

## **EXECUTIVE SUMMARY**

### **ES.1 INTRODUCTION AND BACKGROUND**

This Environmental Impact Report (EIR) evaluates the potential environmental impacts of the proposed Los Angeles Zoo (Zoo) Vision Plan (Vision Plan; Project) in the City of Los Angeles (City), California. Per the California Environmental Quality Act (CEQA), the City is the Lead Agency. This Executive Summary provides an overview of the proposed Project and its environmental impacts, a summary of required mitigation measures, and a description of Project alternatives considered in this EIR.

The purpose of an Environmental Impact Report (EIR) is to inform decision-makers, responsible and trustee agencies, and the public of the potential environmental impacts that could result from a project. Under the provisions of CEQA, “the purpose of the environmental impact report is to identify the significant effects of a project on the environment, to identify alternatives to the project, and to indicate the manner in which significant effects can be mitigated or avoided” (Public Resources Code 21002.1[a]). CEQA requires full disclosure and consideration of the unavoidable environmental risks, as applicable, against the economic, legal, social, or other benefits of the project as part of decision-maker approval proceedings.

The City is the Lead Agency for the proposed Project, pursuant to Section 15367 of the CEQA Guidelines. This EIR has been prepared by and under the direction of the Los Angeles Department of Public Works, Bureau of Engineering (BOE). This EIR was prepared in accordance with CEQA (Public Resources Code Section 21000 et seq.); the Guidelines for the Implementation of the California Environmental Quality Act (CEQA Guidelines) (California Code of Regulations Sections 15000 et seq.); and the City’s environmental guidance documents (i.e., Los Angeles City CEQA Guidelines and L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles).

The proposed Project is located at 5333 Zoo Drive in the City of Los Angeles, in the southern portion of Los Angeles County. It is generally bordered by the Golden State Freeway or Interstate 5 to the east and the Ventura Freeway or California State Route 134 to the north. The 142-acre Project site is in the northeastern portion of Griffith Park, at the base of the foothills of the Santa Monica Mountains.

### **ES.2 PROPOSED PROJECT SUMMARY**

The Project would guide future development and modernization of the Zoo for the next 20 years. The Project would include comprehensive redesign and redevelopment of the Zoo to replace outdated buildings and infrastructure and upgrade animal care and guest amenities. The Project would result in the following:

- Expanded and revitalized immersive exhibit space for improved animal welfare and the Zoo's conservation and endangered species propagation and preservation programs;
- New and redeveloped visitor-serving facilities for enhanced visitor experience, including three visitor centers, picnic and restaurant locations, and internal circulation and walking paths;
- Expanded and modernized administrative and services facilities to support state of the art animal facilities and upgraded visitor support facilities;
- Circulation improvements for access roads, pedestrian walkways and paths, an enhanced entry way and plaza, and new parking facilities;
- Inclusion of environmentally sustainable design features within the Zoo's built structure; and
- Operational excellence of the Zoo.

The Vision Plan provides guiding principles that would apply to future ongoing Zoo operations and redevelopment of Zoo buildings and infrastructure within nine themed boundaries, referred to as "planning areas" within the Project site. Each planning area would include a common natural setting and program. Several planning areas reflect diverse regions of the planet (e.g., Africa), while others are intended to provide a common programmatic theme (e.g., Nature Play Park).

The proposed Project would include several circulation and infrastructure improvements. The proposed Project would include improvements to the Zoo's internal pedestrian and vehicular circulation by creating a complete and intuitive circulation loop for visitors and providing alternative transportation (i.e., ground tram, aerial tram, and funicular). Improvements to the external circulation would include realignment of Western Heritage Way/Crystal Springs Drive, surface parking improvements, and a multi-story parking structure in the Zoo's northern parking lot. Modern, efficient utilities infrastructure (e.g., new water lines, solar panels, stormwater management system, recirculating animal pools, recycled irrigation systems, climate-controlled irrigation, etc.) and landscaping would also improve the Zoo's long-term environmental sustainability and resiliency.

The proposed Project includes near-term and long-term improvements through seven sequential phases of development over the course of 20 years. The envisioned improvements embody the Vision Plan's guiding principles and carry out development concepts for the Zoo. The development concept and phased improvements, along with proposed Zoo programming, would facilitate expansion of annual visitation from approximately 1.8 million guests currently to 3.0 million guests at Project completion. This projected growth in visitation and expansion of facilities within the Zoo property would have commensurate increases in employment, including Zoo staff and vendors.

### **ES.3 PROJECT OBJECTIVES**

CEQA Guidelines Section 15124(b) requires a project description to contain a statement of a project's objectives, and CEQA Guidelines Section 15124(b) requires the statement of objectives includes the purpose of the project. Broadly, the Vision Plan would serve as the blueprint for transformation and modernization of the Zoo over the next 20 years. The City has identified 14 objectives for the proposed Project:

1. **Animal Welfare and Care.** Provide an environment for all the animals that call the Zoo home to thrive through development of state-of-the art exhibits and animal care facilities that meet or exceed AZA, USDA and state of the industry care standards, as well as upgraded Zoo service centers and veterinary facilities that ensure optimal animal welfare.
2. **Increase and Modernize Zoo Exhibit Space.** Increase and modernize Zoo exhibit space to maximize animal habitat areas, create infrastructure for innovative and proactive animal care and welfare practices, and represent ecosystems and lifecycles by transforming underutilized and underdeveloped areas of the Zoo.
3. **Conservation.** Advance conservation efforts by developing facilities and programs that will support conservation actions to protect and grow animal populations and habitats.
4. **Learning and Education.** Advance public engagement efforts by developing facilities and experiences that promote lasting relationships with nature, life-long learning, opportunities for outreach beyond the Zoo's campus, and a civic culture of conservation.
5. **Immersive Visitor Experience.** Design Zoo exhibits and visitor spaces to provide nature-based experiences that allow Zoo visitors to engage with environments and animals in seamless, immersive spaces.
6. **World Class Destination.** Enhance Zoo facilities and operations to increase Zoo visitation, create a sense of place that transports visitors to other parts of the world, and generate revenue to support operation of the Zoo, capital improvements, and conservation programs.
7. **Visitor-serving Amenities.** Provide a variety of visitor-serving amenities including food and retail establishments, a range of resting and gathering places, and special event centers that will attract visitors and support a range of special events within the Zoo.
8. **Efficient Circulation System.** Develop an efficient and accessible internal loop circulation system that maximizes access to Zoo exhibits for visitor comfort, operational efficiency, and safety, providing dedicated pathways for pedestrians, trams, and emergency and service vehicles.

9. **Accessibility.** Design the Zoo to serve the needs of a diverse population of all ages and abilities through incorporation of ADA pathways, alternative travel options in the Zoo such as aerial or ground-based trams, and exhibit features and facilities for families and those with special needs, along with a cohesive approach to wayfinding.
10. **Multi-modal Access.** Improve multi-modal accessibility and regional transportation to the Zoo, including the provision of alternative transportation options to reduce congestion and improve the circulation of vehicle traffic.
11. **Visual Appearance.** Improve the visual characteristics of the Zoo through architectural design, landscaping, lighting, pedestrian-oriented improvements, and incorporation of symbolic design, and create features that reflect architecture of animal habitat theme areas and the Zoo history.
12. **Capital Improvements.** Identify and provide for implementation of capital improvements and investments that are needed to ensure that future demands on the Zoo's infrastructure will be successfully accommodated.
13. **Environmental Sustainability.** Incorporate sustainable design practices into Zoo facilities to ensure resource conservation consistent with City's Sustainable City pLAN, One Water L.A. Plan, and Resilient Los Angeles Plan.
14. **Operational Excellence.** Provide facilities and resources that allow Zoo staff and emergency responders to safely and efficiently support Zoo operations, including safe and quick vehicle access to all parts of the Zoo, as well as ensuring the Zoo is clean, well-maintained, supportive of the organizational culture, and provides high quality customer service.

#### **ES.4 REQUIRED ACTIONS AND APPROVALS**

Project approval would require the following actions by the City Council, with recommendation from the Central Area Planning Commission:

- Vision Plan adoption;
- Certification of the Final EIR; and
- Consideration and approval of a Findings and a Statement of Overriding Considerations, as necessary.

#### **ES.5 COMMENT RECEIVED ON THE NOTICE OF PREPARATION**

The City conducted a public scoping process consistent with CEQA Guidelines Section 15083. The public was provided with an opportunity to comment on the scope of the EIR through a Notice of Preparation (NOP) released on January 24, 2019. The NOP/Initial Study (IS) was distributed to federal, state, and local agencies, neighborhood organizations, and other

interested parties for review and comment during a 45-day period. The NOP comment period ended on March 11, 2019.

Two public scoping meetings were held separately during the public review period to solicit comments from interested parties on the content of the EIR. Spanish translating services were provided for both meetings. These meetings were held on Thursday, February 7, 2019, from 6:00-8:00 pm and Saturday, February 9, 2019 from 11:00 am – 1:00pm in the Witherbee Auditorium at 5333 Zoo Drive Los Angeles, California 90027. During these meetings, City staff described the proposed Project and the environmental review process and received public comment on the scope and content of the EIR. The scoping process assisted the City in determining if any aspect of the proposed Project may cause a significant effect on the environment and, based on that determination, narrow the focus of the subsequent environmental analysis. The NOP/IS is included as Appendix B of this EIR. Comments received during the NOP comment period were considered during EIR preparation and are included in Appendix C.

## **ES.6 AREAS OF KNOWN PUBLIC CONTROVERSY**

CEQA Guidelines Section 15123 states that an EIR shall identify areas of controversy known to the Lead Agency, including issues raised by the agency and the public. Based on comments received during the scoping public meetings and NOP/IS comment period, the following issues are known to be of concern and may be controversial. Each issue is further evaluated in the EIR:

- Transportation impacts to local roads;
- Parking adequacy;
- Improved multi-modal access;
- Loss of trees and vegetation;
- Impacts to sensitive species;
- Visual impacts of Zoo redevelopment on Griffith Park visitors, including hikers and equestrians on public trails;
- Animal welfare during construction and operation
- Discovery of cultural and/or tribal cultural resources during construction;
- Water use and conservation, including recycled water;
- Disabled access and stroller access to Zoo exhibit areas;
- Noise and light impacts to sensitive receptors, including Griffith Park;
- Air quality and greenhouse gas (GHG) emissions from construction and operation;
- Recycling and disposal of construction/demolition waste; and
- Impacts of nighttime events.

## ES.7 ISSUES TO BE RESOLVED

The issues to be resolved by the Lead Agency include whether and how to mitigate the significant effects of the proposed Project, consideration of the various mitigation measures and alternatives recommended in the Draft EIR by the City, whether the benefits of the proposed Project outweigh their unavoidable environmental impacts, and whether the discretionary approvals required to implement the proposed Project should be granted. Significant and unavoidable impacts have been identified in this EIR for the proposed Project; therefore, a Statement of Overriding Considerations will be required for the proposed Project. A detailed evaluation of alternatives to the proposed Project is presented in Section 4.0, *Alternatives* of this EIR.

## ES.8 PROJECT IMPACTS SUMMARY

This EIR examines potential short- and long-term impacts of the project. These impacts were determined through a rigorous process mandated by CEQA in which existing conditions are compared and contrasted with conditions that would exist once the project is implemented. For each impact topic, thresholds for determining impact significance are identified based on City and State CEQA Guidelines, along with descriptions of methodologies used for conducting the impact analysis. For some topics, such as air quality, GHG emissions, noise, and transportation, the analyses of impacts are more quantitative in nature and involve the comparison of effects against a numerical threshold. For other topics, such as land use and planning, the analyses of impacts are inherently more qualitative, involving the consideration of a variety of factors, such as adopted City policies.

The EIR impact discussions classify impact significance levels as:

1. **Significant and Unavoidable** – a significant impact to the environment that remains significant even after mitigation measures are applied;
2. **Less Than Significant with Mitigation** – a significant impact that can be avoided or reduced to a less than significant level with mitigation;
3. **Less Than Significant** – a potential impact that would not meet or exceed the identified thresholds of significance for the topic area; and
4. **No Impact/Beneficial Impact** – no impact would occur for the topic area or a beneficial effect would result.

Determinations of significance levels in the EIR are made based on impact significance criteria and applicable CEQA Guidelines for each topic area.

Per CEQA Guidelines, Section 15126.4, where potentially significant environmental impacts have been identified in the EIR, feasible mitigation measures that would avoid or minimize the severity of those impacts are also identified. Pursuant to CEQA, feasible mitigation measures must be implemented for all significant impacts.

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**ES.8.1 Impacts Determined to Require No Further Consideration in this EIR**

As discussed in Section 1.0, *Introduction* and in Section 5.0, *Other CEQA Considerations*, in accordance with CEQA Guidelines Section 15128 (Effects Not Found to Be Significant), the following environmental resource areas are not analyzed in this Draft EIR because it was determined that the proposed Project would have no impact on them:

- Agriculture Resources
- Mineral Resources
- Population and Housing

**ES.8.2 Impacts Determined to be Less than Significant with Mitigation**

The analysis presented in Section 3.0, *Environmental Impact Analysis and Mitigation* of this EIR concluded that the proposed Project would result in less than significant impacts, with the incorporation of required mitigation, for the following resource areas:

- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Urban Forestry
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Public Services
- Recreation
- Utilities
- Wildfire

**ES.8.3 Impacts Determined to be Significant and Unavoidable**

The analysis presented in Section 3.0, *Environmental Impacts Analysis and Mitigation* of this EIR concluded that the proposed Project would result in significant and unavoidable impacts, with implementation of required mitigation, for the following resource areas:

- Aesthetics and Visual Resources
- Transportation

#### **ES.8.4 Cumulative Impacts**

CEQA Guidelines Section 15130(a) states that an EIR shall “*discuss the cumulative impacts of a project when the project’s incremental effect is cumulatively considerable.*” In this context, “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/or the effects of probable future projects (as defined by CEQA Guidelines Section 15130). Cumulative impacts were determined to be less than significant or less than significant with mitigation for air quality; biological resources; cultural and tribal cultural resources; energy; urban forestry resources; geology and soils; GHG emissions; hazards and hazardous materials; hydrology and water quality; land use and planning; noise; public services; recreation; utilities; and wildfire. The proposed Project would substantially contribute to cumulatively considerable impacts to aesthetics and visual resources and transportation related to projected vehicle miles traveled (VMT).

#### **ES.8.5 Summary of Environmental Impacts of the Project**

Table ES-1 at the end of this Executive Summary presents a summary of the impacts, mitigation measures, and residual impacts that could result from implementation of the proposed Project.

### **ES.9 SUMMARY OF PROJECT ALTERNATIVES ANALYSIS**

The City considered several alternatives to the proposed Project, as fully analyzed in Section 4.0, *Alternatives*. Potential alternatives were developed to identify means other than the proposed Project to attain key Project objectives while lessening or avoiding potentially significant environmental impacts caused by the proposed Project. The proposed Project would result in significant impacts on the environment; accordingly, reduction of significant impacts was a factor considered in the development of alternatives to the Project. Scoping comments received for this EIR inform the identification and development of alternatives to the proposed Project.

#### **ES.9.1 Alternatives Considered**

Based on initial consideration, the following represents a reasonable range of alternatives to the proposed Project and have been identified by the City for consideration in this EIR.

- **No Project Alternative.** In accordance with CEQA, the EIR includes a No Project Alternative. Under the No Project Alternative, the Vision Plan would not be adopted, comprehensive Zoo-wide expansion and redevelopment would not occur, and the Zoo would continue to operate as is, with maintenance, repair, and improvement of facilities occurring as needed. Improvements to Zoo Drive, the intersection of Zoo Drive/Western Heritage Way, realignment of Crystal Springs Drive, and the Zoo’s

parking lot would not occur. Similarly, resident animals would continue to live in some outdated animal spaces. Under the No Project Alternative, the Zoo would continue existing operations, with continued maintenance and repair construction projects occurring on an as needed basis. The No Project Alternative does not mean "no future growth or land uses," but rather that targeted Zoo improvements or expansion would occur under the existing 1998 Zoo Master Plan. As stated in CEQA Guidelines Section 15126.6(e)(3)(A), "typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan." The existing 1998 Master Plan, however, is nearly built out, with little room for growth or improvement available under the existing plan. Therefore, the No Project Alternative would not involve any major improvements or large-scale expansions.

