

# Mitigation, Monitoring, and Reporting Program

## 1 Introduction

The California Environmental Quality Act (CEQA) requires a lead or responsible agency to adopt a mitigation monitoring and reporting program (MMRP) when approving or carrying out a project (Section 21081.6 of the California Public Resources Code). The purpose of this program is to ensure that the mitigation measures identified in an Initial Study (IS) and Mitigated Negative Declaration (MND) are implemented as detailed in the draft environmental document. As lead agency for the Roman Creek Mitigation and Habitat Restoration Project (Project), the City of Vista (City) is responsible for implementation of this MMRP per the requirements of CEQA.

In this context, this MMRP was prepared to provide a monitoring guide to facilitate the implementation of the adopted mitigation measures and related compliance reporting. Once the City adopts the MMRP, the mitigation monitoring/reporting requirements will be incorporated into the appropriate permits and construction documents (i.e., engineering specifications, engineering and construction plans, etc.). In accordance with the aforementioned requirements, this MMRP lists each mitigation measure, describes the methods for implementation and verification, and identifies the responsible party or parties as detailed below in Section 3.

## 2 Monitoring and Reporting Procedures

This MMRP was developed for the Project following the circulation of the draft IS/MND (State Clearinghouse Number 2020050587). The MMRP will be in place through all phases of the Project, including design, construction, and long-term management and will facilitate the implementation of mitigation measures proposed to avoid, minimize, or reduce significant environmental effects.

The City will be responsible for administering the MMRP and ensuring that all parties, including its contractors, comply with its provisions. The City may delegate implementation and monitoring activities to staff, consultants, or contractors. The City will require that its construction contractors submit an environmental compliance plan for approval by the City and construction manager prior to the beginning construction activities.

This plan shall document how the contractor intends to comply with all measures applicable to the contract, including the application of best management practices (BMPs) in accordance with instructions listed in the construction specifications. The City also will ensure that monitoring is documented through systematic compliance verification and reporting and that deficiencies are promptly corrected.

### 3 Mitigation Monitoring and Reporting Program Implementation

This MMRP was prepared to verify compliance with individual mitigation measures proposed in the draft IS/MND for the Project. Table 1 of this MMRP identifies each mitigation measure by discipline and the entity responsible for its implementation. Certain inspections and reports may require preparation by qualified individuals and these are specified as needed. The timing and method of verification for each measure are also specified.



**Table 1. MMRP Mitigation Measures**

Mitigation Measure	Timing	Primary Responsible Party	Secondary Responsible Party	Verification
<b>BIOLOGICAL RESOURCES</b>				
<p><b>BIO-1 - Implement Biological Resource Protection Measures During Construction.</b> The City will implement the following BMPs, which are consistent with BMPs in the Habitat Mitigation Plan, during construction to minimize direct and indirect impacts on special status species.</p> <ul style="list-style-type: none"> <li>a. Prior to the commencement of construction, the City shall designate a Project Biologist (a person with, at minimum, a bachelor’s degree in biology, ecology, or environmental studies with familiarity with special status plant and wildlife species with the potential to be impacted by the Project) who shall be responsible for overseeing compliance with protective measures for biological resources during vegetation clearing and work activities within and adjacent to areas of native habitat. The Project Biologist shall be familiar with the local habitats, plants, and wildlife, and shall maintain communications with the contractor to ensure that issues relating to biological resources are appropriately and lawfully managed. The Project Biologist may designate qualified biologists or biological monitors to help oversee Project compliance or conduct pre construction surveys for special status species. These biologists shall have familiarity with the species for which they would be conducting pre construction surveys or monitoring construction activities.</li> <li>b. The Project Biologist or designated qualified biologist shall review final plans, designate areas that need temporary fencing (e.g., ESA fencing), and monitor construction activities within and adjacent to areas with native vegetation communities or special status plant and wildlife species. The qualified biologist shall monitor activities within designated areas during critical times such as vegetation removal, initial ground disturbing activities, and the installation of BMPs and fencing to protect native species, and shall ensure that all wildlife and regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed. The qualified biologist shall check construction barriers or exclusion fencing and shall provide corrective measures to the contractor to ensure that the barriers or fencing are maintained</li> </ul>	Prior to and during construction	City of Vista Engineering Department	California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE)	



