

**Initial Study/
Mitigated Negative Declaration**

**MIRADA ROAD PEDESTRIAN
BRIDGE REPLACEMENT AND BANK STABILIZATION
PROJECT**



**County of San Mateo
Department of Public Works**

December 2020

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Chapter 1. Background Information

PROJECT DATA

1. **Project Title:** Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project
2. **Lead Agency Name and Address:** County of San Mateo Department of Public Works, 555 County Center, 5th Floor, Redwood City, CA 94063
3. **Project Proponent:** County of San Mateo Department of Public Works, 555 County Center, 5th Floor, Redwood City, CA 94063 Contact: Krzysztof Lisaj, Senior Civil Engineer email: klisaj@smcgov.org
4. **Project Location:** Along the Mirada Road shoreline, approximately 0.15 miles west of State Route 1, between Medio Avenue to the Mirada Road cul-de-sac south of the existing pedestrian bridge in the unincorporated community of Miramar and the City of Half Moon Bay.
5. **Project Description:** The County proposes to stabilize an eroding bluff that experienced extensive erosion associated with storms during the 2015/2016 and 2016/2017 rainy seasons, using a combination of shotcrete wall supported by soil nails and rock slope protection (RSP). The project also includes replacement of a deteriorating pedestrian bridge along Mirada Road that crosses Arroyo de en Medio.

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Chapter 2. Project Description

2.1 INTRODUCTION

This Initial Study has been prepared pursuant to the requirements of the California Environmental Quality Act (CEQA). The purpose of an Initial Study is to determine whether the proposed project could significantly affect the environment, requiring the preparation and distribution of an Environmental Impact Report. Based on the following analysis, it appears that the environmental impacts of the project would be less-than-significant with proposed mitigation, and that the project is eligible for a Mitigated Negative Declaration.

2.2 PROJECT LOCATION

The project is located in an unincorporated community of Miramar and in the City of Half Moon Bay, within San Mateo County, approximately 0.15 miles west of State Route 1. The project area extends along the bluff below Mirada Road, from Medio Avenue to the Mirada Road cul-de-sac south of the existing pedestrian bridge. The project location is shown on the map in Figure 1.

2.3 BACKGROUND

The San Mateo County Department of Public Works (County) proposes to stabilize an eroding bluff that experienced extensive erosion associated with storms during the 2015/2016 and 2016/2017 rainy seasons, using a combination of shotcrete with soil nail walls and rock slope protection (RSP). The project also includes replacement of a deteriorating pedestrian bridge along Mirada Road that crosses Arroyo de en Medio. On July 27, 2020, the County closed the existing pedestrian bridge due to its condition and potential public safety concerns.

The County has evaluated its portion of Mirada Road immediately north of the proposed project area and it appears that a long-term project will be necessary to address coastal erosion along Mirada Road. County funding has not been allocated to address these improvements, which have been identified as sheet pile walls from Magellan Avenue to Medio Avenue to protect the roadway. Based on a preliminary evaluation, this would likely require narrowing the roadway to accommodate one-way vehicular travel along Mirada Road, which would enhance access and safety for pedestrians and bicyclists. This type of project would also be beneficial to neighboring properties and other existing infrastructure in the roadway. This effort would involve development of conceptual designs that would be shared with the adjacent property owners, the community, and the public. The County anticipates that a long-term project to address coastal erosion along Mirada Road will not be constructed before 2021/2022.

2.4 PROJECT DESCRIPTION

To serve the Coastal Trail, the County proposes to remove the existing concrete arch bridge and metal pedestrian bridge as well as place a new aluminum pedestrian bridge crossing the Arroyo de en Medio. To protect the bridge, trail, roadway, utilities, and properties, the project would install shotcrete walls with tieback anchors as well as rock slope protection (RSP) along the bluff face and sections of the north and south banks of the Arroyo de en Medio. The project will also include relocation of existing utilities supported by the existing bridge.

The project will be constructed in two phases. The project elements including the pedestrian bridge, bluff stabilization, and utility improvements are shown in Figure 2. The general bridge plan is presented in Figure 3. The bluff stabilization plan and concept plan are illustrated in Figures 4 and 5. Details of the project are described below.

2.4.1 Description of Phase I Work

The Phase 1 work includes all the tasks necessary to stabilize the bluffs and prepare for the placement of the new pedestrian bridge. During this phase, the Coastal Trail will remain open to pedestrians and bicyclists. Prior to the contractor mobilizing on the site, public utilities including Pacific Gas and Electric (PG&E) and Granada Community Services District (GCSD) that possess infrastructure on the existing pedestrian bridge, will relocate their facilities. The demolition plan for the project is presented in Figure 6.

PG&E has both primary and secondary circuits in conduits crossing the pedestrian bridge. For the temporary relocation, PG&E will install utility poles on either side of the pedestrian bridge to facilitate the placement of overhead electrical cables. Once the project is complete, PG&E will deactivate the circuits and remove both the poles and conductors.

GCSD is currently working to re-route the 2-inch force main currently located on the pedestrian bridge. If this cannot be completed prior to the bridge's removal, GCSD may install a temporary bypass, which could include a hose or pipe routed across Arroyo de en Medio. The force main currently serves about 25 homes located along and near Mirada Road.

To allow access for construction equipment to the beach, the project will install a temporary access road from the Mirada Road cul-de-sac into the Arroyo de en Medio. The access road will require approximately 30 to 40 cubic yards of temporary fill consisting of variously graded rocks to create a pathway approximately 15 feet wide and 60 feet long for construction equipment. If the creek is flowing during the construction period, water will be diverted from the work area through an appropriately sized pipe, which will be buried in sand. The construction access plan is presented in Figure 7.

Once equipment can access the beach, the contractor will relocate the RSP that was placed in January 2016 as an emergency action to protect the eroding slope allowing access for the installation of the shotcrete walls. RSP would be temporarily relocated to an area on the beach approximately 15 feet from the bluff face to deflect wave action and prevent inundation of the work area if sand levels at the time of construction are low. If sand levels are high, preventing waves from striking the bluff, the RSP will be stockpiled on the beach.

To begin preparing for the construction of the shotcrete wall, the contractor will clear and grub the slope face to remove loose material and vegetation along the bluff north and south of the creek. Additionally, the contractor will remove concrete debris from the beach and creek. The contractor will dispose all debris in a facility capable of accepting the material. The walls would be about 170 feet and 110 feet in length along the north and south sides of the pedestrian bridge respectively. During this phase, the contractor will work along the exposed bluff but not under the existing pedestrian or concrete bridge.

Once the bluff is cleared, the contractor will drill tie back anchors into the bluff at intervals of five feet on center to a depth of no more than 25 feet. The base of wall will be at an absolute elevation of eight feet based upon the North American Vertical Datum of 1988 (NAVD 88), which could require excavation into the existing sand depending upon its height at the time of construction. The top of the wall will be set slightly higher than the existing bluff elevation. The wall will be about 23 feet in height, which will vary as sand elevation changes at different times during the year.

The contractor will tie the anchors together with steel reinforcement and will spray the first layer of concrete. The final layer is the surfacing material, which will be sculpted and stained to match the coloring of the surrounding bluffs. However, this final layer will be installed once the entire wall including the phase 2 section is complete to facilitate a uniform appearance.