- **Reduced Project Alternative (Alternative 1).** This alternative would include a major reconfiguration of the proposed Vision Plan land use plan to avoid development of the existing undeveloped hillsides that contain sensitive biological resources, including areas in the California and Africa planning areas. Reconfiguration of the Vision Plan land use plan to avoid these areas would emphasize redevelopment of the existing developed areas of the Zoo within the lower elevation areas of the canyon, resulting in a smaller development footprint (Figure 4-1). Similar to the Project, all Zoo development would occur within the existing Zoo property with offsite roadway improvements to Zoo Drive/Western Heritage Way. The proposed onsite parking structure would also be reduced in size, bulk, and scale, or eliminated altogether depending on the commensurate reduction in project visitation that would occur with a reduced physical capacity within the Zoo and fewer attractions and special events. In doing so, this alternative would reduce environmental impacts identified in the EIR associated with the development and loss of natural resources within these areas (e.g., visual resources, native habitat, sensitive plant species, protected trees). All other elements of the proposed Project not associated with development of these areas would continue to be implemented under this alternative.
- **Multi-modal Transportation Alternative (Alternative 2).** The Multi-modal Transportation Alternative would incorporate all the measures identified as part of the Zoo TDM Program, required as mitigation, with additional measures necessary to achieve a goal of reducing employee VMT by 15 percent and visitor VMT by 2040. These TDM measures would become elements or programs of the Vision Plan. In doing so, this alternative would reduce environmental impacts identified in the EIR associated with VMT and policy consistency with regional and local transportation plans. This alternative would retain all improvements proposed under the Project with the exception of the onsite parking structure, which would be reduced in size, bulk, and scale in response to increase multi-modal transportation options for Zoo visitors

and employees, which would commensurately reduce parking demand. All proposed Zoo improvements would be implemented on the same 20-year timeframe.

- **Alternative Use (Reuse/Conservation Center).** Under this alternative, the Zoo would be redeveloped to function more as a conservation/research facility that would expand upon and emphasize animal conservation, recovery, education, and research. This may include redevelopment of the Zoo property to provide animal conservation or species recovery programs, as opposed to a visitor-serving uses. The Zoo would no longer function primarily as a visitor-serving attraction and would no longer be open to the public. Visitation would be limited to support the conservation program, which would substantially reduce visitors and employee trips and demands for utilities and public services. Visitor-serving uses (e.g., attractions, restaurants, retail shops) would either be transitioned to accommodate animal conservation programs or be demolished, and many resident animals would likely be moved to other zoos.
- **Relocated Zoo.** Under this alternative, the Zoo would be relocated and developed under a revised Vision Plan at an alternative site. The alternate site would be at least 142 acres and located within the City. Potential sites include the 160-acre Wildlife Waystation in the San Fernando Valley or vacant sites near Cabrillo Marine Aquarium, both of which are AZA accredited facilities. The City and Zoo would emphasize selection of a site located within a Transit Priority Areas (TPAs) to improve multi-modal access to the Zoo. Following relocation of the Zoo, the existing Zoo would be demolished and redeveloped as a public park within Griffith Park or serve as a restoration/nature demonstration site connecting with other publicly accessible land within Griffith Park.
- **Golf Course Expansion.** Under this alternative, the Vision Plan would be amended to maintain the proposed increase in visitor-serving and animal habitat areas, but would relocate the California and Africa planning area development currently proposed within the existing undeveloped hillside areas to the adjacent Wilson & Harding Golf Course property. This alternative would require the vacation of portions or all of the Wilson & Harding Golf Course and relocation of existing Zoo back-of-house and administration facilities currently located along the Zoo's southern property boundary to support the expansion of visitor-serving and animal habitat areas onto the golf course property.
- **Adjusted Phasing Alternative.** Under this alternative, the Vision Plan would be implemented through a series of phases organized differently than that described for the proposed Project. Specifically, this alternative would defer construction of the proposed Africa planning area improvements to Phase 4, and construction of the parking structure would be advanced to Phase 3. This would extend the duration of Phase 3 by one year (completion in 2031) and push the timing of each long-term phase back by a similar duration. In addition, the revised phasing schedule would become consolidated, eliminating the need for Phase 7, and resulting in implementation of the Vision Plan in only six phases.

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## ES.10 SUMMARY OF ALTERNATIVES CARRIED FORWARD FOR ANALYSIS

In accordance with the State CEQA Guidelines (Section 15126.6(d)), the discussion of the environmental effects of the alternatives may be less detailed than the discussion of the impacts of the proposed Project. The following provides a comparative analysis of the impacts associated with each of the alternatives carried forward (Alternatives 1 and 2) relative to the proposed Project. Additional detailed analysis is provided in Section 4.0, *Alternatives*.

### ES.10.1 Alternative 1 – Reduced Project Alternative

Alternative 1 would retain approximately 21 acres of undeveloped area currently within Zoo property in its current setting. In doing so, this alternative would preserve a combination of native and non-native vegetation communities supporting a limited range of sensitive species and protected trees, as well as avoid visual and geologic changes to these areas. As a result, this alternative would reduce potentially significant impacts to biological and urban forestry resources, as well as aesthetics, air quality and GHG emissions, energy, noise, transportation, and utilities. With mitigations required for the Project, Alternative 1 would reduce one significant and unavoidable impact (Impact VIS-2) related to aesthetic impacts to the visual character of the Zoo in context of the Zoo Drive gateway to Griffith Park. However, Alternative 1 would still generate VMTs that exceed the City's TAG threshold of net-zero VMT for regional attractions like the Zoo and impacts related to Zoo would remain significant and unavoidable under Alternative 2.

Alternative 1 would continue to support long-term redevelopment of the existing Zoo to be partially consistent with several of the Project objectives, including improvement of animal welfare and care (Project Objective No. 1) though to a lesser extent, modernization of exhibit spaces (Project Objective No. 2), improvement of the visual appearance of the Zoo (Project Objective No. 11), and incorporation of sustainable design practices (Project Objective No. 13). However, this alternative would not include the expanded exhibits within the California and Africa planning areas proposed under the Project, which would limit expansion within Zoo property. Likewise, with less area contributing to the design and function of a redeveloped zoo, this alternative would not utilize all of the Zoo property to maximize immersive experiences for visitors or expand visitor-serving features (Project Objectives Nos. 5, 6, and 7). Further, Alternative 1 would not create an efficient and accessible internal loop circulation system with a Primary Loop Path (Project Objective No. 8). This feature is key to improving not only visitor experience but also to visitor safety and operational excellence (Project Objective Nos. 9 and 14). This alternative would include some improvements to the secondary/exhibit pathways and would implement the proposed Zoo aerial tram to improve access; however, a funicular would not be developed and many of the Zoo's pathways would remain inaccessible for ADA visitors and potentially difficult to navigate, similar to the existing setting at the Zoo. As a result, Alternative 1 would not meet or only partially meet several Project objectives.

### **ES.10.2 Alternative 2 – Multi-modal Transportation Alternative**

Alternative 2 would substantially expand multi-modal transportation opportunities for the Zoo to give visitors and employees the option to use transit, bicycles, walking, and ridesharing as a viable and attractive travel mode. In doing so, Alternative 2 would substantially reduce total Zoo VMT to a greater extent than the Project. As a result, this alternative would reduce potentially significant impacts to aesthetics, air quality and GHG emissions, energy, land use and planning, and transportation. However, given that the City's VMT threshold for the Project is net-zero new VMT, Alternative 2 would not result in zero new VMT and transportation impacts would remain significant and unavoidable,

Alternative 2 would guide redevelopment of the Zoo consistent with all of the Project objectives. Since Alternative 2 would include all of the same development components included in the proposed Project, this alternative would provide the same benefits to the Zoo associated with expanded animal exhibits, enhanced visitor-serving areas, improved circulation, and updated facilities.

### **ES.10.3 Environmentally Superior Alternative**

Section 15126.6(e)(2) of the State CEQA Guidelines requires that an analysis of alternatives shall identify an environmentally superior alternative among the alternatives evaluated in the EIR. Each Project alternative was evaluated based on significance criteria, location, extent and magnitude of impacts, potential benefits, and relative impacts in comparison to other alternatives. The alternative with the fewest adverse impacts and relatively greatest benefits is thereby considered the Environmentally Superior Alternative. Although the No Project Alternative would result in the least amount of impacts, CEQA Guidelines section 15126.6 states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives.

Based on the information in this EIR, Alternative 1, the Reduced Project Alternative, is identified as the Environmentally Superior Alternative. Alternative 1 was found to generate the least adverse impacts compared to the Project and Alternative 2, the Multi-Modal Transportation Alternative. Alternative 1 would reduce impacts as compared to the Project in the following resource areas: aesthetics, air quality; biological resources; energy; urban forestry resources; greenhouse gas emissions; noise; transportation; and utilities. For instance, avoidance of development within the hillsides of the California and Africa planning areas would greatly eliminate impacts to habitats onsite, including laurel sumac shrubland, coast live oak woodlands, eucalyptus/mixed woodlands, coast live oak woodland, and California sage coastal sage scrub habitats. Alternative 1 would also minimize impacts to Nevin's barberry and Southern California black walnut, two sensitive species known to exist on site. Reduction or elimination of the proposed parking structure would also reduce visual impacts to the public from roadways and areas fronting the Zoo in Griffith Park. However,

Alternative 1 would continue to result in significant and unavoidable impacts to transportation, similar to the Project and Alternative 2.

Alternative 1 would only meet the Project objectives for animal welfare and care within fewer exhibit spaces and animal habitats, capital improvements, and environmental sustainability. A majority of the remaining Project objectives would only be partially met by Alternative 1. For instance, the Zoo's ability to increase and modernize Zoo exhibit space, develop conservation facilities and programs, promote learning and education, provide an immersive visitor experience, create a world class destination, and provide visitor-serving amenities would all be hindered by the reduced development footprint under Alternative 1. Therefore, while Alternative 1 would be the Environmentally Superior Alternative, it would not achieve the objectives for the Project to the same extent as the Project and Alternative 2.

**Table ES-1. Summary of Impacts and Mitigation Measures of the Proposed Project**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>Aesthetics and Visual Resources</b>			
<p><b>VIS-1:</b> The proposed Project would not have a substantial adverse effect on a scenic vista.</p>	<p>Less than significant</p>	<p>No mitigation measures required.</p>	<p>Not applicable</p>
<p><b>VIS-2:</b> Even with required mitigation measures, the proposed intersection improvements would detract from the urban wilderness identity of Griffith Park near the Zoo Drive gateway and affect views of topography and natural resources as viewed from travelers along Zoo Drive or Western Heritage Way. Therefore, these proposed changes outside the Zoo property would be inconsistent with the City’s General Plan Conservation Element, Framework Element, 1988 Hollywood Community Plan, and Griffith Park Vision Plan.</p>	<p>Potentially significant</p>	<p><b>MM UF-1 and MM UF-2</b> shall apply.  <b>MM VIS-1 Roadway and Parking Lot Improvement Design.</b>                      Improvements to the intersection of Zoo Drive/North Zoo Drive/Western Heritage Way and the main Zoo entrance, Zoo parking lots, and the realignment of Crystal Springs Drive shall be designed to respect and enhance the visual quality and natural character of Griffith Park, especially designated gateways to Griffith Park as follows:</p> <ul style="list-style-type: none"> <li>• A licensed landscape architect experienced with road and infrastructure design within highly scenic parks shall be part of any design team and charged with maintaining and enhancing visual quality and natural character the public spaces fronting the Zoo, including the parking, roadways, intersections and trails.</li> <li>• For improvements at the intersection of Zoo Drive/North Zoo Drive/Western Heritage Way and the main Zoo entrance, major structural changes, including but not limited to a new bridge, below-grade crossing, and slip ramps or a roundabout, a licensed architect experienced with road and infrastructure design within highly scenic parks shall be part of any design team and charged with creating a scenic and iconic gateway feature, including:                         <ul style="list-style-type: none"> <li>• Use of stone or other natural materials consistent with surrounding structures and facilities in Griffith Park.</li> <li>• Minimize size, bulk, scale of structures to the extent feasible while also adhering to required engineering standards for safety and operations.</li> <li>• Installation of iconic design elements, signage, and art/decorations (e.g., emblematic animals or habitats, sculpture, topiary/vegetation, water feature) that reflect the gateway to both the Zoo and Griffith Park such that the bridge or roundabout become beneficial visual features.</li> </ul> </li> </ul>	<p><b>Significant and unavoidable</b></p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• All improvements to access roads and intersections shall be designed to preserve existing vegetation, particularly healthy mature trees, and characteristic park features (e.g., split rail fences) and to protect views from these roads and adjacent trails.</li> <li>• As part of design of these road and intersection improvement projects, a master landscape plan shall be prepared to guide tree and landscape retention and protection along these road corridors along with tree replanting and replacement landscaping.</li> <li>• The Zoo shall coordinate with RAP on design of all road and intersection improvements, and parking lot perimeter plantings.</li> </ul> <p><b>MM VIS-2 Parking Structure Design and Screening.</b> The proposed parking structure shall be designed in such a manner as to limit size, bulk, and scale and to reduce visibility of this new parking structure. The goal for redesign of the parking structure should be reduce the structure height as much as possible. Possible ways to reduce impacts of views of the structure from adjacent roadways and public areas may include:</p> <ul style="list-style-type: none"> <li>• Siting the parking structure in the far western corner of the parking lot as far from Zoo Drive as possible;</li> <li>• Design of the structure to a height no greater than three stories above grade with development of additional subterranean construction levels as necessary to achieve the intended number of new parking spaces;</li> <li>• Screening of the structure through planting of dense stands of trees and landscaping around the exterior of the structure;</li> <li>• Installation of lattices or climbing vines along the exterior of the structure and;</li> <li>• Use of natural materials (e.g., stone facing) or earth-tone colors to reduce the urban character of the structure.</li> </ul> <p>Proposed plans for the parking structure shall demonstrate screening and compatible design with Griffith Park and the intended goal of reducing structure height to the extent feasible. If the design of the structure within the proposed footprint identified in the Vision Plan and with a reduced structure height is determined to be infeasible due to cost or other environmental factors (e.g., shallow groundwater), redesign of the structure to achieve a reduced structure height may</p>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		include consideration of a design of a structure within a larger footprint and no subterranean levels. All plans for the proposed parking structure shall be subject to review and approval by the City Bureau of Engineering prior to approval of permits.	
<p><b>VIS-3:</b> Construction lighting would be localized and not perceived by the public. Glare from the aerial tram gondolas would be minimized by the use of matte finishing and earth tone colors to blend with the landscape.</p>	Potentially significant	<p><b>MM VIS-3 Aerial Tram Glare Reduction.</b> The proposed aerial tram support structures and gondolas shall have matte-finishing and painted with earth-tone colors to blend with the landscape. All glass features of the gondolas shall utilize non-reflective or low-reflectivity glass or film covers to avoid any potential for glare. Requirements for the use of no or low reflective materials shall be indicated on all plans for the aerial tram and be subject to review and approval by City Bureau of Engineering prior to approval of permits.</p>	Less than significant
<b>Air Quality</b>			
<p><b>AQ-1:</b> The mitigated construction emissions would not have the potential to conflict with or obstruct implementation of the 2016 Air Quality Management Plan (AQMP) by exacerbating air quality violations or delaying attainment of the air quality standards. All operational emissions would remain below applicable thresholds without mitigation.</p>	Potentially significant	<p><b>MM AQ-1 Off-Road Construction Equipment Meeting Tier 4 Final Emissions Standards.</b> All off-road diesel-powered construction equipment greater than 50 horsepower used for Project construction shall meet, at a minimum, Tier 4 Final off-road emissions standards. Construction contractors shall ensure that all off-road equipment meet the standards prior to deployment at the Project site and the Zoo shall demonstrate compliance with this measure to the City Bureau of Engineering prior to the start of construction. The City Bureau of Engineering shall monitor for continual compliance with these requirements throughout the course of construction.</p>	Less than significant
<p><b>AQ-2:</b> Without mitigation, construction of the proposed Project would generate emissions of NO<sub>x</sub>, an O<sub>3</sub> precursor, in excess of the applicable SCAQMD regional mass daily threshold. Operational emissions of O<sub>3</sub> precursors and particulate matter would be below project-level thresholds and would not result in a cumulatively considerable net</p>	Potentially significant	<p><b>MM AQ-1</b> shall apply.</p>	Less than significant

