

**Mitigation Monitoring Reporting Program
for
Roeding Regional Park and Fresno Chaffee Zoo
Facility Master Plans
Fresno, California**

State Clearinghouse No. 2008031002

City of Fresno
Development and Resources Management Department
2600 Fresno Street
Fresno, California 93721-3604
559.621.8046

Contact: Kevin Fabino, Planning Manager

Prepared by:

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Michael Houlihan, AICP, Manager of Environmental Services



January 21, 2011

MITIGATION MONITORING AND REPORTING PROGRAM

The following Mitigation Monitoring and Reporting Program (MMRP) for the Fresno Zoo project has been prepared pursuant to Section 15097 of the CEQA Guidelines and Section 21081.6 of the Public Resources Code. This MMRP lists all applicable mitigation measures from the EIR for the project. The appropriate timing of implementation and responsible party are identified to ensure proper enforcement of the mitigation measures from the EIR to reduce project impacts to less than significant levels.

The following MMRP identifies the entity responsible for verifying that the mitigation measures for the project are performed. The City of Fresno, as lead agency, will also be responsible for providing a date that each mitigation measure is verified as completed. The MMRP provides a comment/verification date column for the responsible entity to provide notes and remarks and provide a date the measure was completed. The timing of implementing the mitigation measures in the MMRP is identified in each measure.

The performance of the mitigation measures is the responsibility of the project applicant. The project applicant is responsible to provide evidence to the City of Fresno that the mitigation measures are performed and completed. The City of Fresno, as lead agency, will be responsible for ensuring that implementation of all mitigation measures occurs in accordance with this program.