The contractor will integrate the existing 18-inch in diameter corrugated metal pipe which serves a drain inlet located within the Mirada Road cul-de-sac as well as the existing 6-inch storm drain on the north side of the bridge into the shotcrete wall. There are three locations where grout installation and/or shotcrete (sprayed on concrete) application will require a concrete containment plan. The three locations and containment plan details for each are described below.

- On the slope: Shotcrete will be applied by an American Concrete Institute (ACI) Certified Nozzleman. ACI training instructs specific procedures to mitigate against shotcrete sloughing during installation. As an added precaution, a tarp containment system will be placed under the shotcrete area to capture any shotcrete rebound or unintentional sloughing. The contents of the tarp catchment system will be removed and disposed of at an appropriate disposal facility offsite.
- At the concrete truck: After the concrete truck has been emptied, the contractor will either clean out the truck within itself (if supplier provides self-cleaning trucks) or within a concrete washout. If a concrete washout is used, all captured material will be removed and disposed of offsite.
- At the grout pump: The contractor will underly the grout pump with a vinyl catchment system. Any grout material that is captured in the system will be removed and disposed of offsite.

The anticipated duration of all construction activities for Phase I will be approximately 45 working days: three days for the access road; two days to relocate RSP; five days for clearing and grubbing and 35 days for the soil nails. Work would only occur on non-holiday weekdays between the hours of 7 am – 5 pm, during times when the work area is dry (low tide). Construction equipment and materials storage are proposed to be stored along the Mirada Road cul de sac south of the current pedestrian bridge (see Figure 7).

2.4.2 Description of Phase 2 Work

Phase 2 will include the permanent relocation of existing utilities, removal of the concrete bridge, removal of the existing pedestrian bridge, placement of the final shotcrete walls, installation of RSP, installation of the pedestrian bridge, and placement of final finishes including trail approaches.

The existing bridge will be lifted off of the existing abutments with a 400-ton seven axle crane (Liebherr LTM 1400-7.1 or similar) staged immediately south of the southern abutment in parking area of 2 Mirada Road (pending property owners approval), resulting in an estimated pick radius of 110 feet. Once the bridge is lifted off the abutments, it will be lowered onto a flatbed trailer parked on Mirada Road and removed from the project site.

The removal of the existing concrete arch bridge would include use of a track-mounted excavator with a breaker arm in addition to jack hammers. Track mounted equipment would be used to break-up the concrete bridge. A tarp containment system will be installed within the creek channel to capture any debris from the bridge demolition. Monitors will be present to ensure no debris leaves the project area and is left on the beach or within the channel at the end of each day. Debris will be loaded into dump trucks using a long reach excavator from the top of the bluff or using loaders that bring the debris to Mirada Road. Upon completion of the bridge demolition the tarp containment system will be removed and disposed of.

Once the concrete bridge is removed, the contractor would clear and grub the slope to prepare for the installation of the shotcrete concrete wall as described in Phase 1. Upon completion of the first layer of concrete the contractor will install the final textured and colored layer along the entire wall face.

Once the shotcrete walls have sufficiently cured, the contractor will reset the RSP at the base of the walls, which will include a backing layer of small rock (#2 or #3), an engineering fabric, and finally the armor rock (1/4 to 1/2 ton) facing the ocean. The base of the RSP will be set to an elevation of 2 feet and rise to about an elevation of 10 feet. Depending upon the depth of sand at the time of construction, the project may need to excavate, which could require about four feet of excavation. If excavation is required, upon completion of setting the RSP, the sand would be spread on the RSP.

The GCSD will trench and place a sanitary sewer pipeline north and south of the bridge re-routing the existing pipeline from the east side of the concrete bridge to approximately the centerline of the new pedestrian bridge. This will require routing the pipeline below and beyond the existing bridge abutments. Alternatively, GCSD will not install the sewer pipeline under the new bridge but install infrastructure to re-route flows to their existing pump station in the Miramar neighborhood. Additionally, PG&E will complete limited trenching north and south of the bridge to connect the existing two 4-inch conduits to the new casings placed on the bridge.

In order to reuse the existing bridge abutments for the new pedestrian bridge, the contractor will clean and inspect the concrete and mounting hardware to confirm the as-built condition. The project will modify the abutments, which will include revising the bridge bearing material and installing a shear key on the southern abutment to improve seismic stability. The new prefabricated aluminum bridge will be installed using the same sized crane that was used for the removal of the existing bridge. The bridge will be picked up and positioned in place onto the modified bridge abutments and connected in place by either welding or fasteners.

Once the bridge is in place, the GCSD will suspend an 8-inch in diameter ductile iron sewer pipeline on anchors mounted under the new pedestrian bridge and connect to the pipeline buried below the abutments. This will not be done if GCSD re-routes sanitary sewer flows as previously described. PG&E will place two, 4-inch in diameter steel conduits on the bridge and route conductors through the conduits.

Upon completion of the work, any fill used for the access road will be removed and the slope re-graded to its original contours. The disturbed areas on the bank and shoulder will be stabilized with erosion control materials and seeded and/or planted with a native plant mix appropriate for the area. Due to disturbance to the trail approaches to the bridge, the project will remove and replace the asphalt concrete pavement. Finally, the project will install a cable rail fence that is approximately 36 inches in height on the northwest and southwest approaches to the bridge for public safety and to prevent pedestrians from accessing the slope.

The anticipated duration of all construction activities during Phase 2 is 40 working days: this includes two days for the pedestrian bridge removal; five days to remove the concrete bridge; four days for the sanitary sewer installation; two days for the electrical conduits installation; 15 days for the shotcrete walls; five days for RSP; three days for the new bridge installation; two days to place pavement and fencing; and two days to install the electrical conductors. Work will only occur on non-holiday weekdays between the hours of 7am – 5pm. Construction equipment and materials storage is proposed along the Mirada Road cul de sac south of the current pedestrian bridge.

2.4.3 Best Management Practices and Conservation Measures

The project will implement best management practices (BMPs), conservation measures, and other techniques to minimize impacts on environmental resources, including restrictions on construction timing, pre-construction sensitive species surveys, and containment BMPs listed below. Use of these preventative measures are an integral part of the maintenance procedures followed by the County, as outlined in the County of San Mateo Watershed Protection Program's Maintenance Standards (2004).

- Project timing during the dry season, which is from June 1 to September 15. As this timing conflicts with the nesting season, the project will need to retain a biologist to verify there are no nesting birds within the work zone. Work shall be restricted to periods of dry weather or low rainfall (less than ¼ inch of rain in a 24-hour period). Work shall not occur when there is a forecast of more than 40% chance of rain or at the onset of any unanticipated precipitation.
- Construction personnel shall participate in a special-status species and BMP implementation training given by a qualified biologist prior to the start of construction. The training shall include special-status species identification and appropriate avoidance measures.
- A qualified biologist shall conduct a pre-construction biological survey for special-status species before the start of construction. Additionally, a qualified biologist shall conduct on-site monitoring of all ground disturbing construction activities. If special-status species are detected within the active work area, all construction activities shall cease, and the appropriate agency (i.e., California Department of Fish and Wildlife, U.S. Fish and Wildlife Service) shall be contacted immediately for guidance on how to proceed.
- If work is scheduled to begin prior to August 31, a qualified biologist will conduct a pre-construction nesting bird survey. If an active nest is found, the County shall consult with the resource agencies regarding the appropriate action to comply with State Fish and Game Code and the Federal Migratory Bird Treaty Act of 1918. If the exclusion zone falls within the work area, construction will be postponed until a qualified biologist has determined that the young have fully fledged and left the nest.
- A litter control program shall be instituted at the project site. All workers will ensure that food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers shall be removed from the area at appropriate intervals. All trash and debris shall be disposed of at an appropriate facility.
- With the exception of a tracked excavator to temporarily relocate and reset the RSP for installation of the soil nail wall, all heavy equipment will be operated from the roadway, shoulder, and top of the bluff. Heavy equipment such as a loader or excavator may need to access the beach during demolition and removal of the existing concrete arch bridge and to clear and grub the bluff. Heavy equipment that operates on the beach will have rubber tires to the greatest extent feasible and be limited to specific activities for short durations. Soil nail installation will be performed from above using the boom on the excavator operated from the roadway and shoulder areas to reach down over the bluff edge to install the nails at sites along the west side of the bridge. The same procedure is planned for the stabilization section to the east of the bridge.
- Fueling and maintenance of vehicles shall not take place within any areas where an accidental discharge to waterways may occur.