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
increase of any criteria pollutants for which Los Angeles County is currently designated nonattainment.			
<b>AQ-3:</b> Maximum daily emissions from sources located on the site during construction would not meet or exceed applicable localized significance threshold (LST) screening values. Furthermore, mitigation would substantially reduce on-site emissions of NO <sub>x</sub> and diesel particulate matter from off-road equipment. Operation of the proposed Project would not result in a land use change or alteration to the site that would place sensitive receptors in closer proximity to substantial sources of air pollutant emissions.	Potentially significant	<b>MM AQ-1</b> shall apply.	Less than significant
<b>AQ-4:</b> Implementation of the proposed Project would not result in sources of odors or other emissions that could create nuisance conditions.	Less than significant	No mitigation measures required.	Not applicable
<b>Biological Resources</b>			
<b>BIO-1:</b> Protection or restoration of native plant communities and special-status species would reduce Project impacts to special-status plant species.	Potentially significant	<b>MM WF-1</b> shall apply. <b>MM BIO-1 Biological Resources Mitigation and Monitoring Program.</b> The Zoo shall prepare and implement a Biological Resources Mitigation and Monitoring Plan (BRMMP) to mitigate loss of native vegetation communities, habitat, and special-status species from each Project phase. The BRMMP shall be prepared after completion of 30 percent design plans for each phase and shall specify timing and implementation of required biological resource restoration, enhancement, or creation measures. The BRMMP shall be prepared by a City-approved biologist as part of planning, engineering, and site	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>design for each Project phase under the direction of and approval by the City Bureau of Engineering and Zoo planning staff. The BRMMP shall be prepared in consultation with appropriate City departments and resource agencies such as the Los Angeles Fire Department, Recreation and Parks Department, and the CDFW. The BRMMP shall be updated prior to final designs and development plans for each phase. The Zoo shall be responsible for ensuring all BRMMP requirements are reflected in Project design/architectural, engineering, and grading plans. All plans for each Project phase shall be reviewed by the City to ensure compliance with the BRMMP.</p> <p>The BRMMP shall require measures to avoid and mitigate impacts to biological resources onsite, including, but not limited to, the following:</p> <ol style="list-style-type: none"> <li>1. At 30 percent design plan stage for each Project phase, biological resource surveys shall be completed for areas of potential effect in that phase by a City-approved biologist, subject to the following requirements:               <ol style="list-style-type: none"> <li>a) The surveys shall refine the disturbance footprint of impacted habitats plus a buffer if recommended by the City-approved biologist.</li> <li>b) The survey shall delineate native vegetation communities such as coast live oak woodland, laurel sumac shrubland, and coastal sage scrub, including maps of the extent and type.</li> <li>c) The survey shall identify all special-status plant and animal species present or potentially present within the subject phase of Project development.</li> <li>d) A summary of the results of the pre-construction survey shall be submitted to the City immediately upon completion of the survey. A survey report describing and delineating the extent and quality of native vegetation communities and the presence or potential presence of special-status plant or animal species shall be submitted to the City for review and approval prior to completion of 60 percent design plans for the subject Project phase; if no native vegetation communities or special-status species are present or potentially present, the survey report shall describe such findings based evidence from the surveys.</li> </ol> </li> </ol>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>e) The survey report shall map and describe the location and extent of native vegetation communities and observed special-status plant or animal species that would be impacted within the areas of potential effect for each Project phase, and require the following avoidance, minimization, and mitigation measures:</p> <p>i) To the maximum extent feasible, onsite native vegetation communities and special-status plant species shall be protected and preserved in place, and design plans shall be amended to avoid disturbance or loss of these biological resources. The City-approved biologist shall work with Project designers during final design for each phase, as required, to incorporate existing native vegetation and special-status plant species, such as Nevin's barberry, and mature native trees, such as coast live oaks, into the Zoo landscaping and facilities (e.g., exhibits, visitor-serving spaces, service areas) in a manner that would ensure the livelihood and biological value of the natural community and/or individual plant. Construction techniques for Project development to avoid and protect special-status species shall be identified as part of a required construction mitigation plan (see <b>MM BIO-2</b>).</p> <p>ii) If avoidance or preservation in place cannot be achieved while meeting Project Objectives, the area of disturbed native vegetation communities and the total lost special-status plant species shall be mitigated onsite at a ratio of 2:1, as feasible given space limitation within the Zoo. To the extent feasible, native vegetation communities and special-status plant species shall be relocated or reestablished within disturbed, altered, and/or lost areas of coast live oak woodland, laurel sumac shrubland, and coastal sage scrub within the Project site. The BRMMP shall provide a description of the location and boundaries of the mitigation site and description of existing site conditions. The mitigation area shall be incorporated into the final development plans for each phase of Project development.</p>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li data-bbox="940 326 1682 591">iii) If native vegetation communities and/or special-status plant species cannot be protected and/or restored onsite, the Zoo and City shall work with RAP to identify an appropriate site(s) for restoration within Griffith Park to serve as a mitigation site. Offsite restoration of affected native vegetation communities and special-status plant species shall occur at a minimum ratio of 3:1. The BRMMP shall provide a description of the location and boundaries of the offsite mitigation site.</li> <li data-bbox="940 591 1682 1045">iv) If onsite or offsite restoration is required, the BRMMP shall specify restoration plans and techniques, as recommended by a City-approved biologist, including, but not limited to:               <ul style="list-style-type: none"> <li data-bbox="989 683 1667 769">(1) Identification of a suitable habitat compensation area of comparable size to be preserved and managed for lost habitat or species</li> <li data-bbox="989 769 1226 802">(2) Site preparation</li> <li data-bbox="989 802 1654 862">(3) Seed collection and/or plant salvage, designation, or establishment of offsite plant nursery facilities.</li> <li data-bbox="989 862 1688 894">(4) Planting, hydroseeding, replanting or seeding activities.</li> <li data-bbox="989 894 1220 927">(5) Success criteria</li> <li data-bbox="989 927 1661 1013">(6) Maintenance and monitoring program, for the short-term plant establishment period (i.e., 1-3 years), and over the long term (i.e., 5 years)</li> <li data-bbox="989 1013 1331 1045">(7) Reporting Requirements</li> </ul> </li> <li data-bbox="940 1045 1682 1398">v) If onsite or offsite restoration is required, a binding long-term agreement with the Zoo to implement and maintain protected and restored habitats/communities shall be implemented with the City. The BRMMP shall identify typical performance and success criteria deemed acceptable by the City based on measurable goals and objectives. Minimum criteria for restored habitats shall be at least 70 percent survival of container plants and 70 percent relative vegetative cover by vegetation type. BRMMP mitigation elements that do not meet performance or final success criteria within 5 years shall be completed through an extension of the BRMMP for an additional 2 years or at the</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>discretion of the City with the goal of completing all mitigation requirements. Monitoring of the mitigation and maintenance areas shall occur for the period established in the BRMMP, or until success criteria are met. If success criteria cannot be met through the BRMMP, the City shall specify appropriate commensurate measures (e.g., additional onsite or offsite restoration).</p> <p>vi) If special-status animal species are present or potentially present based on the survey, including bat, woodrats, or legless lizard species, and migratory or nesting birds, the BRMMP shall include avoidance and minimization measures to avoid or relocate as part of a construction mitigation plan (see <b>MM BIO-2</b>) and management plans for migratory and nesting birds (see <b>MM BIO-4</b>) and bat colonies (<b>MM BIO-5</b>).</p> <p><b>MM BIO-2 Construction Mitigation Plan for Biological Resources.</b> The Zoo shall prepare and implement a Construction Mitigation Plan (CMP) that identifies avoidance, reduction, and mitigation measures for construction-related impacts to biological resources, including special-status species. The CMP shall be prepared by a City-approved and qualified biologist prior to initiation of construction activities for Phase 1 of the Project and updated prior to construction activities for each subsequent phase. The CMP shall be approved by the City Bureau of Engineering and Zoo planning staff. The Zoo shall be responsible for ensuring all CMP requirements are included in construction plans and implemented as part of construction. All construction activities shall be monitored by a City-approved biologist to ensure compliance with the CMP. The Zoo would coordinate with CDFW Region 5 prior to the start of any construction activities.</p> <p>The CMP shall require:</p> <ol style="list-style-type: none"> <li>1. Per <b>MM BIO-1</b>, the CMP shall incorporate and address data from biological resource surveys for each Project phase to avoid and protect special-status plant and animal species to the maximum extent feasible, as follows:</li> </ol>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>a) Within six months prior to the start of construction of each Project phase, biological resource surveys shall be completed for areas affected in that phase by City-approved biologist, consistent with <b>MM BIO-1</b>.</li> <li>b) If the phase-specific survey identifies presence or potential presence of special-status species, within 14 days of the start of construction (including mobilization and staging), pre-construction clearance surveys shall be completed by a City-approved biologist to either confirm or update the BRMMP related to the location and extent of special-status species. A report of the pre-construction survey shall be submitted to the City Bureau of Engineering for review and approval prior to the start of construction.</li> </ul> <p>2. Based on the BRMMP and the results of the pre-construction surveys, the CMP shall require measures to avoid or mitigate impacts to special-status species present or potentially present within the Project phase; if no sensitive species are present or potentially present, the CMP shall identify findings from the surveys. CMP avoidance and minimization measures shall be subject to review and approval by a City-approved biologist, including, but not limited to, the following:</p> <ul style="list-style-type: none"> <li>a) If present, special-status animal species, such as woodrat, legless lizard, and bat species (see also <b>MM BIO-5</b>), shall be relocated from the Project site either through direct capture or through passive exclusion prior to construction activities. With cooperation and authorization from CDFW, trapping may be employed to identify woodrat species that are inhabiting the site. If determined appropriate, woodrat middens should also be relocated by qualified biologists outside of construction areas.</li> <li>b) If present, special-status plant species, such as Nevin’s barberry, shall be avoided to the extent feasible through use of high visibility exclusion fencing and signage to protect vegetation and root systems from disturbance or compaction, consistent with the BRMMP. Lost special-status plant species shall be replaced consistent with the BRMMP.</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>3. The CMP shall include BMPs to avoid or minimize impacts to biological resources during construction, including, but not limited to, the following:</p> <ul style="list-style-type: none"> <li>a) Construction equipment and vehicles shall be stored within existing disturbed or developed areas within the Zoo to the maximum extent feasible to avoid impacts to natural areas. All construction vehicle maintenance shall be performed in a designated offsite vehicle storage and maintenance area approved by the City. All construction access roads and staging areas shall be located to avoid known/mapped native vegetation and special-status species.</li> <li>b) All construction materials (e.g., fuels, chemicals, building materials) shall be stored at designated construction staging areas, which shall be located outside of designated sensitive areas in the BRMMP and CMP. Should spills occur, materials and/or contaminants shall be cleaned immediately and recycled or disposed of to the satisfaction of the RWQCB.</li> <li>c) All trash and construction debris shall be properly disposed at the end of each day. Dumpsters shall be covered either with locking lids or with plastic sheeting at the end of each workday and during storm events. All sheeting shall be carefully secured to withstand weather conditions.</li> <li>d) Construction-related erosion shall be minimized to retain sediment within the area of potential effect, including installation of silt fencing, straw waddles, or other acceptable construction erosion control devices. Such measures shall be installed along the perimeter of disturbed areas.</li> <li>e) Concrete truck and tool washout shall occur in a designated construction staging areas or other offsite location such that no runoff would flow to natural areas within the Zoo or to the Zoo’s stormwater collection system.</li> <li>f) All open trenches shall be constructed with appropriate exit ramps to allow species that incidentally fall into a trench to escape. All open trenches shall be inspected at the beginning of each workday to ensure that no wildlife species are present. Any wildlife species found during inspections shall be gently</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>encouraged to leave the Project site by a qualified biologist or otherwise trained and City-approved personnel. Trenches shall remain open for the shortest period necessary to complete required work.</p> <p>g) Construction shall be limited to daylight hours (7:00 AM to 7:00 PM or sunset, whichever is sooner).</p> <p><b>MM BIO-3 Worker Environmental Awareness Program.</b> The Zoo shall retain a qualified, City-approved biologist to prepare a Worker Environmental Awareness Program (WEAP) that shall be implemented during all phases of construction. WEAP training shall be provided to all personnel working on the site by a qualified, City-approved biologist. The training should review the construction-related requirements of the BRMMP and the CMP, including all special-status species that occur or have potential to occur. Training should explain all mitigation and protection measures, responsibilities of each worker, and a reporting framework. The WEAP shall be prepared and approved by the City Bureau of Engineering and Zoo planning staff prior to construction activities of Phase 1.</p> <p><b>MM BIO-4 Migratory and Nesting Bird Management.</b> Removal of trees and other vegetation shall be conducted outside of the breeding season (generally January 15 to August 31 for raptors, March 1 to August 31 for other bird species) to the extent feasible. If Project construction activities must be conducted during these period, pre-construction nesting bird surveys by a City-approved biologist shall take place within one week prior to ground disturbance and tree removal or trimming associated with each Project phase. If no active nests or nesting activity is found within or immediately adjacent to the phase work area, construction activities may proceed. If active nests are located during these surveys, the following measures shall be implemented:</p> <ol style="list-style-type: none"> <li>1. A summary of the results of the pre-construction survey shall be submitted to the City immediately upon completion of the survey. Consistent with <b>MM BIO-1</b> and <b>MM BIO-2</b>, the qualified biologist shall prepare a final report of the pre-construction survey to be submitted to the City Bureau of Engineering for review and approval prior to the start of construction. The report shall detail</li> </ol>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. A map of the area of potential effect and nest and roost locations shall be included with the report. If any special-status species are observed during pre-construction surveys, the Project biologist shall coordinate with appropriate regulatory agencies to determine appropriate procedures for handling or avoidance of the specimen.</p> <ol style="list-style-type: none"> <li>2. If the pre-construction surveys indicate presence of nesting or roosting birds, the construction activity shall be evaluated, and avoidance methods implemented as necessary at the discretion of the qualified biologist. Methods would vary based on bird species, site conditions, and type of work to be conducted, but could consist of limited or reduced construction access; reduced vehicle speeds; and/or noise attenuation.</li> <li>3. At the discretion of the qualified biologist, construction activities within 300 feet of an active nest of passerine birds shall be restricted until chicks have fledged, unless the nest belongs to a raptor, in which case a 500-foot activity restriction buffer shall be observed to avoid noise, light, and direct disturbance (see Section 3.12, <i>Noise and Vibration</i>). The Project biologist conducting the survey shall have the authority to reduce or increase the recommended buffer depending upon site conditions and the species involved.</li> <li>4. A report of findings and recommendations for bird protection shall be submitted to the City prior to vegetation removal.</li> </ol>	
<p><b>BIO-2:</b> With implementation of best management practices (BMPs) and mitigation, the proposed Project would not adversely affect wildlife movement in the vicinity.</p>	<p>Potentially significant</p>	<p><b>MM BIO-1, MM BIO-2, and MM BIO-4</b> shall apply.  <b>MM UF-1 and MM UF-2</b> shall apply.  <b>MM BIO-5 Bat Colony Management.</b> Removal of trees and older structures should be conducted outside of the maternity roost season (typically March 1 to August 31). Prior to removal of any trees over 20 inches diameter-at-breast-height (DBH) or demolition/relocation of existing onsite structures, a pre-construction acoustic and day/night roost survey shall be conducted by a qualified biologist to determine if any tree or structure proposed for removal, trimming, demolition, or relocation harbors sensitive bat species or maternal bat colonies. If present, maternal bat colonies shall not be disturbed and grading and</p>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>construction activities shall avoid the bat breeding season to the extent feasible. If disturbance of structures must occur during the bat breeding season, buildings and trees must be inspected and deemed clear of bat colonies/roosts within 7 days of demolition and an appropriately trained and approved biologist must conduct a daily site-clearance during demolition. If bats are roosting in a structure or tree in the Project site during the daytime but are not part of an active maternity colony, then exclusion measures shall be utilized and must include one-way valves that allow bats to leave but are designed so that the bats may not re-enter the structure. For each occupied roost removed, one bat box shall be installed in similar habitat as determined by the Project biologist and shall have similar cavities or crevices to those which are removed, including access, ventilation, dimensions, height above ground, and thermal conditions. If a bat colony would be eliminated from the Project site, appropriate alternate bat habitat shall be installed within the Project site. To the extent practicable, alternate bat house installation shall occur near onsite drainages.</p>	
<p><b>BIO-3:</b> Implementation of preservation and restoration measures would reduce impacts associated with the loss of protected native trees and shrubs.</p>	<p>Potentially significant</p>	<p><b>MM UF-1</b> and <b>MM UF-2</b> shall apply.</p>	<p>Less than significant</p>
<p><b>Cultural and Tribal Cultural Resources</b></p>			
<p><b>CUL-1:</b> The proposed Project would not result in impacts to historical resources.</p>	<p>Less than significant</p>	<p>No mitigation measures required.</p>	<p>Not Applicable</p>
<p><b>CUL-2:</b> The proposed Project would potentially discover prehistoric cultural resources during construction.</p>	<p>Potentially significant</p>	<p><b>MM CUL-1 Pre-Construction Workshop.</b> Prior to any ground disturbance activities during construction of each Project phase, a City-qualified archaeologist and shall conduct a cultural resources workshop for all construction personnel. The City-qualified archaeologist must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a Principal Investigator working with Native American archaeological sites in southern California. The qualified archaeologist will ensure that all other personnel are appropriately trained and qualified. The workshop will inform all construction personnel of the types of cultural material that may be</p>	<p>Less than significant</p>

