

## **MITIGATION MONITORING AND REPORTING PROGRAM**

This Mitigation and Monitoring Reporting Program (MMRP) has been formulated based upon the findings of the Environmental Impact Report prepared for the proposed San Francisco Bay Trail: Pinole Shores to Bayfront Park Project (proposed project). The purpose of the MMRP is to ensure the implementation of mitigation measures identified as part of the environmental review for the project. The MMRP includes the following information:

- A list of mitigation measures;
- The party responsible for implementing the mitigation measures;
- The timing for implementation of the mitigation measure;
- The agency responsible for monitoring the implementation; and
- The monitoring action and frequency.

The East Bay Regional Park District (Park District) must adopt this MMRP, or an equally effective program, if it approves the proposed project with the mitigation measures that were adopted or made conditions of project approval.

## Exhibit 5: Mitigation Monitoring and Reporting Program

**Table 1: Mitigation Monitoring and Reporting Program**

Mitigation Measures	Product/Action	Implemented By	When Implemented	Monitored By	Monitoring Action and Frequency
<b>4.1 LAND USE</b>					
<i>There are no significant Land Use impacts.</i>					
<b>4.2 AESTHETICS</b>					
<i>There are no significant Aesthetics impacts.</i>					
<b>4.3 BIOLOGICAL RESOURCES</b>					
<b><i>Impact BIO-1: Implementation of the proposed project could impact special-status plant species.</i></b>					
<p><b>Mitigation Measure BIO-1:</b> To further evaluate the presence or absence of special-status plant species, a qualified botanist shall conduct focused botanical surveys in accordance with CDFG protocols. Surveys shall be timed to coincide with the blooming period for the target species. Based on the blooming periods for the target species, botanical surveys shall be conducted for western leatherwood in late winter (January–March) and for other species in early spring (April–May), and late summer (August–September).</p> <p>If any special-status plants are detected, their locations shall be mapped with a Global Positioning System (GPS) unit and their population sizes estimated. Project designers shall strive to avoid any impacts to special-status plants to the greatest extent feasible.</p> <p>Depending on the species detected and its rarity, further mitigation may be required if the project is unable to avoid special-status plants detected during the focused botanical surveys. The Park District shall work with CDFG and the botanist who conducted the surveys to develop measures to compensate for the loss of special-status plants. Such measures shall include collecting seeds and replanting them at suitable locations elsewhere, transplanting the affecting plants, or both. The planting areas shall be on the project site, if suitable locations are available, and if not, shall be at suitable offsite locations that are approved by CDFG.</p>	<p>Focused special status plant surveys and avoidance and/or implementation of mitigation measures to compensate for the loss of special status plants, if detected during focused surveys and, if, impacted by project construction.</p>	<p>Project Botanist/ Park District</p>	<p>Late winter (January – March), early spring (April – May), and late summer (August – September).</p>	<p>Project Biologist/ Park District</p>	<p>Review of survey results during final design. Develop further mitigation prior to initiation of construction (if required).</p>
<b><i>Impact BIO-2: Implementation of the proposed project could impact special-status bird species and native birds protected under the Migratory Bird Treaty Act potentially nesting in and adjacent to the project area.</i></b>					
<p><b>Mitigation Measure BIO-2:</b> To the extent feasible, vegetation removal activities shall occur during the non-nesting season (September 1 to January 31). For any construction activities conducted during the nesting season, a qualified biologist shall conduct a preconstruction nest survey of all trees and other suitable nesting habitat in and within 250 feet of the</p>	<p>If nesting birds are present during nesting season, conduct preconstruction nest survey and</p>	<p>Project Biologist/ Project Contractor</p>	<p>No more than 15 days prior to start of work (if required).</p>	<p>Park District/ Project Biologist</p>	<p>Review of preconstruction survey prior to initiation of construction. Review of buffer</p>