- All leaks, drips, and spills shall be immediately cleaned up to prevent entry into drainages and water bodies. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- Erosion control and containment BMPs (i.e., straw wattles, silt fencing, erosion blanket, street sweeping) shall be implemented to prevent pollutants from entering waterways. Erosion control materials with plastic monofilament shall not be allowed. At the end of project construction, all materials trapped by the barriers and excess materials such as dirt, rock, or debris shall be collected and removed from the project site. No materials shall be allowed to enter into adjacent aquatic habitats.
- All vegetation, construction-related debris, and trash shall be removed from the site and taken to an appropriate disposal site.
- Disturbed areas on the bank and shoulder shall be seeded with a native seed mix following construction activities.

2.4.4 Project Objectives

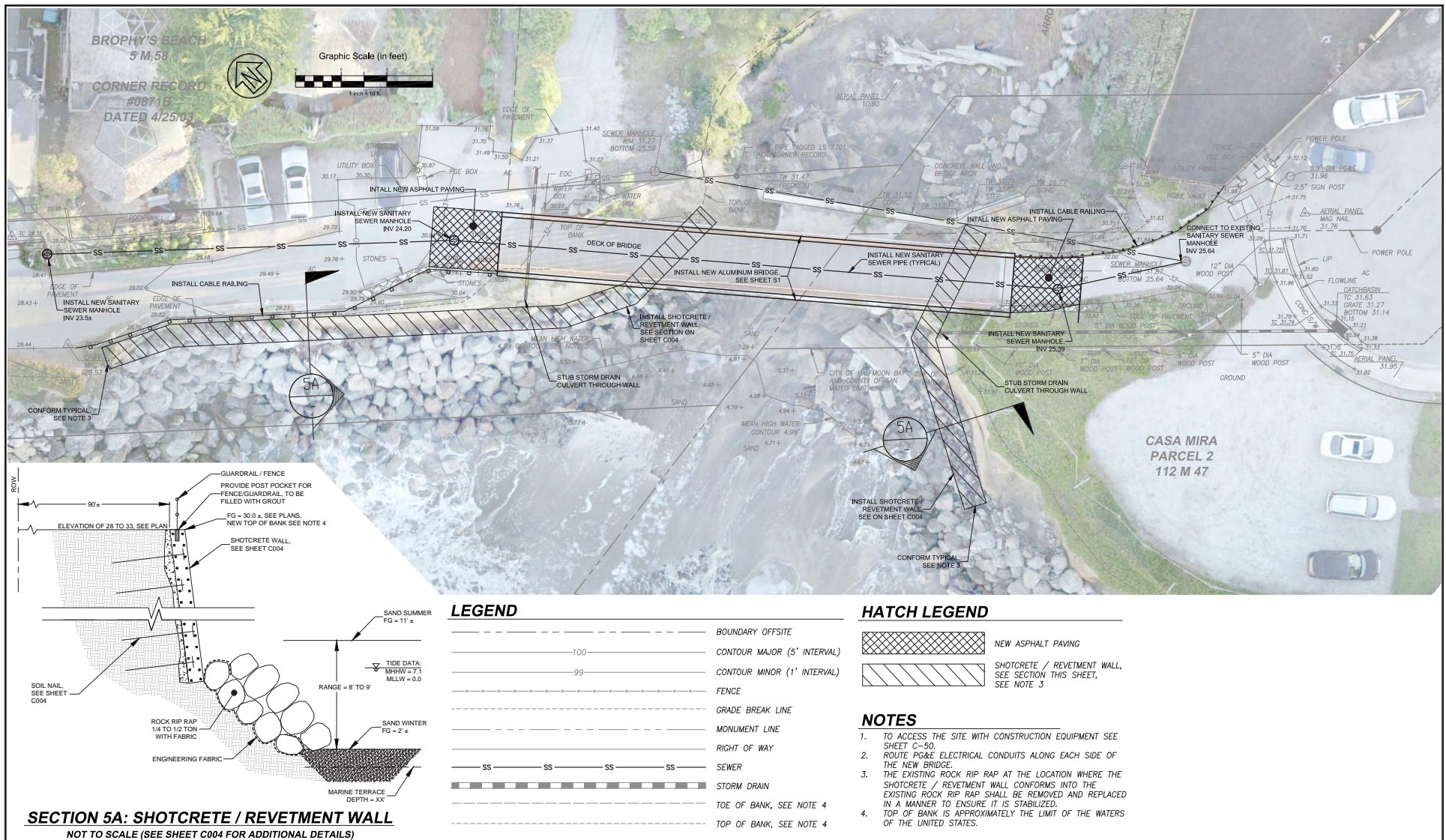
The objective of the project is to stabilize an eroding bluff, which experienced extensive damage associated with storms during the 2015/2016 and 2016/2017 rainy seasons, using a combination of soil nail walls and rock slope protection. The project also includes replacement of a deteriorating steel truss pedestrian bridge along Mirada Road that crosses Arroyo de en Medio with an aluminum truss pedestrian bridge.