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>encountered, and of the proper procedures to be followed in the event of an unexpected discovery of cultural material or human remains. Appropriate documentation will be completed to demonstrate attendance.</p> <p><b>MM CUL-2 Unexpected Discovery of Cultural Material.</b> In the event unexpected cultural resource material - such as flaked or ground stone, historic debris, building foundations, or non-human bone - is discovered during Project-related ground disturbances, construction personnel will stop all work within 50 feet of the discovery until a City-qualified archaeologist can evaluate the discovery for significance. Construction personnel will contact the City and Zoo staff immediately. Activities that may adversely impact the discovery will not resume without written authorization from the City that construction may proceed. The nature, extent, and significance of the discovery will be evaluated by a City-qualified archaeologist, and a Native American representative if the discovered resource is prehistoric. If the discovery is determined to be a significant cultural resource under CEQA, avoidance is the primary method of mitigation. If avoidance is not feasible, the City-qualified archaeologist will prepare a treatment plan consistent with CEQA Guidelines Section 15064.5(f) that addresses implementation of data recovery mitigation excavations. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation and public interpretation. A report of findings shall be prepared, and recovered materials curated, if needed, in an approved facility.</p>	
<p><b>CUL-3:</b> The proposed Project would potentially discover human remains during construction.</p>	<p>Potentially significant</p>	<p><b>MM CUL-3 Unexpected Discovery of Human Remains.</b> In the event human remains are encountered during Project-related ground disturbances, construction personnel will stop all work in the vicinity of the discovery and immediately contact the Los Angeles County Coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. The City and Zoo staff will also be contacted. If the County Coroner determines the remains are prehistoric, the Coroner will contact the Native American Heritage Commission and the Native American Heritage Commission shall designate a Most Likely Descendant.</p>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p><b>CUL-4:</b> The proposed Project would potentially impact tribal cultural resources, including buried resources and cultural landscapes.</p>	<p>Potentially significant</p>	<p><b>MM CUL-4 Native American Monitoring.</b> A Native American representative approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and the NAHC will monitor ground disturbing construction activities. Ground disturbing construction activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that include, but are not limited to, pavement removal, pot-holing or augering, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. The Native American representative will complete daily monitoring logs that will provide the location of construction activities, and a description of the soil and any cultural materials identified. Native American monitoring will be terminated when all ground disturbing construction activities are complete or when the Native American representative determines that the proposed Project site has a low potential for impacting Tribal Cultural Resources during each phase of Project implementation. Native American monitoring during ground disturbing construction activities will be conducted consistent with current professional standards.</p> <p><b>MM CUL-5 Unanticipated Discovery of Tribal Cultural and Archaeological Resources.</b> Pursuant to <b>MM CUL-2</b>, upon discovery of any archaeological resources, construction activities will cease in the immediate vicinity of the discovery until the discovery can be assessed. All archaeological resources identified during Project construction activities will be evaluated by the Native American representative approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation will coordinate with the City and the Zoo regarding treatment and curation of the resources including reburial or preservation for educational purposes. Per AR-2, if the discovery is a significant resource, avoidance measures or appropriate mitigation will be implemented.</p> <p><b>MM CUL-6 Preservation of Unique Archeological Resources.</b> If unique archaeological resources are discovered, preservation in place (i.e., avoidance) will be the preferred manner of treatment consistent with Public Resources Code Section 21083.2(b). If preservation in place is not feasible, treatment may include implementation of archaeological</p>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>data recovery excavations to remove the resources and subsequent laboratory processing and analysis. Historic archaeological material that is not Native American in origin will be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it will be offered to a local school or historical society for educational purposes.</p> <p><b>MM CUL-7 Unanticipated Discovery of Human Remains and Associated Funerary Objects.</b> PRC Section 5097.98(d)(1) defines Native American human remains as an inhumation or cremation in any state of decomposition or skeletal completeness. Consistent with MM CUL-3, in the event human skeletal material is discovered, excavation will be stopped, and the discovery will be immediately reported to the Los Angeles County Coroner consistent with Health and Safety Code 7050.5. If the County Coroner recognizes the human remains to be Native American or has reason to believe the remains are Native American, the County Coroner will contact the NAHC within 24 hours. Public Resources Code 5097.98 will be followed.</p> <p>In the event human skeletal material is discovered, the following will occur:</p> <ul style="list-style-type: none"> <li>The Native American representative monitor will immediately redirect construction activity a minimum of 150 feet from the discovery and place an exclusion zone around the discovery. The Native American representative will contact the construction manager who will then contact the Los Angeles County Coroner. The Native American representative will also contact the Gabrieleño Band of Mission Indians-Kizh Nation, a City-qualified archaeologist, the City, and the Zoo. Construction activity will continue to be redirected while the County Coroner determines whether the human skeletal material is Native American. The discovery will be kept confidential and secure to prevent further disturbance. If the human skeletal material is determined to be Native American, the County Coroner will notify the NAHC. The NAHC will then appoint a Most Likely Descendant.</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Funerary objects/associated grave goods will be treated in the same manner as bone fragments.</li> <li>• If discovered human remains cannot be fully documented and recorded on the same day, the remains will be covered with muslin cloth. A steel plate will be placed over the discovery to protect the remains. If a steel plate is not available, a 24-hour guard will be present onsite outside of regular construction hours.</li> <li>• Redirecting construction activities to protect the human remains in place will be recommended if feasible. If construction activities cannot be redirected, the burials may be removed. Cremations will be removed in bulk or by any means necessary to ensure complete recovery of all material. The Gabrieleño Band of Mission Indians-Kizh Nation will work closely with the City-qualified archaeologist to ensure that any excavation to remove human remains is conducted carefully, ethically, and respectfully.</li> <li>• If the discovery of human remains includes four or more burials, the location will be considered a cemetery and a separate treatment plan will be prepared.</li> <li>• If data recovery excavations are approved by the Gabrieleño Band of Mission Indians-Kizh Nation, documentation will include detailed descriptive notes and sketches at a minimum. Additional documentation will be approved by the Gabrieleño Band of Mission Indians-Kizh Nation</li> <li>• All feasible care will be taken to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects.</li> <li>• Scientific study of the human remains, including the use of invasive diagnostic procedures/techniques, will not be conducted.</li> <li>• Each discovery of human remains or associated funerary objects will be stored in opaque cloth bags. All human remains, funerary objects, sacred objects, and objects of cultural patrimony will be removed to a secure container on-site if possible. These items will be retained and reburied within six months of discovery.</li> <li>• Prior to the resumption of ground disturbing construction activities, the Zoo will designate a location within the proposed Project site for the respectful reburial of the human remains and/or funerary</li> </ul>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>objects. The reburial/repatriation site will be a location agreed upon between the Gabrieleño Band of Mission Indians-Kizh Nation and the Zoo to be protected in perpetuity.</p> <ul style="list-style-type: none"> <li>• There will be no publicity regarding a discovery of human remains.</li> <li>• A final report will be submitted to the Gabrieleño Band of Mission Indians-Kizh Nation and the NAHC.</li> </ul>	
<b>Energy</b>			
<p><b>EN-1:</b> The proposed Project would utilize fuel-efficient equipment consistent with state and federal regulations and would comply with state and City measures to reduce the inefficient, wasteful, and unnecessary consumption of energy.</p>	Less than significant	No mitigation measures required	Not Applicable
<p><b>EN-2:</b> Implementation of the proposed Project has potential to conflict with regional plans and policies governing transportation energy initiatives due to the substantial increase in annual Zoo visitation and VMT generated by new Zoo visitors and employees.</p>	Potentially significant	<b>MM T-2</b> shall apply.	Less than significant
<b>Urban Forestry Resources</b>			
<p><b>UF-1:</b> With implementation of mitigation, significant trees impacted during Project implementation would be protected, relocated, or replaced consistent with applicable City tree protection policies.</p>	Potentially significant	<p><b>MM UF-1 Protected Tree Plan.</b> To offset impacts to protected and important trees and shrubs resulting from Vision Plan implementation, the Zoo shall prepare and implement a Protected Tree Plan. The Protected Tree Plan shall identify measures for the protection, relocation, and/or replacement of protected and important significant trees and shrubs. The Protected Tree Plan shall outline and require that Project activities affecting protected trees and shrubs proceed as follows:</p> <ol style="list-style-type: none"> <li>1. <b>Preservation of Trees and Shrubs:</b> Protected and important trees and shrubs shall be preserved in place to the maximum extent feasible. To ensure protection of native protected trees and shrubs, as part of final design of the California and Africa area exhibits, all</li> </ol>	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>protected trees and shrubs shall be mapped and incorporated into the exhibit to the maximum extent feasible. The Zoo shall hire a City-approved Tree Expert meeting the requirements of the City’s Tree Protection Ordinance to evaluate the health and structure of protected and important trees and shrubs and make recommendations for avoidance of healthy specimens to the maximum extent feasible. The tree expert shall work with project designers during the final design of each phase to incorporate such trees into the exhibits in a manner that would ensure protection of the tree or shrub from damage by exhibit animals or exhibit maintenance activities. Each protected or important tree and shrub to be retained shall have a designated Protection Zone identifying the area sufficiently large enough to protect it and its roots from significant damage during construction. The designated Protection Zone of each specimen shall be protected with 5- to 6-foot-high chain link fences. Fences shall be mounted on 2-inch galvanized iron posts, driven into the ground to a depth of at least two feet and at no more than 10-foot centers, or similarly durable material. Tree and shrub fences shall be erected before demolition, grading, or construction begins and remain until final inspection of the project. Construction and demolition activities around protected trees shall follow all industry standards. Erosion control measures, tree pruning, soil compaction preventive measures, and a tree maintenance schedule shall be implemented and verified by the Bureau of Engineering and a City-authorized tree expert. Following construction, each tree or shrub preserved shall be monitored for a minimum of 5 years to ensure their long-term survivability.</p> <p>2. <u>Relocation of Trees and Shrubs</u>: Where protected and important trees cannot be avoided and preserved in place, individuals shall be transplanted elsewhere onsite to the extent feasible. If relocation onsite is not feasible, individuals shall be transplanted to an appropriate offsite location elsewhere within Griffith Park, pursuant to the approval of the City Bureau of Engineering and RAP. The City-approved Tree Expert shall identify the necessary measure to be taken to ensure the maximum survivability of the relocated specimens, including relocation method, placement,</p>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>irrigation method, and maintenance. Relocated individuals shall be monitored for their success for a period of 5 years. The Tree Protection Plan shall identify performance standards for determining whether relocated specimens are healthy and growing normally and shall outline procedures for periodic monitoring and implementation of corrective measures in the event the health of relocated trees declines.</p> <p>3. <u>Replacement of Trees and Shrubs</u>: Where the preservation or relocation of protected and important trees and shrubs is not feasible, or where the health of preserved or relocated specimens becomes compromised, as part of the final design of each exhibit or feature, the Zoo shall prepare and implement a replacement planting program. Replacement of protected and important trees and shrubs should follow guidelines described in the City’s Tree Protection Ordinance adopted at the time, including requirements for relocated or removed trees or shrubs to be replaced by other species protected by the ordinance at a 4:1 ratio (number of individuals restored to number of individuals impacted). The replacement planting program shall be prepared by a City-approved Tree Expert meeting the requirements of the City’s Tree Protection Ordinance. The replacement planting program shall specify the location for replacement, tree or shrub size, planting specifications, and shall include a monitoring program to ensure that the replacement planting program is successful. To the extent feasible, protected and important trees or shrubs removed within the California or Africa exhibits shall be replaced within each exhibit. Where this is not feasible, the Tree Protection Plan shall outline provisions and standards for replacement in areas outside of each exhibit. At a minimum, the monitoring program shall require monitoring of replacement individuals for a period of 5 years and shall include performance standards for determining whether replacement specimens are healthy and growing normally and procedures for periodic monitoring and implementation of corrective measures in the event that the health of replacement trees declines.</p>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>Replacement of removed trees and shrubs should occur within the Zoo to the extent feasible. If replacement within the Zoo is not feasible, the Zoo should coordinate with RAP for replacement trees and shrubs to be planted on adjacent areas of Griffith Park, provided such locations can support the tree’s or shrub’s survival. Each replacement tree shall be at least 15-gallon, or larger, measuring one inch or more in diameter one foot above the base, and be not less than seven feet in height measured from the base. The size and number of replacement trees shall approximate the value of the tree to be removed. If use of similar sized replacement trees and shrubs is not possible, smaller sized replacements may be planted. In that event, a greater number of replacement trees or shrubs may be required.</p>	
<p><b>UF-2:</b> Preparation of a detailed landscape plan for each proposed phase would ensure the Project area would be landscaped, irrigated, and maintained with a diverse mix of tree species that would provide significant urban forest value such that a net loss of urban forestry resources would not occur.</p>	<p>Potentially significant</p>	<p><b>MM UF-2 Restoration Plan.</b> To offset impacts to urban forestry resources and ensure landscaping under the Vision Plan is planned to provide urban forest value, the Zoo shall retain a qualified landscape architect to prepare a landscaping plan. The Zoo landscape plan shall be subject to review and approval by City Bureau of Engineering and shall include the following:</p> <ol style="list-style-type: none"> <li>1. Maximize protection of existing protected and important trees and shrubs consistent with the Zoo’s Tree Protection Plan identified in <b>MM UF-1</b>.</li> <li>2. Specify a plant palette and landscape plan that ensures establishment of tree canopy that is cohesive with and supports continuity with the surrounding canopy. The plant palette shall emphasize tree species which are considered to provide a healthy mix of visual and biological value and which offer greater shade cover and carbon sequestration.</li> <li>3. Plantings shall include tree specimens and shrubs capable of reaching or exceeding the heights of the adjacent proposed structures and plantings.</li> <li>4. Landscaping shall occur immediately following completion of construction of a proposed area of improvement. Planting shall prioritize the use of larger containers and more mature specimens to expedite recovery of the urban forest and minimize duration of heat island effects following construction.</li> </ol>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>Geology and Soils</b>			
<p><b>GEO-1:</b> With compliance with the California and Los Angeles Building Codes, the proposed Project would not expose people or structures to potential substantial adverse effects from rupture of a known earth fault or strong seismic ground shaking.</p>	<p>Less than significant</p>	<p>No mitigation measures required.</p>	<p>Not Applicable</p>
<p><b>GEO-2:</b> With geotechnical investigations for each phase of Project development and implementation of engineering techniques and technologies, the proposed Project would not expose people or structures to potential substantial adverse effects from ground failure.</p>	<p>Potentially significant</p>	<p><b>MM GEO-1 Site-Specific Geotechnical Evaluation.</b> Prior to the design and construction of proposed improvements at in each phase of the Project, a detailed geotechnical evaluation, including subsurface exploration and laboratory testing, shall be performed, consistent with LADBS standards and approvals. The geotechnical evaluation shall 1) further evaluate the specific subsurface conditions, including liquefaction and landslide potential, at each development site, 2) provide site-specific data regarding potential geologic and geotechnical constraints, and 3) provide information pertaining to the engineering characteristics of earth materials with regard to the proposed Project. Recommendations for earthwork, excavations, foundations, shoring, pavements, and other pertinent geotechnical design considerations shall be formulated from the detailed geotechnical evaluation. In the California planning area, the proposed hillside cut, excavation, and reinforcement required for Condor Canyon and its potential bridges shall be evaluated and designed with appropriate shoring mechanisms to avoid landslide and soil instability during construction and operation. The recommendations of the geotechnical report shall be incorporated into the final design and construction of the Project components. The geotechnical reports shall analyze for the following hazards:</p> <ul style="list-style-type: none"> <li>• If the site-specific geotechnical evaluation finds that slope instability is an issue in certain phases of development such as California and Africa planning area improvements, engineering techniques and technologies as retaining walls or graded soil buttresses, shall be employed during construction and/or operation.</li> </ul>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• If the site-specific geotechnical evaluation finds that liquefaction is an issue in certain phases of development such as development of Zoo Entry, Nature Play Park, or Asia planning area improvements or the proposed parking structure, engineering techniques and technologies such as removal and recompaction, densification of existing soils, or deepened foundations shall be employed during construction and operation.</li> <li>• If the site-specific geotechnical evaluation finds that expansive soils are an issue in certain phases of development such as development of Zoo Entry, Nature Play Park, or Asia planning area improvements, engineering techniques and technologies such as removal and replacement with low expansive materials or special reinforced design of foundations and slabs shall be employed during construction and operation.</li> <li>• If the site-specific geotechnical evaluation finds that dynamic compaction of dry soils is an issue in certain phases of development, engineering techniques and technologies such as removal and recompaction, densification of existing soils, or deepened foundations may be employed during construction and operation.</li> </ul> <p>The Zoo shall prepare each geotechnical evaluation for each improvement in Phases 1 – 7 to inform final design and engineering of improvements. Each geotechnical investigation shall be reviewed and approved by LADBS and the City Bureau of Engineering prior to groundbreaking of each phase. LADBS and the City of Bureau of Engineering shall review and approve all geotechnical investigations and review final Zoo development and engineering plans to ensure geotechnical recommendations are accurately incorporated prior to Project-related construction.</p>	
<p><b>GEO-3:</b> With geotechnical investigations for each phase of Project development and implementation of engineering techniques and technologies, the proposed Project would not expose people or structures to potential</p>	<p>Potentially significant</p>	<p><b>MM GEO-1</b> shall apply.</p>	<p>Less than significant</p>