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<p>throughout construction. The qualified biologist shall have the authority to stop work if a special status wildlife species is encountered within the Project area during construction. Construction activities shall cease until the Project Biologist or qualified biologist determine(s) that the animal will not be harmed or that it has left the construction area on its own. The appropriate regulatory agency(ies) shall be notified within 24 hours of sighting of a special status wildlife species.</p> <p>c. Prior to the start of construction, all Project personnel and contractors who will be on site during construction shall complete mandatory training conducted by the Project Biologist or a designated qualified biologist. Any new Project personnel or contractors that come on board after the initiation of construction shall also be required to complete the mandatory Worker Environmental Awareness Program training before they commence with work. The training shall advise workers of potential impacts on special status vegetation communities and special status species, and the potential penalties for impacts on such vegetation communities and species. At a minimum, the training shall include the following topics: (1) occurrences of special status species and special status vegetation communities in the Project area (including vegetation communities subject to USACE, CDFW, and Regional Water Quality Control Board [RWQCB] jurisdiction), (2) the purpose for resource protection; (3) sensitivity of special status species to human activities; (4) protective measures to be implemented in the field, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced to avoid special status resource areas in the field (i.e., avoided areas delineated on maps or on the Project site by fencing); (5) environmentally responsible construction practices; (6) the protocol to resolve conflicts that may arise at any time during the construction process; (7) reporting requirements and procedures to follow should a special status species be encountered during construction; and, (8) avoidance and minimization measures designed to reduce the impacts on special status species.</p>				



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<p>d. The training program shall include color photos of special status species and special status vegetation communities. Following the education program, the photos shall be posted in the contractor and resident engineer's office, where the photos shall remain throughout the duration of Project construction. Photos of the habitat in which special status species are found shall be posted onsite. The contractor shall be required to provide the City with evidence of the employee training (e.g., a sign in sheet) on request. Project personnel and contractors shall be instructed to immediately notify the Project Biologist or designated biologist of any incidents that could affect special status vegetation communities or special status species. Incidents could include fuel leaks or injury to any wildlife. The Project Biologist shall notify the City of any incident and the City shall notify the appropriate regulatory agency within 24 hours of being noticed.</p> <p>e. The Project Biologist shall be authorized to halt work, if necessary, and contact the appropriate regulatory agencies in collaboration with the City to ensure the proper implementation of species and habitat protection measures. The Project Biologist shall report any non compliance issue to the City and the City will notify the appropriate regulatory agencies within 24 hours of its occurrence.</p> <p>f. The Project Biologist shall monitor the Project site immediately prior to and during construction to identify the presence of invasive weeds and shall recommend measures to avoid their inadvertent spread in association with the project. Such measures may include inspection and cleaning of construction equipment and use of eradication strategies. All heavy equipment shall be washed and cleaned of debris prior to entering special status vegetation communities to minimize the spread of invasive weeds.</p> <p>g. ESA fencing shall be placed along the perimeter of the identified work area. Work areas shall be clearly marked in the field and shall be confirmed by the Project Biologist or designated biologist prior to any clearing, and the marked boundaries shall be maintained throughout the duration of the work. Staging areas,</p>				



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<p>including lay down areas and equipment storage areas, shall be flagged and fenced with ESA fencing.</p> <p>h. All native or special status vegetation communities outside of and adjacent to the designated Project limits of disturbance shall be designated as ESAs on Project maps. Prior to construction, the Contractor shall delineate the Project limits, including construction, staging, lay down, and equipment storage areas, and erect the construction boundary, with fencing or flagging, along the perimeter of the identified construction area to protect adjacent special status habitats and special status plant populations. ESAs shall be clearly delineated with fencing or flagging or other BMPs prior to construction to inform construction personnel where the ESAs are located. ESAs fencing may include orange plastic snow fence, orange silt fencing, or stakes and flagging in areas of flowing water. No personnel, equipment, or debris shall be allowed within the ESAs. Fences and flagging shall be installed by Contractor in a manner that does not impact habitats to be avoided and such that it is clearly visible to personnel on foot and operating heavy equipment. Ten days prior to initiating construction, the Contractor shall submit to the City final plans for initial clearing and grubbing of habitat and Project construction. At least five days prior to initiating construction (except for impacts resulting from clearing to install temporary fencing), The City shall submit to the appropriate regulatory agencies for approval, the final plans for initial clearing and grubbing of habitat and Project construction. These final plans shall include photographs that show the fenced and flagged ESA limits and all areas to be impacted or avoided. If work occurs beyond the fenced or demarcated limits of impact, all work shall cease until the problem has been remedied to the satisfaction of the City and the appropriate regulatory agencies. Temporary construction fences and markers shall be maintained in good repair by the Contractor and shall be removed upon completion of Project construction.</p> <p>i. No work activities, materials or equipment storage or access shall be permitted outside the project limits without permission from the City. All parking and equipment storage by the contractor related</p>				