Location Map

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
1



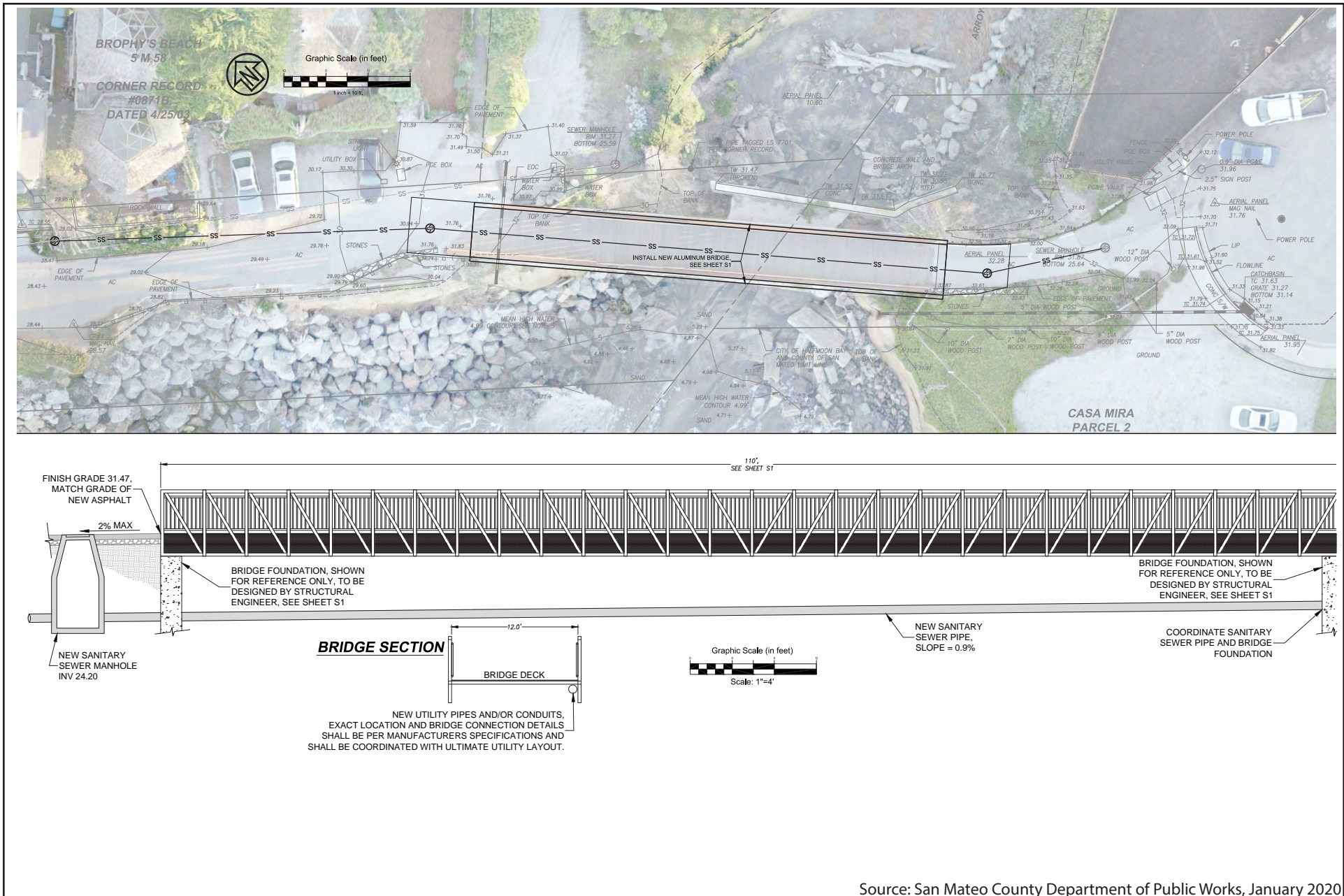
Source: San Mateo County Department of Public Works, January 2020



Project Improvements Plan

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
2



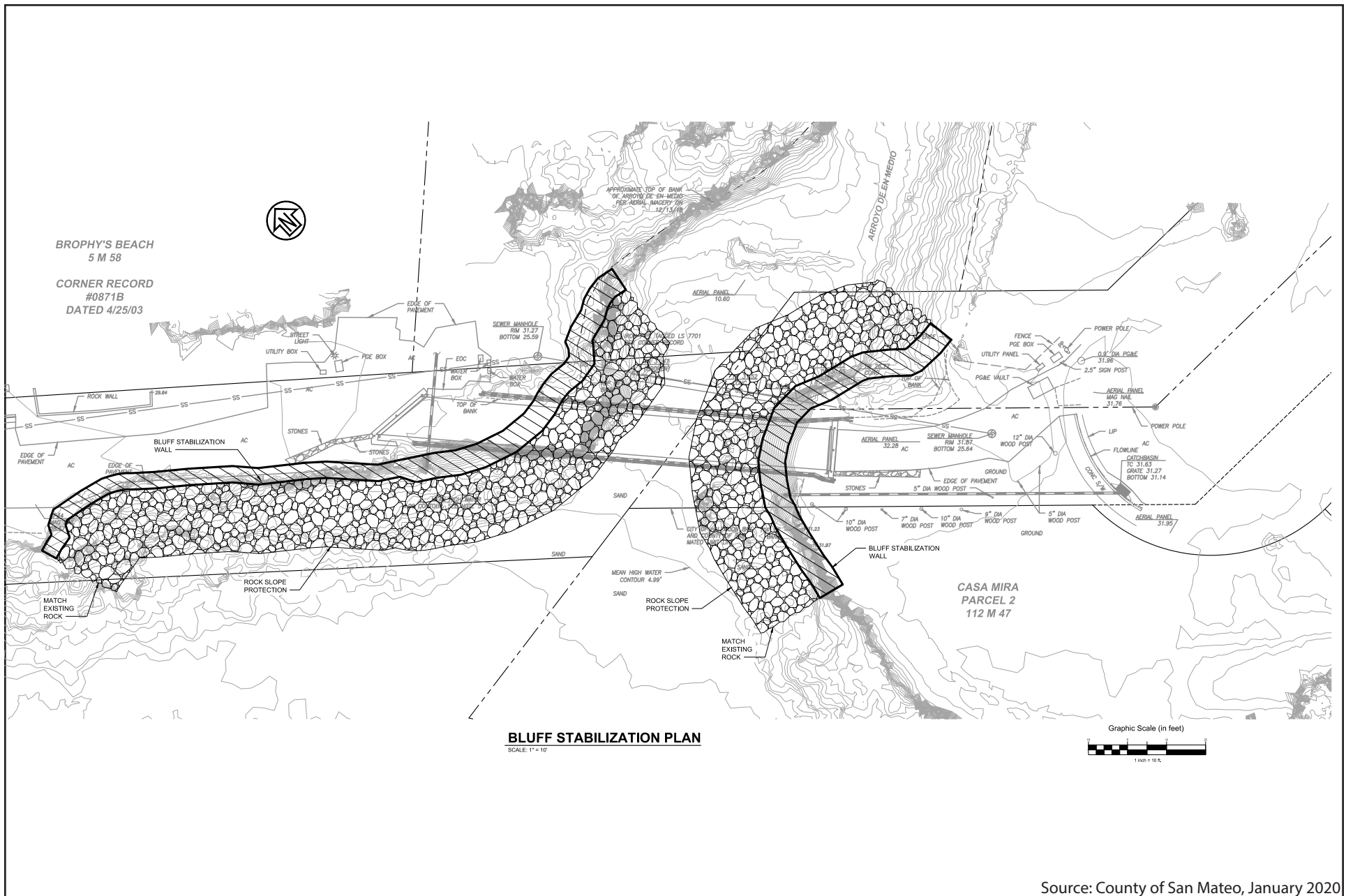
Source: San Mateo County Department of Public Works, January 2020