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
Cultural Resources			
<p>4.1(a). Maintain the public recreational uses associated with the ponds by introducing a new pond feature in accordance with Mitigation Measure 4.8(a), which states that historic preservation design guidelines shall be developed that address new design in the context of the contributing architectural and landscape features of the potential historic district. A new pond feature shall be located near the Golden State Boulevard entry to the park, such that the pond feature is at least visible and as accessible as they are in their current location. Historic American Landscape Survey (HALS) documentation of the ponds shall be prepared by a qualified historic preservation professional prior to the demolition of the ponds. The Zoo will consult with the California Department of Fish and Game (CDFG) and will stock the pond feature with fish species recommended by CDFG.</p>	<p>Prior to demolition of the existing pond feature</p>	<p>Development and Resource Management Department</p>	
<p>4.1(b). Prior to the completion of the improvements schedule for 2014 or before, Fresno Chaffee Zoo shall rehabilitate the Pergola and the Lisenby Bandstand according to the Secretary of the Interior’s Standards for Rehabilitation. If feasible, the Lisenby Bandstand will be accessible to the public.</p>	<p>Prior to the completion of the improvements scheduled for 2014 or before</p>	<p>Development and Resource Management Department</p>	
<p>4.2. Relocate the Fresno Chaffee Zoo Administration Office within the boundaries of the historic district that is consistent with its historic setting. Consistency with the historic setting shall be determined by a city-approved historian. Historian American Building Survey (HABS) documentation shall be prepared for the Administration Office by a qualified historic preservation professional prior to relocation.</p>	<p>Prior to grading on or in the immediate vicinity of the Zoo Administration Office</p>	<p>Development and Resource Management</p>	
<p>4.3. Maintain the open, landscaped character of the southeastern boundary of the Roeding Regional Park Historic District. The design of the new zoo expansion perimeter fence shall comply with the Secretary of the</p>	<p>Prior to approval of the perimeter fence design.</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>Interior’s Standards for the Treatment of Historic Properties and integrate the overall historic character of the existing boundary of the historic district. In keeping with the historic character of the park landscape, in areas where the new zoo fencing is located in close proximity to the park perimeter, the fencing shall not be higher than required by AZA and USDA standards. Prior to issuance of any permits required for the construction of the expanded fence, the applicant shall submit a landscaping and materials plan to the City for review and approval. The plan shall incorporate building materials and colors that are consistent with the park’s historic character. To the extent that such materials or colors are not consistent with AZA and USDA requirements, these materials and colors shall only be required for the exterior portion of the fence. In these areas and in areas where fencing is close to public roads, special care should be given to maintaining a sense of openness and avoid creation of a barrier around the zoo so that the park experience is not visually interrupted by a “continuous solid wall” effect. The fence shall be designed and constructed in an informal manner that is aesthetically pleasing and generally follows the form of the existing trees, shrubs and ponds. The landscaping and materials plan shall use screening vegetation of species drawn from the existing vegetation palette of the park (not introducing a different plant palette) in various locations. Where landscaping is introduced for visual screening purposes along the park perimeter, plantings shall be varied in scale, materials, and density. Landscaping shall be designed to be generally perceived as part of the landscape of the park and not as part of the fence. Overall, the perimeter of the site shall feel like an element of the park.</p>			
<p>4.4(a). All contractors and subcontractors for the project shall be informed, in writing, of the possibility that cultural and/or paleontological resources or human remains may be discovered during project activities. If</p>	<p>Prior to the issuance of any grading permit</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>any cultural resources, paleontological resources, and/or human remains, are uncovered during project-related activities, all project-related activity in the area or in any area reasonably suspected to overlie the resources shall halt until a evaluation and/or data recovery excavation can be planned and implemented by a professional archaeologist or a professional paleontologist. Appropriate measures, as recommended by the archaeologist or paleontologist, to protect uncovered remains from accidents, looting, and vandalism shall be implemented immediately.</p>			
<p>4.4(b). After any such cultural or paleontological resources have been professionally recorded in their place of discovery, the finds shall be transferred to an appropriate regional repository for preservation, research, and/or use in interpretive exhibits. Project-related activities in the affected area may only resume with the approval of the archaeologist.</p>	<p>During construction activities</p>	<p>Development and Resource Management Department</p>	
<p>4.4(c). If human remains are discovered, all project-related activity in the area or any area reasonably suspected to overlie the resources shall halt and the Fresno County Coroner shall be notified immediately. The Coroner has two working days to examine the remains and 24 hours to notify the Native American Heritage Commission (NAHC) if the remains are Native American (Health and Safety Code Section 7050.5). Once the NAHC is notified, the procedures set forth in CEQA Guidelines Section 15064.5(d) and Public Resources Code Section 5097.98 shall be followed.</p>	<p>During construction activities</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>4.8(a). Prior to the approval of grading plans to construct new non-contributing features within the potential Roeding Park Historic District, develop historic preservation design guidelines that address new design in the context of the contributing architectural and landscape features of the potential historic district. The historic preservation design guidelines shall be prepared by a qualified historic preservation professional.</p>	<p>Prior to the issuance of a grading permit.</p>	<p>Development and Resource Management Department</p>	
<p>4.8(b). Prior to the approval of landscape plans, the historic plant palette and theme shall be utilized for the introduction of new landscape elements.</p>	<p>Prior to the approval of a landscape plan</p>	<p>Development and Resource Management Department</p>	
<p>Aesthetics</p>			
<p>5.1(a). Prior to the removal of any trees, shrubs, turf, street furniture or other elements of the existing landscape for any project phase; and prior to any grading activities for any project phase, a licensed landscape architect shall prepare a comprehensive landscape and irrigation plan (hereinafter landscape plan). Said landscape plan shall:</p> <ol style="list-style-type: none"> (1) Identify trees, shrubs, turf, street furniture and other components to be used within the project to ensure the project's landscape is consistent with existing landscape them of the Park and Zoo. (2) Optimize open space by clustering park facilities and attractions near or adjacent to roadways and pedestrian pathways. (3) Identify the location and protect existing landscape materials, street furniture, monuments, structures and other features of the Park that will be incorporated into the new project's landscape plan. (4) Define protocols and standards for landscape maintenance and removal of dead or damaged landscape materials including recommendations for replacement to maintain and enhance the Park and the Zoo's theme. 	<p>Prior to removal of vegetation or other landscape elements and prior to the issuance of a grading permit</p>	<p>Parks, After School, Recreation and Community Services Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>5.1(d). The design of the new PARCS maintenance yard shall be compatible with the predominant architectural style within Roeding Regional Park.</p>	<p>Prior to the removal of the existing PARCS maintenance yard</p>	<p>Development and Resource Management Department</p>	
<p>5.1(e). The trees located north of the proposed maintenance yard site shall be retained, provided they are healthy. If the trees cannot be retained, a row or grove of trees, consistent with the project landscaping, shall be planted along the north park boundary in this area to provide landscape screening.</p>	<p>Prior to grading on or in the immediate vicinity of the trees north of the proposed maintenance yard.</p>	<p>Parks, After School, Recreation and Community Services Department</p>	
<p>5.1(f). The design and construction of the zoo expansion perimeter fence shall comply with the following requirements:</p> <ol style="list-style-type: none"> (1) The fence shall comply with United State Department of Agriculture and American Zoo Association (AZA) requirements for Zoo perimeter fences. In keeping with these requirements, the location and design of the fence shall not jeopardize the safety of animals within the Fresno Chaffee Zoo. Compliance with this mitigation requirement shall take precedence over following mitigation requirements in cases where the requirements may conflict. (2) The fence shall comply with the Secretary of the Interior’s Standards for the Treatment of Historic Properties and integrate the overall historic character of the existing boundary of the historic district. In keeping with the historic character of the park landscape, in areas where the new zoo fencing is located in close proximity to the park perimeter, the fencing shall not be higher than required by AZA and USDA standards. (3) Prior to issuance of any permits required for the construction of the zoo expansion perimeter fence, the applicant shall submit a landscaping and materials plan to the City of Fresno Development and Resources Management Department for review and approval. The plan shall incorporate building 	<p>Prior to approval of the perimeter fence design.</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>materials and colors that are consistent with the park’s historic character. To the extent that such materials or colors are not consistent with AZA and USDA requirements, these materials and colors shall only be required for the exterior portion of the fence.</p> <p>(4) The zoo expansion perimeter fence shall be designed to maintain a sense of openness and to avoid the appearance a barrier around the zoo so that the park experience is not visually interrupted by a “continuous solid wall” effect.</p> <p>(5) The landscaping and materials plan for the zoo expansion perimeter fence shall use screening vegetation of species drawn from the existing vegetation palette of the park (not introducing a different plant palette) in various locations. Where landscaping is introduced for visual screening purposes along the park perimeter, plantings shall be varied in scale, materials, and density. The landscaping shall be designed in such a way so as to be generally perceived as part of the landscape of the park and not as part of the fence. Overall, the perimeter of the site should still feel, in the judgment of the City, like an element of the park.</p> <p>(6) The zoo expansion fence shall be aligned to avoid removing existing healthy trees with a breast height diameter greater than 6 inches. Removal of any trees shall be subject to the requirements of Mitigation Measure 5.1.1(a).</p> <p>(7) The visual impact of the zoo expansion perimeter fence may be reduced by lowering the grade of the land where the fence is located or the grade elevation of the land within the exhibit area, provided this does not result in the removal of any existing significant vegetation, including trees with a breast height diameter greater than 6 inches.</p>			