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limits of work. The survey shall be conducted no more than 15 days prior to the start of work. If the survey indicates the presence of nesting birds, the biologist shall determine an appropriately sized buffer around the nest in which no work would be allowed until the young have successfully fledged. The size of the nest buffer shall be determined by the biologist and shall be based on the nesting species and its sensitivity to disturbance. In general, buffer sizes of up to 250 feet for raptors and 50 feet for other birds should suffice to prevent substantial disturbance to nesting birds, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.	establishment of buffers around nest trees (if required).				design and implementation prior to construction and throughout the construction period.
<b><i>Impact BIO-3: Implementation of the proposed project could impact tidal marsh rails.</i></b>					
<b><u>Mitigation Measure BIO-3a:</u></b> Construction activity between the UPRR tracks and the tidal marsh fragment shall be conducted only when high tides are not at their winter or summer extremes, to reduce the likelihood that tidal marsh rails will be present in the work area. Construction next to the marsh shall be avoided during the highest tides of June–July and December–January (± one week each month).	Avoid construction during the highest tides.	Project Contractor	During construction.	Park District/ Project Biologist	Monitor compliance throughout the construction period.
<b><u>Mitigation Measure BIO-3b:</u></b> A qualified biological monitor familiar with the habitat and ecology of California black rail, California clapper rail, and salt marsh harvest mouse (see below) shall be present on site during all construction activities between the UPRR tracks and the tidal marsh (i.e., approximately Station 26+50 to 33+50) to ensure that avoidance and minimization measures and construction limits are enforced. The monitor would have the authority to stop any construction activity that is not consistent with approved plans and amendments.	Monitor construction activities between the UPRR tracks and the tidal marsh.	Project Biological Monitor	During construction.	Park District/ Project Biologist	Monitor compliance throughout the construction period.
<b><u>Mitigation Measure BIO-3c:</u></b> Prior to construction, the Park District shall obtain required authorization from the USFWS (ESA Section 7 biological opinion) for any construction activities adjacent to the tidal marsh and shall implement any additional protective measures required as part of such authorization such as setbacks between suitable tidal marsh habitat and construction activities.	Obtain authorization from USFWS.	Park District	Prior to construction.	Park District	Review and verification of authorization prior to start of construction.
<b><i>Impact BIO-4: Implementation of the proposed project could impact the salt marsh harvest mouse.</i></b>					
<b><u>Mitigation Measure BIO-4a:</u></b> Implement Mitigation Measure BIO-3a, described above.	Avoid construction during the highest tides.	Project Contractor	During construction.	Park District/ Project Biologist	Monitor compliance throughout the construction period.

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<p><b>Mitigation Measure BIO-4b:</b> Prior to ground disturbance, a qualified biologist shall prepare a site-specific salt marsh harvest mouse avoidance plan. At a minimum, the plan shall include (1) the installation of silt fencing around the entire portion of the work area (that is within 100 feet from the edge of the marsh) to exclude salt marsh harvest mice from entering, (2) the clearing of all ground vegetation within the fenced area, taking care to avoid take of any salt marsh harvest mice, if present, and (3) the relocation to the tidal marsh of any salt marsh harvest mice found during the vegetation removal effort (if prior authorization has been obtained from both USFWS and CDFG). If no salt marsh harvest mice are found, construction work shall start as soon as possible (and no longer than one week) after vegetation has been cleared. All exclusion measures and initial ground disturbance activities shall be monitored by a biologist with the necessary federal permits to handle and relocate salt marsh harvest mice.</p>	<p>Prepare avoidance plan. If salt marsh are not present, monitor construction activities. If present, obtain permission from USFWS and CDFG to relocate mice to tidal marsh habitat.</p>	<p>Project Biologist</p>	<p>Prior to and during construction.</p>	<p>Park District</p>	<p>Review and verification of plan prior to ground disturbance. Monitor compliance throughout the construction period.</p>
<p><b>Mitigation Measure BIO-4c:</b> Prior to construction, the Park District shall obtain the required authorization from the USFWS (ESA Section 7 biological opinion) for any construction activities adjacent to the tidal marsh and implement any additional protective measures required as part of such authorization such as setbacks between suitable tidal marsh habitat and construction activities.</p>	<p>Obtain authorization from USFWS. Implement protective measures for salt marsh harvest mice.</p>	<p>Park District</p>	<p>Prior to construction.</p>	<p>Park District</p>	<p>Review and verification of authorization prior to start of construction.</p>
<p><b>Impact BIO-5:</b> <i>Implementation of the proposed project would temporarily impact brackish marsh wetlands adjacent to the work area and may also result in indirect impacts.</i></p>					
<p><b>Mitigation Measure BIO-5a:</b> Prior to construction, the Park District shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) in consultation with the RWQCB, in accordance with the new State Water Resources Board General Stormwater Permit (effective July 1, 2010). The SWPPP shall include the following components, at a minimum:</p> <ul style="list-style-type: none"> <li>• A comprehensive erosion and sediment control plan, depicting areas to remain undisturbed and providing specifications for revegetation of disturbed areas.</li> <li>• A list of potential pollutants from building materials, chemicals, and maintenance practices to be used during construction, and the specific control measures to be implemented to minimize release and transport of these constituents in runoff.</li> </ul>	<p>Prepare and implement SWPPP.</p>	<p>Park District</p>	<p>Prior to and during construction.</p>	<p>Park District</p>	<p>Review and verification of SWPPP prior to construction. Monitor compliance throughout the construction period.</p>