Pedestrian Bridge Plan

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
3



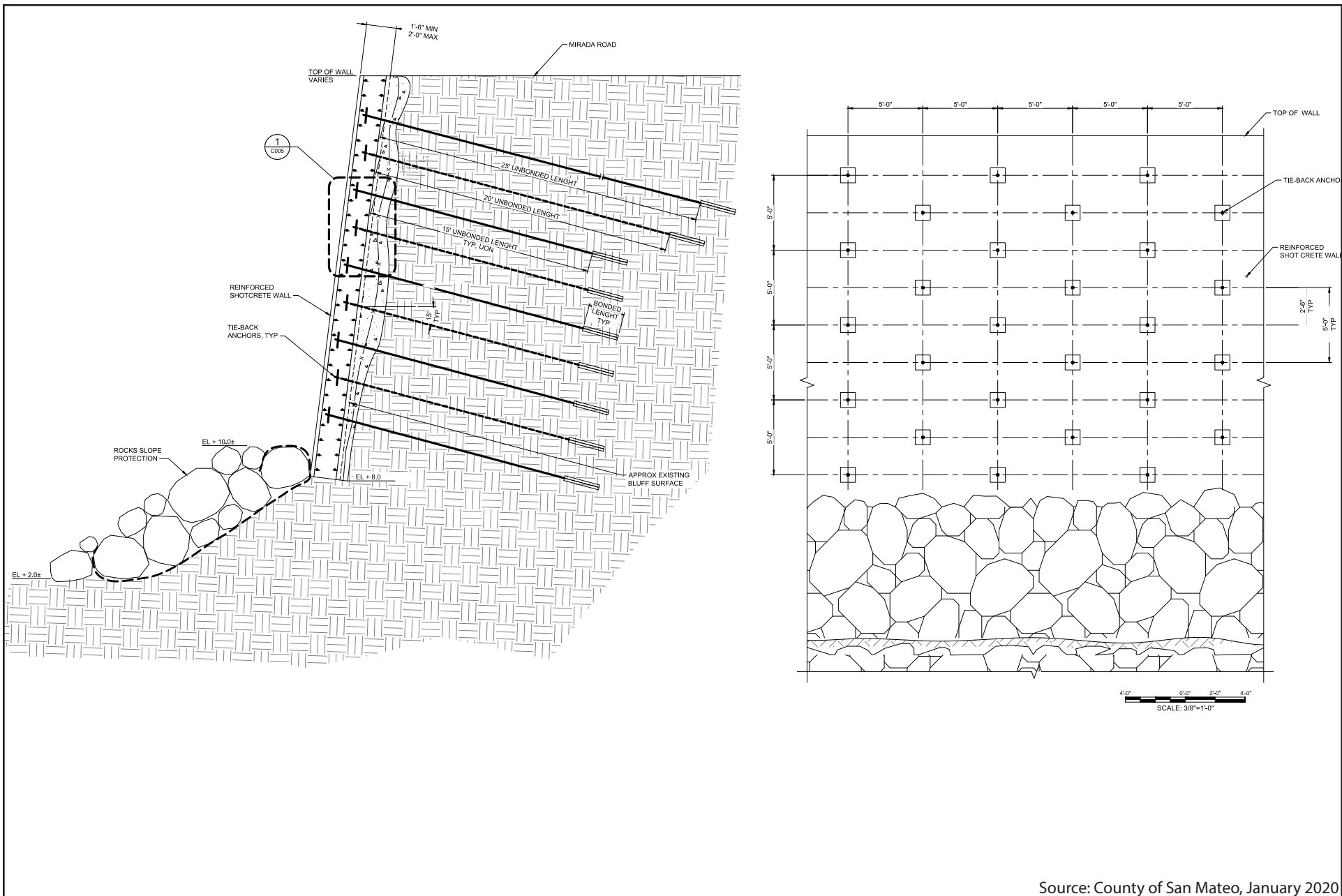
Source: County of San Mateo, January 2020



Bluff Stabilization Plan

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
4



Source: County of San Mateo, January 2020



Bluff Stabilization Concept

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
5



Photo 1. Soil Nail Wall 1 Installation Location Northwest of Pedestrian Bridge.



Photo 3. Soil Nail Wall 3 Installation Location Northeast of Pedestrian Bridge.



Photo 2. Soil Nail Wall 2 Installation Location Southwest of Pedestrian Bridge.



Photo 4. Location of Proposed Access Southeast of Pedestrian Bridge.



Site Photos

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
8a



Photo 5. Proposed Staging Area Southwest of Pedestrian Bridge.



Photo 7. Existing Pedestrian Bridge.



Photo 6. Proposed Staging Area Along Mirada Road North of Pedestrian Bridge.



Photo 8. Existing Rock Slope Protection.



Site Photos

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
8b

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Chapter 3. Environmental Evaluation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The key environmental factors identified below are discussed within Chapter 3. Environmental Setting and Impacts. Sources used for analysis of environmental effects are cited in the checklist and listed in Chapter 4 References.

- | | | |
|-------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology/Soils | <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards/Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

Leianne Humble, DD&A
Printed Name

December 2, 2020
date

San Mateo County Public Works
for

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on project-specific screening analysis).
2. All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level mitigation measures.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a) The significance criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL SETTING AND IMPACTS

The following section describes the environmental setting and identifies the environmental impacts anticipated from implementation of the proposed project. The criteria provided in the CEQA environmental checklist was used to identify potentially significant environmental impacts associated with the project. Sources used for the environmental analysis are cited in the checklist and listed in Chapter 4 of this Initial Study.

A. AESTHETICS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
1. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?			X		1, 2
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X		1, 2
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X		1, 2, 3
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X		1, 2

Explanation

- a) **Less than Significant Impact.** The County proposes construction of soil nail reinforced, sculpted shotcrete walls along the Mirada Road bluff, overlooking Miramar Beach. The walls will be about 170 feet and 110 feet in length along the north and south sides of the pedestrian bridge, respectively. The proposed walls will be approximately 23 feet in height. Shotcrete will be installed on the face of the bluff, which will be sculpted and stained to match the coloring of the surrounding bluffs. Examples of shotcrete walls are presented in Figure 9. The project also includes replacement of the deteriorating steel truss pedestrian bridge along Mirada Road that crosses Arroyo de en Medio, part of the Half Moon Bay Coastal Trail, with an aluminum truss pedestrian bridge.

Visual photo simulations of the proposed soil nail walls, bank stabilization measures, and replaced pedestrian bridge were created by ICF International showing the proposed project from four viewpoints (ICF International March 2020). The viewpoints map is presented in Figure 10. The simulated pedestrian bridge and stabilization measures are shown in Figures 11 through 14.



Source: GeoStabilization International, 2017



Sculpted Shotcrete Wall Examples

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
9



Map of Simulation Locations

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
10

EXISTING VIEW
(7/25/2019)



SIMULATION



Note: The conditions of the beach near the Mirada Road pedestrian bridge are dynamic as sand levels can change by 10 feet in a year. Winter storms remove sand; during summer waves replace it. Thus, sand levels are lowest in winter and highest in early fall. As waves bring sand, rocks at the base of the concrete walls become buried. The simulations depict approximate sand conditions at mid-summer.

Source: ICF International, March 2020



Simulation 1

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
11



Source: ICF International, March 2020



Simulation 2

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
12

EXISTING VIEW
(7/25/2019)



SIMULATION



Note: The conditions of the beach near the Mirada Road pedestrian bridge are dynamic as sand levels can change by 10 feet in a year. Winter storms remove sand; during summer waves replace it. Thus, sand levels are lowest in winter and highest in early fall. As waves bring sand, rocks at the base of the concrete walls become buried. The simulations depict approximate sand conditions at mid-summer.

Source: ICF International, March 2020



Simulation 3

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
13

EXISTING VIEW
(7/25/2019)



SIMULATION



Note: The conditions of the beach near the Mirada Road pedestrian bridge are dynamic as sand levels can change by 10 feet in a year. Winter storms remove sand; during summer waves replace it. Thus, sand levels are lowest in winter and highest in early fall. As waves bring sand, rocks at the base of the concrete walls become buried. The simulations depict approximate sand conditions at mid-summer.

