlapping construction phases. See Appendix C for details.

SOURCE: Appendix C.

4.4.3 Biological Resources

Project construction would occur in previously disturbed areas lacking biological resources. Similarly, the immediate off-Reservation vicinity is developed with residential uses and lacks biological resources. For these reasons, the Project would not contribute to off-Reservation cumulative impacts.

4.4.4 Geology and Soils

The impact of the risks associated with exposure to potential geological and soils hazards is generally localized because of the dependence on site-specific conditions and thus is not cumulative in nature.

4.4.5 Hazards and Hazardous Materials

The Project does not involve activities that would result in hazardous emissions or the handling of hazardous or acutely hazardous materials at a level which could affect off-Reservation areas and thus would not contribute to off-Reservation cumulative impacts.

4.4.6 Land Use

As discussed in Section 3.7, Land Use, the Project site is on land currently held in trust by the United States Government for the benefit of the Tribe and therefore is not subject to local discretionary approvals, standards, or ordinances. Off-Reservation infrastructure improvements, if needed, would be subject to further review by the City of San Bernardino but are not anticipated to result in significant, environmental effects or conflict with City of San Bernardino land use planning as they include improvements in disturbed right-of-way which already contain utility infrastructure. The ~~Draft~~ Final TEIR utilized off-Reservation standards where applicable, including for air quality, noise and traffic analysis and has considered cumulative development. The Project, when considered with other cumulative development, would be consistent with off-Reservation standards with the incorporation of traffic mitigation. For these reasons, the Project, when considered with other cumulative development, would not conflict with off-Reservation land use plans, policies or regulations adopted for the purpose of avoiding or mitigating environmental effects. Accordingly, the Project would not contribute to off-Reservation cumulative impacts to land use.

4.4.7 Noise

Cumulative impacts with respect to noise are discussed in Section 3.8, Noise. The Project could contribute to cumulative off-Reservation traffic noise impacts along with other projects in the area. Traffic noise modeling was conducted to assess cumulative conditions with and without the Project. Effects to ambient noise levels at sensitive receptors would be less than the considered significance threshold of 5 dBA. As such, the Project's contribution to noise impacts would be less than cumulatively considerable.

4.4.8 Public Services

As described in Section 3.9, Public Services, the Project site would be adequately served by the San Manuel Fire Department, Tribal Department of Public Safety and San Bernardino County Sheriff's Department and Office of the District Attorney. Thus, the Project's contribution to public services impacts would be less than cumulatively considerable.

The Project would not contribute to cumulative impacts with respect to schools as the Project does not increase demands on these facilities.

4.4.9 Transportation and Traffic

Cumulative impacts with respect to traffic are discussed in Section 3.10, Transportation and Traffic, and the Traffic Impact Analysis (Appendix D). The Traffic Impact Analysis assesses cumulative impacts for Existing, 2020, 2022 and 2040 traffic conditions. Phase 1 of the Project would contribute to a significant cumulative impact at the intersection of Arden Avenue and Highland Avenue in 2040 and Phase 2 of the Project would contribute to a significant cumulative impact the same intersection under Existing and 2022 conditions (i.e. upon opening of Phase 2) or 2040 conditions. Mitigation Measure 3.10-1 is recommended for the impact at this intersection and would fully mitigate the impact to a less-than-significant level.

4.4.10 Utilities and Service Systems

As discussed in Section 3.11, Utilities and Service Systems, the East Valley Water District has both short-term and long-term water and wastewater capacity to serve the Project. The long-term assumptions of capacity include growth assumptions within the 2015 San Bernardino Valley Regional Urban Water Management Plan, the 2014 EVWD Water System Master Plan and the 2013 EVWD Wastewater Collection System Master Plan. As the Tribe is coordinating with EVWD and there is adequate short-term and long-term capacity, the Project's contribution to water and wastewater facility impacts would be less than cumulatively considerable.

As discussed in Section 3.12, Water Resources, the Project does not increase demands on existing stormwater facilities and, thus, would not contribute to cumulative impacts with respect to such stormwater facilities.

4.4.11 Water Resources

The Project includes development of a Stormwater Pollution Prevention Plan which would be followed throughout the duration of construction in compliance with a National Pollutant Discharge Elimination System (NPDES) Construction General Permit. Off-Reservation projects are required to adhere to NPDES requirements and/or the requirements of the adopted City or County stormwater program. As such, the Project's contribution to stormwater quality impacts would be less than cumulatively considerable.

The Project would not contribute to cumulative impacts with respect to drainage patterns, groundwater recharge or flooding as the Project does not increase stormwater flows or impervious surfaces and is not located within a floodplain.

4.5 Alternatives

The Tribe is considering energy variant alternatives as discussed in Chapter 2, Project Description. The Tribe also considered alternatives to the Project including a No Action Alternative and Higher Intensity Alternatives as discussed below.

4.5.1 No Action Alternative

The No Action Alternative assumes that the Project would not be implemented. The existing casino would continue to operate on the Project site. The No Action Alternative would not result in significant off-Reservation environmental impacts. Under the No Action Alternative, traffic volumes to the existing casino would remain similar to existing conditions and thus there would be no additional contribution to the traffic impact at Arden Avenue and Highland Avenue. However, as shown in the Traffic Analysis, this intersection would eventually be cumulatively impacted by other new projects and such new projects would be required to implement a measure similar to that identified for the proposed Project.

4.5.2 Higher Intensity Alternatives

The Tribe considered development of larger facilities in comparison to the proposed Project including an increased number of hotel rooms. In comparison to the proposed Project, impacts would be greater.

CHAPTER 5

Mitigation Measures

5.1 Introduction

The following mitigation measure shall be implemented as part of the Project. This mitigation measure is considered to be feasible by the Tribe.

Mitigation Measure 3.10-1: Arden Avenue/Highland Avenue Intersection Improvements – the Applicant shall pay a fair-share contribution to stripe the northbound through lane to a second northbound left-turn lane and restripe the northbound right-turn lane to a northbound shared through-right-turn lane on Arden Avenue; and modify the existing traffic signal and include the northbound and southbound left-turn movements as lead-lag to avoid conflict.

CHAPTER 6

Agency and Public Comments

6.1 Summary of Notice of Preparation Comments

The Tribe filed a Notice of Preparation (NOP) of a Draft TEIR on November 7, 2017 in accordance with Section 11.2 of the Compact, which is included as **Appendix A**. Comments on the NOP were accepted for a 30-day period ending on December 7, 2017 and comments received during that time are included in **Appendix B**.

The following is a summary of comments related to the scope and content of the Draft TEIR that were received, acknowledged and considered in the scope and content of the Draft TEIR and the Final TEIR:

- **Public Outreach** – A comment was received regarding the steps taken during the process to reach the public and stakeholders.
- **Project Description** – Comments requested to know the height of the proposed hotel and parking structure. A comment suggested designating smoke-free areas of the expanded facilities. A comment suggested design of the hotel roof and parking structure to ensure public safety. A comment was received regarding what permits, future actions or approvals would be required.
- **Aesthetics** – Comments were received regarding lighting at the proposed parking structure. Comments were received regarding the potential changes to hillside views. Comments were received regarding the potential of the proposed hotel and parking structure to produce glare, reflection, or shadow onto neighboring residential areas. A comment was received suggesting no banners, bright signs or advertising on the exterior of the new parking structure or hotel. A comment was received regarding the potential for construction lighting to shine off-Reservation.
- **Air Quality/Energy/Greenhouse Gas Emissions** – A comment suggested use of the South Coast Air Quality Management District (SMAQMD) California Environmental Quality Act (CEQA) Air Quality Handbook, CalEEMod land use emissions software. A comment requested that the TEIR quantify criteria pollutant emissions and compare the results to SCAQMD's CEQA regional pollutant emissions significance thresholds to determine air quality impacts. A comment recommended calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs) or performing dispersion modeling as necessary. Comments requested identification of construction-related (heavy equipment, delivery trucks, chemicals) and operation-related air quality impacts, including impacts from indirect sources, such as sources that generate or attract vehicular trips. A comment recommended a mobile source health risk assessment if the project would

generate or attract vehicular trips, especially heavy-duty diesel-fueled vehicles. A comment discussed that an analysis of all toxic air contaminants should also be included. A comment discussed the potential for increased air pollution from cars, delivery trucks, buses and emergency vehicles. A comment was received regarding construction dust meeting AQMD standards.