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<ul style="list-style-type: none"> <li>• Specifications and designs for appropriate best management practices (BMPs) for controlling drainage and treating runoff in the construction phase. Examples of BMPs that could be implemented include hydroseeding, straw mulch, silt fences, sediment traps, and stockpile management.</li> <li>• A program for monitoring all control measures that includes schedules for inspection and maintenance and identifies the party responsible for monitoring.</li> <li>• A site map that locates all water quality control measures and restricted areas to be left undisturbed.</li> <li>• All concrete for the bridge footings shall be discharged only into tightly sealed forms or cells such that water in contact with uncured concrete will not enter the marsh.</li> </ul>					
<p><b>Mitigation Measure BIO-5b:</b> Prior to construction, the Park District shall obtain a Section 404 permit from the Corps and Section 401 water quality certification from the RWQCB to authorize the temporary impacts to the tidal marsh. The permit applications shall stipulate that any portions of the marsh disturbed during construction shall be restored to pre-project conditions via re-contouring (if necessary) and revegetation with native marsh species.</p> <p>All jurisdictional areas located adjacent to, but outside of, the construction footprint shall be avoided during construction and no fill shall be allowed to enter these areas. Exclusion fencing (i.e., silt fence) shall be installed to mark the limits of the construction footprint. A biological monitor shall oversee the installation of the fencing and periodically monitor the work area to ensure avoidance of jurisdictional areas.</p> <p>During project construction, no soil or other construction materials shall be allowed to enter or be stored in the marsh. All stockpiled fill and other materials shall be kept at least 50 feet from the marsh edge.</p>	<p>Section 404 Permit and Section 401 Water Quality Certification.</p> <p>Avoid/protect jurisdictional areas during construction.</p> <p>Restore marsh, if disturbed during project construction.</p>	<p>Park District/ Project Contractor/ Biological Monitor</p>	<p>Prior to and during construction.</p>	<p>Park District</p>	<p>Review and certification/ permit issuance prior to start of construction. Monitor compliance throughout the construction period.</p>
<p><i>Impact BIO-6: Implementation of the proposed project could impact native trees protected under the City of Pinole Municipal Code.</i></p>					
<p><b>Mitigation Measure BIO-6a:</b> To identify the number and location of protected trees within the project area, the Park District shall hire an International Society of Arboriculture (ISA) Certified Arborist to conduct a formal tree inventory of the project area. The resulting arborist report</p>	<p>Conduct a formal tree inventory.</p> <p>Prepare report with recommendations for tree protection</p>	<p>Park District/ Certified Arborist</p>	<p>Prior to construction with City of Pinole Design Review Application.</p>	<p>Park District</p>	<p>Review and verification of tree survey report with final design phase.</p>

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shall include a table listing the species, health, size, and status of all trees in the project area and recommendations for the removal and/or preservation of specific trees. Protected trees shall be identified on a tree survey plan of the project area that shows which trees are proposed to remain and which trees are to be removed. The tree inventory shall be conducted as part of the final design phase of the project and shall be submitted to the City of Pinole as part of the comprehensive design review application.	and/or removal.				
<b>Mitigation Measure BIO-6b:</b> Any protected trees within the project area shall be avoided to the maximum extent feasible. If project construction requires the removal of protected trees, the Park District shall obtain a tree removal permit from the City pursuant to Section 17.96.060 of the Municipal Code. As part of the conditions of approval for the tree removal permit, the Park District may be required to mitigate for the tree removal by either: 1) planting trees over and above the landscaping that would be required at a value equal to the value of the trees to be removed, or 2) paying an in-lieu fee to the city in an amount equivalent to the value of the protected trees to be removed.	Obtain tree removal permit (if required) from the City of Pinole. Mitigate for tree losses per permit conditions, as needed.	Park District	Prior to construction.	Park District	Tree Removal Permit issuance prior to construction.
<b>4.4 CULTURAL RESOURCES</b>					
<b>Impact CULT-1:</b> <i>Ground-disturbing activities associated with site preparation could adversely affect archaeological deposits that qualify as historical resources or archaeological resources under CEQA.</i>					
<b>Mitigation Measure CULT-1a:</b> A qualified archaeologist shall be retained to monitor project ground-disturbing activities. Archaeological monitors shall be empowered to halt construction activities at the location of a discovery to review possible archaeological material and to protect the resource while the finds are being evaluated. Monitoring should continue until, in the archaeologist's judgment, cultural resources are not likely to be encountered.  If deposits of prehistoric or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the archaeologist assesses the finds, consults with agencies as appropriate, and makes recommendations for the treatment of the discovery. If avoidance of the archaeological deposit is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing in the California Register of Historical Resources. If the deposits are not eligible, mitigation is not necessary. If the deposits are eligible, adverse effects on the deposits shall be mitigated. Mitigation	Monitor ground disturbing activities. Evaluate any materials encountered during project activities. Prepare report with findings from monitoring.	Project Contractor/ Project Archaeologist and Monitors	During construction activities.	Park District/ Project Archaeologist	Monitor compliance throughout the construction period.