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<p>to the Project shall be confined to the project limits. Undisturbed areas and special status vegetation communities outside and adjacent to the project limits shall not be used for parking or equipment storage. Project related vehicle traffic shall be restricted to the project limits and established roads and construction access points.</p> <p>j. Construction activities shall be limited to daylight hours to the extent feasible. If nighttime activities are unavoidable, then workers shall direct all lights for nighttime lighting into the work area and shall minimize the lighting of natural habitat areas adjacent to the work area. The contractor shall use light glare shields to reduce the extent of illumination into special status vegetation communities. If the work area is located near surface waters, the lighting shall be shielded such that it does not shine directly into the water.</p> <p>k. Clearing shall be confined to the minimal area necessary to facilitate construction activities. Cleared vegetation and spoils shall be disposed of daily at a permanent offsite spoils location or at a temporary onsite location that will not create habitat for special status wildlife species. Spoils and dredged material shall be disposed of at an approved site or facility in accordance with all applicable federal, state, and local regulations.</p> <p>l. Food related and other garbage shall be disposed of in wildlife proof containers and shall be removed from the Project area daily during the construction period. Vehicles carrying trash shall be required to have loads covered and secured to prevent trash and debris from falling onto roads and adjacent properties.</p> <p>m. All construction equipment used for the Project shall be maintained in accordance with manufacturer’s recommendations and requirements and shall be maintained to comply with noise standards (e.g., exhaust mufflers, acoustically attenuating shields, shrouds, or enclosures).</p> <p>n. The Contractor shall store all construction related vehicles and equipment in the designated staging areas. These areas shall not</p>				



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<p>contain native or special status vegetation communities and shall not support special status plant or wildlife species.</p> <ul style="list-style-type: none"> <li data-bbox="247 472 1001 659">o. The Contractor shall avoid wildlife entrapment by completely covering or providing escape ramps for all excavated steep walled holes or trenches more than 1 foot deep at the end of each construction work day. The qualified biologist shall inspect open trenches and holes and shall remove or release any trapped wildlife found in the trenches or holes prior to filling by the construction contractor.</li> <li data-bbox="247 680 1001 1057">p. Special status wildlife can be attracted to den like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar features; construction equipment; or construction debris left overnight in areas that may be occupied by special status species that could occupy such structures shall be inspected by a qualified biologist prior to being used for construction. Such inspections shall occur at the beginning of each day's activities for those materials to be used or moved that day. If necessary, and under the direct supervision of the biologist, the structure may be moved up to one time to isolate it from construction activities, until the special status species has moved from the structure of their own volition, has been captured and relocated, or has otherwise been removed from the structure.</li> <li data-bbox="247 1078 1001 1406">q. Capture and relocation of trapped or injured wildlife listed under the federal Endangered Species Act or the California Endangered Species Act can only be performed by personnel with appropriate state and/or federal permits. Any sightings and any incidental take shall be reported to the City via email within one working day of the discovery. A follow up report shall be sent to the regulatory agencies, including dates, locations, habitat description, and any corrective measures taken to protect special status species encountered. For each special status species encountered, the biologist shall submit a completed California Natural Diversity Data Base field survey form (or equivalent) to CDFW no more than 90 days after completing the last field visit to the Project site.</li> </ul>				



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<ul style="list-style-type: none"> <li>r. The City shall be notified within one working day of the discovery of, injury to, or mortality of a special status plant or wildlife species that results from Project related construction activities or is observed at the Project site. Notification shall include the date, time, and location of the incident or of the discovery of an individual special status species that is dead or injured. For a special status species that is injured, general information on the type or extent of injury shall be included. The location of the incident shall be clearly indicated on a U.S. Geological Survey 7.5 minute quadrangle and/or similar map at a scale that will allow others to find the location in the field, or as requested by the City. The biologist is encouraged to include any other pertinent information in the notification.</li> <li>s. The spread of dust from work sites to special status vegetation communities or habitats for special status species on adjacent lands shall be minimized by use of a water truck. Dirt access roads, haul roads, and spoils areas shall be watered at least twice each day when being used during construction dry periods.</li> <li>t. The Contractor shall strictly limit their activities, vehicles, equipment, and construction materials to established roads and the Project disturbance limits. Posted speed limit signs on local roads and a 15 mile per hour speed limit along ingress and egress routes shall be observed. Extra caution shall be used when special status reptile species may be basking on roads.</li> <li>u. To avoid injury or death to wildlife, no firearms shall be allowed on the Project site except for those carried by authorized security personnel or local, state, or federal law enforcement officials.</li> <li>v. To prevent harassment, injury, or mortality of special status wildlife species by dogs or cats, no canine or feline pets shall be permitted in the active construction area.</li> <li>w. Plastic monofilament netting or similar material shall not be used for erosion control because smaller wildlife may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackifier hydroseeding compounds. This limitation shall be communicated to the contractor through specifications or</li> </ul>				