- Geology and Soils – A comment was received regarding whether the project is located on an active fault. A comment recommended the use of strict earthquake construction standards and compliance with State and local building codes.
- Hazards and Hazardous Materials – A comment was received recommending an emergency evacuation plan.
- Land Use – A comment was received regarding the compatibility of the project with the surrounding residential neighborhoods, with respect to height.
- Noise – Comments were received regarding the potential for noise during construction and operation. A comment was received requesting restriction of construction from Monday to Friday 8 a.m. to 5 p.m. A comment was received regarding the potential for vibration from construction.
- Public Services/Public Safety – Comments were received regarding public safety and crime impacts. A comment suggested increased police presence in surrounding neighborhoods. A comment was received regarding the need for additional emergency personnel including such as fire, paramedic and police to serve the expansion. A comment was received regarding the potential for hotel guest to view residential properties.
- Transportation and Traffic – Comments were received regarding potential impacts to existing highway facilities and other transportation facilities, particularly the Highland Avenue Interchange. A comment requested coordination with Omnitrans and consideration of bus stops and pedestrian access to the proposed expansion. Comments were received regarding the potential for traffic in local neighborhoods. Comments were received regarding illegal U-turns and speeding in neighborhoods. Comments were received requesting left turns be allowed from Lynwood Drive to the casino property to reduce illegal U-turns. A comment suggested a solar-powered flashing sign to discourage U-turns. A comment suggested changing the language of the signs on southbound N Victoria Avenue from “No Turns” to “No Right Turn”. A comment recommended construction of a handicap accessible pedestrian and bicycle bridge to cross N Victoria Avenue near Lynwood Drive and/or Citrus Street. Comments were received regarding emergency access. A comment was received recommending traffic control before and after events. A comment was received concerning whether Piedmont gates will be open to traffic.
- Comments were received regarding traffic on the following roadways:
 - E Lynwood Drive
 - N Victoria Avenue
 - E Highland Avenue
 - E Highland Avenue exit from highway
 - Los Feliz Drive

- Citrus Avenue
 - Orange Street
 - Mirada Road
- Utilities and Service Systems – A comment was received regarding the capacity of water and sewer to serve the expansion.
 - Water Resources – A comment was received regarding water quality from project parking areas and streets leading to the project.

The following comments were received and acknowledged but are considered outside of the scope and content of the Draft TEIR and the Final TEIR:

- Economic impact analysis on off-Reservation businesses and property values. The proposed facilities are anticipated to continue to positively affect the local and regional economy through the addition of jobs during construction and operation.
- The requirements of CEQA, Assembly Bill 52, and Senate Bill 18 related to evaluation of cultural/historic resources. These State laws are not applicable to the Project.
- Anecdotal statements regarding existing facilities or the surrounding neighborhood. These comments are acknowledged but lack evidence for substantiation.
- General support and opposition. These comments are acknowledged but do not relate to the scope and content of the Draft TEIR and the Final TEIR.
- Questions about off-Reservation properties that are not directly impacted by the Project are considered outside the scope of the Draft TEIR and the Final TEIR.
- Relocation of the Project to near the San Bernardino Airport property or Glen Helen Amphitheatre. These sites are not considered viable alternatives as they would not enhance the experience of existing customers. Additionally, Class III gaming-related facilities are not allowable on off-Reservation property.
- Stormwater runoff on Arden Avenue, between Piedmont Drive and E Lynwood Drive. This is outside of the Project site and the Project does not contribute to this runoff.

6.2 Draft TEIR Comments and Responses

The Draft TEIR was released for public and agency review on January 10, 2018 and the public review period ended on February 26, 2018. During this review period, on January 25, 2018, the Tribe held a public information meeting on the Draft TEIR at the San Manuel Village Events Center. Approximately 93 members of the public, including residents, community leaders, and city officials attended the meeting. A court reporter was available to take verbal comments.

Comments received during the review period, including comments received at the public information meeting, are listed in **Table 6-1** and included in **Appendix G**. Responses to comments are provided in **Tables 6-2** through **6-4**. Where appropriate, responses are cross-referenced.

TABLE 6-1
DRAFT TEIR COMMENTS

Letter Number	Commenter	Date
Agency Comment Letters		
<u>A1</u>	<u>Mark Roberts, California Department of Transportation</u>	<u>3/21/2018</u> <u>and</u> <u>2/21/2018</u>
<u>A2</u>	<u>Paul Granillo, Inland Empire Economic Partnership</u>	<u>n.d.</u>
<u>A3</u>	<u>Douglas Kleam, Dignity Health</u>	<u>2/16/2018</u>
<u>A4</u>	<u>Patrick McClenahan, Goodwill Southern California</u>	<u>2/15/2018</u>
<u>A5</u>	<u>Judi Penman, San Bernardino Area Chamber of Commerce</u>	<u>2/21/2018</u>
<u>A6</u>	<u>Dale Marsden, San Bernardino City Unified School District</u>	<u>2/21/2018</u>
<u>A7</u>	<u>P.T. McEwen, Boys & Girls Club of Greater Redlands-Riverside</u>	<u>n.d.</u>
<u>A8</u>	<u>Richard H. Hart, Loma Linda University Health</u>	<u>2/21/2018</u>
<u>A9</u>	<u>Diana Z. Rodriguez, San Bernardino Valley College</u>	<u>2/21/2018</u>
<u>A10</u>	<u>Deborah Barmack, Inland Action</u>	<u>2/26/2018</u>
<u>A11</u>	<u>Jim Brennan, Aquinas High School</u>	<u>2/27/2018</u>
<u>A12</u>	<u>Carlos Rodriguez, Building Industry Association of Southern California</u>	<u>2/28/2018</u>
<u>A13</u>	<u>Heather Neely, Southern California Edison</u>	<u>2/26/2018</u>
<u>A14</u>	<u>Scott Morgan, California State Clearinghouse</u>	<u>2/26/2018</u>
Individual Comment Letters		
<u>I1</u>	<u>Dave Van Buren</u>	<u>1/22/2018</u>
<u>I2</u>	<u>Geri Conway</u>	<u>1/22/2018</u>
<u>I3</u>	<u>Mr. & Mrs. J. Williams</u>	<u>1/19/2018</u>
<u>I4</u>	<u>Linda Massenzo</u>	<u>1/25/2018</u>
<u>I5</u>	<u>Kellen Ricker</u>	<u>1/25/2018</u>
<u>I6</u>	<u>Thomas Dillon</u>	<u>1/25/2018</u>
<u>I7</u>	<u>Rochelle Oquendo</u>	<u>1/25/2018</u>
<u>I8</u>	<u>Ginger Lassiter</u>	<u>1/25/2018</u>
<u>I9</u>	<u>Juan De La Rosa</u>	<u>1/25/2018</u>
<u>I10</u>	<u>Brad Orescanin</u>	<u>1/25/2018</u>
<u>I11</u>	<u>Chris Waters</u>	<u>1/25/2018</u>
<u>I12</u>	<u>Blake MacDonald</u>	<u>1/25/2018</u>
<u>I13</u>	<u>Charles Ballew</u>	<u>1/25/2018</u>
<u>I14</u>	<u>Bettye Flamish</u>	<u>1/25/2018</u>
<u>I15</u>	<u>William and Judy Yamaguchi</u>	<u>1/25/2018</u>
<u>I16</u>	<u>Dean Werner</u>	<u>2/1/2018</u>
<u>I17</u>	<u>Linda Massenzo</u>	<u>2/14/18</u>
<u>I18</u>	<u>Shirley Dorsey</u>	<u>2/13/2018</u>
<u>I19</u>	<u>Angela Ukiru</u>	<u>2/20/2018</u>
<u>I20</u>	<u>Janice West</u>	<u>2/23/2018</u>

TABLE 6-1
DRAFT TEIR COMMENTS

<u>Letter Number</u>	<u>Commenter</u>	<u>Date</u>
<u>I21</u>	<u>Ralph Abramo</u>	<u>2/26/2018</u>
<u>I22</u>	<u>Emi Mendez</u>	<u>2/26/2018</u>
<u>I23</u>	<u>Ralph Abramo</u>	<u>2/26/2018</u>
<u>I24</u>	<u>Doug and Mary Betten</u>	<u>2/26/2018</u>
<u>I25</u>	<u>Ramiro Gomez Sr.</u>	<u>2/26/2018</u>
Public Meeting Transcript		
<u>T1</u>	<u>Jason Eshelman</u>	<u>1/25/2018</u>
<u>T2</u>	<u>Joalene and Stephanie</u>	<u>1/25/2018</u>
<u>T3</u>	<u>David Lassiter</u>	<u>1/25/2018</u>
<u>T4</u>	<u>Unidentified</u>	<u>1/25/2018</u>
<u>T5</u>	<u>Justin Tillman</u>	<u>1/25/2018</u>
<u>T6</u>	<u>Gary Quiel</u>	<u>1/25/2018</u>
<u>T7</u>	<u>Art</u>	<u>1/25/2018</u>