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<p>may include excavation of the archaeological deposit in accordance with a data recovery plan (see <i>CEQA Guidelines</i> Section 15126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; preparation of a report detailing the methods, findings, and significance of the archaeological site and associated materials; and accessioning of archaeological materials and a technical data recovery report at a curation facility.</p> <p>Upon completion of the assessment, the archaeologist shall prepare a report to document the methods and results of the assessment. The report shall be submitted to the East Bay Regional Park District (Park District), the City of Pinole, and the Northwest Information Center at Sonoma State University upon completion of the resource assessment.</p>					
<p><b>Mitigation Measure CULT-1b:</b> If archaeological deposits are encountered during project subsurface construction when an archaeological monitor is <u>not</u> present, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. The Park District shall inform its contractor(s) of the sensitivity of the project area for archaeological deposits. The Park District and the City of Pinole shall verify that the following directive has been included in the appropriate contract documents:</p> <p><i>“If prehistoric or historical archaeological deposits are discovered during project activities, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations regarding the treatment of the discovery. Project personnel should not collect or move any archaeological materials or human remains and associated materials. Archaeological resources can include flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone-milling equipment (e.g., mortars, pestles, handstones). Prehistoric archaeological sites often contain human remains.”</i></p>	<p>Redirect construction upon encountering prehistoric or historic archaeological materials and contact qualified archaeologist. No collection or movement of archaeological materials.</p>	<p>Park District/ Project Contractor</p>	<p>Prior to and during construction activities.</p>	<p>Park District/ City of Pinole</p>	<p>Review contract documents prior to issuance of building permit. Monitor compliance throughout the construction period. Inform contractor about sensitivity of project area.</p>
<p><b>Impact CULT-2:</b> Ground-disturbing activities associated with site preparation could adversely affect paleontological resources.</p>					

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<p><b>Mitigation Measure CULT-2a:</b> A qualified paleontologist shall be retained to monitor project ground-disturbing activities. Paleontological monitors shall be empowered to halt construction activities at the location of the discovery to review possible paleontological materials and to protect the resource while the finds are being evaluated. Samples of matrix may be collected, as appropriate, for processing, sorting, and microscopic examination to determine if fossils are present. Monitoring should continue until, in the paleontologist's judgment, fossils are not likely to be encountered.</p> <p>If paleontological resources are discovered during project activities, all work within 25 feet of the discovery shall be redirected until the paleontological monitor has assessed the situation and made recommendations regarding their treatment. It is recommended that adverse effects to paleontological resources be avoided by project activities. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. Paleontological resources are considered significant if they possess the possibility of providing new information regarding past life forms, paleoecology, stratigraphy, and geological formation processes. If the resources are not significant, mitigation is not necessary. If the resources are significant, adverse effects on the resource shall be mitigated. Mitigation may include recording the fossil locality, data recovery and analysis, a technical data recovery report, and accessioning the fossil material and technical report to a paleontological repository. Public educational outreach may also be appropriate.</p> <p>Upon completion of the paleontological monitoring, a report of findings with an appended, itemized inventory of specimens—as appropriate—shall be prepared and submitted to an appropriate repository, such as the University of California Museum of Paleontology.</p>	<p>Monitor ground disturbing activities. Redirect construction upon encountering paleontological resources. Evaluate any materials encountered during project activities. Mitigate for resources, as appropriate. Prepare report with findings from monitoring.</p>	<p>Project Contractor/ Project Paleontologist and Monitors</p>	<p>During construction activities.</p>	<p>Park District/ Project Paleontologist</p>	<p>Monitor compliance throughout the construction period.</p>
<p><b>Mitigation Measure CULT-2b:</b> If paleontological resources are encountered during project subsurface construction when a paleontological resources monitor is <u>not</u> present, all ground-disturbing activities within 25 feet should be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. The Park District and the City of Pinole shall verify that the following directive has been included in the appropriate contract documents:</p>	<p>Redirect construction upon encountering paleontological materials. Contact qualified paleontologist to assess the</p>	<p>Park District/ Project Contractor</p>	<p>Prior to and during construction activities</p>	<p>Park District/ City of Pinole</p>	<p>Review of contract documents prior to issuance of building permit. Monitor compliance throughout the construction period.</p>