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>5.2(a). Any tree within the area of Roeding Regional Park affected by the Master Plans Project and is not currently dead or severely diseased (i.e., currently estimated at 710 trees), shall be (1) preserved at its present location; (2) relocated to another location within Roeding Regional Park; or (3) replaced by the same species of tree at a ratio of between 1.0 to 5.0 trees per tree lost, depending on the size of the tree, as identified below in Table 5-4, in Draft EIR Chapter 5, Aesthetics.</p> <p>A landscape plan shall be prepared in consultation with a certified arborist. The size of the replacement trees will be determined by the landscape architect and approved by the Development and Resources Management Department. After installation of the relocated and replacement trees, periodic monitoring shall occur to ensure the survival of the trees. For trees that are relocated and do not survive within the first two years of replacement, these trees shall be replaced by the same species of tree at the ratio shown in Table 5-4. For replacement trees that do not survive within the first two years of replacement, these trees shall be replaced by the same species of tree.</p> <p>Subsequent to the first two years of replacement or relocation, there shall be a periodic maintenance of the trees. A maintenance plan shall be prepared by a certified arborist and include pruning, fertilization, irrigation, and pest management to maintain the health of the trees.</p>	<p>Prior to the approval of a landscape plan</p>	<p>Parks, After School, Recreation and Community Services Department</p>	
<p>5.2(b). The Master Plans Project shall not result in the removal of more than 30% of trees identified in Table 5-3 that have a breast height diameter of greater than six inches, excluding trees that are currently dead or severely diseased.</p>	<p>Prior to the approval of a landscape plan</p>	<p>Parks, After School, Recreation and Community Services Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>5.2(c). All new trees planted under the Master Plans Project shall be planted at the earliest possible time after the location of any such trees is determined, to the extent such replanting can occur without interfering with construction, and to the extent construction activities would not damage the new trees. In addition, any trees with over 12 inches diameter at breast height that cannot be relocated shall not be removed until prior to the initiation of construction on the phase of the Master Plans Project that will result in the removal of the tree.</p>	<p>Prior to the removal of trees within the Palm Point Grove</p>	<p>Parks, After School, Recreation and Community Services Department</p>	
<p>5.2(d). The palm trees within the Palm Point Grove (i.e., <i>Washingtonia robusta</i>, <i>Washingtonia filifera</i>, and <i>Phoenix canariensis</i> trees) shall all either be (1) maintained in their present location or (2) relocated to another location within Roeding Regional Park. If the palm trees within the Palm Point Grove are relocated to another location in Roeding Regional Park, the design of the relocated grove area(s) shall reflect the current landscaping and natural setting of the existing grove area(s).</p>	<p>Prior to the removal of trees within the Palm Point Grove</p>	<p>Parks, After School, Recreation and Community Services Department</p>	
<p>5.2(e). The <i>Melia azedarach</i> and <i>Melia azedarach</i> ‘umbraculiformis’ trees within the Umbrella Grove shall all either be (1) maintained in their present location or (2) relocated to another location within Roeding Regional Park. If the <i>Melia azedarach</i> and <i>Melia azedarach</i> ‘umbraculiformis’ trees within the Umbrella Grove are relocated to another location in Roeding Regional Park, the design of the relocated grove area(s) shall reflect the current landscaping and natural setting of the existing grove area(s).</p>	<p>Prior to the removal of trees within the Umbrella Grove</p>	<p>Parks, After School, Recreation and Community Services Department</p>	
<p>5.4(a). Construction staging areas shall be surrounded by a solid wall or fence at least six feet in height. A chain-link fence draped with a heavy plastic cover, slats, or similar material for visual screening shall be considered a solid fence under this mitigation measure.</p>	<p>During construction activities</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
5.4(b). Construction sites shall be kept clean and free from rubbish and debris. Rubbish and debris shall be removed the day it appears.	Prior to the issuance of a grading permit	Development and Resource Management Department	
5.4(c). Public roads and private properties near Roeding Regional Park shall be kept free from construction-related rubbish and debris. Rubbish and debris shall be removed the day it appears.	During construction activities	Development and Resource Management Department	
5.4(d). Construction equipment and supplies shall be stored inside construction staging areas.	During construction activities	Development and Resource Management Department	
5.4(e). Portable restrooms shall be located inside construction staging areas	During construction activities	Development and Resource Management Department	
5.4(f). Construction materials and equipment shall be removed from construction sites as soon as they are no longer necessary.	During construction activities	Development and Resource Management Department	
5.4(g). With the exception of cut-and-fill materials or stockpiles, excess excavated material shall be removed from construction sites immediately or shielded visually until such material can be removed.	During construction activities	Development and Resource Management Department	
5.4(h). Graffiti on construction staging area fences or walls or elsewhere on construction sites shall be removed the day it appears.	During construction activities	Development and Resource Management Department	
5.5(a). New parking lot lighting shall employ full cut-off type fixtures. A full cut-off type fixture is a luminaire or light fixture that, by design of the housing, does not allow any light dispersion or direct glare to shine above a 90 degree horizontal plane from the base of the fixture. Full cut-off type fixtures must be installed in a horizontal position as designed	Prior to the approval of lighting plans	Department of Public Works	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