Source: ICF International, March 2020



Simulation 4

Mirada Road Pedestrian Bridge
Replacement and Bank Stabilization
Initial Study

Figure
14

As shown in the photo simulations, given the severely eroded condition of the existing bluff, the limited length and height of the proposed walls and stabilization measures, development of the project will not have a substantial adverse effect on a scenic vista. The new bridge truss structure will be larger and extend downward towards the beach more than the current bridge. However, the new aluminum pedestrian bridge will improve its appearance, as compared to the existing deteriorating bridge, and will not degrade a scenic vista, resulting in a less-than-significant impact.

- b) **Less than Significant Impact.** Highway 1 is located over 700 feet northeast of the project. Highway 1, north of Highway 92, is designated as an “eligible” scenic highway, but not an officially state-designated state scenic highway. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a scenic highway. The project site is not visible from Highway 1. In summary, the project will not damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway
- c) **Less than Significant Impact.** See a) above. Photo simulations of the proposed improvements are presented in Figures 11-14. The proposed soil nail walls will be sculpted and stained to match the coloring of the surrounding bluffs and will not substantially alter or degrade the existing visual character. The new aluminum tress pedestrian bridge will replace the existing deteriorating steel truss bridge and will not substantially alter or degrade the existing visual character of the site. All disturbed areas will also be planted with native vegetation following construction. The project is consistent with the site’s zoning and other regulations related to scenic quality and would not degrade the existing visual character or quality of the site and its surroundings within its relatively urbanized location.
- d) **No Impact.** No new exterior lighting or sources of glare are proposed as part of the project.

B. AGRICULTURAL AND FOREST RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
<p>2. AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X	3
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X	2
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X	2
d) Result in the loss of forest land or conversion of forest land to non-forest uses?				X	2
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				X	2, 3

Explanation

- a) **No Impact.** The project is located along the shoreline bluff in a residential area, and will not impact any areas of prime farmland, unique farmland, or farmland of statewide importance will be affected.
- b) **No Impact.** The project is not located on land zoned for agricultural use or land under Williamson Act contract; no conflicts with agricultural uses will occur.
- c) **No Impact.** No other changes to the environment will occur from the proposed improvements that will result in conversion of farmland to non-agricultural uses.
- d) **No Impact.** The project will not impact forest resources since the project will only affect the existing, non-forested shoreline bluff.
- e) **No Impact.** As per the discussion above, the project will not result in conversion of farmland or agricultural or forest land.

C. AIR QUALITY

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?			X		1,4
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X		1,4
c) Expose sensitive receptors to substantial pollutant concentrations?			X		1,4
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X		1,4

Explanation

The Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) mandate the control and reduction of certain air pollutants. Under these Acts, the U.S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for certain "criteria" pollutants. These pollutants are carbon monoxide (CO), ozone (O₃), sulfur dioxide (SO₂), nitrogen oxides (NO_x), particulate matter less than 10 microns in diameter (PM₁₀), lead and particulate matter less than 2.5 microns in diameter (PM_{2.5}).

California is divided into several air basins by district. The project site is located within the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) monitors and enforces local, state, and federal air quality standards. The BAAQMD, along with other regional agencies (e.g., ABAG and MTC), develop plans to reduce air pollutant emissions.

The BAAQMD, along with other regional agencies such as the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), develops plans to reduce air pollutant emissions. The most recent clean air plan is the *Bay Area 2017 Clean Air Plan: Spare the Air, Cool the Climate* (2017 CAP), which was adopted by BAAQMD in April 2017. This is an update to the 2010 CAP, and centers on protecting public health and climate. The 2017 CAP identifies a broad range of control measures. These control measures include specific actions to reduce emissions of air and climate pollutants from the full range of emission sources.

- a) **Less than Significant Impact.** The 2017 Clean Air Plan contains various control measures to reduce stationary and mobile sources of air pollutants. The project would not include new stationary sources of air pollutants, increase population growth, or result in long-term operational emissions. The project would, however, generate temporary emissions from the use of construction equipment as well as worker vehicle trips. The project is a coastal bluff protection and pedestrian bridge replacement project and will not conflict with or obstruct implementation of the 2017 Clean Air Plan. Construction of the project will generate minor air pollutant emissions due to the short

construction duration (45 working days during Phase 1 and 40 working days during Phase 2). The Clean Air Plan does not specifically address this type of project.

- b) **Less than Significant Impact.** The Bay Area is considered a non-attainment area for ground-level ozone and PM_{2.5} under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM₁₀ under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM₁₀, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_x), PM₁₀, and PM_{2.5} and apply to both construction period and operational period impacts; these are shown in Table 1.

Table 1 BAAQMD Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors	
Pollutant/Precursor	Daily Average Emissions (pounds per day)
Reactive Organic Gases (ROG)	54
Nitrogen dioxide (NO _x)	54
Coarse Particulate Matter (PM ₁₀)	82*
Fine Particulate Matter (PM _{2.5})	54*
Source: BAAQMD CEQA Air Quality Guidelines *Only applies to construction exhaust emissions	

The proposed bank stabilization measures and pedestrian bridge replacement will not generate operational air pollutant emissions. The proposed project will not generate substantial new permanent vehicle trips or otherwise result in long-term air quality impacts that would contribute to a cumulatively considerable increase of any air pollutant.

Emissions generated during construction of the project would be minimal due to the small area being disturbed and the short construction duration of 45 working days (Phase 1) and 40 working days (Phase 2). In addition, the project contractor will implement the following BAAQMD's Basic Construction Mitigation Measures to minimize emissions associated with construction activities:

1. Any exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. 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.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne

toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

In summary, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

- c) **Less than Significant Impact.** See b) above. Sensitive receptors in the vicinity of the project site consist of residences located to the north, south, and east. Given the project's relatively short construction duration (approximately 85 working days total) and its small scale, the project will not generate substantial levels of air emissions during construction. The project will not have a significant impact on sensitive receptors by subjecting them to substantial pollutant concentrations.
- d) **Less than Significant Impact.** The proposed project will not create any new sources of odor. During construction, use of diesel-powered vehicles and equipment could temporarily generate localized odors, which would cease upon project completion.

D. BIOLOGICAL RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
4. BIOLOGICAL RESOURCES. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X			5
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?		X			5
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X			5
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X	5
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X	1, 2, 5
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X		1, 5

Explanation

DD&A biologists conducted reconnaissance-level biological surveys on August 19, 2016 and August 16, 2018. The second biological survey was conducted following updates to the proposed project by the County. The project site consists of coastline including a portion of Miramar Beach, Arroyo de en Medio (an intermittent stream), and Mirada Road. The project is located in the Coastal Zone within the City of Half Moon Bay and unincorporated San Mateo County. Habitat types within the project site include developed land, ruderal, riparian, beach, and coastal bluff. Land uses adjacent to the project site consist of residential areas, transportation corridors, and public beach. A pedestrian bridge spans a gap between the coastal bluffs, over the mouth of Arroyo de en Medio as it enters the Pacific Ocean at Miramar Beach. The pedestrian bridge is part of the Half Moon Bay Coastal Trail.