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<p>special provisions included in the construction bid solicitation package.</p> <ul style="list-style-type: none"> <li>x. Rodenticides and herbicides shall be used in accordance with the manufacturer recommended uses and applications and in such a manner as to prevent primary or secondary poisoning of special status fish, wildlife, and plant species and depletion of prey populations upon which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, the California Department of Pesticide Regulation, and other appropriate state and federal regulations, as well as additional Project related restrictions imposed by the City.</li> <li>y. Hazardous materials and equipment stored overnight, including small amounts of fuel to refuel hand held equipment, shall be stored within secondary containment when within 50 feet of open water to the fullest extent practicable. Secondary containment shall consist of a ring of sand bags around each piece of stored equipment/structure. A plastic tarp/visqueen lining with no seams shall be placed under the equipment and over the edges of the sandbags, or a plastic hazardous materials secondary containment unit shall be used by the Contractor.</li> <li>z. The Contractor shall be required to conduct vehicle refueling in upland areas where fuel cannot enter WOUS or waters of the state and in areas that do not have suitable habitat to support federally and/or state listed species. Any fuel containers, repair materials including creosote treated wood, and/or stockpiled material that is left onsite overnight shall be secured in secondary containment within the work area and staging/assembly area, and covered with plastic at the end of each work day.</li> <li>aa. In the event that no activity is to occur in the work area for the weekend and/or a period of time greater than 48 hours, the Contractor shall ensure that all portable fuel containers are removed from the Project site.</li> <li>bb. Equipment and containers will be inspected daily for leaks. Should a leak occur, contaminated soils and surfaces will be cleaned up and disposed of following the guidelines identified in</li> </ul>				



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<p>the Stormwater Pollution Prevention Plan (SWPPP), Materials Safety Data Sheets, and any specifications required by other permits issued for the Project.</p> <p>cc. The Contractor shall utilize off site maintenance and repair shops as much as possible for maintenance and repair of equipment.</p> <p>dd. If maintenance of equipment must occur onsite, fuel/oil pans, absorbent pads, or appropriate containment shall be used to capture spills/leaks within all areas. Where feasible, maintenance of equipment shall occur in upland areas where fuel cannot enter WOUS or waters of the state and in areas that do not have suitable habitat to support federally and/or state listed species.</p>				
<p><b>BIO-2 - Avoid, Minimize and Compensate for, Direct and Indirect Impacts on Special Status Vegetation Communities.</b> Temporary impacts on special status vegetation communities, including Oak Willow Alliance, Coast Live Oak Alliance and unvegetated streambed will be restored onsite pursuant to the Habitat Mitigation and Monitoring Plan for the Project. Compensatory mitigation for the temporary loss of function associated with Oak-Willow Alliance and Coast Live Oak Alliance while restored areas mature, will consist of 1:1 enhancement as proposed by the Project herein.</p> <p>Compensatory mitigation for the net loss of non-native grassland shall consist of preservation and long-term management of native grassland established onsite per the Habitat Mitigation and Monitoring Plan for the Project at a 0.5:1 ratio.</p> <p>Permanent impacts on jurisdictional aquatic resources will be mitigated at a 3:1 ratio for USACE wetlands and CDFW riparian habitats and at a 2:1 ratio for non wetland WOUS Coordination with USACE (through the 404 process) and CDFW (through the Section 1602 Streambed Alteration Agreement process) may determine a higher ratio is required. Mitigation shall be achieved through a combination of in kind creation, restoration, and/or enhancement as determined to be appropriate through consultation with the resource agencies. Mitigation shall first be considered onsite, then with an approved mitigation bank, and thirdly through offsite mitigation. The appropriate permit applications shall be submitted to state and federal</p>	<p>Prior to, during, and following construction</p>	<p>City of Vista Engineering Department</p>	<p>CDFW, USFWS, USACE</p>	



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regulatory agencies. The permits issued by these agencies will finalize the mitigation requirements.				
<p><b>BIO-3 - Conduct Oak Tree Survey and Avoid, Minimize and Compensate for Direct and Indirect Impacts on Oak Trees.</b> A certified arborist shall conduct an oak tree survey to document the size and health of each oak tree within the grading area. Heritage oak trees shall be assessed to determine the feasibility of boxing and relocating those trees to the proposed onsite oak riparian establishment area. All oak trees greater than 5 inches diameter at breast height shall be replaced in kind at a 3:1 ratio by planting acorns and container plants at the proposed onsite oak riparian establishment area. Planting of acorns has been demonstrated to be the most effective technique for native oak tree establishment; however, a mix of acorns and container plants (1 gallon and 5 gallon) may be used to provide a variety of size classes in the establishment area. Acorns shall be collected onsite for planting in the establishment area. In addition, soil from existing oak riparian and woodland habitats within the grading area shall be collected and used in the acorn and container plant soil pits to serve as a source of inoculum for mycorrhizal fungi and other beneficial soil microorganisms and invertebrates.</p>	Prior to, during, and following construction	City of Vista Engineering Department	CDFW, USFWS	