5.5(b). All external signs, street lighting, and security lighting shall be lit from the top and shine downward except where uplighting is required for safety or security purposes. The lighting shall be shielded to prevent direct glare and/or light trespass. The lighting shall also be, as much as physically possible, contained to the target area.	Prior to the approval of lighting plans	Department of Public Works	
5.5(c). Exterior building lighting shall be full cut-off or a shielded type designed to minimize any upward distribution of light.	Prior to the approval of lighting plans	Development and Resource Management Department	
5.5(d). Non-essential lighting shall be turned off by 10:00 p.m.	Prior to the approval of lighting plans and during operation	Department of Public Works; Parks, After School, Recreation and Community Services Department	
5.5(e). Exterior lighting originating on the project site shall be limited to a maximum of 0.5 footcandle at a distance of 25 feet beyond the property lines. A photometric analysis shall be provided to the City of Fresno Development and Resource Management Department for review to determine compliance with the above footcandle criteria.	Prior to the approval of lighting plans	Department of Public Works	
Biological Resources			
6.1(a). If tree removal, brushing, grading, or construction under the Master Plans Project is to occur during the breeding season (February 1 to August 31) a qualified ornithologist or biologist approved by the City PARCS Department shall conduct a protocol-level, pre-construction survey for nesting birds and raptors (including both tree- and ground-nesting species) onsite within 30 days before the onset of ground disturbance or tree removal.	Prior to tree removal, brushing, grading, and construction if planned before the breeding season (February 1 to August 31)	Parks, After School, Recreation and Community Services Department	
6.1(b). If an active raptor or migratory bird nest is detected on-site, an appropriate construction-free buffer shall be established by the ornithologist or biologist, in consultation with the California Department of Fish and	During construction activities	Development and Resource Management Department	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>Game. The size of the buffer and the restrictions on activity within the buffer will be determined by the ornithologist or biologist, and depend on species, topography, and the type of construction activity that would occur in the vicinity of the nest and will remain in place until all young have fledged.</p>			
<p>6.1(c). The ornithologist or biologist will determine during regularly scheduled field visits when all young have fledged, so that Master Plans Project construction activity within the buffer zone area can move forward.</p>	<p>During construction activities</p>	<p>Development and Resource Management Department</p>	
<p>6.2(a). Within 30 days prior to the commencement of restoration work on the bandstand, a qualified bat biologist shall conduct a habitat assessment and daytime survey of the bandstand. If no evidence of current bat habitation by the pallid bat or the Townsend’s big-eared bat is found, no further action is required. If bat use is noted, then a qualified biologist shall prepare a report that makes recommendations for appropriate measures that will prevent harm to sensitive species of bats. These measures may include exclusion and humane eviction of bats roosting within the structure, partial dismantling of the structure to induce abandonment by bats, or other appropriate measures in coordination with and as approved by CDFG. If the measures are planned to be implemented between September 1 and September 30, no further action is required. If the measures are planned to be implemented during the breeding season (October 1 through August 31), coordination and approval by CDFG is required. The recommended measures shall be incorporated into and implemented as part of the bandstand restoration.</p>	<p>30 days prior to the commencement of restoration work on the bandstand</p>	<p>Development and Resource Management Department</p>	
<p>Transportation and Traffic</p>			
<p>8.1(a). Prior to the issuance of building permits, the project applicant shall participate in the Traffic Signal Mitigation Impact (TSMI) program, paying the approved</p>	<p>Prior to the issuance of building permits</p>	<p>Department of Public Works</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>fixed fee for the proposed project. Following are the TSMI program improvements that are required to be implemented. The timing of implementing these improvements is estimated to be in or before 2014; however, the improvements shall be completed as the significance thresholds are reached.</p> <ul style="list-style-type: none"> • Belmont Avenue and SR 99 SB – Signal Installation • Belmont Avenue and SR 99 NB – Signal Installation 			
<p>8.2(a). Prior to the issuance of building permits, the project applicant shall install traffic signals at the following intersections. The timing of implementing these improvements is estimated to be prior to 2030; however, the improvements shall be completed as the significance thresholds are reached.</p> <ul style="list-style-type: none"> • Olive Avenue and Site Access – Signal Installation • Golden State Boulevard and Site Access – Signal Installation 	<p>Prior to the issuance of building permits</p>	<p>Department of Public Works</p>	
<p>8.2(b). Prior to the issuance of building permits, the project applicant shall pay the proportionate share to accommodate dedicated left-turn storage lanes on Belmont Avenue for each on-ramp. This improvement is not currently part of a fee program and would likely require widening of the overcrossing structure and reconstruction of much of the interchange. At the time of publication of this Draft EIR, the estimated proportionate share is 7.5 percent; however, the final proportionate share shall be determined by the City Engineer (or his/her designer) at the time building permits are requested.</p>	<p>Prior to the issuance of building permits</p>	<p>Department of Public Works</p>	