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<p><i>“The subsurface at the construction site may be sensitive for paleontological resources. If paleontological resources are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any paleontological materials. Paleontological resources include fossil plants and animals, and such trace fossil evidence of past life as tracks. Ancient marine sediments may contain invertebrate fossils such as snails, clam and oyster shells, sponges, and protozoa; and vertebrate fossils such as fish, whale, and sea lion bones. Vertebrate land mammals may include bones of mammoth, camel, saber tooth cat, horse, and bison. Paleontological resources also include plant imprints, petrified wood, and animal tracks.”</i></p>	<p>situation. No collection or movement of paleontological materials.</p>				
<p><b>Impact CULT-3:</b> <i>Ground-disturbing activities associated with site preparation could adversely affect Native American skeletal or cremated remains.</i></p>					
<p><b>Mitigation Measure CULT-3:</b> Any human remains encountered during project ground-disturbing activities shall be treated in accordance with California Health and Safety Code Section 7050.5. The Park District and the City of Pinole shall verify that the following directive has been included in the appropriate contract documents:</p> <p><i>“If human remains are uncovered, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted—if one is not already on site—to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains or associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.”</i></p>	<p>Redirect construction upon encountering human remains. Notify the County Coroner and a qualified archaeologist. No collection or movement of human remains.</p>	<p>Park District/ Project Contractor</p>	<p>Prior to and during construction activities</p>	<p>Park District/ City of Pinole</p>	<p>Review of contract documents prior to issuance of building permit. Monitor compliance throughout the construction period.</p>
<p><b>4.5 GEOLOGY, SOILS AND SEISMICITY</b></p>					
<p><b>Impact GEO-1:</b> <i>Strong seismic ground shaking at the project site could result in risks to humans and damage to property, including, seismic-related ground failure and/or seismically-induced landslides.</i></p>					
<p><b>Mitigation Measure GEO-1:</b> Prior to the issuance of any site-specific grading permit, a final, design-level geotechnical investigation report</p>	<p>Prepare a final, design-level</p>	<p>Project Engineer/ Project</p>	<p>Prior to issuance of a grading</p>	<p>Park District/ City of Pinole</p>	<p>Review and verification of</p>

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shall be prepared and submitted to the Park District and the City of Pinole for review and confirmation that the proposed project fully complies with the Caltrans Seismic Design Criteria. The report shall determine the project site's geotechnical conditions and address potential seismic hazards such as seismic shaking. The report shall recommend foundation techniques appropriate to minimize seismic damage. All mitigation measures, design criteria, and specifications set forth in the geotechnical reports shall be followed.	geotechnical investigation report. Implement mitigation measures and design criteria recommended in the geotechnical report.	Geotechnical Engineer	permit.		geotechnical report and construction plans prior to issuance of grading permit.
<b>Impact GEO-2:</b> <i>Ground settlement could result in structural damage to proposed site improvements.</i>					
<b>Mitigation Measure GEO-2:</b> All structures shall be designed and constructed in conformance with the Caltrans Seismic Design Criteria. As required in Mitigation Measure GEO-1, a final design-level geotechnical investigation that includes recommendations for avoidance of settlement and placement of fill materials as well as foundation techniques appropriate to minimize seismic damage shall be prepared and submitted to the Park District and the City of Pinole for final approval. All mitigation measures, design criteria, and specifications set forth in the geotechnical reports shall be followed.	Prepare a final, design-level geotechnical investigation report. Submit for review. Mitigate, as appropriate.	Project Engineer/ Project Geotechnical Engineer	Prior to issuance of a grading permit.	Park District/ City of Pinole	Review and verification of geotechnical report and construction plans prior to issuance of grading permit.
<b>Impact GEO-3:</b> <i>Slope excavation and installation of retaining walls could cause slope instability potentially resulting in landslides at the project site.</i>					
<b>Mitigation Measure GEO-3:</b> Prior to issuance of a grading permit, detailed retaining wall design drawings and a site-specific grading plan for the project site shall be prepared by a licensed professional and submitted to the Park District and the City of Pinole for review and approval. The retaining wall design drawings shall be reviewed by a qualified engineering geologist and show the heights of the walls, the backfill material type, drainage details, and the earth pressure used in design. All cut slopes shall be observed by a qualified engineering geologist at the time of grading to assess the applicability of the recommendations and to make supplemental recommendations, if necessary. Supplemental recommendations may include slope flattening, installation of drainage, slope reconstruction in areas where weak rock, adverse bedding, or other local anomalies are encountered, or construction of retaining walls. Retaining wall installation and testing shall be observed by a qualified engineering geologist.	Prepare detailed retaining wall design drawings and site-specific grading plans. Monitor retaining wall installation and testing.	Project Engineer/ Project Geologist	Prior to issuance of a grading permit.	Park District/ City of Pinole	Review and verification of construction plans and peer review of retaining wall design prior to issuance of grading permit.
<b>Impact GEO-4:</b> <i>The shrink-swell potential of project soils could result in damage to structures at the project site.</i>					
<b>Mitigation Measure GEO-4:</b> Prior to the issuance of a site-specific grading permit, a final design-level geotechnical investigation, to be	Prepare a final, design-level	Park District/ Project Engineer	Prior to issuance of a grading	Park District/ City of Pinole	Review and verification of