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
substantial adverse effects from landslides.			
<b>GEO-4:</b> The proposed Project would not result in substantial soil erosion or the loss of topsoil with compliance with BMPs from the National Pollutant Discharge Elimination System (NPDES) Permit and the City's Stormwater and Urban Runoff Pollution Control Ordinance.	Less than significant	No mitigation measures required.	Not Applicable
<b>GEO-5:</b> With geotechnical investigations for each phase of Project development and implementation of engineering techniques and technologies, geologic risks associated with unstable geology would be minimized.	Potentially significant	<b>MM GEO-1</b> shall apply.	Less than significant
<b>GEO-6:</b> With implementation of a paleontological resource mitigation plan and worker awareness training, the proposed Project would not significantly affect fossil specimens that may be uncovered during construction.	Potentially significant	<b>MM GEO-2 Site-specific Paleontological Mitigation Plan.</b> A qualified paleontologist approved by the City of Los Angeles and the Los Angeles County Natural History Museum Vertebrate Paleontology Department shall be retained prior to earth-moving activities associated with construction of any individual Project phase. Prior to these earth-moving activities, the paleontologist shall determine if a site-specific mitigation plan is required for each phase based on the underlying geology and the proposed depths of excavation proposed by development and engineering plans for each phase. If a site-specific mitigation plan is required, the plan shall specify the level and types of mitigation efforts as set forth below, based on the types and depths of any ground disturbing activities and associated, impacted geological unit. Where a site-specific mitigation plan is required, earth-moving activities shall be monitored by the paleontologist or a monitor. Monitoring is only required in those areas of the individual development phase where these activities would disturb previously	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>undisturbed geological units and dependent upon the units present. Monitoring shall be conducted on a full-time basis in areas underlain by the Upper Topanga Formation, and at depths greater than 10 feet bgs in areas underlain by Quaternary alluvium. Monitoring shall consist of:</p> <ul style="list-style-type: none"> <li>• Visually inspecting debris piles and freshly exposed cuts for larger fossil remains</li> <li>• Periodic dry screening sediment, rock, and debris for smaller fossil remains</li> <li>• Recovery of all vertebrate fossil specimens, a representative sample of invertebrate or plant fossils, or any fossiliferous rock sample that may be easily recovered</li> <li>• Diversion of ground disturbing activities away from large or unusually productive fossil localities for the time that is required to recover the resource by the paleontologist or monitor(s)</li> <li>• Notification of the paleontologist or monitor (if not on-site) by the construction crew of any unanticipated discoveries of fossil resources. Ground disturbing activities will be temporarily diverted while the paleontologist or monitor assess the resource and determine if recovery is warranted or if ground-disturbing activities may resume in the area.</li> <li>• Collection of rock or sediment samples of the Upper Topanga Formation or Quaternary alluvium for each construction site for processing for small fossils. The total weight of all processed samples from either rock unit shall not exceed 1,000 pounds (2,000 pounds total). The results of processing initial 250-pound test samples shall be used by the paleontologist in determining how much of the remaining total samples shall be collected and processed. More of the samples shall be processed if the recovered remains are sufficiently concentrated (at least 4-5 identifiable specimens per sample), generally identified to genus or species level, and represent a taxonomically diverse faunal assemblage. With the development of each successive construction site, the paleontologist or monitor, may specify that less than 1,000 pounds shall be processed, based on the amount of excavation and other ground disturbing activities that would occur in areas underlain by the Quaternary alluvium, 10 feet bgs, or Upper Topanga Formation,</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>and on the results of processing samples from the same rock unit at previous construction sites.</p> <ul style="list-style-type: none"> <li>• Unless potentially fossilized remains are discovered at or near the surface, no paleontological monitoring of ground disturbing activities in the Quaternary alluvium at depths less than 10 feet bgs, and no samples shall be collected or processed.</li> <li>• The paleontologist or monitor shall maintain daily monitoring logs that record the tasks accomplished, locations, where ground disturbing activities and monitoring were conducted, geological units encountered, any fossil specimen recovered, and associated specimen data and geologic and geographic site data.</li> </ul> <p>If no fossil remains are found after 50 percent of ground-disturbing activities have been completed in an area underlain by Quaternary alluvium or Upper Topanga Formation, monitoring may be reduced or suspended in the remainder of that area with approval from the City of Los Angeles.</p> <p>If a site-specific mitigation program is required, the paleontologist shall reach a formal agreement with a recognized museum repository, such as the Los Angeles County Natural History Museum, before the mitigation program begins. The agreement shall include specifications regarding final disposition and permanent storage and maintenance of any fossil specimens recovered as part of the mitigation program as well as archiving associated fossil specimen data and corresponding geologic and geographic site data, and level of treatment/preparation of the fossil specimens. The fossil collection shall be donated to a public, nonprofit repository with a research interest in the collection. The costs to be charged by the repository for curating and permanently storing the collected fossil specimens shall be specified in the repository agreement.</p> <p>If paleontological resources are discovered and curated as a result of a required site-specific mitigation program, a final technical report of results and findings shall be prepared by the paleontologist in accordance with City of Los Angeles requirements, as applicable. Copies of the final report and any supporting documentation, including the paleontologist's or monitor's field notes and fossil site maps shall be archived at the designated repository. The final report shall be prepared</p>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>upon completion of ground disturbing activities for the first applicable phase of Project development. Subsequent reports for additional phases shall be issued as addenda to the first final report. Individual projects whose ground disturbing activities are completed within a single calendar year may be addressed collectively in one report or addendum, as applicable.</p> <p><b>MM GEO-3 Worker Paleontological Resource Awareness Program.</b> Prior to construction of each phase, workers shall receive education regarding the recognition of possible paleontological resources, during grading and excavation. Such training shall provide construction personnel with direction regarding the procedures to be followed in the unlikely event that previously unidentified paleontological materials are discovered during construction. Training shall also inform construction personnel that unauthorized collection or disturbance of paleontological resources is not allowed. The training shall be prepared by a City-approved paleontologist and shall provide a description of paleontological resources that may be encountered in the Project site, outline steps to follow in the event that a discovery is made, and provide contact information for the Project paleontologist and appropriate City personnel. The training shall be conducted concurrent with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to paleontological resources is provided by a qualified instructor meeting applicable professional qualifications standards. To prevent inadvertent potential significant impacts to paleontological resources that may be encountered during ground disturbance or construction activities, in the event of any inadvertent discovery of paleontological resources during construction, all work within the vicinity of the resource established by the City-approved paleontologist shall temporarily cease. If a paleontological resource is discovered, the City-approved paleontologist shall be notified to assess the significance of the find and provide recommendations as necessary for its proper disposition and the need for a site-specific mitigation plan, consistent with <b>MM GEO-2</b>.</p>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>Greenhouse Gas Emissions</b>			
<p><b>GHG-1:</b> The proposed Project would not generate greenhouse gases (GHG) emissions that would have a significant impact on the environment, and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs with implementation of mitigation for impacts to urban forestry, hydrology, transportation, and utilities.</p>	Potentially significant	<p><b>MM UF-1</b> and <b>MM UF-2</b> shall apply.  <b>MM HYD-2</b> shall apply.  <b>MM T-2</b> shall apply.  <b>MM UT-1</b> shall apply.</p>	Less than significant
<b>Hazards and Hazardous Materials</b>			
<p><b>HAZ-1:</b> With implementation of federal, state, and local regulations governing the transport, use, and disposal of potentially hazardous materials, the proposed Project would not create a significant hazard to the public or the environment.</p>	Less than significant	No mitigation measures required.	Not Applicable
<p><b>HAZ-2:</b> With implementation of a Phase II Environmental Site Assessment (ESA) and measures for discovery of contamination, construction of the proposed Project would not create a significant hazard to the public or the environment involving release of hazardous materials. The proposed Project would not result in significant operational hazards.</p>	Potentially significant	<p><b>MM HAZ-1 Phase II Environmental Site Assessment (ESA).</b>  Prior to Project implementation, the City shall prepare a Phase II ESA to address the following:</p> <ul style="list-style-type: none"> <li>• <b>Potential soil contamination around known USTs on site.</b>  Prior to ground-disturbance, a qualified environmental specialist (e.g., a licensed Professional Geologist [PG], a licensed Professional Engineer [PE] or similarly qualified individual) shall perform soil sampling and analysis to determine whether contamination exists and, if so, the extent of contamination from the following UST locations within the Project site; if contaminants are detected in soil at or above regulatory levels, then the results of the soil sampling shall be reviewed and acted upon by the LAFD and other regional or state regulatory agencies as needed:</li> </ul>	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• The fueling station in the Zoo Construction Shop and Support area</li> <li>• West of the South Parking Area</li> <li>• North of the Autry Museum.</li> <li>• <b>ACM, LBP, and Molds in Buildings.</b> Prior to any building demolition, the City shall conduct a comprehensive survey of ACM, LBP, and molds. If such hazardous materials are found to be present, the Zoo shall follow all applicable local, state and federal codes and regulations, as well as applicable best management practices, related to the treatment, handling, and disposal of ACM, LBP, and molds to ensure public safety.</li> </ul> <p>If the Phase II ESA identifies contamination at or above regulatory levels, prior to the issuance of grading permits for development, it shall be the responsibility of the Zoo to conduct and conclude all investigation and/or remediation activities under the oversight of the applicable regulatory agency (e.g., LAFD, DTSC, SWRCB). Remediation shall be accomplished in accordance with the requirements of the appropriate oversight agency. No Project construction shall occur in the affected area until case closure reports have been approved by the appropriate oversight agency.</p> <p><b>MM HAZ-2 Discovery of Contamination.</b> In the event that previously unknown or unidentified soil and/or groundwater contamination that could present a threat to human health or the environment is encountered during construction at a development site, construction activities in the immediate vicinity of the contamination shall cease immediately. At the start of construction, all construction contractors shall be instructed to immediately stop all subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or significantly stained soil is visible. Contractors shall be instructed to follow all applicable regulations regarding discovery and response for hazardous materials encountered during the construction process. A qualified environmental specialist (e.g., a licensed PG, a licensed PE or similarly qualified individual) shall investigate to identify and determine the level of soil and/or groundwater contamination.</p>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		If contamination is encountered, a Human Health Risk Management Plan shall be prepared and implemented that: (1) identifies the contaminants of concern and the potential risk each contaminant would pose to human health and the environment during construction and post-development, and (2) describes measures to be taken to protect workers, and the public from exposure to potential site hazards. Such measures could include a range of options, including, but not limited to, physical site controls during construction, remediation, long-term monitoring, post-development maintenance or access limitations, or some combination thereof. Depending on the nature of contamination, if any, appropriate agencies shall be notified (e.g., LAFD). If needed, a Site Health and Safety Plan that meets Occupational Safety and Health Administration requirements shall be prepared and in place prior to commencement of work in any contaminated area.	
<b>HAZ-3:</b> While the Project site is located within 0.25 miles of a school, implementation of the Phase II ESA would ensure no adverse impacts related to hazardous emissions or spills would occur during implementation of the proposed Project.	Potentially significant	<b>MM HAZ-1</b> shall apply.	Less than significant
<b>HAZ-4:</b> While the Project site is located within or in the vicinity of several sites which are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, with implementation of measures for discovery of contamination, construction of the proposed Project would not create a significant hazard to the public or the environment.	Potentially significant	<b>MM HAZ-2</b> shall apply.	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p><b>HAZ-5:</b> Project implementation would not impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	<p>Less than significant</p>	<p>No mitigation measures required.</p>	<p>Not Applicable</p>
<p><b>Hydrology and Water Quality</b></p>			
<p><b>HYD-1:</b> With implementation of BMPs from the City’s Stormwater and Urban Runoff Pollution Control Ordinance and a stormwater management plan, the proposed Project would not violate any water quality standards or waste discharge requirements or otherwise degrade water quality.</p>	<p>Potentially significant</p>	<p><b>MM HAZ-1</b> and <b>MM HAZ-2</b> shall apply.  <b>MM HYD-1 Construction Sequencing and Design of Onsite Stormwater Management System.</b> The Zoo shall prepare a stormwater management plan prior to Phase 1 Project implementation. The stormwater management plan shall finalize the design of the subterranean stormwater management system with minimum capacity to capture the equivalent of 2-year, 24-hour storm events as proposed by the Project, and shall consider increased capacity to maximize rainfall capture and reuse. The stormwater management plan shall indicate the sizing and design of the underground stormwater collection system for all proposed drainage areas. The stormwater management plan shall also determine the appropriate sequencing of system installation relative to the Project’s development phasing to provide continuous stormwater management throughout the 20-year implementation of the proposed Vision Plan. This sequencing plan shall ensure each phase of development has a functioning onsite stormwater system prior to operation to contain and convey all stormwater flows to the underground cistern(s), to onsite LIDs (e.g., bioswales), and/or to the Zoo’s Wastewater Facility. Sequencing shall avoid or minimize sedimentation into proposed LID features and underground stormwater management system infrastructure, which could lead to a loss of capacity and decrease in water quality benefits. During phased construction of the Project, the City shall also install stormwater storage facilities to supplement the underground cisterns such as rain barrels if needed to temporarily manage stormwater flows. These can be integrated into the Vision Plan redevelopment to be thematically appropriate and visually reminding visitors of the Zoo’s efforts for water conservation.                      The Zoo shall prepare and submit the stormwater management plan to the City BOE for review and approval prior to issuance of grading</p>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>permits for each Project phase. All development plans and permits shall reflect the approved sequencing and timing of implementation of stormwater management measures. The Zoo shall be responsible for ensuring all requirements are included in construction plans and implemented as part of construction. All construction activities shall be monitored by a City BOE staff to ensure compliance with the stormwater management plan.</p> <p><b>MM HYD-2 Preparation of a Storm Water Pollution Prevention Plan (SWPPP).</b> For each phase of construction, the City shall require the building contractor to prepare and submit a SWPPP as part of the City’s NPDES Construction General Permit 45 days prior to the start of work for approval. The contractor is responsible for understanding the Construction General Permit and instituting the SWPPP during construction. A SWPPP for site construction shall be developed prior to the initiation of grading and implemented for all construction activity on the Project site in excess of 1 acre, or where the area of disturbance is less than 1 acre but is part of the Project’s plan of development that in total disturbs 1 or more acres. The SWPPP shall identify potential pollutant sources that may affect the quality of discharges to stormwater and shall include specific BMPs to control the discharge of material from the site, including, but not limited to:</p> <ul style="list-style-type: none"> <li>• Temporary detention basins, straw bales, sand bagging, mulching, erosion control blankets, silt fencing, and soil stabilizers shall be used.</li> <li>• Sufficient physical protection and pollution prevention measures to prevent sedimentation, siltation, and/or debris from entering the onsite storm drain system, proposed stormwater management system, and the Los Angeles River.</li> <li>• Soil stockpiles and graded slopes shall be covered after 14 days of inactivity and 24 hours prior to and during inclement weather conditions.</li> <li>• Fiber rolls shall be placed along the top of exposed slopes and at the toes of graded areas to reduce surface soil movement, as necessary.</li> <li>• Sandbags, or other equivalent techniques, shall be utilized along graded areas to prevent siltation transport to the surrounding areas.</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• A routine monitoring plan shall be implemented to ensure success of all onsite erosion and sedimentation control measures.</li> <li>• Dust control measures shall be implemented to ensure success of all onsite activities to control fugitive dust.</li> <li>• Streets, parking areas, and paved pathways affected by phased Project construction shall be cleaned daily or as necessary to remove sediment, soils, and other construction debris.</li> <li>• BMPs shall be strictly followed to prevent spills and discharges of pollutants onsite (material and container storage, proper trash disposal, construction entrances, etc.); additional BMPs shall be implemented for any fuel storage or fuel handling that could occur onsite during construction.</li> </ul> <p>The SWPPP must be prepared in accordance with the guidelines adopted by the SWRCB. The SWPPP shall be submitted to the City BOE along with grading/development plans for review and approval. The SWPPP and notices shall be submitted to the SWRCB under their Stormwater Multi-Application, Reporting, and Tracking System (SMARTS). The SWPPP shall be designed to address erosion and sediment control during all phases of development of the site until all disturbed areas are permanently stabilized.</p> <p>All development plans and permits shall reflect the approved erosion control plan and BMPs submitted to the SWRCB. The Zoo shall be responsible for ensuring all requirements are included in construction plans and implemented as part of construction. All construction activities shall be monitored by a City BOE staff to ensure compliance with the SWPPP.</p> <p>All construction activities shall be monitored by City staff to ensure compliance with the SWPPP during grading and after conclusion of grading activities to monitor runoff. A Qualified SWPPP Practitioner shall be retained by the developer for overall management and reporting responsibility regarding the SWPPP and documentation under SMARTS in accordance with their permitting requirement. The City will keep a copy of the SWPPP on the Project site during grading and construction activities.</p> <p>The City shall file a Notice of Completion once construction of each Project phase is complete, identifying that pollution sources were</p>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>controlled during the construction of the Project and implementing a closure SWPPP for the site.</p> <p><b>MM HYD-3 Avoidance of the Seasonal Storms.</b> Ground disturbing activities such as excavation, grading, earthwork, and installation of the stormwater collection system shall occur during the dry season (May through October), including installation of the storm drains, underground cisterns, hydrological connections, and water pumps for irrigation use. Stormwater management system features shall be fully installed and restored to ensure soil stabilization and adequate stormwater conveyance capacity prior to the storm season (October through April).</p> <p>The Zoo shall be responsible for ensuring all requirements are included in construction plans and implemented as part of construction. The City shall review grading and construction plans for all phases to ensure compliance. All construction activities shall be monitored by a City BOE staff to ensure compliance with the grading and construction phasing plans.</p>	
<p><b>HYD-2:</b> The proposed Project would not adversely affect groundwater recharge and impacts to groundwater quality would be minimized with implementation of a Phase II ESA. With implementation of a site-specific geotechnical report, impacts related to encountering shallow groundwater during excavation would be minimized.</p>	Potentially significant	<p><b>MM HAZ-1</b> shall apply.  <b>MM GEO-1</b> shall apply.</p>	Less than significant
<p><b>HYD-3:</b> Construction activities would alter drainage on site, subject to requirements to control water quality and stormwater flows but would not alter drainage patterns or amounts offsite to the Zoo Wastewater Facility or the Los Angeles River. Soil erosion and</p>	Potentially significant	<p><b>MM HYD-1</b> through <b>MM HYD-3</b> shall apply.  <b>MM HYD-4 Operation and Maintenance Manual.</b> The City shall prepare and submit an Operation and Maintenance (O&amp;M) Manual to ensure LID features and the underground stormwater capture are maintained following installation under the Project. Regular maintenance is critical for the proper operation and longevity of the LID features and stormwater collection system. For example, the O&amp;M Manual would provide maintenance schedules for type and frequency</p>	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>sedimentation would be controlled through implementation of mitigation.</p>		<p>for items such as replacing mulch, trash removal, or sediment removal for bioretention, permeable pavement, and the stormwater collection system. The O&amp;M Manual shall also include guidelines for each LID life-cycle and appropriate reconstruction at the end of the life-cycle. The Zoo shall prepare and submit the O&amp;M Manual to the City BOE and Zoo planning staff for review and approval prior to issuance of grading permits. The Zoo shall be responsible for ensuring all requirements are included in O&amp;M Manual and implemented as part of Zoo operations.</p> <p><b>MM HYD-5 Mulch.</b> Immediately following the completion of landscaping installation, gorilla-mulch (i.e., shredded redwood) or similar non-animal waste mulch should be applied to landscaped and bioretention areas to minimize the risk of erosion and sedimentation. The application of mulch would also retain irrigated water within the soil, thereby reducing evaporation and irrigation requirements. Sedimentation in the stormwater collection system would result in degraded water quality, requiring additional treatment prior to stormwater reuse. Bark mulch is not recommended (especially in bioretention) as it tends to float and does not include the beneficial soil building properties of a shredded redwood or similar mulch. The Zoo shall be responsible for ensuring all landscaped areas are mulched as part of construction.</p> <p><b>MM HYD-6 Underground Stormwater Capture Pre-Treatment and Filtering.</b> The Zoo shall develop a pre-treatment and filtering plan and design for the stormwater collection system to ensure that captured water reused for irrigation does not unnecessarily contribute pollutants back into the Zoo’s drainage system. At a minimum, the stormwater collection system must comply with SWRCB safety regulations and County Guidelines for Alternate Water Sources. Additionally, sediment and TSS shall be filtered out to the level required for the proposed irrigation system. The Zoo shall submit pre-treatment and filtering plans to the City BOE and Zoo planning staff for review and approval prior to issuance of grading permits for each Project phase. All development plans and permits shall reflect the approved pre-treatment and filtering features. The Zoo shall be responsible for ensuring all requirements are included in construction plans and implemented as part of construction. All</p>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		construction activities shall be monitored by City BOE staff to ensure compliance with the pre-treatment and filtering plans.	
<b>HYD-4:</b> Implementation of the stormwater collection system would result in beneficial impacts to polluted runoff and existing stormwater drainage systems.	Less than significant	No mitigation measures required.	Not Applicable
<b>Land Use and Planning</b>			
<b>LU-1:</b> The proposed Project would not cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect with implementation of mitigation for impacts to biological resources, cultural and tribal cultural resources, urban forestry, recreation, and transportation.	Potentially significant	<b>MM BIO-1</b> through <b>MM BIO-6</b> shall apply. <b>MM CUL-1</b> through <b>MM CUL-7</b> shall apply. <b>MM UF-1</b> and <b>MM UF-2</b> shall apply. <b>MM REC-1</b> shall apply. <b>MM T-1</b> and <b>MM T-2</b> shall apply.	Less than significant
<b>Noise and Vibration</b>			
<b>NOI-1:</b> With implementation of noise control measures, construction noise levels would not exceed applicable standards. Project operation would not exceed applicable thresholds with the exception of ongoing construction activities within the Service areas, which would be minimized with noise control measures.	Potentially significant	<b>MM NOI-1 Equipment Mufflers.</b> The City and its contractors and subcontractors shall ensure that all construction equipment is operated with closed engine doors and is properly muffled according to manufactures specifications or as required by the City Department of Building and Safety (LADBS), whichever is the more stringent. Use of manufacturer-certified mufflers associated with construction equipment has been shown to reduce noise levels by a minimum of 8 dBA and up to 10 dBA. These requirements shall be included in all final Project plans and permit documents. <b>MM NOI-2 Rubber Tired Equipment.</b> The City and its contractors and subcontractors shall use rubber-tired equipment to the maximum extent feasible during grading, excavation, and building construction activities, rather than metal-tracked equipment, to reduce noise and vibration levels. These requirements shall be included in all final Project plans and permit documents.	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><b>MM NOI-3 Equipment Idling.</b> California State law prohibits heavy-duty diesel motor vehicles from idling for longer than five minutes (Title 13 CCR Section 2485). Under this mitigation, all construction equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.</p> <p><b>MM NOI-4 Notification Requirements and Coordination with Neighboring Properties.</b> At least one month prior to the initiation of construction related activities, the City shall prepare and distribute notices to property owners within 500 feet of the Project site, including the Wilson and Harding Golf Courses, Los Angeles Department of Recreation and Parks (RAP), North Hollywood High School Zoo Magnet Center, and the Autry Museum of the American West, as well as affected commercial businesses and residences along the haul truck route. At a minimum, the notices shall describe the overall construction schedule, advise residents, business owners, and employees of increased construction-related noise, and provide a non-automated telephone number to call to submit complaints associated with construction noise.</p> <ul style="list-style-type: none"> <li>• The Zoo shall retain a Noise Disturbance Coordinator for the duration of Project construction activities. The Noise Disturbance Coordinator shall be responsible for responding to local complaints about construction noise. The Noise Disturbance Coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures such that the complaint is resolved. All notices that are sent to sensitive receptors within 500 feet of the construction site and all signs posted at the construction site shall list the telephone number for the Noise Disturbance Coordinator.</li> <li>• Prior to initiating construction activity, the BOE’s construction contractor shall coordinate with the site administrator for the North Hollywood High School Zoo Magnet Center to discuss construction activities that generate high noise levels. Coordination between the site administrator and the construction contractor shall continue on an as-needed basis throughout construction of the proposed Project to mitigate potential disruption of classroom activities.</li> </ul>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><b>MM NOI-5 Temporary Noise Barriers.</b> The City and its contractors and subcontractors shall implement noise attenuation measures to the satisfaction of the LADBS. Prior to the initiation of the proposed realignment of Crystal Springs Drive/Western Heritage Way and south parking area improvements (Phase 1), a solid noise barrier wall shall be erected around the property boundary of North Hollywood High School Zoo Magnet Center. The noise barrier wall shall be designed to achieve the maximum sound attenuation feasible by breaking the line of site to the Project site (i.e., it shall be scalable to the height of the mixed-use hotel building during each construction phase). The noise barrier wall shall be based on a site-specific acoustic analysis prepared by a qualified acoustic engineer to be approved by the Community Development Director. The noise barrier wall shall be designed to reduce construction-related noise by a minimum of 10 dBA; however, it is expected that the noise barrier wall could decrease construction-related noise levels by up to 15 dBA during certain phases of construction. The noise barrier wall design shall be subject to City staff approval and shall include an art installation (e.g., painting, adhesive pattern design, etc.) that provides visual relief during the Phase 1 construction period.</p> <p><b>MM NOI-6 Noise Reduction Through Design.</b> The City shall design the Zoo's planning areas to reduce operational noise levels. For example, buildings and noise generating uses, such as the proposed Service Center and Zoo Entry shops, should be oriented such that the open faces of these buildings are facing inwards towards the center of the Zoo. Additionally, noise generators for operational equipment, including but not limited to the aerial tram and funicular motors and generators shall be enclosed to reduce noise exposure.</p>	
<p><b>NOI-2:</b> Due to the distance of sensitive receptors to individual construction sites requiring blasting, groundborne vibration would not exceed applicable thresholds. The Zoo would continue to implement existing relocation and protective measures</p>	<p>Less than significant</p>	<p>No mitigation measures required.</p>	<p>Not Applicable</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
to ensure no adverse noise and vibration impacts to Zoo animals.			
<b>Public Services</b>			
<p><b>PS-1:</b> Implementation of a Construction Traffic &amp; Access Management Plan would ensure continued access to the Zoo and through the interior of the Zoo circulation system to minimize impacts from Project construction on emergency access and response. Project operation would not adversely affect service ratios, response times, or other performance objectives for fire protection.</p>	Potentially significant	<b>MM T-1</b> shall apply.	Less than significant
<p><b>PS-2:</b> Implementation of additional measures to increase security of the Zoo’s parking lot areas would help to reduce the likelihood for vehicle theft/break in and manage crime within the Zoo, thereby minimizing impacts to public safety and police protection services.</p>	Potentially significant	<p><b>MM PS-1 Zoo Parking Lot Security Improvements.</b> In coordination with the City and LAPD, the Zoo shall prepare a Parking Lot Security Plan. The Plan shall identify and implement strategies to improve security within the Zoo’s parking areas to reduce vehicle theft/break in or other crimes. Strategies may include but not be limited to installation of surveillance cameras to provide 24-hour video coverage of all Zoo parking areas and frequent foot- or bicycle-based patrolling of the Zoo parking areas by Zoo Security personnel. LAPD shall review and approve the Plan and parking lot security improvements shall be implemented prior to completion of Phase 1. The parking structure improvements proposed as Phase 7 shall be equipped with video surveillance.</p>	Less than significant
<p><b>PS-3:</b> Project impacts to schools would be minimized by designating parking spaces for Zoo Magnet Center school buses and implementing parking hour limitations to accommodate staff and visitors.</p>	Potentially significant	<p><b>MM PS-2 Zoo Magnet Center Parking Restrictions.</b> The City and Zoo shall work with the LAUSD North Hollywood High School Zoo Magnet Center to coordinate improvements to the southern Zoo parking lot in Phase 1 of the Project. Parking lot design and management shall ensure adequate provision of parking for the Zoo Magnet Center during peak Zoo attendance days. Measures may include, but not be limited to, reserved parking spaces for Zoo Magnet Center school buses and adequate spaces to accommodate teachers, the</p>	Less than significant