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<p><b>BIO-4 - Avoid and Minimize Direct and Indirect Impacts on Least Bell's Vireo, Southwestern Willow Flycatcher, and coastal California Gnatcatcher.</b> The removal of native vegetation and habitat shall be avoided and minimized to the maximum extent practicable. For temporary impacts, the work site shall be graded and revegetated with appropriate native species as detailed in the Habitat Mitigation and Monitoring Plan for the Project.</p> <p>Contractor shall, to the maximum extent practicable, avoid removing suitable habitat for coastal California gnatcatcher (coastal sage scrub habitats) and least Bell's vireo and southwestern willow flycatcher (all riparian and coast live oak alliances) during their respective breeding seasons (February 15 through August 31 for coastal California gnatcatcher) and March 15 through September 15 for least Bell's vireo and southwestern willow flycatcher collectively).</p> <ul style="list-style-type: none"> <li>i. Should least Bell's vireo or southwestern willow flycatcher habitat removal occur during these timeframes, a qualified biologist will conduct three pre construction surveys within 7 days of the initiation of suitable habitat removal. The final survey shall be conducted within 24 hours of vegetation removal. If either species is detected, work will be halted until the species is no longer present, CDFW, USACE, and USFWS will be notified for consultation. Work may proceed upon authorization by CDFW, USACE, and USFWS.</li> <li>ii. A qualified biologist will conduct three pre construction surveys within 7 days of the initiation of suitable habitat removal. The final survey shall be conducted within 24 hours of vegetation removal. If coastal California gnatcatcher is detected, work will be halted until the species is no longer present, CDFW, USACE and USFWS will be notified for consultation. Work may proceed upon authorization by CDFW, USACE, and USFWS.</li> </ul>	<p>Prior to and during construction</p>	<p>City of Vista Engineering Department</p>	<p>CDFW, USFWS, USACE</p>	



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Mitigation Measure	Timing	Primary Responsible Party	Secondary Responsible Party	Verification
<p><b>BIO 5 - Avoid Impacts on Migratory and Nesting Birds.</b> If construction activities occur between January 15 and September 15, a preconstruction nesting bird survey (within seven days prior to construction activities) shall be conducted by a qualified biologist to determine if active nests are present within the area proposed for disturbance in order to avoid the nesting activities of breeding birds/raptors. The results of the surveys shall be submitted to the City (and made available to the Wildlife Agencies [USFWS/CDFW], upon request) prior to initiation of any construction activities.</p>	Prior to and during construction	City of Vista Engineering Department	CDFW, USFWS, USACE	
<p><b>BIO 6 - Conduct Pre Construction Surveys for Western Spadefoot and Southwestern Pond Turtle.</b> Prior to ground-disturbing activities in or near aquatic habitats, preconstruction surveys for western spadefoot and southwestern pond turtles will be conducted to determine their presence or absence within the construction footprint. If western spadefoot are found within the construction footprint, the occupied habitat and appropriate buffer, as determined by a qualified biologist, will be avoided to the maximum extent practicable. If avoidance is not possible and the species is determined to be present in work areas the project biologist will consult with the Wildlife Agencies to determine appropriate measures to avoid and minimize take of individuals.</p> <p>If western pond turtles are found within the construction footprint, the occupied habitat and appropriate buffer, as determined by a qualified biologist, will be avoided to the maximum extent practicable. If avoidance is not possible and the species is determined to be present in work areas, the biologist may capture turtles prior to construction activities and relocate them to nearby suitable habitat a minimum of 300 feet downstream from the work area. Alternatively, if recommended/approved by the Wildlife Agencies, the turtles may be captured and either temporarily held or relocated to an appropriate nearby location.</p>	Prior to and during construction	City of Vista Engineering Department	CDFW, USFWS	