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prepared by licensed professionals and approved by the Park District, shall include measures to ensure potential damages related to expansive soils are minimized. Mitigation options may range from removal of the problematic soils and replacement, as needed, with properly conditioned and compacted fill, to design and construction of improvements to withstand the forces exerted during the expected shrink-swell cycles and settlements. If problematic soils are not removed due to budget limitation, the Park District shall have a maintenance plan to correct future soil movement problems.	geotechnical investigation report. Mitigate, as appropriate. Prepare and implement maintenance plan, if needed.		permit.		geotechnical report and construction plans prior to issuance of grading permit.
<b>4.6 HYDROLOGY AND WATER QUALITY</b>					
<i>Impact HYDRO-1: Construction and operation period activities could generate stormwater runoff that could cause or contribute to a violation of water quality standards or waste discharge requirements, or otherwise substantially degrade the water quality of San Pablo Bay.</i>					
<p><b>Mitigation Measure HYDRO-1:</b> The Park District shall file a Notice of Intent to comply with the statewide General Permit for Discharges of Storm Water Associated with Construction Activities, and shall prepare a Storm Water Pollution Prevention Plan (SWPPP) for construction activities on the site. In addition to the regulatory requirements for the SWPPP, the site-specific SWPPP shall include provisions for the minimization of sediment disturbance (i.e., production of turbidity) and release of chemicals to the Bay. Following are the types of BMPs that shall be implemented, subject to review and approval by the RWQCB.</p> <ul style="list-style-type: none"> <li>• <i>Scheduling.</i> To reduce the potential for erosion and sediment discharge, construction shall be scheduled to minimize ground disturbance during the rainy season. The project applicant shall: <ul style="list-style-type: none"> <li>○ Sequence construction activities to minimize the amount of time that soils remain disturbed.</li> <li>○ Stabilize all disturbed soils as soon as possible following the completion of ground disturbing work.</li> <li>○ Install erosion and sediment control BMPs prior to the start of any ground-disturbing activities.</li> </ul> </li> <li>• <i>Preservation of Existing Vegetation.</i> Where feasible, existing vegetation shall be preserved to provide erosion control.</li> <li>• <i>Stabilize Soils.</i> Hydroseeding and geotextile fabrics shall be used, as appropriate, to reduce erosion.</li> <li>• <i>Drainage Swales/Culverts.</i> Construct drainage swales/culverts to</li> </ul>	File Notice of Intent to comply with General Permit for Discharge of Storm Water Associated with Construction Activities. Prepare a SWPPP for construction activities on site. Implement BMPs during construction activities.	Park District/ Project Engineer/ Project Contractor	Prior to issuance of a grading permit and throughout the construction period.	Park District/ RWQCB	Plan review and scheduled site inspections throughout the construction period.

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<p>divert runoff away from exposed soils and stabilized areas, and redirect the runoff to a desired location.</p> <ul style="list-style-type: none"> <li>• <i>Outlet Protection and Velocity Dissipation Devices.</i> Install rock or concrete rubble at culvert and pipe outlets to prevent scour of the soil caused by concentrated high-velocity flows.</li> <li>• <i>Silt Fence/Fiber Roll.</i> Silt fences or fiber rolls shall be installed around the perimeter of the areas affected by construction to prevent offsite sedimentation.</li> <li>• <i>Dust Control.</i> Potable water shall be applied using water trucks to alleviate nuisance caused by dust. Water application rates shall be minimized to prevent erosion and runoff.</li> <li>• <i>Stockpile Management.</i> Silt fences shall be used around the perimeter of stockpiles and stockpiles shall be covered with plastic to prevent wind dispersal of sediment.</li> <li>• <i>Stabilized Construction Entrance/Exit.</i> Construction site entrances and exits, the equipment yard, the water filling area for water trucks, and the project office location, shall be graded and stabilized to prevent runoff from the site and erosion.</li> <li>• <i>Dewatering.</i> The SWPPP shall include a dewatering plan for non-contaminated groundwater specifying methods of water collection, transport, treatment, and discharge. The discharger shall consult with the RWQCB regarding any required permit (other than the Construction General Permit) or Basin Plan conditions prior to initial dewatering activities to land, storm drains, or waterbodies. Water produced by dewatering shall be impounded in holding tanks or other holding facilities to settle the solids and provide other treatment as necessary prior to discharge to receiving waters. Discharges of water produced by dewatering shall be controlled to prevent erosion.</li> <li>• <i>Illicit Connection/Discharge Detection and Reporting.</i> Contractors shall regularly inspect the site for evidence of illicit connections, illegal dumping, or discharges. Such discharges shall immediately be reported to the stormwater illegal discharge contact for Pinole.</li> <li>• <i>Vehicle and Equipment Cleaning.</i> Construction equipment shall be washed regularly in a designated enclosed area. Except for concrete washout, vehicle cleaning shall not be performed on site. Concrete</li> </ul>					