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		office administrator, and campus counselor, with an additional reserve space for visitors. Reserved parking stalls shall be in effect during hours of Zoo Magnet Center operation. Signage shall indicate all restrictions on public parking within the southern parking lot. All proposed parking improvements shall be noted on final plans and reviewed and approved by the City Bureau of Engineering and the LAUSD prior to Project construction of Phase 1.	
<b>Recreation</b>			
<p><b>REC-1:</b> Implementation of the proposed Project would accommodate and facilitate the growth in demand for the Zoo's amenities and would not result in loss of or substantial additional demand on existing recreational facilities within Griffith Park. Consideration of pedestrian, bicyclist, and equestrian mobility and safety along the Main Trail in the design of proposed Zoo Drive/Western Heritage Way intersection improvements would ensure that the use of this trail is not hindered by Project implementation.</p>	Potentially significant	<p><b>MM REC-1 Consideration of the Main Trail in Intersection Designs.</b> Should the Zoo pursue improvements to the intersection of Zoo Drive/Western Heritage Way to include a roundabout or grade-separated intersection, the design of the proposed improvements shall be considerate of pedestrian, bicyclist, and equestrian mobility and safety along the Main Trail and ensure that the use of this trail is not hindered. All proposed intersection improvements, including those for design for the mobility and safety of pedestrians, bicyclists, and equestrians shall be incorporated into final plans and reviewed and approved by the City of Los Angeles Bureau of Engineering and the City of Los Angeles Department of Transportation prior to the issuance of permits for these improvements.</p>	Less than significant
<p><b>REC-2:</b> With implementation of the regulations and measures identified in other sections of this EIR, impacts from the construction or expansion of recreational facilities would be minimized.</p>	Less than significant	Mitigation measures required to reduce potentially significant environmental impacts from the construction of the proposed Project, including a new public park, are further discussed within each of the resource sections analyzed in this EIR. All mitigation measures discussed in this EIR shall apply.	Not applicable