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<p><b>BIO-7 - Implement Long-Term Management Plan.</b> A Long-Term Management Plan shall be prepared and implemented. The Long Term Management Plan shall include measures to minimize the potential introduction of invasive species during maintenance activities including, but not limited to: washing all equipment, clothing, boots, and vehicles prior to entering the site from another location, remove invasive species before seeding to the maximum extent feasible, collect all plant material removed during maintenance securely, such as in a burlap bag, and remove from the site. The plan shall prohibit the use of pesticides or herbicides with potential toxicity to aquatic or terrestrial wildlife species. Maintenance shall be conducted outside of the bird breeding season (February 15 to September 15) to the maximum extent feasible. If maintenance must occur during the breeding season, a qualified biologist shall conduct pre-construction nesting bird surveys and direct maintenance staff to areas not occupied by breeding birds. The plan shall include contingency erosion control BMP's should they be needed following especially large storms.</p>	<p>Prior to and following construction</p>	<p>City of Vista Engineering Department</p>	<p>CDFW, USFWS City of Vista Community Development Department</p>	
<p><b>BIO-8: Invasive Pest Control.</b> The City shall implement the following best management practices during Project construction to avoid the introduction and spread of invasive Polyphagous and Kuroshio shot hole borers (ISHBs):</p> <ul style="list-style-type: none"> <li>a. Conduct baseline assessment of the site for the presence of ISHBs</li> <li>b. Educate on-site workers regarding ISHB and its spread;</li> <li>c. Report signs of ISHB infestation, including sugary exudate (“weeping”) on trunks or branches and ISHB entry/exit-holes (about the size of the tip of a ballpoint pen), to the Department and UCR’s Eskalen Lab (<a href="http://www.pshb.org">www.pshb.org</a>);</li> <li>d. Disinfect equipment that may have come into contact with infected wood;</li> <li>e. Prune infected limbs in infested areas where project activities may occur;</li> <li>f. Inspect container stock for sign of infestation before accepting delivery;</li> </ul>	<p>Prior to and during construction</p>	<p>City of Vista Engineering Department</p>	<p>CDFW; USFWS; University of California, Riverside</p>	

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<ul style="list-style-type: none"> <li>g. Chip potential host materials to less than 1 inch and sterilize, prior to delivering to a landfill, biogeneration facility or commercial composting facility;</li> <li>h. Chip potential host materials to less than 1 inch, and sterilize (via solarization or equivalent method), prior to composting on-site;</li> <li>i. Sterilize cut logs using solarization or equivalent method;</li> <li>j. If infested wood cannot be treated on-site, cover wood tightly while being stored on site and in transit to other facilities for treatment; and</li> <li>k. Conduct regular inspections of susceptible species on site; prune or remove as needed. Follow reporting and disposal methods described above.</li> </ul>				
<b>CULTURAL RESOURCES</b>				
<p><b>CULT-1 - Cultural Resource Monitoring.</b> Cultural resource mitigation monitoring shall be conducted on the site to provide for the identification, evaluation, treatment, and protection of any cultural resources that are affected by or may be discovered during the construction of the proposed project. The monitoring shall consist of the full-time presence of a Qualified Archaeologist and a traditionally and culturally affiliated (TCA) Native American Monitor associated with a TCA tribe for, but not limited to, any clearing or grubbing of vegetation, tree removal, demolition and/or removal of remnant foundations, pavements, abandonment and/or installation of infrastructure; grading or any other ground disturbing or altering activities, including the placement of any imported fill materials (note: all fill materials shall be absent of any and all cultural resources); and any related road improvements, including, but not limited to, the installation of infrastructure, realignments, and/or expansions to parking lots. Other tasks of the monitoring program shall include the following:</p> <ul style="list-style-type: none"> <li>• The requirement for cultural resource mitigation monitoring shall be noted on all applicable construction documents, including demolition plans, grading plans, etc.</li> </ul>	<p>Prior to and following construction</p>	<p>City of Vista Engineering Department</p>	<p>Native American Heritage Commission (NAHC), San Luis Rey Band of Mission Indians (San Luis Rey Band)  City of Vista Community Development Department</p>	



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<ul style="list-style-type: none"> <li>The Qualified Archaeologist and TCA Native American Monitor shall attend at least one pre-construction meeting with the Contractor and/or associated Subcontractors (e.g., Grading Contractor) and a representative from the City of Vista's Engineering or Community Development departments to present the archaeological monitoring program as presented in these measures.</li> <li>The Qualified Archaeologist shall maintain ongoing collaborative consultation with the TCA Native American Monitor during all ground disturbing or altering activities, as identified above. The Contractor or Grading Contractor shall notify the Director of Community Development &amp; Engineering, preferably through e-mail, of the start and end of all ground-disturbing activities.</li> <li>The Qualified Archaeologist and/or TCA Native American Monitor may halt ground-disturbing activities if archaeological artifact deposits or cultural features are discovered. In general, ground-disturbing activities shall be directed away from these deposits for a short time to allow a determination of potential significance, the subject of which shall be determined by the Qualified Archaeologist and the TCA Native American Monitor, in consultation with the San Luis Rey Band of Mission Indians (San Luis Rey Band), or other TCA tribe. Ground disturbing activities shall not resume until the Qualified Archaeologist, in consultation with the TCA Native American Monitor, deems the cultural resource or feature has been appropriately documented and/or protected. At the Qualified Archaeologist's discretion, the location of ground disturbing activities may be relocated elsewhere on the project site to avoid further disturbance of cultural resources.</li> <li>The avoidance and protection of discovered unknown and significant cultural resources and/or unique archaeological resources is the preferable mitigation for the proposed project. If avoidance is not feasible, culturally appropriate treatment of those resources, including but not limited to funding an ethnographic or ethnohistoric study of the resource(s), and/or developing a data recovery plan may be authorized by the City as the Lead Agency under CEQA. If data recovery is required, then the San Luis Rey</li> </ul>				