TABLE 6-2
RESPONSES TO COMMENTS FROM AGENCIES AND ORGANIZATIONS

Number	Response
Agency Comment Letter 1. Mark Roberts, Department of Transportation	
A1-1	<p>The comment suggests not using Live Theater Code 441 for the Traffic Impact Analysis (TIA).</p> <p><u>Comment noted; however, the "Live Theater" land use is the most appropriate and applicable based on the Institute of Transportation Engineers (ITE) land use options. Most of the theater patrons have been captured in the casino trip generation category, since the Live Theater trip would likely include a visit to the casino. The analysis is considered conservative as it assumes 100% occupancy of the performance venue on weekdays and provides no reduction from shared trips. Furthermore, based on the typical performance times, very few trips would occur during the peak hour on a weekday and the peak hour weekend trips are reflected in the trip generation forecast.</u></p>
A1-2	<p><u>The comment notes that comments #3 and 5c from Caltrans' letter dated February 21, 2018 have been addressed.</u></p> <p><u>Comment noted. See Response to Comment A1-5 regarding the letter from Caltrans submitted on February 21, 2018.</u></p>
A1-3	<p><u>The comment notes that comments #6a and b from Caltrans' letter dated February 21, 2018 have been addressed.</u></p> <p><u>Comment noted. See Response to Comment A1-5 regarding the letter from Caltrans submitted on February 21, 2018.</u></p>
A1-4	<p><u>The comment notes that Caltrans considers comments #1, 2, 4, 5a, 5b, and 8 from their letter dated February 21, 2018 to be addressed or considered non-applicable.</u></p> <p><u>Comment noted. See Response to Comment A1-5 regarding the letter from Caltrans submitted on February 21, 2018.</u></p>
A1-5	<p><u>A comment letter from Caltrans was submitted February 21, 2018 and the Tribe met with Caltrans to discuss such comments on February 21, 2018, March 9, 2018 and March 21, 2018. Based upon such discussions, Caltrans submitted a revised comment letter on March 21, 2018. Accordingly the March 21, 2018 letter supersedes the February 21, 2018 letter. Specific comments and responses related to the superseded February 21, 2018 letter are summarized below:</u></p> <ol style="list-style-type: none"> 1) <u>The comment recommends correcting the published data on page 16 of the TIA from March 2013 to March 2003.</u> <u>See Response to Comment A1-4. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed or is no longer applicable.</u> <u>Please note that the Revised TIA (Appendix E) was updated accordingly in the Final TEIR.</u> 2) <u>The comment recommends including the SR-210/Del Rosa Avenue Interchange in the analysis.</u> <u>See Response to Comment A1-4. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed or is no longer applicable.</u> <u>In addition, it is not anticipated that Project traffic would utilize this interchange since no casino patron access is currently permitted from either Piedmont Drive/Foothill Drive (closed access gate to Reservation) or Lynwood Drive (no turns allowed to or from casino via Lynwood Drive). Project traffic via State Route 210 (SR-210) utilizes the Highland Avenue exit. Therefore, no traffic impact analysis of the SR-210/Del Rosa Interchange is necessary.</u> 3) <u>The comment suggests considering a weaving analysis on the mainline (SR-210) between Del Rosa Avenue and Highland Avenue.</u> <u>See Response to Comment A1-2. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed.</u> <u>Further, since the Project is not proposing any improvements to the freeway mainline (SR-210), which would affect the weaving condition on this (or any) section of SR-210, the preparation of a weaving analysis is not warranted. The requested approach is not typical for non-highway project specific TIAs. It should be noted that this is a non-highway project.</u>

TABLE 6-2
RESPONSES TO COMMENTS FROM AGENCIES AND ORGANIZATIONS

Number	Response
A1-5 (cont.)	<p>4) <u>The comment suggests providing queue lengths for all movements at ramps intersections in provided tables.</u> <u>See Response to Comment A1-4. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed or is no longer applicable.</u> <u>Queue length tables have been added as Appendix F to the Final TEIR.</u></p> <p>5a) <u>The comment suggests, for the year 2020 Saturday PM Peak Hour + Project (Phase I), that the LOS for each phase be operated at acceptable LOS D or better.</u> <u>See Response to Comment A1-4. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed or is no longer applicable.</u> <u>Additionally, the Highway Capacity Manual (HCM) indicates that the average delay should be reported for signalized intersections, which is consistent with Caltrans, County, and City Guidelines. The requested approach is not typical for non-highway project specific TIAs. It should be noted that this is a non-highway project.</u></p> <p>5b) <u>The comment suggests, for the year 2020 Saturday PM Peak Hour + Project (Phase I), that a volume over capacity ratio greater than or equal to one is considered a LOS F.</u> <u>See Response to Comment A1-4. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed or is no longer applicable.</u> <u>Additionally, this condition is not considered an impact based upon applicable guidelines for California Environmental Quality Act (CEQA) projects and thus would not be considered an impact for TEIRs. It should be noted that HCM 6th Edition, Chapter 19: Signalized Intersections states that "for approach-based and intersection-wide assessments, LOS is defined solely by control delay". Please note that for all Caltrans locations, the LOS has a V/C of less than 1.0.</u></p> <p>5c) <u>The comment notes for the year 2020 Saturday PM Peak Hour + Project (Phase I), queue lengths on Highland Avenue between EB off ramp and Arden Avenue, and Arden Avenue and WB off ramp exceed the intersection spacing.</u> <u>See Response to Comment A1-2. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed.</u> <u>Additionally, this condition is not considered an impact based upon applicable guidelines for CEQA projects and accordingly should not be applicable for TEIRs.</u></p> <p>6a) <u>The comment notes that for year 2022 Saturday PM Peak Hour + Project (Phase 2) with mitigation that most movements in lane group LOS for intersection #10 are failing.</u> <u>See Response to Comment A1-3. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed.</u> <u>As noted in 5a) above, the HCM indicates that the average delay should be reported for signalized intersections, which is consistent with Caltrans, County, and City Guidelines. The requested approach is not typical for non-highway project specific TIAs. It should be noted that this is a non-highway project. Please note that the overall average delay for the intersection is acceptable consistent with CEQA requirements and those used for the TEIR.</u></p> <p>6b) <u>The comment notes that for year 2022 Saturday PM Peak Hour + Project (Phase 2) with mitigation, that queue lengths on Highland Avenue between EB off ramp and Arden Avenue, and Arden Avenue and WB off ramp exceed the intersection spacing and thus the proposed northbound improvement will not improve LOS.</u> <u>See Response to Comment A1-3. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed.</u> <u>As noted in 5c) above, this condition is not considered an impact based upon applicable guidelines for CEQA projects and accordingly should not be applicable for TEIRs. Also, the mitigation identified in the TEIR/TIA improves the overall intersection delay/LOS to an acceptable level as required by CEQA and the standards used for the TEIR.</u></p> <p>7) <u>The comment suggests not using Live Theater Code 441 for the TIA.</u> <u>See Response to Comment A1-1.</u></p>

TABLE 6-2
RESPONSES TO COMMENTS FROM AGENCIES AND ORGANIZATIONS

Number	Response
A1-5 (cont.)	<p>8) <u>The comment recommends using a K-factor of 9% AM and 11% PM to convert daily to peak hour, or for a multi-peak hour an 8% and 10% K-factor.</u></p> <p><u>See Response to Comment A1-4. Caltrans concluded in their letter dated March 21, 2018 that this comment has been addressed or is no longer applicable.</u></p> <p><u>The rates and factors were obtained from the County of San Diego's Traffic Needs Assessment of Tribal Development Projects in the San Diego Region, (dated March 2003), the Sycuan Hotel & Casino Expansion TIA, prepared by LLG, (dated February 2016), the ITE Trip Generation Manual, 9th Edition (2012), and the San Diego Association of Governments (SANDAG).</u></p>
Agency Comment Letter 2. Paul Granillo, Inland Empire Economic Partnership	
A2-1	<p><u>Inland Empire Economic Partnership provided a letter in support of the Project and its economic benefits to the region.</u></p> <p><u>Comment noted.</u></p>
Agency Comment Letter 3. Douglas Kleam, Dignity Health	
A3-1	<p><u>Dignity Health provided a letter in support of the Project and its economic benefits to the region.</u></p> <p><u>Comment noted.</u></p>
Agency Comment Letter 4. Patrick McClenahan, Goodwill Southern California	
A4-1	<p><u>Goodwill Southern California provided a letter in support of the Project and its economic benefits to the region.</u></p> <p><u>Comment noted.</u></p>
Agency Comment Letter 5. Judi Penman, San Bernardino Area Chamber of Commerce	
A5-1	<p><u>San Bernardino Area Chamber of Commerce provided a letter in support of the Project and its economic benefits to the region.</u></p> <p><u>Comment noted.</u></p>
Agency Comment Letter 6. Dale Marsden, San Bernardino City Unified School District	
A6-1	<p><u>San Bernardino City Unified School District provided a letter in support of the Project and its economic benefits to the region.</u></p> <p><u>Comment noted.</u></p>
Agency Comment Letter 7. P.T. McEwen, Boys & Girls Club of Greater Redlands-Riverside	
A7-1	<p><u>Boys & Girls Club of Greater Redlands Riverside provided a letter in support of the Project and its economic benefits to the region.</u></p> <p><u>Comment noted.</u></p>
Agency Comment Letter 8. Richard H. Hart, Loma Linda University Health	
A8-1	<p><u>Loma Linda University Health provided a letter in support of the Project and its economic benefits to the region.</u></p> <p><u>Comment noted.</u></p>
Agency Comment Letter 9. Diana Z. Rodriguez, San Bernardino Valley College	
A9-1	<p><u>San Bernardino Valley College provided a letter in support of the Project and its economic benefits to the region.</u></p> <p><u>Comment noted.</u></p>