Regulatory Framework

The County maintains the existing shoreline boulder revetment located along the coastal bluffs below Mirada Road, from Magellan Avenue to the north side of the pedestrian bridge, and the City of Half Moon Bay maintains the portion from the south side of the pedestrian bridge to the Mirada Road cul-de-sac. Therefore, the project is located within the jurisdiction of both the City of Half Moon Bay and San Mateo County. The City of Half Moon Bay (City) is located entirely in the Coastal Zone. The Half Moon Bay Local Coastal Plan Land Use Plan (City LUP) and the City's Zoning Ordinance make up the LCP for the City. The LUP also serves as the City's General Plan Land Use Element. The LUP discusses environmental resources and contains policies concerning environmental resources within the City. The County of San Mateo Local Coastal Program (County LCP) also contains specific policies for development in the Coastal Zone, including protection of sensitive habitats and resources.

Habitat Types

Riparian

Riparian habitat, defined as a unique suite of vegetation dependent upon subsurface hydrology associated with the stream channel, exists within and adjacent to the project site. Vegetation within the riparian habitat associated with Arroyo de en Medio consists of sedges (*Carex* sp.), Pacific potentilla (*Potentilla anserine* ssp. *pacifica*), and willows (*Salix* sp.). Iceplant (*Carpobrotus chilensis*) was also observed within the riparian habitat and through the project site. The proposed beach access route is located within the bed and banks of Arroyo de en Medio, adjacent to the existing pedestrian bridge, and will likely impact the riparian habitat within the project site. The bed and bank features of the Arroyo de en Medio are collectively referred to as the riparian corridor. Steep banks restrict the width of the riparian corridor within and adjacent to the project site. The banks of the riparian corridor within the project site are degraded due to pedestrian traffic and tidal wave action. They are dominated by non-native plant species, including wild radish (*Raphanus sativus*), iceplant, and black mustard (*Brassica nigra*). The riparian habitat within the project site has a low value for special-status wildlife and plant species, due to the frequent anthropogenic disturbance, existing development, and the adjacent land use.

As mentioned in the project description, RSP exists along a portion of the riparian corridor, at the bottom of the southern banks, to stabilize the channel and protect the adjacent banks from tidal wave action. The riparian corridor transitions into beach habitat approximately 30 feet upstream of the inland side of the pedestrian bridge. No riparian habitat is present within the beach area and no defined channel associated with Arroyo de en Medio existed in the beach area. During the August 2016 survey, a small amount of water was observed in the stream, this water infiltrated into the sand before reaching the open water of Half Moon Bay. During the August 2018 survey, no water was observed within the channel of the Arroyo de en Medio. Historical aerial photos indicate that streamflow from Arroyo de en Medio has connected to the ocean by way of a channel formed in the beach sand.

Beach

Beach habitat within and adjacent to the project site consists of unvegetated sand subject to tidal influence. The area of the beach varies depending on several factors including the tidal cycle and season. Aerial images and personal communication with local County staff indicate that the beach habitat within and adjacent to the project site becomes inundated daily with the tidal cycle. The beach habitat within the project site has a low value for special-status wildlife and plant species, due to frequent anthropogenic disturbance, existing development, and the adjacent land use.

Coastal Bluff

Coastal bluffs within and adjacent to the project site have been armored/stabilized by the placement of rip-rap along the face of the bluff. The top of the bluffs have been developed and consist of paved roads, the

pedestrian bridge, a gravel parking lot, and single family residences. Dominant vegetation located along the coastal bluffs consists of non-native species. On the seaward side of the project site dominant vegetation consists of iceplant and sea rocket (*Cakile maritima*). On the inland side of the pedestrian bridge, vegetation along the sides of the bluffs in the upland area adjacent to the stream channel also includes lizard tail (*Eriophyllum staechadifolium*), pampas grass (*Cortaderia* sp.), wild radish, and pride of madeira (*Echium cadicans*). In some areas, the face of the bluffs do not support vegetation. The coastal bluff habitat within the project site has a low value for special-status wildlife and plant species due to frequent anthropogenic disturbance, existing development, and adjacent urban land uses.

Ruderal

Ruderal habitat includes disturbed areas that have been affected by previous development. Some areas are devoid of vegetation, and other areas support a mixture of ruderal (weedy) species and non-native annuals grasses and forbs, including iceplant, wild radish, and black mustard. Within the project site ruderal habitats are found on the top of bank of the Arroyo de en Medio as well as adjacent to the roads and parking areas. Ruderal habitat generally provides marginal habitat for wildlife that may utilize the surrounding habitat. No special-status wildlife species are expected to occur within this habitat.

Developed

Developed areas within the project site consist of paved roadways, compacted gravel parking area, pedestrian trail, and road shoulders. The developed areas within the project site do not provide suitable habitat for special-status wildlife and plant species.

Special-Status Species

The project site was evaluated for the presence or potential presence of special-status plant and wildlife species. Special-status species are those plants and animals that have been formally listed or proposed for listing as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA). Listed species are afforded legal protection under the ESA and CESA. Species that meet the definition of Rare or Endangered under CEQA Section 15380 are also considered special-status species. Species that meet this definition are typically provided management consideration through the CEQA process, although they are not legally protected under the ESA or CESA. Additionally, special-status species include the following: California Department of Fish and Wildlife (CDFW) species of special concern and fully protected species; plants listed as rare under the California Native Plant Protection Act (CNPPA) or on the California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR) 1A and 1B; raptors and other migratory birds protected under the California Fish and Game Code; and marine mammals protected under the Marine Mammal Protection Act of 1972 (MMPA).

The primary literature and data sources reviewed in order to determine the occurrence or potential for occurrence of special-status species at the project site are as follows: current agency status information from the U.S. Fish and Wildlife Service (USFWS) and CDFW for species Listed, Proposed for listing, or Candidates for listing as Threatened or Endangered under ESA or CESA, and those considered the CDFW's "species of special concern" (2018); the CNPS Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2010); and CDFW's CNDDB occurrence reports (CDFW, 2018). RareFind Reports from the CNDDB were reviewed for special-status species occurrences in the USGS quadrangle containing the project site (Half Moon Bay quadrangle), and the five surrounding quadrangles (La Honda, Montara Mountain, San Gregorio, San Mateo, and Woodside quadrangles). Special-status plant and wildlife species known to occur or with the potential to occur within the project site, along with their legal status, habitat requirements, and potential to be impacted by the project, are included in Appendix A. No specific CNDDB occurrences were located within or directly adjacent to the project site. Species documented as known or

with a moderate to high potential to occur within the project site boundaries are discussed further below. All other species are assumed absent based on the species-specific rationale provided in Appendix A. Evaluation of the level associated with the potential for species to occur was based on geographic ranges, habitat requirements of the species, and habitat conditions on the project site.

Special-Status Plant Species

No special-status plant species were identified during either site visit; however, site visits were not conducted during the appropriate blooming period for some special-status plant species with the potential to occur within the project site. There are no known occurrences of special-status plant species within the project site or the immediate vicinity. Suitable habitat exists and the project site is within the known historical range for three special-status plant species: coastal marsh milk-vetch (*Astragalus pycnostachyus* var. *pycnostachyus*), San Francisco Bay spineflower (*Chorizanthe cuspidata* var. *cuspidata*), and California strawberry (*Fragaria vesca*).¹ Coastal marsh milk-vetch and San Francisco Bay spineflower are CNPS List 1B species, species considered rare, threatened, or endangered in California and elsewhere. California strawberry is identified in the Half Moon Bay LUP and County LCP as a locally sensitive species. These species have a moderate potential to occur within the project site.