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Band or other TCA tribe shall be notified and consulted in drafting and finalizing any such recovery plan.				
<b>CULT-2 - Grading Plan Review and Pre-Excavation Agreement.</b> Prior to the submission of a grading plan to City staff for review, the Applicant or Owner, and/or Contractor shall enter into a Pre-Excavation Agreement with the San Luis Rey Band, or other TCA tribe. A copy of the agreement shall be included in the grading plan submission. The purpose of this agreement shall be to formalize protocols and procedures between the Applicant or Owner, and/or Contractor, and the San Luis Rey Band (or other TCA tribe) for the protection and treatment of, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and cultural items, located and/or discovered through a monitoring program in conjunction with the construction of the proposed project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, off-site infrastructure installation, grading, and all other ground disturbing activities.	Prior to and during construction	City of Vista Engineering Department	NAHC, San Luis Rey Band City of Vista Community Development Department	
<b>CULT-3 - Cultural Resources Monitoring Report.</b> Prior to the release of the Grading Bond, a Monitoring Report and/or Evaluation Report, which shall comply with Government Code Section 6254(r), shall be submitted by the Qualified Archaeologist, along with the TCA Native American Monitor’s notes and comments, to the City Planner for the project administrative record.	Following construction	City of Vista Engineering Department	NAHC, San Luis Rey Band City of Vista Community Development Department	
<b>CULT-4 - Cultural Resource Repatriation.</b> All cultural materials that are associated with burial and/or funerary goods shall be repatriated to the Most Likely Descendant as determined by the Native American Heritage Commission (NAHC) per California Public Resources Code Section 5097.98.	During construction	City of Vista Engineering Department	NAHC, San Luis Rey Band City of Vista Community Development Department	



**Table 1. MMRP Mitigation Measures**

Mitigation Measure	Timing	Primary Responsible Party	Secondary Responsible Party	Verification
<p><b>CULT-5 - Cultural Resources Discovery.</b> Recovered cultural material of historic significance, but not of tribal significance, shall be curated with accompanying catalog, photographs, and reports to a San Diego curation facility that meets federal standards per 36 CFR Part 79. Recovered cultural material of tribal cultural significance shall be repatriated as stipulated in the pre-excavation agreement as described in CULT-2.</p>	During construction	City of Vista Engineering Department	NAHC, San Luis Rey Band, San Diego County  City of Vista Community Development Department	
<p><b>CULT-6 - Discovery Human Remains.</b> As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Coroner’s office by telephone. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie adjacent remains (as determined by the Qualified Archaeologist and/or the TCA Native American monitor) shall occur until the Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected (as determined by the Qualified Archaeologist and/or the TCA Native American monitor), and consultation and treatment could occur as prescribed by law. As further defined by State law, the Coroner would determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission would then make a determination as to the Most Likely Descendent. If Native American remains are discovered, the remains shall be kept in situ (“in place”), or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of a TCA Native American monitor.</p>	During construction	City of Vista Engineering Department	NAHC, San Luis Rey Band, San Diego County  City of Vista Community Development Department	



**Table 1. MMRP Mitigation Measures**

Mitigation Measure	Timing	Primary Responsible Party	Secondary Responsible Party	Verification
<b>GEOLOGY</b>				
<b>GEO-1 - Geotechnical Review of Bridge Foundations.</b> During final design, the City shall have a licensed geotechnical engineer conduct an additional field exploration program to obtain site specific data; review the proposed bridge design; and provide recommendations on the foundation type and applicable seismic design criteria, including recommendations to address the potential for liquefaction.	Prior to construction	City of Vista Engineering Department	City of Vista Community Development Department	
<b>HAZARDS AND HAZARDOUS MATERIALS</b>				
<b>HAZ-1 - Halt Construction Work if Potentially Hazardous Materials are Encountered.</b> All construction contractors shall immediately stop all surface or subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or considerably stained soil is visible. Contractors shall follow all applicable local, state, and federal regulations regarding discovery, response, disposal, and remediation for hazardous materials encountered during the construction process. These requirements shall be included in the contractor specifications	During construction	City of Vista Engineering Department	City of Vista Community Development Department	
<b>HAZ-2 - Keep Construction Area Clear of Combustible Materials.</b> During construction, construction contractors shall ensure that staging areas, welding areas, or areas slated for construction using spark producing equipment shall be cleared of combustible vegetation or other materials that could serve as fire fuel. All vegetation clearing shall be coordinated with a qualified biologist and any required permits prior to removal. The contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.	During construction	City of Vista Engineering Department	City of Vista Community Development Department	