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<p>washout waste will be contained and managed properly.</p> <ul style="list-style-type: none"> <li>• <i>Vehicle and Equipment Fueling and Maintenance.</i> Self-propelled vehicles shall be fueled off-site or at the temporary fueling area. Fuel trucks equipped with absorbent spill clean-up materials shall be used for all on-site fueling; the fuel truck shall be parked on the paved fueling area for overnight storage. Drip pans shall be used for all mobile fueling. Drip pans or absorbent pads shall be used for all vehicle and equipment maintenance activities. Vehicle maintenance and mobile fueling operations shall be conducted on a level graded area, at least 50 feet away from operational inlets and drainage facilities.</li> <li>• <i>Paving and Grinding Operations.</i> Proper practices shall be implemented to prevent run-on and run-off, and to properly dispose of waste. Paving and grinding activities shall be avoided during the rainy season, when feasible.</li> <li>• <i>Material Delivery, Storage and Use.</i> The general material storage area shall be located in the contractor's yard. Two watertight shipping containers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents and grease. Very large items, such as light standards, framing materials, and stockpiled lumber, shall be stored in the open in the general storage area. Such materials shall be elevated with wood blocks to minimize contact with run-off. Spill clean-up materials, material safety data sheets, a material inventory, and emergency contact numbers shall be maintained at the site.</li> <li>• <i>Spill Prevention and Control.</i> Proper procedures shall be implemented to contain and clean-up spills and prevent material discharges into the storm drain system.</li> <li>• <i>Solid Waste Management.</i> Solid wastes shall be loaded directly into trucks for off-site disposal. When on-site storage is necessary, solid wastes shall be stored in watertight dumpsters in the general storage area of the contractor's yard. Asphalt concrete and Portland cement concrete rubble shall be removed immediately to an approved disposal site.</li> <li>• <i>Sanitary/Septic Waste Management.</i> Portable toilets shall be located and maintained 50 feet away from drain inlets and away from paved</li> </ul>					

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<p>areas.</p> <ul style="list-style-type: none"> <li>• <i>Stockpile Management.</i> Stockpiles shall be surrounded by sediment controls and shall be covered. Alternatively, soil binders may be used to minimize erosion. If contaminated soils are encountered, such as soils containing aerially-deposited lead, stockpiles shall be covered and bermed and located away from storm drain inlets and watercourses, and on-site storage shall be minimized. Hazardous materials shall be transported and disposed in accordance with applicable regulations.</li> <li>• <i>Concrete Waste Management.</i> Cement-based fill material for the project and waste management shall be consistent with requirements in the CA BMP Handbook (BMP WM-8). Concrete washout waste will be contained and managed properly.</li> <li>• <i>Training.</i> Construction site personnel shall receive training on implementing all BMPs included in the SWPPP. All personnel that inspect BMPs and perform other monitoring activities, such as visual observations and collecting water quality samples, shall be trained.</li> </ul>					
<b>4.7 HAZARDS AND HAZARDOUS MATERIALS</b>					
<i><b>Impact HAZ-1:</b> Project construction activities would entail the use of hazardous materials and could also encounter hazardous materials in shallow soils, which would require transportation off-site and disposal. In addition, hazardous materials used or encountered during construction could create a significant hazard through release into the environment.</i>					
<p><b>Mitigation Measure HAZ-1a:</b> Prior to the initiation of project construction, a project-specific Health and Safety Plan (HASP) shall be prepared by a certified industrial hygienist that shall include measures to protect construction workers and the general public, if contaminants are encountered during construction. Such measures shall include monitoring, engineering controls, administrative controls, and security measures to prevent unauthorized entry into the construction area. The HASP shall address the possibility of encountering unknown contamination or subsurface hazards, in addition to emergency response procedures in the event of a hazardous materials release. The Park District shall verify that the HASP is incorporated into the construction worker's health and safety programs.</p>	<p>Prepare a Health and Safety Plan (HASP). Implement measures, as appropriate.</p>	<p>Park District/ Licensed Environmental Professional/ Certified Industrial Hygienist</p>	<p>Prior to initiation of project construction.</p>	<p>Park District</p>	<p>Verify that HASP incorporated into construction workers' health and safety programs.</p>