<p>8.3(a). Pedestrian crossings on Park Boulevard shall be provided with appropriate signage and traffic controls, consistent with the most recent version of the California Manual on Uniform Traffic Control Devices, in order to alert motorists and pedestrians to the presence of the crossings. Sight distances for pedestrians and motorists shall be verified by the City Engineer (or his or her designee), as consistent with the most recent edition of the</p>	<p>Prior to approval of the design for the new Park Boulevard.</p>	<p>Department of Public Works</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
Caltrans Highway Design Manual and City of Fresno standard practices during the project design phase.			
8.4(a). The project applicant shall construct a vandal resistant fence along the east side of Golden State Boulevard from Olive Avenue to Belmont Avenue undercrossing, within the right-of-way, to prevent pedestrians from crossing the railroad tracks at mid-block locations.	Prior to the completion of the improvements scheduled for 2014 or before	Development and Resource Management Department	
8.4(b). The project applicant shall install a sidewalk on the south and north sides of the Olive Avenue at-grade railroad crossing.	Prior to the completion of the improvements scheduled for 2014 or before	Department of Public Works	
8.4(c). The project applicant shall install a Standard 8 warning device (flashing lights without a gate) in the off-quadrant due to the skewed track configuration of the crossing.	Prior to the completion of the improvements scheduled for 2014 or before	Department of Public Works	
Air Quality			
10.1(a). The following greenhouse gas reduction measures shall be included in the project that will reduce emissions related to energy and/or natural gas use: <ul style="list-style-type: none"> • Provide shade (within five years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30 percent of the site's non-roof impervious surfaces, including parking lots, walkways and plazas; OR place a minimum of 50 percent of parking spaces underground or covered by structured parking; OR use an open-grid pavement system (less than 50 percent impervious) for a minimum of 50 percent of the parking lot area. Unshaded paved areas shall have a minimum albedo of 0.3 or greater. • Install efficient lighting and lighting control systems where new lighting is being installed. Daylight shall be used as an integral part of lighting systems, where feasible. • Install Energy Star labeled roof materials on new 	Prior to approval of building permits	Development and Resource Management Department	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>buildings, unless the roof has solar panels installed. As an alternative to Energy Star roofing materials, a vegetated roof that covers at least 50 percent of the roof area can be installed.</p> <ul style="list-style-type: none"> • Install energy efficient heating and cooling systems, appliances and equipment, and control systems. • Install a solar power system in at least one onsite location. The system shall be a demonstration to the public on how solar or wind power works to generate electricity. • Install solar and/or tankless hot water heaters where new water heaters are being installed as part of the project, unless to do so would be infeasible (such as for food service water heaters, which may require different specifications). • Proposed onsite structures shall be designed to exceed California Title 24 energy conservation requirements by a minimum of 20 percent; OR become LEED certified. 			
<p>10.1(b). The following greenhouse gas reduction measures shall be included in the project as they will reduce emissions related to water transport and treatment:</p> <ul style="list-style-type: none"> • Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls. Micro-irrigation systems shall be utilized to the extent practical. • Use reclaimed/recycled water for landscape irrigation when the water is available for use. • Install low-flow, ultra-low flow, and/or waterless toilets and urinals where new ones are being installed. • Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff. <p>Implement low-impact development practices that maintain the existing hydrologic character of the site to manage storm water and protect the environment. (Retaining storm water runoff on-site can drastically</p>	<p>Prior to the issuance of building permits</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
reduce the need for energy-intensive imported water at the site.)			
<p>10.1(c). The following greenhouse gas reduction measures shall be included in the project as they will reduce emissions related to waste generation:</p> <ul style="list-style-type: none"> • Reuse and/or recycle a minimum of 50 percent of construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard). • New food service areas shall provide the customers with reusable, recyclable, and/or compostable dishes and drinking containers (with compost bins located throughout the park/zoo). Wedding and catering facilities shall have reusable dishes and drinking containers available. • Yard waste shall be reused or composited either onsite or offsite. 	Prior to the issuance of building permits	Development and Resource Management Department	
<p>10.1(d). The following greenhouse gas reduction measures shall be included in the project as they will reduce emissions related to motor vehicles:</p> <ul style="list-style-type: none"> • Purchase low or zero-emission vehicles for use onsite when the need arises for new vehicles. • Include internal pedestrian and bicycle routes that connect to adjacent pedestrian and bicycle routes located along Belmont Avenue, Olive Avenue and Golden State Boulevard; as well as transit stops located either onsite or along adjacent roadways. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking. • Site design and building placement minimize barriers to pedestrian access and connectivity. This measure is not meant to prevent the limited use of barriers to ensure public safety by prohibiting access to restricted areas. • Incorporate onsite transit facility improvements (e.g., 	Prior to the issuance of building permits	Development and Resource Management Department	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>pedestrian shelters, route information, benches, lighting) to coincide with existing or planned transit service.</p> <ul style="list-style-type: none"> • Daily charge for parking must be equal to or greater than the cost of a local transit pass plus 20 percent. • Provide onsite bicycle storage for employees who bike to work. 			