TABLE 6-2
RESPONSES TO COMMENTS FROM AGENCIES AND ORGANIZATIONS

Number	Response
Agency Comment Letter 10. Deborah Barmack, Inland Action	
A10-1	<u>Inland Action provided a letter in support of the Project and its economic benefits to the region.</u> <u>Comment noted.</u>
Agency Comment Letter 11. Jim Brennan, Aquinas High School	
A11-1	<u>Aquinas High School provided a letter in support of the Project and its economic benefits to the region.</u> <u>Comment noted.</u>
Agency Comment Letter 12. Carlos Rodriguez, Building Industry Association of Southern California	
A12-1	<u>Building Industry Association of Southern California provided a letter in support of the Project and its economic benefits to the region.</u> <u>Comment noted.</u>
Agency Comment Letter 13. Heather Neely, Southern California Edison	
A13-1	<u>The comment provides an overview of the Project description.</u> <u>Comment noted.</u>
A13-2	<u>The comment states that the TEIR did not analyze the Project's impact to Southern California Edison (SCE) facilities nor did it analyze the impacts of off-Reservation SCE construction activities, including aesthetics, air quality, noise, traffic, cultural resources, and biological resources, to a level that would allow SCE to utilize the TEIR without separate permitting with the California Public Utilities Commission.</u> <u>Comment noted. SCE currently provides power to the existing casino through 12 kilovolt (kV) power lines from the Del Rosa substation and has stated to the Tribe that the Project can be powered using 12 kV lines from the existing Del Rosa substation. The TEIR considers three energy alternatives to using the 12 kV power lines, including a 66 kV substation (and associated infrastructure including new 66 kV transmission poles, new 66 kV transmission conductor, and telecommunications lines on existing structures), a fuel cell facility and a cogeneration facility. The fuel cell and cogeneration facilities would be sited on-Reservation. Accordingly, new off-Reservation utility infrastructure, including SCE infrastructure, is proposed as an alternative power source and is not needed to provide power to the Project. The Tribe has contracted with SCE to conduct a Method of Service study for the proposed installation of the 66kV on-Reservation substation alternative. As part of the ongoing Method of Service Study, SCE informed the Tribe that the new 66 kV lines would travel to the Reservation from the Del Rosa substation along Arden Avenue and Piedmont Drive in SCE existing disturbed right of way. Other than the new 66 kV lines and telecommunications lines, SCE has not indicated that any additional off-Reservation work to its facilities would be required or that there would be any additional off-Reservation impact. Accordingly, the Draft TEIR considered the off-Reservation impacts of the 66 kV substation and associated infrastructure including new 66 kV transmission poles, new 66 kV transmission conductor, and telecommunications lines and concluded that there were no significant off-Reservation impacts. Such analysis took into consideration aesthetics, air quality, noise, traffic, cultural resources, and biological resources.</u> <u>The Final TEIR has been revised to address clarification provided by SCE that the new 66 kV poles and telecommunication lines would be installed in addition to the 66 kV transmission lines required to support the new 66 kV substation on the Reservation.</u>
Agency Comment Letter 14. Scott Morgan, State of California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	
A14-1	<u>The State Clearinghouse acknowledged compliance with State Clearinghouse review requirements. No State agencies submitted comments to the Clearinghouse regarding the Project.</u> <u>Comment noted.</u>

**TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS**

Number	Response
Individual Comment Letter 1. Dave Van Buren	
<u>11-1</u>	<p><u>The commenter raises concerns regarding the comment letter submittal process, including an incorrect email address contained in a newsletter provided to neighbors.</u></p> <p><u>The Notice of Preparation of the Draft TEIR, the Notice of Completion of the Draft TEIR, the newspaper notices, official mailings and the TEIR website contained the correct email address to provide comments.</u></p>
<u>11-2</u>	<p><u>The commenter opposes the casino expansion as it would worsen traffic and crime in adjacent neighborhoods.</u></p> <p><u>Regarding traffic, refer to Section 3.10 of the TEIR and the TIA (Appendix E). With improvements to the Arden Avenue/Highland Avenue Intersection (Mitigation Measure 3.10-1), all study intersections would operate at an acceptable level of service with the Project.</u></p> <p><u>Regarding crime, as discussed in Section 3.9 of the TEIR, the Tribe has an agreement with the San Bernardino County Sheriff's Department to provide additional law enforcement and public safety services to the Reservation. The Tribe provides funding for two deputies to provide 24/7 coverage at the existing casino. In addition, the Tribe currently funds two County Sheriff's Deputies to supplement existing public safety coverage at the casino for peak hours on Thursday, Friday and Saturday. Deputies are permitted to leave the casino to respond to high priority service calls in the area. The San Manuel Department of Public Safety has 400 employees, including patrol, dispatch, management and canine units. The Department of Public Safety staffing would be increased for the Project. In addition, the Tribe has provided a \$4.2 million grant that will be used over three-plus years starting in 2018 to increase police visibility and public safety in the community surrounding the Reservation, including the deployment of community service officers, parking control officers and citizen patrol volunteers and the purchase of police vehicles, signage, criminal surveillance cameras and license plate recognition systems.</u></p>
<u>11-3</u>	<p><u>The commenter opposes the Project location and suggests alternate locations for the Project.</u></p> <p><u>As discussed in Section 6.1 of the TEIR, alternative sites are not considered viable, as they would not enhance the experience of existing customers and Class III gaming-related facilities are not allowable on off-Reservation property. The potential Off-Reservation impacts from the Project on traffic, air quality, noise and public services, are discussed within the TEIR. With Project design features and mitigation, all impacts to the surrounding neighborhood would be reduced to a less-than-significant level.</u></p>
Individual Comment Letter 2. Geri Conway	
<u>12-1</u>	<p><u>The comment raises concerns regarding the management of lighting, noise, traffic, air pollution and trash for the Project.</u></p> <p><u>The TEIR assesses the potential for environmental effects on the surrounding neighborhood, including, but not limited to lighting (Section 3.2), traffic (Section 3.10), noise (Section 3.8) and air quality (Section 3.3). The Project incorporates light shielding for nighttime lighting to ensure impacts remain less than significant.</u></p> <p><u>Regarding speeding traffic, see Response to Comment 11-2 regarding existing and increased law enforcement and security measures.</u></p> <p><u>Regarding ambulance noise, 24-hour noise measurements were taken at several locations and found to be less than significant; additionally, emergency vehicle sirens are exempt from local noise control regulations.</u></p> <p><u>Regarding trash, the existing casino has and the Project would have regular litter pick up in the outside parking lot and other facilities.</u></p>
<u>12-2</u>	<p><u>The comment suggests building a pedestrian bridge over Victoria Avenue.</u></p> <p><u>The TEIR (Section 3.10) and TIA (Appendix E) analyze the traffic impacts of the Project, including pedestrian crossings, and concluded that there were no significant impacts. There are existing pedestrian crossings at stoplights. The Tribe has funded and anticipates continuing to fund crossing guards for Belvedere Elementary and Serrano Middle Schools.</u></p>

**TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS**

Number	Response
<u>12-3</u>	<p><u>The commenter states that they will attend the informational meeting to hear neighbors' concerns and how San Manuel will manage spillover effects into adjacent neighborhoods.</u></p> <p><u>Comments received in writing or provided to the court reporter at the public meeting are addressed in this section of the Final TEIR. The TEIR assesses the potential for environmental effects on the surrounding neighborhood, including, but not limited to: air quality (Section 3.3), noise (Section 3.8), traffic (Section 3.10), and visual impacts (Section 3.2).</u></p>
Individual Comment Letter 3. Mr. and Mrs. J. Williams	
<u>13-1</u>	<p><u>The commenter opposes the Project location and suggests alternate locations for the Project.</u></p> <p><u>See Response to Comment I1-3 regarding alternate Project locations and the analysis of Project impacts on off-Reservation areas.</u></p>
<u>13-2</u>	<p><u>The comment states that the hotel will tower over the area, cause shadows on homes and block existing views.</u></p> <p><u>Section 3.2.2 of the TEIR assesses the visual impacts of the proposed hotel, including an analysis of shadow and changes to existing views. As the hotel would alter views of previously developed hillside areas and would not create a sustained shadow on off-Reservation areas, this impact was considered less than significant.</u></p>
<u>13-3</u>	<p><u>The comment raises concerns regarding increased traffic and the resulting air pollution.</u></p> <p><u>The TEIR's traffic study conservatively estimated that the Project may generate a maximum of 12,300 vehicle trips on a weekday and 15,400 vehicle trips on a weekend day (i.e., Saturday) and determined that the Project would not have a significant impact with the implementation of the proposed mitigation measures at the intersection of Arden Avenue and Highland Avenue. The air quality study used these maximum traffic counts to estimate the maximum daily air pollutant emissions (along with other conservative assumptions regarding air emission sources from Project operations). As shown in Table 3.3-5 of the TEIR, mobile sources (vehicles) accounted for the majority of Project operational air emissions. NOx was the only pollutant exceeding the South Coast Air Quality Management District (SCAQMD) mass-rate based screening threshold and warranted further analysis. To further analyze the Project's NOx emissions, the TEIR conducted NOx air dispersion modeling for the roadway segments that are expected to experience the most Project traffic. As demonstrated by results in Table 3.3-6 of the TEIR, NOx concentration would be below the most stringent federal and State ambient air quality standards. Using the maximum traffic counts from the TEIR's traffic study and approved models and methodologies of SCAQMD, California Air Resources Board and U.S. Environmental Protection Agency, the TEIR demonstrated that the Project's impact on air quality would be less than significant.</u></p>
<u>13-4</u>	<p><u>The comment suggests a non-smoking facility to reduce air pollution.</u></p> <p><u>Comment noted. As with the existing casino, the Project will have an advanced air/smoke filtration system. The existing casino has a non-smoking area. It is currently planned for a large portion of the hotel rooms to be designated as non-smoking.</u></p>
<u>13-5</u>	<p><u>The comment suggests developing an off-Reservation emergency evacuation plan for the residential neighborhoods.</u></p> <p><u>The emergency evacuation of off-Reservation areas, including residential neighborhoods, is within the jurisdiction of City, County and State agencies. The Tribe prepared a Reservation Evacuation Plan to ensure a timely evacuation of the Reservation and casino in a manner that does not impede the evacuation of adjacent neighborhoods nor inhibits the ingress of emergency vehicles to the Project site. The Reservation Evacuation Plan was coordinated with local fire and police departments, California Highway Patrol and Caltrans and is periodically reviewed and updated.</u></p>
<u>13-6</u>	<p><u>The comment states that the Project is not compatible with the surrounding neighborhood and discusses the Project height.</u></p> <p><u>Section 3.7 of the TEIR acknowledges that there is off-Reservation residential development surrounding the existing casino facilities and the Project site. The Project site is located on a portion of the Reservation which is a commercial area and thus the expansion would be consistent with the existing on-Reservation land use. Section 3.2 of the TEIR assesses the potential visual impacts associated with the height of the hotel (including shadow and effects to scenic vistas) and determines that impacts would be less than significant.</u></p>

TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS

Number	Response
<u>I3-7</u>	<p><u>The comment suggests restricting the hours of construction to Monday - Friday 8:00 am to 5:00 pm.</u></p> <p><u>Because the homes closest to the on-site construction are in the City of San Bernardino, the Project has voluntarily agreed to hours specified in the City's Municipal Code for outdoor construction. Section 8.54.070 of the City of San Bernardino Municipal Code states that no person shall be engaged or employed, or cause any other person to be engaged or employed, in any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours of 7:00 AM to 8:00 PM.</u></p>
<u>I3-8</u>	<p><u>The comment suggests prohibiting the use of vibration causing construction equipment.</u></p> <p><u>As stated in Section 3.8.2 of the TEIR, during construction, vibration levels at the nearest residences would be below the Federal Transit Administration threshold of 0.20 inches/second PPV and 80 MRS. In addition, as discussed on page 3.8-16 of the TEIR, no pile driving is anticipated to occur during Project construction. Therefore, anticipated vibration from construction activity would be below applicable thresholds and would not result in significant impacts.</u></p>
<u>I3-9</u>	<p><u>The comment raises concerns regarding existing parking structure noise.</u></p> <p><u>Noise measurements were taken at the existing parking garage. As shown in TEIR Table 3.8-1, the average daytime and nighttime noise levels at the entrance of the existing parking structure are 61 dBA and 59 dBA. The noise meter captured all sources of noise reaching the entrance of the structure, including car engines, alarms, talking, etc. and found such noise to not be significant. This 24-hour noise measurement of the existing parking structure provides a representation of expected noise levels from the proposed parking structure. The noise analysis determined that the impact of existing plus Project noise on off-Reservation residences would be less than significant. Emergency vehicle sirens are exempt from the local noise control regulations.</u></p>
<u>I3-10</u>	<p><u>The comment suggests sound-proofing parking areas and the event center.</u></p> <p><u>The TEIR's noise analysis (Section 3.8) has demonstrated that the Project's noise levels would be at an acceptable level and noise impacts would be less than significant. The performance venue would include soundproofing, as described in the Section 2.4 of the TEIR.</u></p>
<u>I3-11</u>	<p><u>The comment suggests updating the noise study to include 24-hour noise monitoring.</u></p> <p><u>As discussed in Section 3.8.1 of the TEIR, noise data was collected for 24 hours at Lynwood Drive and Victoria Avenue, as well as the existing parking structure. An additional 24 hour noise measurement was taken just east of Willow Drive as discussed in Response to Comment I4-1.</u></p>
<u>I3-12</u>	<p><u>The comment raises concern about the height of the parking structure and its noise attenuation.</u></p> <p><u>The commenter incorrectly assumes that a receptor will perceive more noise if the noise source goes higher than if it goes lower from the receptor. In fact, sound travels in the form of waves from its origin, how much sound a receptor perceives is determined by the distance between the source and the receptor; for the same lateral distance, the higher or lower the noise source goes from the receptor, the less sound is perceived because the sound travels a further distance before arriving at the receptor. From a noise point of view, the loudest sound a receptor perceives from a source is when the sound source and the receptor are at the same height, which was the conservative assumption used by the TEIR. The TEIR also conservatively assumed noise from the parking structure travels in open air between the source and the receptor; in fact, the parking structure would have partially open perimeter walls. When considering a receptor that is lower than the parking structure, those perimeter walls would reduce the perceived noise. Nevertheless, even with those conservative assumptions, the TEIR's noise analysis has demonstrated that the Project's noise levels would be at allowable levels and thus less than significant.</u></p>
<u>I3-13</u>	<p><u>The comment suggests building a pedestrian bridge over Victoria Avenue.</u></p> <p><u>Refer to Response to Comment I2-2 regarding a pedestrian bridge.</u></p>

TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS

Number	Response
<u>13-14</u>	<p><u>The comment suggests adding an additional major roadway to the casino complex from Highland Avenue to accommodate increased traffic from construction and operations.</u></p> <p><u>The TEIR (Section 3.10) and TIA (Appendix E) analyzed the Project's impact on traffic, including Highland Avenue and Victoria Avenue, and concluded that with proposed mitigation there would be no significant impacts. Construction traffic would be staggered throughout the day; based on the allowable hours for outdoor construction noise, most construction employees would arrive before the AM peak hour and/or leave after the PM peak hour. Many of the construction vehicles would remain on the Reservation. As described in Section 2, cut and fill would be balanced on the Reservation, reducing the amount of off-Reservation trips. No long-term permanent impacts resulting from construction traffic are anticipated.</u></p>
<u>13-15</u>	<p><u>The comment raises concerns regarding the LOS on Victoria Avenue resulting from the Project. The comment suggests mitigation for Victoria Avenue.</u></p> <p><u>To determine if the Project would create a significant impact along Victoria Avenue, adverse roadway segments were further analyzed in the TEIR/TIA under peak hour conditions to determine if there were any peak hour deficiencies. All study roadway segments are forecast to operate at LOS B or better during the Weekday AM, Weekday PM, and Saturday PM peak hours. As a result, the key study roadway segments are not significantly impacted by Project traffic and therefore no improvements are required.</u></p>
<u>13-16</u>	<p><u>The comment suggests building a pedestrian bridge over Victoria Avenue.</u></p> <p><u>Refer to Response to Comment I2-2 regarding construction of a pedestrian bridge.</u></p>
<u>13-17</u>	<p><u>The comment suggests daily cleanup of trash and debris in parking areas to help prevent pollution and water quality issues.</u></p> <p><u>As with existing casino facilities, the Project would have regular litter pick up in outside parking areas.</u></p>
<u>13-18</u>	<p><u>The commenter opposes the Project location and suggests alternate locations for the Project.</u></p> <p><u>See Response to Comment I1-3 regarding alternate Project locations and the analysis of Project impacts on off-Reservation areas.</u></p>
Individual Comment Letter 4. Linda Massenzo	
<u>14-1</u>	<p><u>The commenter is concerned about noise from the existing casino and requests that noise be measured at her address and that a sound wall is needed.</u></p> <p><u>A 24-hour noise measurement was taken at the eastern boundary of the residence in question from approximately 11:18 A.M. on March 8, 2018 to 12:18 P.M. on March 9, 2018.</u></p> <p><u>The residence in question is located approximately 700 feet west of the proposed performance venue which would include soundproofing. As discussed on page 3.8-19 of the TEIR, the Project's air conditioning units would likely be located on building rooftops and shielded from nearby land uses to attenuate noise; however, no shielding was assumed for purposes of evaluating noise impacts. Existing plus Project noise at the residence was assessed based on a conservative reference noise level for the primary source of mechanical equipment, a conservative assumption that no noise shielding would be included, and a conservative assumption that new HVAC equipment would be located at the point nearest to this residence. The Project's noise level at this residence plus existing noise would result in a combined noise level of 49.1 dBA, an increase in 0.4 dBA during the quietest nighttime hour (48.7 dBA Leq), which is not a perceivable increase in ambient noise. Impacts would be less than significant.</u></p>
Individual Comment Letter 5. Kellen Ricker	
<u>15-1</u>	<p><u>The comment suggests adding traffic lights and widening on-ramps.</u></p> <p><u>The TEIR analyzes the traffic impacts on ramps in the study area. As addressed in Section 3.10.2, impacts to traffic at the Highland Avenue/Arden Avenue intersection would be mitigated to a less than significant level with implementation of Mitigation Measure 3.10-1. Refer to Response to Comment I16-1 regarding SR-210.</u></p>

TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS

Number	Response
<u>15-2</u>	<p><u>The comment asks whether monetary gain for the City has been considered.</u></p> <p><u>As discussed in Section 6.1 of the TEIR, economic impact analysis is considered outside of the scope and content of the TEIR. The proposed facilities are anticipated to continue to positively affect the local and regional economy through the addition of jobs during construction and operation.</u></p>
Individual Comment Letter 6. Thomas Dillon	
<u>16-1</u>	<p><u>The comment suggests conducting a traffic study at Del Rosa Avenue.</u></p> <p><u>It is not anticipated that the Project traffic would utilize this Del Rosa interchange since no casino patron access is currently permitted from either Piedmont Drive/Foothill Drive (closed access gate to Reservation) or Lynwood Drive (no turns allowed to or from casino via Lynwood Drive). Project traffic via SR-210 utilizes the Highland Avenue exit. Therefore, no traffic impact analysis of the SR-210/Del Rosa Interchange is necessary.</u></p>
<u>16-2</u>	<p><u>The comment suggests adding a right hand turn lane instead of re-striping roadways.</u></p> <p><u>The proposed re-striping mitigation addresses the significant impact of the Project and with proposed mitigation the intersection would operate at an acceptable LOS. Adding a right-turn lane (Intersection #10) is not needed or required.</u></p>
Individual Comment Letter 7. Rochelle Oquendo	
<u>17-1</u>	<p><u>The comment suggests proposing a solution for noise.</u></p> <p><u>As discussed in Section 3.8.2 of the TEIR, both construction and operational noise would not exceed the applicable thresholds of significance for off-Reservation neighboring sensitive receptors. As impacts would be less than significant, no mitigation would be necessary.</u></p>
<u>17-2</u>	<p><u>The comment suggests satellite parking.</u></p> <p><u>Adequate parking is proposed on the Reservation and no additional parking would be required.</u></p>
<u>17-3</u>	<p><u>The comment suggests there is an issue with traffic safety.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. See Response to Comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>
<u>17-4</u>	<p><u>The comment suggests foot patrols during high volume periods.</u></p> <p><u>See Response to Comment I1-2 regarding existing and increased law enforcement and security measures. In addition, the casino provides increased security for large events.</u></p>
<u>17-5</u>	<p><u>The comment suggests proposing better walls and landscaping.</u></p> <p><u>The Tribe has committed funds for the repair of existing sound walls along Victoria Avenue in 2018 and the Project would maintain or replace other sound walls where feasible. Aesthetic impacts are assessed within the TEIR (Section 3.2) and no significant impacts were identified; casino facility landscaping would continue to be maintained.</u></p>
Individual Comment Letter 8. Ginger Lassiter	
<u>18-1</u>	<p><u>The comment suggests removing the "no U-turn" sign from Victoria Avenue.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. See Response to Comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>
Individual Comment Letter 9. Juan De Rosa	
<u>19-1</u>	<p><u>The commenter is encouraged about the Project bringing revenue and jobs to the community.</u></p> <p><u>This comment is noted.</u></p>

TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS

Number	Response
Individual Comment Letter 10. Brad Orescanin	
<u>I10-1</u>	<p><u>The commenter suggests hiring local trade union contractors/workers for the Project.</u></p> <p><u>As discussed in Section 4.3.1 of the TEIR, most workers associated with construction and operation of the Project are expected to come from within San Bernardino County and would benefit from the employment opportunities provided by the Project. Other hiring issues are considered outside of the scope of the TEIR.</u></p>
Individual Comment Letter 11. Chris Waters	
<u>I11-1</u>	<p><u>The commenter suggests hiring local trade union contractors/workers for the Project.</u></p> <p><u>See Response to Comment I10-1 regarding local hiring.</u></p>
Individual Comment Letter 12. Blake MacDonald	
<u>I12-1</u>	<p><u>The commenter suggests only hiring union contractors/workers for Project construction.</u></p> <p><u>See Response to Comment I10-1 hiring issues.</u></p>
Individual Comment Letter 13. Charles Ballew	
<u>I13-1</u>	<p><u>The commenter suggests hiring local trade union contractors/workers for the Project.</u></p> <p><u>See Response to Comment I10-1 regarding local hiring.</u></p>
Individual Comment Letter 14. Bettye Flamish	
<u>I14-1</u>	<p><u>The commenter raises concerns regarding an existing gas odor.</u></p> <p><u>The existing casino's and the Project's effluent would meet all applicable standards. As discussed in Section 3.3 (Impact E) of the TEIR, the Project does not include land uses which pose significant odor problems such as agriculture, wastewater treatment plants, food processing and rendering facilities, chemical plants, composting facilities, landfills, waste transfer stations, and dairies. Therefore, the Project would not create objectionable odors that would affect a substantial number of people, and odor impacts would be less than significant.</u></p>
Individual Comment Letter 15. William and Judy Yamaguchi	
<u>I15-1</u>	<p><u>The comment asks whether a third-party environmental agent reviewed the Project's impact to the neighborhoods.</u></p> <p><u>The Tribe serves as the lead agency of the TEIR and provides final review and approval of the TEIR documents. The off-Reservation environmental analysis was prepared by third party environmental consultants, Environmental Science Associates (see Section 7.2 of the TEIR) and Linscott, Law, and Greenspan (Traffic Impact Analysis, Appendix E).</u></p>
<u>I15-2</u>	<p><u>The commenter requests specification on the traffic mitigation at the intersection of Arden Avenue and Highland Avenue.</u></p> <p><u>The TEIR analyzed the traffic impacts within the study area. As addressed in Section 3.10.2, impacts to traffic at the Highland Avenue/Arden Avenue intersection would be mitigated to a less than significant level with implementation of Mitigation Measure 3.10-1.</u></p>
<u>I15-3</u>	<p><u>The commenter raises concern regarding impacts to the area resulting from increased traffic, noise and air quality.</u></p> <p><u>Refer to Section 3.3.2 (air quality), Section 3.8.2 (noise), and Section 3.10.2 (transportation and traffic) of the TEIR regarding impacts to the off-Reservation area resulting from the Project. As discussed in these sections, all impacts to air quality, noise, and traffic would be less than significant with implementation of mitigation.</u></p>

**TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS**

Number	Response
<u>I15-4</u>	<p><u>The comment expresses concern of safety for Belvedere Elementary School children due to the increased traffic.</u></p> <p><u>The Tribe has funded and anticipates continuing to fund crossing guards for Belvedere Elementary School and Serrano Middle School. The new hotel is located on the Reservation and is not adjacent to Lynwood Drive. Refer to Response to Comment I2-2 regarding child safety. Casino patrons would continue to use Victoria Avenue as no access is allowed via Marshall Boulevard. Additionally, the TEIR/TIA analyzes the Project's traffic impacts on local streets and concluded that there were no significant impacts with implementation of proposed mitigation.</u></p>
<u>I15-5</u>	<p><u>The comment asks if the Piedmont Drive entrance to the casino will be closed.</u></p> <p><u>There are currently no plans to open the Piedmont Drive entrance for casino patron traffic.</u></p>
Individual Comment Letter 16. Dean Werner	
<u>I16-1</u>	<p><u>The comment states that additional traffic would impact State Route 210 at the Highland Avenue exit.</u></p> <p><u>As addressed in Section 3.10.2, impacts to traffic at the Highland Avenue/Arden Avenue intersection would be mitigated to a less than significant level with implementation of Mitigation Measure 3.10-1. The Caltrans SR-210 Mixed Flow Lane Project proposes to widen a portion of SR-210 with one mixed flow lane in each direction; the Caltrans project would build a deceleration lane on eastbound SR-210 between the Sterling Avenue undercrossing and the proposed two-lane off-ramp at Highland Avenue, which would help with traffic flow.</u></p>
Individual Comment Letter 17. Linda Massenzo	
<u>I17-1</u>	<p><u>The commenter is concerned about noise from the existing casino and requests that noise be measured at her address and that a sound wall is needed.</u></p> <p><u>See Response to Comment I4-1 regarding noise at this residence.</u></p>
<u>I17-2</u>	<p><u>The comment raises concern with noise, light, privacy, traffic, and property value.</u></p> <p><u>Refer to Section 3.2.2 (aesthetics), Section 3.8.2 (noise), and Section 3.10.2 (transportation and traffic) of the TEIR regarding impacts to the off-Reservation area resulting from the Project. As discussed in Section 6.1 of the TEIR, economic impact analysis on off-Reservation property values is outside the scope and content of the TEIR.</u></p>
Individual Comment Letter 18. Shirley Dorsey	
<u>I18-1</u>	<p><u>The commenter lists positive aspects of the Project and TEIR review process, including increasing community income, increasing jobs, sharing news with neighbors, and soliciting neighbor input.</u></p> <p><u>This comment is noted.</u></p>
<u>I18-2</u>	<p><u>The comment raises a concern regarding increased traffic.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. There are currently no plans to open up alternative routes such as Piedmont Drive to casino patron traffic.</u></p>
<u>I18-3</u>	<p><u>The comment states that there is no turning light at the intersection of Citrus Street and Victoria Avenue.</u></p> <p><u>It is unclear what the comment is suggesting; however, the TEIR/TIA analyzes the Project's traffic impacts on local streets and concluded that there were no significant impacts with the implementation of proposed mitigation. Refer to Response to comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>
<u>I18-4</u>	<p><u>The comment raises concern regarding casino patrons making U-turns and running red lights.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. See Response to Comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>

TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS

Number	Response
<u>I18-5</u>	<p><u>The comment states that increased sirens are heard in the vicinity.</u></p> <p><u>24 hour noise measurements were taken at key locations on-Reservation, which would have captured any sirens in the vicinity and were analyzed with respect to the proposed Project. The analysis concluded that noise resulting from the Project would still be within acceptable thresholds at local residences. Additionally, emergency vehicles sirens are exempt from local noise control regulations. See Response to Comment I3-9 regarding car alarms.</u></p>
<u>I18-6</u>	<p><u>The comment raises concerns about increased foot traffic and litter from the existing casino.</u></p> <p><u>See Response to Comment I2-1 regarding litter resulting from the Project.</u></p> <p><u>See Response to Comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>
<u>I18-7</u>	<p><u>The comment raises concerns regarding local crime increasing due to the existing casino.</u></p> <p><u>Refer to Response to Comment I1-2 regarding additional law enforcement.</u></p>
<u>I18-8</u>	<p><u>The comment suggests increasing security presence for residences near the casino.</u></p> <p><u>Refer to Response to Comment I1-2 regarding additional law enforcement.</u></p>
<u>I18-9</u>	<p><u>The comment suggests locking the gate at Piedmont Drive and Victoria Avenue.</u></p> <p><u>The existing gate on Victoria Avenue (at the Piedmont Drive cul-de-sac) is not located on the Reservation and does not provide access to/from the Reservation. The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. Victoria Avenue would continue to provide access to/from the casino for patrons and employees.</u></p>
<u>I18-10</u>	<p><u>The comment suggests casino guests enter the casino via Citrus Street and Victoria Avenue.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. Casino traffic would continue to use Victoria Avenue.</u></p>
<u>I18-11</u>	<p><u>The comment suggests that children from Serrano Middle School use Citrus Street to enter the school.</u></p> <p><u>The routes that school children use is outside of the jurisdiction of the Tribe and the TEIR. The Tribe provides funding for crossing guards for Belvedere Elementary and Serrano Middle Schools.</u></p>
<u>I18-12</u>	<p><u>The comment suggests building an electric gate at Piedmont Drive and Victoria Avenue.</u></p> <p><u>See Response to Comment I18-9.</u></p>
<u>I18-13</u>	<p><u>The commenter would like to see the neighborhood preserved and protected while San Manuel moves forward with the Project.</u></p> <p><u>Comment noted. See Responses to Comments I18-2 through I18-12 regarding specific issues discussed in the comment letter.</u></p>
Individual Comment Letter 19. Angela Ukiru	
<u>I19-1</u>	<p><u>The commenter is concerned that off-Reservation environmental issues will impact quality of life if not mitigated.</u></p> <p><u>See specific Responses to Comment I19-2 through I19-10 below.</u></p>

TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS

Number	Response
I19-2	<p><u>The comment asks if the current sound wall at Valaria Drive and Rockford, as well as landscaping and lighting will be improved.</u></p> <p><u>See Response to Comment I7-5 regarding sound walls. The TEIR assesses the potential for environmental effects on the surrounding neighborhood, including noise (Section 3.8), and determined that impacts would be less than significant.</u></p> <p><u>Aesthetic impacts are assessed within the TEIR (Section 3.2) and no significant impacts were identified; casino facility landscaping would continue to be maintained and the Project would be similarly landscaped. The Project would provide shielding consistent with those used on the existing casino and parking structure to reduce light and glare on adjacent off-Reservation residences.</u></p>
I19-3	<p><u>The comment states that an East Valley Water District sewer hole and its odor is a serious air quality issue in the area.</u></p> <p><u>See Response to Comment I14-1.</u></p>
I19-4	<p><u>The commenter is concerned with opossums in the neighborhood and the Project's impact on their habitat.</u></p> <p><u>Project construction would be limited to developed portions of the Reservation and any off-Reservation infrastructure improvements would occur within developed right-of-way. As such, no natural wildlife habitats would be impacted by the Project. Impacts to biological resources are discussed in Section 3.4 of the TEIR and were determined to be less than significant. It should be noted that opossums are not considered a special-status species by local, State or federal agencies.</u></p>
I19-5	<p><u>The commenter suggests paving the streets.</u></p> <p><u>Comment noted. The Tribe has committed funds to repaving Victoria Avenue from the Reservation to Third Street, and portions of Citrus Avenue and adjoining side streets, along with the repair of sound walls and storm drains. Improvements are scheduled to begin in 2018.</u></p>
I19-6	<p><u>The comment suggests mitigating the noise on Lynwood Drive and nearby neighborhoods.</u></p> <p><u>See Response to Comment I7-5 regarding sound walls. Casino patron traffic is not proposed to utilize Lynwood Drive.</u></p>
I19-7	<p><u>The comment suggests assigning law enforcement officers near the casino and in neighborhoods.</u></p> <p><u>Refer to Response to Comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>
I19-8	<p><u>The comment suggests routing casino traffic away from Arden Avenue and Lynwood Drive and improving the sound wall on Lynwood Drive if traffic increases on the street.</u></p> <p><u>All casino traffic would continue to use Victoria Avenue and not Arden Avenue or Lynwood Drive. No turns to or from the casino are allowed from Lynwood Drive with existing traffic controls. Refer to Response to Comment I1-2 regarding existing and increased law enforcement and security measures. Refer to Response to Comment I7-5 regarding sound walls.</u></p>
I19-9	<p><u>The comment suggests moving the existing bus stop location.</u></p> <p><u>The Tribe does not have jurisdiction over public buses or off-Reservation bus stops. Private buses and other transportation provided to the casino stop on the Reservation.</u></p>
I19-10	<p><u>The comment suggests addressing the casino sewer system and its impact to off-Reservation residents.</u></p> <p><u>Section 3.11.2 (Impact B) of the TEIR addresses Project wastewater impacts. There is sufficient future capacity for the Project, therefore, impacts related to Project wastewater would be less than significant.</u></p>

**TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS**

Number	Response
Individual Comment Letter 20. Janice West	
<u>I20-1</u>	<p>The commenter is concerned about traffic on Victoria Avenue in the event of an emergency, such as fire.</p> <p><u>Refer to Section 3.6.2 (Impact D) of the TEIR regarding the Tribe's Reservation Evacuation Plan. Following the wildfires in 2003, the Tribe developed a Reservation Evacuation Plan to ensure a timely evacuation of the Reservation and casino in a manner that neither impedes the evacuation of adjacent neighborhoods nor inhibits the ingress of emergency vehicles to the Project site. The Reservation Evacuation Plan was coordinated with local fire and police departments, California Highway Patrol and Caltrans and is periodically reviewed and updated.</u></p>
<u>I20-2</u>	<p>The commenter suggests an alternate location for the Project.</p> <p><u>See Response to Comment I1-3 regarding alternate Project locations.</u></p>
Individual Comment Letter 21. Ralph Abramo	
<u>I21-1</u>	<p><u>The comment raises concerns regarding increased traffic in the nearby neighborhoods and suggests an evaluation to determine measures to discourage casino patrons from using neighborhood surface streets.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. Victoria Avenue is the only entrance to the casino and Project site since both Lynwood Drive and Piedmont Drive are closed to casino and Project patron traffic. Refer to Response to comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>
Individual Comment Letter 22. Emi Mendez	
<u>I22-1</u>	<p><u>The comment states that the increased Project traffic on Victoria Avenue and Arden Avenue would cause the roadways to deteriorate.</u></p> <p><u>Victoria Avenue would continue to be used as access for the casino and the Project and not Arden Avenue since both Lynwood Drive and Piedmont Drive are closed to casino and Project patron traffic. Refer to Response to Comment I19-5 regarding Tribally funded roadway improvements. See Response to Comment I7-5 regarding sound walls.</u></p>
<u>I22-2</u>	<p><u>The comment enquires about the noise controls that will be used to adhere to the local noise ordinance.</u></p> <p><u>As discussed in TEIR Section 3.8, construction noise levels would not exceed local noise thresholds for each of the studied receptors. As discussed in TEIR Section 2.4 there are several construction noise reduction measures that have been incorporated into the Project. In regards to operations, as discussed in TEIR Section 3.8, on-site operational noise would not exceed allowable levels. As discussed in Section 2.4, the Tribe would continue to maintain existing sound walls and the event center would include soundproofing.</u></p>
<u>I22-3</u>	<p><u>The comment questions how the neighborhoods will be protected from criminal activity.</u></p> <p><u>Refer to Response to Comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>
Individual Comment Letter 23. Ralph Abramo	
<u>I23-1</u>	<p><u>The comment states that Project traffic in local neighborhoods is resulting in noise and safety impacts. The commenter suggests a study of increased traffic flow be completed at the intersection of Citrus Street and Victoria Avenue.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. Refer to Response to comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>

TABLE 6-3
RESPONSES TO COMMENTS FROM INDIVIDUALS

Number	Response
Individual Comment Letter 24. Doug and Mary Betten	
<u>I24-1</u>	<p><u>The comment expresses support for the Project but raises concerns regarding increased traffic, specifically casino patrons making illegal U-turns at the corner of Citrus and Havasu Court.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. See Response to Comment I1-2 regarding existing and increased law enforcement and security measures. Regarding analysis of Victoria Avenue, refer to Response to Comment I3-15.</u></p>
<u>I24-2</u>	<p><u>The comment raises concerns regarding undesirable traffic and loitering in nearby neighborhoods.</u></p> <p><u>The TEIR/TIA analyzes the Project's traffic impacts on local streets and concludes that impacts would be less than significant with the implementation of proposed mitigation. See Response to Comment I1-2 regarding existing and increased law enforcement and security measures.</u></p>
<u>I24-3</u>	<p><u>The comment raises concerns regarding runoff of water and mud from the Reservation during rainstorms. The comment suggests addressing this issue for the safety of the local residences.</u></p> <p><u>Refer to Section 3.12.2 (Impact A) of the TEIR regarding potential changes in drainage and flooding patterns. The Project would be constructed on disturbed/paved areas. Accordingly, the Project would not increase impervious surfaces or introduce a new substantial source of runoff. Therefore, impacts related to runoff and drainage patterns would be less than significant.</u></p>
Individual Comment Letter 25. Ramiro Gomez Sr.	
<u>I25-1</u>	<p><u>The comment raises concerns regarding noise, traffic, and light produced by the Project.</u></p> <p><u>Refer to Section 3.2.2 (aesthetics), Section 3.8.2 (noise), and Section 3.10.2 (transportation and traffic) of the TEIR regarding impacts to the off-Reservation area resulting from the Project. As discussed in these sections, all impacts to aesthetics, noise, and traffic would be less than significant with implementation of mitigation.</u></p>