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>Transportation</b>			
<p><b>T-1:</b> The proposed Project would not cause a significant environmental impact due to conflict with a program, plan, ordinance, or policy addressing the circulation system, with implementation of mitigation for recreation and VMT impacts.</p>	<p>Potentially significant</p>	<p><b>MM REC-1</b> shall apply.  <b>MM T-2 Zoo Transportation Demand Management (TDM) Program.</b> The Zoo shall prepare and implement a comprehensive TDM program to provide trip reduction strategies for Zoo visitors and employees. The TDM program shall be prepared by a qualified transportation planner and submitted by the Zoo to LADOT for review and approval prior construction activity. The goal of the TDM Program shall be to reduce Zoo employee VMT by 10 percent below existing conditions by 2040. The TDM Program shall also apply all feasible VMT reduction strategies for visitor vehicle trips to reduce visitor VMT below projected conditions to the maximum extent feasible. The TDM Program shall be developed and approved prior to operation of Phase 1 of the Project and shall be maintained and adjusted as needed continuously.                      The TDM Program shall be overseen by a Zoo TDM Coordinator. The Zoo TDM Coordinator shall be qualified transportation planner and may be a City/Zoo employee or contractor. The Zoo TDM Coordinator shall monitor visitor and employee mode share with annual surveys, collect and analyze parking and transit use data, and develop annual reports for submittal to BOE and LADOT. The surveys shall capture trip origin data, travel mode, number of people in the party, and other key data and indicators for TDM program performance relative to VMT. The Zoo TDM Coordinator shall ensure that monitoring efforts capture all Zoo-related travel behavior. Annual monitoring reports shall include trip length surveys completed at least biannually by a sample of Zoo patrons and annually by Zoo employees (e.g., trip origin data collection). Monitoring results shall be used to determine the appropriate TDM measures to employ in the coming year to maximize reductions in VMT per capita, champion transit and alternative mode transportation to the Zoo for visitors and employees, develop appropriate incentives to increase the Zoo’s transit mode share incrementally over time, and develop effective marketing tools to advertise transit and non-vehicular travel mode availability and incentives.                      Each annual TDM Program monitoring report shall:</p>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Describe the TDM efforts in place at the time to reduce vehicular trips;</li> <li>• Summarize collected survey data and results;</li> <li>• Evaluate parking utilization and transit use, comparing trends and annual changes;</li> <li>• Analyze the results of trip reduction measures in reducing VMT relative to projected VMT increases;</li> <li>• Evaluate change in available transportation infrastructure and programs serving the zoo,</li> <li>• Report the effect on zoo employee and visitor VMT per capita and compare to current citywide VMT per capita; and</li> <li>• Provide recommendations for adjustments to the tdm program to adaptively manage VMT reductions for visitors and employees.</li> </ul> <p>The TDM Coordinator shall oversee annual monitoring and reporting to evaluate the effectiveness of the TDM measures being implemented at the Zoo and recommend adjustments as needed to the TDM Program on an annual basis. The annual report shall be submitted to LADOT for review. The TDM measures shall be assessed and adapted as necessary based on the results of this review. Final annual reports and data (e.g., survey data) shall be shared with the City and made readily available for public review and use.</p> <p>The TDM Program shall be prepared consistent with the Mobility Element and in consultation with LADOT, as well as RAP, if required for measures affecting Griffith Park. Information regarding the TDM program shall be distributed to all Zoo employees and shall be posted on the Zoo’s website and other marketing materials for Zoo visitors and updated annually as needed based on the annual reports.</p> <p>The TDM Coordinator shall consider a range of measures for the TDM Program to reduce employee and visitor VMT per capita, including, but not limited to, the following:</p> <p><b>1. Measures to Reduce Zoo Employee VMT Per Capita</b></p> <ul style="list-style-type: none"> <li>• Encourage employee participation in existing vanpool programs, including City employee and Metro vanpool programs, or develop/expand the Zoo vanpool program.</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Provide employee incentives to participate in a vanpool program and regularly advertise the opportunities to vanpool through a variety of employee communication formats.</li> <li>• Implement a paid parking program to discourage employee vehicle trips to the Zoo and generate revenue that the Zoo may use to expand transit ridership for employee trips. Pricing options of onsite employee parking spaces include pay-per-use or weekly/monthly parking passes.</li> <li>• Partner with rideshare companies such as Uber or Lyft to guarantee availability of an emergency ride home or provide access to City vehicles for this purpose.</li> <li>• Offer employee TDM benefits for use of active transportation commuter modes, including ridesharing, transit, bicycling walking, carpool/vanpool, etc. Incentives for Zoo employees could include flexible scheduling or options for telecommuting.</li> <li>• Maximize opportunities for Zoo employee to telecommute as part of regular scheduling.</li> <li>• Provide a transportation information center and a commuter club to support a collaborative approach among employees to TDM.</li> <li>• Provide onsite bicycle facilities (i.e., shower, racks, and lockers) for Zoo employees in an amount and location informed by annual employee surveys and monitoring reports.</li> <li>• Encourage bicycles as a primary commute mode for employees and provide incentives for biking to work, including providing free or discounted equipment to employees such as helmets, locks, bicycle commuter gear, and bicycles (electric or non-electric).</li> <li>• Coordinate with LARiverworks, RAP, and LADOT to identify and facilitate new bicycle and pedestrian linkages and bridges between the Zoo and neighboring communities, particularly linkages to Los Angeles River Bike Path. The Zoo, RAP, and LADOT in consultation with the City of Glendale shall consider development of a new bicycle and pedestrian bridge across Colorado Boulevard, linking neighborhoods within the City of Glendale to Griffith Park, south of the Project site. The Zoo, RAP, and LADOT shall ensure that all bicycle and pedestrian linkages and bridges to Griffith Park are</li> </ul>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>well-signed and provide lighting, are regularly patrolled by law enforcement.</p> <ul style="list-style-type: none"> <li>• Continue to seek grant funding to support expanded TDM measures to reduce employee VMT per capita.</li> </ul> <p><b>2. Measures to Reduce Zoo Visitor VMT Per Capita</b></p> <ul style="list-style-type: none"> <li>• Offer discounted Zoo entrance tickets for patrons using transit to visit the Zoo. Visitors must provide proof of arrival via transit to receive discounted rate. Advertise the availability of ticket discounts for transit through social media and in coordination with RAP, LADOT, and Metro.</li> <li>• Coordinate with Metro to increase bus service frequency to the Zoo bus stop.</li> <li>• Seek funding opportunities to provide proportional share funding in coordination with RAP to expand Parkline Shuttle service to increase access to Griffith Park and Zoo from nearby Metro light rail stations, as follows: <ul style="list-style-type: none"> <li>• Expand Parkline Shuttle service to connect to the Metro B Line Vermont/Sunset station in the south and the Metro B/G (formerly, Orange) Line North Hollywood station in the north. Shuttle routes should be coordinated with LADOT and RAP.</li> <li>• Extend Parkline Shuttle service hours to begin at 9:30 AM, before the Zoo opens each day. This expanded service should first be targeted to occur during peak demand periods such as Easter, Memorial Day, and during Los Angeles Unified School District (LAUSD) holidays, such as the week of spring break.</li> <li>• Coordinate with RAP to monitor the success of the Parkline Shuttle during such peak periods and to fund expansion of the service over time, as needed, to facilitate and accommodate increased ridership. The program shall then be expanded to broaden the hours and days of operation as needed to meet demand.</li> <li>• Coordinate with RAP on how best to advertise and perform outreach to user groups regarding the availability of this transit service and methods to increase ridership (e.g., social media outreach).</li> </ul> </li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Seek funding opportunities to provide proportional share funding in coordination with Metro and LADOT to provide an express shuttle service to and from Los Angeles Union Station and the Zoo.                             <ul style="list-style-type: none"> <li>• Provide Union Station shuttle during operating hours on weekends and legal holidays. This new service shall first be targeted as a pilot program to occur during peak demand periods such as Easter, Memorial Day, and during LAUSD holidays, such as spring break week. If successful, the program shall then be expanded to broaden hours and days of operation.</li> <li>• Coordinate with Metro and LADOT on how best to advertise and perform outreach to user groups regarding the availability of this transit service and methods to increase ridership (e.g., social media outreach).</li> </ul> </li> <li>• Maintain and expand onsite bicycle parking for Zoo visitors in an amount and location informed by visitor surveys and annual monitoring reports.                             <ul style="list-style-type: none"> <li>• Maintain and expand short-term bicycle parking within the Zoo to meet changing demands evaluated in the TDM Program annual reports.</li> <li>• Provide well-lit, clearly signed, bicycle parking that is convenient and in close proximity to the Zoo Entry to encourage bicycling by visitors.</li> <li>• Provide secure short-term bicycle parking and/or a bicycle parking attendant, bicycle valet, or indoor bicycle parking facility to prevent theft and ensure parking availability for Zoo visitors.</li> <li>• Design bicycle racks with space-efficient configurations, such as vertically staggered racks and two-tier racks.</li> <li>• Provide a bike share station at the Zoo as a part of the Metro Bike Share, Ofo, or a new bike share program specific to Griffith Park. Funding shall be determined based on the area required for the bike station. The bike share station shall be well-lit and located at a safe and convenient location adjacent to the Zoo entrance.</li> </ul> </li> </ul>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Develop and implement a paid parking program for Zoo visitors to discourage personal vehicle trips to the Zoo and provide a secure funding source to help subsidize TDM, transit improvement, and other trip reduction measures, considering the following options:               <ul style="list-style-type: none"> <li>• A Peak Period Parking Program would charge for preferred parking during the highest visitation periods, including all weekends (Saturdays and Sundays), holidays, the spring months (April and May), and December, collecting fees for preferred parking on approximately 170 days of the year (based on the 2020 calendar year).</li> <li>• An Everyday Parking Program would charge for preferred parking 364 days of the year (every day the Zoo is open).</li> <li>• Maintain at least 15 percent of parking spaces as free parking to meet the needs of disadvantaged households and ensure that low-income visitors may continue to visit the Zoo.</li> <li>• The Zoo’s TDM Coordinator shall prepare a quarterly report on the effectiveness of the Paid Parking Program and monthly revenue generated.</li> <li>• Continue to seek grant funding to support expanded TDM measures to reduce visitor VMT per capita.</li> </ul> </li> </ul>	
<p><b>T-2:</b> While a required TDM program would substantially reduce Project VMT, the projected increase in Project VMT would exceed the City’s established VMT threshold, which stipulates that any net increase in VMT for event centers and regional-serving entertainment venues would be significant.</p>	Potentially significant	<p><b>MM T-2</b> shall apply.</p>	<p><b>Significant and Unavoidable</b></p>
<p><b>T-3:</b> Construction-related hazards would be minimized with implementation of a Construction Traffic &amp; Access Management Plan. With compliance with City standards and regulations and</p>	Potentially significant	<p><b>MM T-1 Construction Traffic &amp; Access Management Plan.</b> The Zoo shall prepare, implement, and maintain a Construction Traffic &amp; Access Management Plan during the pre-construction design and permitting for each Project phase to address traffic management during construction. The Construction Traffic &amp; Access Management Plan shall be subject to LADOT approval and designed to:</p>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>review and approval by various City agencies, the proposed Project would not create potentially hazardous conditions for people driving.</p>		<ul style="list-style-type: none"> <li>• Minimize traffic impacts on the surrounding street network within Griffith Park and surrounding areas to the maximum extent feasible during each construction phase;</li> <li>• Minimize impacts to existing public recreational uses and parking to the greatest extent practicable;</li> <li>• Ensure safety for both those constructing the proposed Project and the surrounding community;</li> <li>• Minimize the impacts of truck traffic within Griffith Park;</li> <li>• Avoid conflicts with planned events and festivals within Griffith Park to the greatest extent possible; and</li> <li>• Provide for coordination with adjacent or nearby construction projects.</li> </ul> <p>To achieve these outcomes, the Plan shall, at a minimum, include the following:</p> <p><b>1. Ongoing Requirements throughout the Duration of Construction</b></p> <ul style="list-style-type: none"> <li>• A detailed Construction Traffic &amp; Access Management Plan for work zones shall be maintained. At a minimum, this shall include parking and travel lane configurations; warning, regulatory, guide, and directional signage; and area sidewalks, bicycle lanes, and parking lanes. The plan shall include specific information regarding the Project’s construction activities that may disrupt normal pedestrian and traffic flow and the measures to address these disruptions.</li> <li>• Work within the public right-of-way (i.e., road realignment, intersection improvements, construction of the proposed parking structure) that is performed before 9:00 AM and after 2:00 PM on weekdays during the school year shall require flaggers and traffic controls to avoid conflicts with pick-up and drop-off at the North Hollywood High School Magnet Center.</li> <li>• Any requests for work before or after normal construction hours within the public right-of-way shall be subject to review and approval through the After-Hours Permit process administered by the Los Angeles Department of Building and Safety.</li> <li>• A Zoo-funded on-site construction monitor shall be present to ensure safety when work occurs within the public right-of-way (i.e., road realignment, intersection improvements, construction of the</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>proposed parking structure), or when more hazardous activities are occurring such as heavy-haul materials delivery or oversize transport. The Construction Traffic &amp; Access Management Plan shall identify the activities that would prompt the presence of an on-site monitor.</p> <ul style="list-style-type: none"> <li>• Trucks shall only travel on a City-approved construction route. Construction routes shall avoid Griffith Park roads to the maximum extent feasible. Truck queuing/staging shall not be allowed on City streets. Limited queuing may occur on the construction site itself.</li> <li>• Staging areas for construction materials and equipment shall be limited to fenced-off areas within the Zoo campus (with the exception of the road realignment and intersection improvements during Phase 1 and construction of the parking structure during Phase 7).</li> <li>• Materials and equipment shall be minimally visible to the public; the preferred location for materials is to be onsite, with a minimum amount of materials within a work area in the public right-of-way.</li> <li>• Off-street parking shall be provided for construction workers, which may include the use of a remote location with shuttle transport to the site, if determined necessary by the City.</li> <li>• At the discretion of the City, construction work shall not be permitted during City-approved or RAP-sponsored large events or festivals (e.g., Griffith Park Trail Race, Harvest Festival, concerts at the Greek Theatre) within Griffith Park.</li> </ul> <p><b>2. Project Coordination Elements That Shall Be Implemented Prior to Commencement of Construction</b></p> <ul style="list-style-type: none"> <li>• The Zoo shall advise the traveling public of impending construction activities through active outreach measures (e.g., information signs, portable message signs, media listing/notification, social media, and implementation of an approved Construction Traffic &amp; Access Management Plan).</li> <li>• The Zoo shall obtain needed City permits (e.g., Use of Public Property Permit, Oversize Load Permit), as well as any Caltrans permits required, for any construction work requiring encroachment into public rights-of-way, detours, or any other work within the public right-of-way.</li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>The Zoo shall provide timely notification of construction schedules to all affected agencies (e.g., Metro, RAP, LAFD, LAPD, Public Works Department, and BOE), as well as adjacent facilities (e.g., Autry Museum of the American West, Zoo Magnet School, Wilson-Harding Golf Course).</li> <li>The Zoo shall coordinate construction work with affected agencies in advance of start of work. Coordination with Metro regarding construction activities that may impact Metro bus lines (e.g., Metro Line 96) or result in closures lasting over 6 months shall be initiated at least 30 days in advance of construction activities.</li> <li>The Zoo shall obtain LADOT approval of any haul routes for earth, concrete, or construction materials and equipment hauling.</li> </ul>	
<p><b>T-4:</b> Implementation of a Construction Traffic &amp; Access Management Plan would ensure continued access to the Zoo and through the interior of the Zoo circulation system to minimize impacts from Project construction on emergency access and response. Project operation would not result in inadequate emergency access.</p>	<p>Potentially significant</p>	<p><b>MM T-1</b> shall apply.</p>	<p>Less than significant</p>
<p><b>Utilities</b></p>			
<p><b>UT-1:</b> Construction of the proposed Project would not result in significant environmental effects from water demand or construction of water facilities. The installation of water efficient fixtures, use of recycled water, and reuse of stormwater would minimize impacts from the Zoo’s water demand.</p>	<p>Potentially significant</p>	<p><b>MM HYD-7</b> shall apply.  <b>MM UT-1 Recycled Water Use.</b> In accordance with the Green New Deal pLAN and One Water L.A. Plan, the Zoo shall work with LADPW and LASAN to expand recycled water lines (purple pipe) to interior portions of the Zoo. Recycled water shall be used to the maximum extent available for washdown of the animal holding areas, powerwashing walkways and plazas, and flushing toilets, and in the Zoo’s exhibits (e.g., treatment systems, ponds, aesthetics, water features, etc.) if the recycled water is dechlorinated before use, and for fire suppression where feasible. Additionally, all irrigation water demand not covered by stormwater captured in the proposed stormwater collection system (i.e., during dry years), shall be covered by recycled water. The point of connection to the City’s water recycling</p>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>system would be at the existing 8-inch recycled water main at the west end of the Zoo parking lot in Griffith Park, subject to review and approval of LADPW, LASAN, and BOE. LASAN staff shall ensure the recycled water main connections are incorporated into the final building plans prior grading. City staff shall ensure measures are on all Project plans to ensure that these requirements are implemented.</p> <p><b>MM UT-2 Vision Plan Recommendations.</b> Project components designed and engineered to implement the Vision Plan shall follow all recommendations and guidelines for water, wastewater, and stormwater utilities provided in the Appendix of the Vision Plan. As recommended in the Vision Plan Appendix (New Infrastructure: Plumbing), the Project must provide the following features to reduce maintenance and conserve water:</p> <ul style="list-style-type: none"> <li>• Restrooms               <ul style="list-style-type: none"> <li>• Shut-off valve for all fixtures in each restroom, located above the upper terminal water closet and behind a locked access panel.</li> <li>• Water-saving battery-operated infrared-sensored flush valves, with manual override on all water closets.</li> <li>• Push-button, ADA-metered, self-closing faucets on lavatories.</li> <li>• Hose-bibb with vacuum breaker in recessed box with locking cover.</li> <li>• Floor drains with trap primers with floors sloped to drain.</li> <li>• Clean-outs above all urinals, lavatories, and water closets.</li> </ul> </li> <li>• Public Restrooms               <ul style="list-style-type: none"> <li>• Shut-off valve for all fixtures located above the upper terminal water closet and behind a locked access panel.</li> <li>• Floor drains with trap primers sloped to drain.</li> <li>• Clean-outs above all urinals, lavatories, and water closets.</li> <li>• ADA compliant floor-mounted water closet and countertop lavatory.</li> </ul> </li> <li>• Sewer Lines               <ul style="list-style-type: none"> <li>• Cast iron soil pipe at all following locations:                   <ul style="list-style-type: none"> <li>• Within the building and 5 feet outside the building line.</li> <li>• Running parallel to and within 2 feet of any building or structure.</li> </ul> </li> </ul> </li> </ul>	