**Table 1. MMRP Mitigation Measures**

Mitigation Measure	Timing	Primary Responsible Party	Secondary Responsible Party	Verification
<b>HAZ-3 - Provide Accessible Fire Suppression Equipment.</b> Work crews shall be required to have sufficient fire suppression equipment readily available to ensure that any fire resulting from construction activities is immediately extinguished. All off road equipment using internal combustion engines shall be equipped with spark arrestors.	During construction	City of Vista Engineering Department	City of Vista Community Development Department	
<b>HYDROLOGY AND WATER QUALITY</b>				
<b>HWQ-1 - Prepare and Implement a Flow Diversion Plan for Construction.</b> The construction contractor shall develop a Flow Diversion Plan(s) for in channel construction activities. The contractor shall incorporate measures to minimize changes to flood flow elevation(s) during construction, address accumulation of floating debris, provide measures that minimize sedimentation to surface waters, and include contingency measures in the event of substantial rainfall.	Prior to and during construction	City of Vista Engineering Department	RWQCB	
<b>HWQ-2 - Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy.</b> The construction contractor will assess the receiving water vulnerability and develop a SWPPP that complies with the requirements of the NPDES General Construction Permit (Order 2009 0009 DWQ as amended by 2010 0014 DWQ and 2012 006 DWQ) based on the project specific risk level (Risk Level 2) subject to the City Engineer’s approval. The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions, local jurisdictional requirements; and shall be reviewed and approved by the City Engineer prior to commencement of work.  The SWPPP shall be prepared by a qualified SWPPP developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e.,	Prior to and during construction	City of Vista Engineering Department	CDFW, USFWS, USACE, RWQCB	

**Table 1. MMRP Mitigation Measures**

Mitigation Measure	Timing	Primary Responsible Party	Secondary Responsible Party	Verification
<p>observation of above normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (e.g., inadvertent petroleum release) is required to determine adequacy of the measure.</p> <p>The SWPPP shall also address other project specific water quality threats, as required for individual improvements including but not limited to, temporary dewatering, hydrostatic testing, and other resources permits as required under the Federal Clean Water Act and State Fish and Game Code, as applicable. Construction and post construction BMPs will be designed to avoid the creation of standing water and potential mosquito breeding habitat.</p>				
<b>TRANSPORTATION</b>				
<p><b>TR-1 - Traffic Management Plan.</b> The construction contractor shall prepare a TMP for impacts to surrounding multi modal transit (e.g., trails, roadways, and parking) that may be impacted by construction for approval by the City Engineer. The Traffic Control Plan will comply with local agency requirements (e.g., Vista, Caltrans, etc.) with jurisdiction over project construction. The Traffic Control Plan will include, but not be limited to, the following elements based on local site and roadway conditions:</p> <ul style="list-style-type: none"> <li>• Provide street layout showing location of construction activity and surrounding streets to be used as detour routes, including “special signage.” Post a minimum 72 hour advance warning of construction activities within affected roadways to allow motorists to select alternative routes.</li> <li>• Restrict delivery of construction materials to non peak travel periods (9 a.m. – 3 p.m.) as appropriate.</li> <li>• Maintain the maximum travel lane capacity during construction along Melrose Avenue and Shadowridge Drive.</li> <li>• Maintain access to Buena Vista Park from the Shadowridge Drive entrance.</li> </ul>	<p>Prior to and during construction</p>	<p>City of Vista Engineering Department</p>	<p>San Diego County, Caltrans City of Vista Community Development Department</p>	



**Table 1. MMRP Mitigation Measures**

Mitigation Measure	Timing	Primary Responsible Party	Secondary Responsible Party	Verification
<ul style="list-style-type: none"> <li>• Provide flagger control at construction sites to manage traffic control and flows.</li> <li>• Limit the construction work zone to designated boundaries of the Mitigation Site to the extent possible to minimize impacts to available parking.</li> <li>• Signage would be placed within the Buena Vista Park to notify park users of temporary closures of several parking spaces during construction.</li> <li>• Require appropriate warning signage and safety lighting for construction zones.</li> <li>• Access for emergency vehicles shall be maintained at all times. Police, fire, and emergency services shall be notified of the timing, location, and duration of construction activities that could hinder and/or delay emergency access through the construction period.</li> <li>• Provide adequate off street parking locations for workers' vehicles and construction equipment within the Mitigation Site to minimize impacts to available parking.</li> </ul>				
<p><b>TR-2 - Construction Trail Detours.</b> Prepare a temporary trail detour plan for Buena Vista Park visitors utilizing active recreational parkland and trails within the Mitigation Site that will be subject to temporary closures during construction. The plan will define the detour routes available, the duration of the closure, and advanced notification to users.</p>	<p>Prior to and during construction</p>	<p>City of Vista Engineering Department</p>	<p>City of Vista Community Development Department</p>	

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