<p>10.1(e). To reduce emissions associated with refrigerants, the average refrigerant global warming potential used in air conditioning units in new buildings shall be less than 500.</p>	<p>Prior to the issuance of building permits</p>	<p>Development and Resource Management Department</p>	
<p>Noise</p>			
<p>11.1(a). Except in the case of emergency work, as defined in Fresno Municipal Code, § 10-102(d), the use of noise-generating activities at maintenance facilities shall only occur within the maintenance yard building, and only between the daytime hours of 7 a.m. and 10 p.m. To the extent practical, noise-generating maintenance activities shall be conducted with exterior doors closed.</p>	<p>During construction and operational activities</p>	<p>Development and Resource Management Department</p>	
<p>11.1(b). The proposed park maintenance building shall be maintained, designed, and constructed of materials sufficient to achieve applicable City of Fresno noise standard for stationary noise sources, or applicable measures adopted at the time of construction. Based on currently adopted standards, the proposed park maintenance building shall be designed to achieve operational noise levels of less than 61 dBA Leq, measured at the nearest residential property line. Based on the analysis conducted for this project, the proposed park maintenance building should be designed and constructed sufficient to achieve an interior-to-exterior noise reduction of 28 dBA, or greater. At a minimum, the following measures shall be implemented: (1) Building vents, doors, and windows shall be prohibited along the northern building façade of the maintenance building. (2)</p>	<p>Prior to the issuance of a building permit</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
Roof vents shall be prohibited on areas located within line-of-sight of the nearest residential land use. (3) All exterior building vent/utility openings shall be sealed. Additional measures may be required, at the time of construction, sufficient to achieve City of Fresno noise standards.			
11.1(c). The proposed maintenance building shall be oriented in a south-facing direction, so that the entrances to the building are located along the southern façade of the building.	Prior to the issuance of a building permit	Development and Resource Management Department	
11.1(d). A six-foot tall solid masonry wall shall be constructed along the southern property line of the nearest residential dwelling located north of the proposed park maintenance facility. The barrier shall be constructed prior to beginning construction of the proposed park maintenance facility.	Prior to beginning construction of the proposed park maintenance facility.	Development and Resource Management Department	
11.1(e). The proposed maintenance facility shall be designed so that the exterior equipment maintenance yard is located along the southern façade of the proposed park maintenance building. The proposed building shall be oriented so that it provides a break in the line-of-sight between the exterior equipment yard and the nearest residential use property line.	Prior to approval of the design for the maintenance facility	Development and Resource Management Department	
11.1(f). Noise-generating equipment located at the proposed park maintenance facility (e.g., air compressors, generators, etc.) shall be placed within the building interior and/or sufficiently shielded to achieve an exterior noise standard of 61 dBA Leq, or less, measured at the nearest residential-use property line, per applicable City of Fresno noise standards.	Prior to the issuance of a building permit	Development and Resource Management Department	
Hydrology and Water Quality			
14.1(a). Prior to the issuance of a grading permit, the project applicant shall prepare a Stormwater Pollution Prevention Plan (SWPPP) to be submitted to the City of	Prior to the issuance of a grading permit	Development and Resource Management Department	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>Fresno for review and approval. The SWPPP shall include a specific list of Best Management Practices (BMPs) that will be used to prevent construction pollutants from contacting stormwater and prevent all products of erosion from moving off site into receiving waters. Furthermore, the project applicant shall provide evidence that the Notice of Intent (NOI) was filed with the State Water Resources Control Board. The NOI is a mechanism to establish responsible parties, dischargers, and scope of the proposed operations. The BMPs that will be included, but will be finalized with the preparation of the SWPPP, include the following.</p> <p>Soil Stabilization</p> <ul style="list-style-type: none"> • Upon completion of grading, permanent seeding will be performed in all areas identified in the landscape plans • The seed mix will consist of native plants that include fast-germinating and fast growing plants as well as plant cover that requires more time to become established. • Mulching of seeded areas will be performed to prevent loss of weeds and soil. Natural germination, as opposed to watering is recommended. Watering or irrigation of seeded areas usually results in early germination and die-off without plant-establishment. • Perimeter controls such as silt fences and berms will be installed to commencement of grading, and will be maintained through completion of construction. • The proposed storm drainage basin will be constructed at the commencement of grading. As grading operations progress, temporary sediment traps and sediment basins shall be constructed at strategic locations until such time as improvements are completed. <p>Slope Stabilization</p> <ul style="list-style-type: none"> • Grading of the project site could result in cut and fill 			