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<b>Mitigation Measure HAZ-1b:</b> The Storm Water Pollution Prevention Plan required as Mitigation Measure HYD-1 shall include Best Management Practices (BMPs) for containing hazardous materials and minimizing the contact of hazardous materials (e.g., fuels, lubricants, paints, solvents, and adhesives) with rain and stormwater runoff, including BMPs for stockpile management.	File Notice of Intent to comply with General Permit for Discharge of Storm Water Associated with Construction Activities. Prepare a SWPPP for construction activities on site. Implement BMPs during construction activities.	Park District/ Project Engineer	Prior to issuance of a grading permit and throughout the construction period.	Park District	Plan review and scheduled site inspections throughout the construction period.
<b>4.8 TRANSPORTATION AND CIRCULATION</b>					
<i>There are no significant Transportation and Circulation impacts.</i>					
<b>4.9 NOISE</b>					
<b>Impact NOI-1:</b> <i>Construction period activities could result in significant short-term noise impacts on noise-sensitive receptors in the project vicinity.</i>					
<b>Mitigation Measure NOI-1a:</b> All construction equipment must be maintained in good working order and have appropriate sound muffling devices, which shall be properly maintained and used at all times such equipment is in operation.	Maintain construction equipment.	Project Contractor	Throughout the construction period.	Park District	Monitor compliance throughout the construction period.
<b>Mitigation Measure NOI-1b:</b> Where feasible, the project contractor shall place all stationary construction equipment so that emitted noise is directed away and is located as far as practical from sensitive receptors nearest the project site.	Direct noise away from sensitive receptors.	Project Contractor	Throughout the construction period.	Park District	Monitor compliance throughout the construction period.
<b>Mitigation Measure NOI-1c:</b> Take advantage of existing features (terrain, structures, edge of trenches) to act as shielding between construction noise sources and sensitive receptors.	Shield construction noise from sensitive receptors using existing features.	Project Contractor	Throughout the construction period.	Park District	Monitor compliance throughout the construction period.
<b>Mitigation Measure NOI-1d:</b> Except as otherwise permitted, all noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the	Comply with the City of Pinole Noise Ordinance.	Project Contractor	Throughout the construction period.	Park District	Monitor compliance throughout the

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hours of 7:00 a.m. to 5:00 p.m., Monday through Friday. No construction work shall be conducted on federal holidays A one-time exception may be required to allow the pre-cast bridge span to be placed over the UPRR tracks.	Limit noise producing activities to 7 a.m. to 5 p.m. Monday through Friday.				construction period.
<b>Mitigation Measure NOI-1e:</b> The construction contractor shall post signs prohibiting unnecessary idling of internal combustion engines.	Post signs prohibiting unnecessary idling.	Project Contractor	Throughout the construction period.	Park District	Monitor compliance throughout the construction period.
<b>Mitigation Measure NOI-1f:</b> The use of quieter pile installation methods, where practical and feasible, shall be employed to reduce project-related noise. Examples of such methods include, but are not limited to, the shrouding of the equipment with noise control blankets and use of more than one pile rig to shorten the total pile installation duration.	Use quieter pile installation methods.	Project Contractor	Throughout the construction period.	Park District	Monitor compliance throughout the construction period.
<b>4.10 AIR QUALITY</b>					
<i><b>Impact AIR-1:</b> Construction period activities could generate significant dust, exhaust and emissions.</i>					
<p><b>Mitigation Measure AIR-1:</b> Consistent with guidance from the BAAQMD for Basic Construction Mitigation Measures, the following actions shall be required of construction contracts and specifications for the project.</p> <ul style="list-style-type: none"> <li>• All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.</li> <li>• All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</li> <li>• All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</li> <li>• All vehicle speeds on unpaved roads shall be limited to 15 mph.</li> <li>• All trail surfaces to be paved shall be completed as soon as possible after grading.</li> <li>• All construction equipment shall be maintained and properly tuned in accordance with manufacture’s specifications. All equipment shall be</li> </ul>	Require construction contracts and specifications to comply with BAAQMD guidelines for control of fugitive dust emissions during construction.	Project Contractor	During construction activities.	Park District/ BAAQMD	Monitor compliance throughout the construction period.

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<p>checked by a certified mechanic and determined to be running in proper condition prior to operation.</p> <ul style="list-style-type: none"> <li>A publicly visible sign shall be posted with the telephone number and person to contact at the East Bay Regional Park District regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the BAAQMD shall also be visible to ensure compliance with applicable regulations.</li> </ul>					
<b>4.11 GLOBAL CLIMATE CHANGE</b>					
<b><i>Impact GCC-1:</i></b> Construction of the proposed project could generate substantial GHG emissions.					
<p><b>Mitigation Measure GCC-1:</b> Consistent with guidance from the BAAQMD, the following best management practices shall be required of construction contracts and specifications for the project.</p> <ul style="list-style-type: none"> <li>Alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet, as feasible;</li> <li>Local building materials (within 100 miles) of at least 10 percent; and</li> <li>Recycle at least 50 percent of construction waste or demolition materials.</li> </ul>	Comply with BAAQMD best management practices.	Project Contractor	During construction activities.	Park District	Monitor compliance throughout the construction period.

Source: LSA Associates, Inc., 2011.