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• 6-inch sewer lateral to fire station.</li> <li>• Provide clean-outs above all urinals, lavatories, upper terminal water closets, and sinks.</li> <li>• Provide uniform slope of 0.25-inch fall per foot whenever possible, but never less than 0.125-inch per foot.</li> <li>• Indicate invert elevations of new sewer lines at buildings, changes in direction, locations where sewer lines join and at property lines.</li> <li>• Review existing sewer pipe’s capacities, conditions, and materials.</li> <li>• Floor Drains, Area Drains and Floor Sinks               <ul style="list-style-type: none"> <li>• Where drains or sinks are required, slope floor to drain at 0.125 inch per foot.</li> <li>• Floor drains with trap primers are required at restrooms. One floor drain shall be provided front and center for two or more urinals. One floor drain is required for water closets in all restrooms with an additional floor drain when a total of four or more water closets are provided. One floor drain shall be provided for a combination of one water closet and one urinal.</li> </ul> </li> <li>• Utility/Service Sink Room               <ul style="list-style-type: none"> <li>• Provide wall-mounted stainless-steel mop sink, with floor drain.</li> <li>• Floor sinks with trap primers are required at:                   <ul style="list-style-type: none"> <li>• Utility/Service sink room.</li> <li>• Kitchens, and where preparation sinks have an indirect waste drain rather than a direct connection.</li> <li>• Trench drain.</li> <li>• Wherever required by the California Plumbing Code or the City Plumbing Code.</li> </ul> </li> </ul> </li> <li>• Water Systems               <ul style="list-style-type: none"> <li>• Use Type L hard copper pipe inside buildings.</li> <li>• Do not run water lines under slab if at all possible.</li> <li>• Provide a shut-off valve to isolate all fixtures in each restroom, kitchens, and any other room with multiple fixtures.</li> </ul> </li> </ul>	

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Slope pipes up in direction of water flow to air-elimination devices, or up to a nearby expansion tank, to provide for air elimination from water lines.</li> <li>• Water hammer arrestors are required for lavatories, sinks, fountains, water closets, urinal headers, and other fixtures.</li> <li>• Water Valves and Other Devices               <ul style="list-style-type: none"> <li>• Uninterrupted Service:                   <ul style="list-style-type: none"> <li>• All domestic water supply mains shall be designed in an above-ground valve station with a minimum of two parallel branch lines – a primary and secondary – to provide for uninterrupted service to the site during maintenance of a backflow preventer or a pressure regulating valve. Each branch shall include a backflow preventer with strainer and when the street pressure exceeds 80 psi, a pressure regulator with strainer.</li> <li>• A separate service shall be provided for landscape irrigation, with an above-ground valve station that includes a backflow preventer and a pressure regulator with strainer when the street pressure exceeds manufacturer’s or design suggested range.</li> </ul> </li> <li>• Shut-off Valves:                   <ul style="list-style-type: none"> <li>• All shut-off valves shall be accessible from the room in which fixtures are installed, and shall be located at approximately 3 feet, but not more than 7 feet, from the floor. These valves shall control only fixtures in the room in which they are installed.</li> </ul> </li> <li>• Provide shut-off valves for:                   <ul style="list-style-type: none"> <li>• Each group of fixtures.</li> <li>• Each restroom.</li> </ul> </li> </ul> </li> </ul> <p><i>The City is required to include the above standard recommended measures from the Vision Plan’s Appendix in the final building plans prior to approval. City staff shall ensure measures are on all Project plans to ensure that these requirements are implemented.</i></p>	
<b>UT-2:</b> The proposed underground stormwater infrastructure would	Potentially significant	Mitigation measures required to reduce potentially significant environmental impacts from the construction of the proposed	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>result in environmental impacts associated with excavation and trenching of underlying soils, emissions from construction equipment and fugitive dust, construction vehicle traffic, construction stormwater runoff, potential disturbance of archaeological and paleontological resources, and construction related noise.</p>		<p>underground stormwater system, are further discussed within each of the resource sections analyzed in this EIR. All mitigation measures discussed in this EIR shall apply.</p>	
<p><b>UT-3:</b> The proposed Project would not adversely affect flows to the Zoo Wastewater Facility, North Outfall Sewer and Advanced System, and Los Angeles – Glendale Water Reclamation Plant (LAGWRP). Further, the installation of pre-treatment and filtering devices within the stormwater collection system would ensure that captured water reused for irrigation does not unnecessarily contribute pollutants back into the Zoo’s drainage system. The proposed Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB).</p>	<p>Potentially significant</p>	<p><b>MM HYD-6</b> shall apply.</p>	<p>Less than significant</p>
<p><b>UT-4:</b> The proposed Project would be served by landfills with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs and would</p>	<p>No impact</p>	<p>No mitigation measures required.</p>	<p>Not Applicable</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
comply with federal, state, and local statutes and regulations related to solid waste.			
<b>Wildfire</b>			
<p><b>WF-1:</b> The proposed Project would not impair an adopted emergency response plan or emergency evacuation plan with implementation of a Construction Traffic &amp; Access Management Plan and updates to the Los Angeles Zoo Procedures Manual and the City Emergency Operations Plan.</p>	<p>Potentially significant</p>	<p><b>MM T-1</b> shall apply.  <b>MM WF-2 Evacuation and Fire Response Access Plan.</b> Prior to initiation of each phase of Project implementation, the Zoo shall prepare and implement an Evacuation and Fire Response Access Plan (EFRAP), which shall address conditions and requirements for both construction and operation of the Zoo area affected by the Project. The EFRAP shall be prepared in coordination with the LAFD and RAP. The Zoo Department shall oversee implementation of the EFRAP, including updates of the Los Angeles Zoo Procedures Manual and coordination with the City Emergency Management Department – Planning Division for updates of the City Emergency Operations Plan. The EFRAP shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Evacuation of Visitors and Employees                             <ul style="list-style-type: none"> <li>• Designated evacuation routes and exits within the Zoo for Zoo visitors and employees;</li> <li>• Wayfinding and signage to assist with route, exits, and meeting area identification during evacuation;</li> <li>• Special considerations and requirements for nighttime evacuations;</li> <li>• Accommodations for special care or disabled guests or employees;</li> <li>• Specified egress points for transportation vehicles and traffic controls to help efficiently evacuate the Zoo’s parking lot;</li> <li>• Contingency plans for changes to the construction schedule or phasing plan that would affect the primary evacuation plan and routes; and</li> <li>• Regular practice drills (e.g., one per year) for implementation of the EFRAP.</li> </ul> </li> <li>• Fire Response Access within the Zoo                             <ul style="list-style-type: none"> <li>• Specified at least two dedicated ingress points for emergency responders;</li> </ul> </li> </ul>	<p>Less than significant</p>

**Table ES-1. Summary of Impacts and Mitigation Measures (Continued)**

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Specified firefighter staging or command locations within the Zoo (e.g., northern parking lot or Gottlieb Animal Health Center); and</li> <li>• Traffic controls at gates and intersections to balance ingress/egress needs during evacuation.</li> <li>• Zoo Animal Shelter in Place and Evacuation               <ul style="list-style-type: none"> <li>• Shelter-in-place accommodations; and</li> <li>• A relocation plan from the Project site to a secondary location or facility, with associated transportation.</li> </ul> </li> </ul>	
<p><b>WF-2:</b> With implementation of existing regulations, risks associated with construction of the Project over the Vision Plan implementation period would be reduced such that associated wildfire risk would be nominal. With the application of existing regulations and requirements to update wildfire management and evacuation plans, Project operation would not significantly exacerbate wildfire risks resulting in the exposure of Zoo staff and visitors to wildfire hazards.</p>	<p>Potentially significant</p>	<p><b>MM WF-2</b> shall apply.</p>	<p>Less than significant</p>
<p><b>WF-3:</b> Adverse impacts to biological resources as a result of installation and maintenance of fuel breaks would be reduced through maximum avoidance of native vegetation and appropriate restoration offsite.</p>	<p>Potentially significant</p>	<p><b>MM BIO-2</b> shall apply.  <b>MM WF-1 Wildfire Fuel Management Plan.</b> The Zoo shall retain a City-qualified specialists (i.e., fire management professionals) and City-approved biologist to prepare a Wildfire Fuel Management Plan (WFMP) to design the creation and maintenance of required fire buffers and fuel management zones around the Project site while preserving the integrity of existing native oak woodland, chaparral and coastal sage scrub habitats to the maximum extent feasible. To the maximum extent feasible, native trees and shrubs, such as coast live oak, coastal scrub, and grassland shall be thinned and limbed up but left in place. The WFMP shall be prepared consistent with the requirements of PRC Section 4291 and also detail methods for achieving fire safety around</p>	<p>Less than significant</p>

Table ES-1. Summary of Impacts and Mitigation Measures (Continued)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>new and existing structures. The WFMP shall incorporate management strategies in coordination with RAP and LAFD to address any needed future management actions in Griffith Park buffering the Project site. Vegetation and other fuels with the management zone(s) shall be maintained by the Zoo in a manner consistent with existing CFC and LAFD regulations to reduce fuel loading in vulnerable areas and to avoid the buildup of deadwood and leaf litter and/or inappropriate storage of flammable materials. Specifically, the WFMP shall describe at least the following elements:</p> <ul style="list-style-type: none"> <li>• Vegetation coverage and type within and adjacent to the vegetation management zone(s);</li> <li>• Sensitive species identification, mapping, and avoidance;</li> <li>• Setbacks between structures, Project site boundaries, and access routes;</li> <li>• Location and management procedure for flammable materials use and storage; and</li> <li>• Development plan landscaping and planting standards within the setback areas.</li> </ul> <p>The Zoo shall submit the WFMP to the City Bureau of Engineering, Emergency Management Department, RAP, LAFD, and California Department of Fish and Wildlife (CDFW) for review and approval prior to issuance of any grading and development plans for improvements under the Project.</p>	
<p><b>WF-4:</b> The proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.</p>	<p>Less than significant</p>	<p>No mitigation measures required.</p>	<p>Not Applicable</p>