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>slopes. Slopes will be stabilized using techniques that, along with re-vegetation, include products to minimize storm water velocity as wattles, compost tubes, and compost blankets.</p> <p>Dust Control/Dust Suppressants</p> <ul style="list-style-type: none"> Implementation of dust control or dust suppressants in compliance with the San Joaquin Valley Air Pollution Control District Regulation VIII (Rules 8011-8081) and Rule 9510 are required. <p>Containment of Fuels, Lubricants, and Other Possible Sources of Pollution</p> <ul style="list-style-type: none"> Special care will be taken during fueling of construction vehicles. Accidental spills will be contained and disposed of, including removal of contaminated soil. Chemicals, paints, solvents, fertilizers, toxic materials or potential pollutants will be stored in watertight containers. <p>Construction Water</p> <ul style="list-style-type: none"> Water used in construction will not contain pollutants. <p>Sanitary Facilities</p> <ul style="list-style-type: none"> Temporary sanitary facilities will be provided throughout the construction area. <p>Solid Waste Disposal</p> <ul style="list-style-type: none"> Solid waste will not be allowed to discharge from the construction area via storm water. Solid waste will be collected, contained, and hauled away. 			
<p>14.1(b). Prior to the issuance of building permits, the project applicant shall submit a stormwater management plan to the City of Fresno for review and approval. The stormwater management plan shall identify pollution prevention measures and practices to prevent polluted runoff from leaving the project site. Examples of</p>	<p>Prior to the issuance of building permits</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>stormwater pollution prevention measures and practices to be contained in the plan include but are not limited to:</p> <ul style="list-style-type: none"> • Bioswales and landscaped areas that promote percolation of runoff • Pervious pavement • Roof drains that discharge to landscaped areas • Trash enclosures with screen walls and roofs • Curb cuts in parking areas to allow runoff to enter landscaped areas • Rock-lined areas along landscaped areas in parking lots • Catch basins • Regular sweeping of parking areas and cleaning of storm drainage facilities • Employee training to inform personnel of stormwater pollution prevention measures 			
<p>14.2(a). The design of the proposed storm drainage system shall comply with the standards of the City of Fresno. These standards ensure that the storm drain system will have adequate capacity accommodate stormwater flows associated with the proposed Master Plans Project. The storm drainage system shall be subject to the approval of the City’s Director of Public Works.</p>	<p>Prior to the approval of the proposed storm drain system</p>	<p>Department of Public Works</p>	
<p>14.2(b). The Fresno Chaffee Zoo shall coordinate with the City and the Fresno Metropolitan Flood Control District to implement a relief system for the proposed storm drainage facility. The relief system will include the installation of a siphon at the southeast corner of the proposed basin (i.e., at the intersection of Franklin Avenue and Pacific Avenue) and installation of a pipeline approximately 500 feet in the Franklin Avenue right-of-way to the existing underground Fresno Metropolitan Flood Control District (FMFCD) pipeline located at the intersection of Franklin Avenue and Humboldt Avenue. The relief system shall be subject to approval by the FMFCD.</p>	<p>Prior to the approval of the proposed storm drain system</p>	<p>Department of Public Works</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
Hazards and Hazardous Materials			
<p>19.1(a). Prior to the issuance of any demolition permit or building permit for any renovation or relocation of any structure within Project area, a risk survey shall be performed to determine the presence of lead-based paint, asbestos-containing materials, polychlorinated biphenyls in electrical equipment, mercury switches, heating/cooling systems, or other hazardous materials in the buildings.</p>	<p>Prior to the issuance of any demolition permit or building permit for any renovation or relocation of any structure within Project area</p>	<p>Development and Resource Management Department</p>	
<p>19.1(b), Prior to the issuance of any demolition permit or building permit for any renovation or relocation of any structure within the Project area, which work may disturb identified asbestos-containing materials, lead-based paint, polychlorinated biphenyls in electrical equipment, mercury switches, heating/cooling systems, or other hazardous materials, a licensed contractor, certified for handling and disposing of hazardous building materials, shall remove and properly dispose of the hazardous material(s).</p>	<p>Prior to the issuance of any demolition permit or building permit for any renovation or relocation of any structure within the Project area,</p>	<p>Development and Resource Management Department</p>	
Cumulative Impacts			
<p>22.1(a). Prior to the issuance of building permits, the project shall pay their fair share to the City for the following improvements:</p> <ul style="list-style-type: none"> • Olive and SR 99 – Interchange Widening Improvements – 2.0% fair share • Belmont and SR 99 – Interchange Widening Improvements – 7.5% fair share • Belmont and H Street – Intersection Improvements – 1.8% fair share • Olive and Weber – Intersection Improvements – 0.9% fair share • The required widening improvements at the Olive and SR 99 interchange and the Belmont and SR 99 interchange would be under the jurisdiction of Caltrans. Currently, Caltrans does not have a program in place to collect impact fees from project applicants 	<p>Prior to the issuance of building permits</p>	<p>Department of Public Works</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>for future interchange widenings. Due to the uncertainty of when the interchange would be widened by Caltrans, the project’s contribution to the potential significant cumulative impact is considered to remain significant. The project applicant will provide the City of Fresno its proportionate share of the funding toward the proposed interchange improvements. The City will retain the funding until the Year 2030. If Caltrans has not, at a minimum, begun the planning for the widening improvements by the Year 2030, the City shall refund the proportionate share funding back to the applicant.</p>			
<p>22.1(b). Prior to the issuance of building permits, the project shall pay the fair share towards improvements that are cumulatively considerable. Improvements and fair share are considered below:</p> <p>The one-lane portions of Belmont Avenue are expected to operate at LOS F with or without the Project as a result of the cumulative significant impact. To operate at acceptable levels of service, the one-lane portions of Belmont Avenue would require widening to two lanes, which would require modification of the Belmont Circle. With implementation of the widening the westbound road segment would operate at LOS C and the eastbound road segment would operate at LOS D. The project’s fair share for this improvement are as follows:</p> <ul style="list-style-type: none"> • Belmont Avenue eastbound (Fruit to Golden State) – 3.6% • Belmont Avenue westbound (Weber to Golden State) – 0.5% 	<p>Prior to the issuance of building permits</p>	<p>Department of Public Works</p>	
<p>22.2(a). A sound barrier shall be constructed at 919 W. Belmont Avenue sufficient to shield the outdoor activity area of the onsite residential land use from line-of-sight of W. Belmont Avenue. The sound barrier shall be constructed of solid material, such as masonry block or</p>	<p>When noise levels exceed the City’s exterior noise standards</p>	<p>Development and Resource Management Department</p>	

Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comments/ Verification Date
<p>material of similar density, with no visible air gaps between the single-family home or at the base of the structure. The barrier shall be constructed to a minimum height of 6 feet above ground elevation. A driveway shall be constructed off of North Durant Avenue along the southern boundary of the property line and a gate shall be installed at the existing wood side yard fence to allow access to the southern portion of the property. Construction of the sound barrier, driveway, and gate shall occur when noise levels exceed the City's exterior noise standards (i.e., projected to be prior to year 2030) and approved by the property owner. An engineer with expertise in the design of sound barriers shall be consulted, prior to construction, to ensure that adequate noise-reductions are achieved.</p>			
<p>22.2(b). A sound barrier shall be constructed at 461 N. Delno Avenue sufficient to shield the outdoor activity area of the onsite residential land use from line-of-sight of W. Belmont Avenue. The sound barrier shall be constructed of solid material, such as masonry block or material of similar density, with no visible air gaps between building components or at the base of the structure. The barrier shall be constructed to a minimum height of 6 feet above ground elevation. Construction of the sound barrier shall occur when noise levels exceed the City's exterior noise standards (i.e., projected to be prior to year 2030) and approved by the property owner. An engineer with expertise in the design of sound barriers shall be consulted, prior to construction, to ensure that adequate noise-reductions are achieved.</p>	<p>When noise levels exceed the City's exterior noise standards</p>	<p>Development and Resource Management Department</p>	