TABLE 6-4
RESPONSES TO COMMENTS RECORDED AT PUBLIC MEETING

Number	Response
Transcript Commenter 1. Jason Eshelman	
<u>T1-1</u>	<u>The commenter suggests hiring local contractors/workers for the Project.</u> <u>See Response to Comment I10-1 regarding local hiring.</u>
Transcript Commenter 2. Joalene and Stephanie	
<u>T2-1</u>	<u>The commenter enquired whether the Project would be installing an on-site solar energy system.</u> <u>Comment noted. As discussed in Section 2.3 of the TEIR, the Project is expected to continue to obtain power from Southern California Edison (SCE) via existing lines and/or development of a customer dedicated substation and requisite transmission lines, a fuel cell facility and/or a cogeneration facility.</u>
Transcript Commenter 3. David Lassiter	
<u>T3-1</u>	<u>The commenter suggests removing cigarette smokes from the existing casino.</u> <u>Refer to Response to Comment I3-4 regarding cigarette smoke.</u>
Transcript Commenter 4. Unidentified Speaker	
<u>T4-1</u>	<u>The commenter raises concern regarding existing odor from the casino kitchen.</u> <u>Refer to Response to Comment I14-1 regarding odor resulting from the Project. As with the existing casino, any new kitchen facilities for the Project would have advanced exhaust and ventilation systems.</u>
Transcript Commenter 5. Justin Tillman	
<u>T5-1</u>	<u>The commenter suggests hiring local contractors/workers for the Project.</u> <u>See Response to Comment I10-1 regarding local hiring.</u>
Transcript Commenter 6. Gary Quiel	
<u>T6-1</u>	<u>The comment raises a concern that the proposed parking structure will block existing views of the mountains from a private residence located east of the proposed parking structure.</u> <u>The area 500 feet east of the proposed parking structure is a developed residential community. The neighborhood is not designated locally as a scenic corridor or vista where private views are protected. Second story views from private residences in this area currently include other two-story residences, neighborhood trees, development within the City of San Bernardino, and distant mountain views. The proposed parking structure would alter some second-story views to the west which have previously been altered by urban development. As this viewshed currently includes urban development and the residential area is not designated locally as having protected scenic views, this change is not considered a substantial adverse effect on a scenic vista. Section 3.2.2 of the Final TEIR has been revised to include a discussion regarding second-story views from residences to the east of the proposed parking structure.</u>
<u>T6-2</u>	<u>The commenter speculates that the noise study is incorrect.</u> <u>Refer to Response to Comment I3-9 regarding existing noise including car alarms, sirens and people talking. The noise analysis was prepared by a third party consultant and is based on data gathered from a 24-hour noise monitoring study at key locations around the existing casino and parking structure facilities.</u>
<u>T6-3</u>	<u>The commenter raises concern regarding the Project devaluing his property.</u> <u>As discussed in Section 6.1 of the TEIR, economic impact analysis on off-Reservation property values is outside the scope and content of the TEIR. See Response to Comment T6-1 regarding views of the parking structure from the neighborhood.</u>
<u>T6-4</u>	<u>The commenter raises concern regarding increased traffic resulting from the Project.</u> <u>The TEIR analyzes the impact on traffic and concludes that with proposed mitigation there would be no significant impacts.</u>

TABLE 6-4
RESPONSES TO COMMENTS RECORDED AT PUBLIC MEETING

Number	Response
<u>T6-5</u>	<p><u>The comment raises concern about the validity of the TEIR and public comment process.</u></p> <p><u>See Response to Comment T6-1 through T6-4 regarding specific concerns raised in the comment letter. Comments received on the Notice of Preparation are summarized in Section 6.1 and included in Appendix B of the TEIR. These comments were considered in preparation of the Draft TEIR; however, no formal response is required. Responses have been provided to all comments formally submitted on the Draft TEIR.</u></p>
<u>T6-6</u>	<p><u>The commenter raises concern regarding the Project devaluing his property.</u></p> <p><u>See Response to Comment T6-3.</u></p>
<u>T6-7</u>	<p><u>The commenter suggests building three stories of the building underground to reduce aesthetic and noise impacts.</u></p> <p><u>See Response to Comment I3-9 regarding parking structure height and noise.</u></p>
<u>Transcript Commenter 7. Art</u>	
<u>T7-1</u>	<p><u>The commenter suggests distributing a survey to local residents during the review period.</u></p> <p><u>The Tribe has provided a public comment period for the Notice of Preparation of a Draft TEIR and for the Draft TEIR and held a public information meeting to obtain comments regarding the Project and has responded to all comments received. A hotline will be available during the construction period to allow neighbors to report any issues.</u></p>

CHAPTER 7

List of Preparers

7.1 Lead Agency

This TEIR has been prepared by the San Manuel Band of Mission Indians.

7.2 Consultants

Environmental Science Associates

Erich Fischer, Project Director, Senior Vice President and California Biological Resources and Land Management Leader

Jennifer Wade, Project Manager, Land Management Program Manager, (Hazards, Utilities and Service Systems, Effects Found Not to be Significant, Other Considerations/Cumulative Impacts)

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CHAPTER 8

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CHAPTER 9

List of Abbreviations and Acronyms

ADWF	Average Dry Weather Flow
AED	Automatic External Defibrillators
AERMOD	AMS/EPA Regulatory Model
AF	Acre-Feet
AMR	American Medical Response
AQMP	Air Quality Management Plans
ATCM	Airborne Toxic Control Measure
BACT	Best Available Control Technology
BMP	Best Management Practices
BTU	British Thermal Unit
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH ₄	Methane
CMP	Congestion Management Plan
CNDDB	California National Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide equivalents
CWA	Clean Water Act
CWPP	Community Wildfire Protection Plan

dB	Decibels
dBA	A-weighted Decibels
DPS	Department of Public Safety
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EDD	Employment Development Department
EMT	Emergency Medical Technician
EPA	United States Environmental Protection Agency
EVWD	East Valley Water District
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHGs	Greenhouse Gases
GIS	Geographic Information System
GPD	Gallons Per Day
HAP	Hazardous Air Pollutants
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HI	Hazard Index
HP	Horsepower
HRA	Health Risk Analysis
Hz	Hertz
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
kV	Kilovolts
L _{dn}	24-hour A-weighted Noise Exposure Level
L _{eq}	Energy-Equivalent Sound Level
L _{max}	Instantaneous Maximum Noise Level
LOS	Level of Service
LST	Localized Significance Thresholds
MBTA	Migratory Bird Treaty Act
MGD	Million Gallons Per Day
MOA	Memorandum of Agreement
N ₂ O	Nitrous oxide
N _A	Number of Automobiles Per House
NAAQS	National Ambient Air Quality Standards
National Register	National Register of Historic Places
NEHRP	National Earthquake Hazards Reduction Program

NESHAP	National Emission Standards for Hazardous Air Pollutants
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NOC	Notice of Completion
NOP	Notice of Preparation
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
O ₃	Ozone
OSHA	Occupational Safety and Health Administration
Pb	Lead
pc/mi/ln	Passenger Cars per Mile per Lane
PCE	Passenger Car Equivalents
PDFs	Project Design Features
PF	Public Facility/Quasi-Public
PFCs	Perfluorocarbons
PM ₁₀	Particulate Matter equal to or less than 10 microns
PM _{2.5}	Particulate Matter equal to or less than 2.5 microns
POV	Private-Owned-Vehicles
PPD	Pounds Per Day
PPM	Parts Per Million
PPV	Peak Particle Velocity
REL	Reference Exposure Levels
RL	Residential Low
RMS	Root Mean Square
RS	Residential Suburban
s/v	Seconds per Vehicle
SAFZ	San Andreas Fault Zone
SARWQCB	Santa Ana Regional Water Quality Control Board
SANBAG	San Bernardino Associated Governments
SBCUSD	San Bernardino City Unified School District
SBTAM	San Bernardino County Transportation Analysis Model
SBWRP	San Bernardino Water Reclamation Plant
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCG	Southern California Gas Company
SEL	Sound Exposure Level
SF	Square Feet
SF ₆	Sulfur Hexafluoride

SFR	Single-Family Residential
SIP	State Implementation Plan
SLM	Sound Level Meter
SMFD	San Manuel Fire Department
SO ₂	Sulfur Dioxide
SO ₄	Sulfates
SRA	Source Receptor Area
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TDS	Total Dissolved Solids
TEIR	Tribal Environmental Impact Report
TeNS	Technical Noise Supplement
TIA	Traffic Impact Analysis
TMDL	Total Maximum Daily Load
TPY	Tons Per Year
TTL	Tribal Trust Land
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
V/C	Volume-to-Capacity
Vdb	Velocity Decibel
VOC	Volatile Organic Compounds
WVHCP	West Valley Habitat Conservation Plan