Special-Status Wildlife Species

Special-status species with a moderate to high potential to occur within or adjacent to the project site include the western snowy plover (*Charadrius alexandrinus nivosus*), southern sea otter (*Enhydra lutris nereis*), and California sea lion (*Zalophus californianus*). Nesting raptors and other protected migratory bird species also have the potential to occur within and adjacent to the project site. A short life history description is provided below for each of these species and an explanation of their potential to occur within the project site.

Western Snowy Plover

The western snowy plover is a federally Threatened species and a CDFW species of special concern. This species is associated with sandy marine and estuarine shores and rarely occurs at salt ponds. Snowy plovers require a sandy, gravelly or friable soil substrate for nesting. Nests are shallow depressions in the sand or soil, sometimes lined with small pebbles, glass fragments, or gravel. Nests are often near or under objects such as driftwood, rocks, or defoliated bushes, although nests may also be found on barren ground with no nearby cover. Snowy plovers glean insects and amphipods from the dry sand of upper beaches along the coast, occasionally foraging in wet sand for young sand crabs. Gulls, ravens, coyotes, and skunks are predators of adults, eggs, and young. Although no suitable nesting habitat is present in or adjacent to the project site as the beach is subject to daily tidal flow, suitable foraging habitat is present within and adjacent to the beach habitat at the project site. Due to the relative ability of nearby foraging habitat temporary loss of foraging habitat at the project site is not considered a significant impact; therefore, significant impacts to this species are not anticipated as a result of the project.

Southern Sea Otter

Throughout their range, southern sea otters use a variety of near shore marine environments and 84% of foraging occurs in water 30m in depth (Bodkin et al. 2004) and throughout much of their range, foraging occurs within a kilometer of the shore. Their classic association is with rocky substrates supporting kelp beds, but they also frequent soft-sediment areas where kelp is absent (Riedman and Estes 1990). Kelp canopy is an important habitat component, used for foraging and resting (Riedman and Estes 1990). They are found most often in areas with protection from the most severe ocean winds such as rocky coastlines, thick kelp forests, and barrier reefs. Although they are most strongly associated with rocky substrates, sea otters can also live in areas where the sea floor consists primarily of mud, sand, or silt. The southern sea otter is a federally Threatened species and California fully protected marine mammal with the potential to

¹ Formerly referred to as *Fragaria californica*.

occur adjacent to the project site in the shallow marine environment. These species are highly mobile and, although they may be observed in the project area at any given time, they would not be expected to permanently occupy the project site. Additionally, because the project will not be active during high tide and work will not occur within the water, significant impacts to this species are not anticipated as a result of the project.

California Sea Lion

California sea lion rookeries are found on islands from Los Islotes in Baja California Sur to the Channel Islands in southern California. In addition to rookeries, this species also occupies haul-out sites, mainly during the fall and winter. Following the breeding season, large numbers of adult and subadult males and juveniles migrate north from the major rookeries in southern California and Baja California and winter from central California to Washington (Fry 1939, Odell 1975, Mate 1975). This species overall range extends north through the Gulf of Alaska as far as the Aleutian Islands (Maniscalco et al. 2004), and south around the end of the Baja California Peninsula to the Gulf of California. California sea lions have the potential to occur on the beach habitat within and adjacent to the project site and in the marine environment adjacent to the project site. These species are highly mobile and, although they may be observed in the project area at any given time, they would not be expected to permanently occupy the project site. California sea lions could haul-out on the RSP where construction would occur. Removal of these animals for the construction work site is considered a potentially significant impact.

Nesting Raptors and Other Protected Migratory Birds

Raptors (e.g., eagles, hawks, and owls) and their nests are protected in California under Fish and Game Code Section 3503.5. Section 3503.5 states that it is “unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto.” In addition, fully protected species under the Fish and Game Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. While the life histories of these species vary, overlapping nesting and foraging similarities (approximately February through August) allow for their concurrent discussion. Most raptors are breeding residents throughout most of the wooded portions of the state. Stands of live oak, riparian deciduous, or other forest vegetation types, as well as open grasslands, are used most frequently for nesting. Breeding occurs February through August, with peak activity May through July. Prey for these species includes small birds, small mammals, and some reptiles and amphibians. Many raptor species hunt in open woodland and habitat edges.

Various species of raptors such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), American kestrel (*Falco sparverius*), and turkey vulture (*Cathartes aura*) have a potential to nest within riparian habitat and trees adjacent to the project site. Additionally, nesting habitat for migratory bird species that may be present within the project site include, but is not limited to, Townsend’s warbler (*Setophaga townsendii*), western tanager (*Piranga ludoviciana*), ash-throated fly catcher (*Myiarchus cinerascens*), and violet-green swallow (*Tachycineta thalassina*).

Sensitive Habitats

The project site was surveyed for potentially sensitive habitats. Sensitive habitats include riparian corridors, wetlands and other waters of the U.S., habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on the CNDDB’s working list of high priority and rare natural communities (i.e., those habitats that are Rare or Endangered within the borders of California, CDFW, 2010), those that are occupied by species listed under ESA or are critical habitat in accordance with ESA, and those that are defined as Environmentally Sensitive Habitat Areas (ESHA) under the Coastal Act or Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act or protected under the Marine Life Protection Act. Specific habitats may also be identified

as sensitive in City or County General Plans or ordinances. Sensitive habitats are regulated under federal regulations (such as the Clean Water Act, the Rivers and Harbors Act, and Executive Order 11990 – Protection of Wetlands), state regulations (such as CEQA and the CDFW Streambed Alteration Program), or local ordinances or policies (such as City or County tree ordinances, Habitat Management Plan areas, and General Plan elements).

Waters of the U.S.

The USACE is the primary federal agency responsible for regulating waters of the U.S. Vegetated areas of the Arroyo de en Medio channel are potentially under the jurisdiction of the USACE. Additionally, USACE has jurisdiction over tidal waters of the United States and territorial seas. Waters of the U.S. occur within and adjacent to the project site. Vegetated areas of the Arroyo de en Medio channel are potential wetlands under the jurisdiction of USACE.

Riparian Corridor

The Arroyo de en Medio riparian corridor within and adjacent to the project site would be subject to the jurisdiction of CDFW and, therefore, is considered a sensitive habitat. The CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation. The Arroyo de en Medio riparian corridor is also designated as a sensitive habitat by the LCP, as described below.

Coastal/State Wetlands

The California Coastal Commission (CCC) regulates areas of coastal wetlands that occur in the Coastal Zone. Coastal wetlands may also be considered waters of the State under the jurisdiction of the Regional Water Quality Control Board (RWQCB). Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program, which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act (CWA) and Porter-Cologne. Vegetated areas of the Arroyo de en Medio channel are potentially coastal wetlands subject to the regulation of RWQCB.

Environmentally Sensitive Habitat Areas

Habitats may be considered ESHA by the CCC or under the approved LCP as they occur in the Coastal Zone. In addition, under Section 30107.5 of the California Coastal Act, an “environmentally sensitive area” is any area in which plant or animal life or their habitat are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. Therefore, the CCC may designate additional habitat areas within the project site as ESHA if CCC determines that it meets this definition. Within the project site the coastal bluffs, riparian corridor, and beach area have the potential to be considered ESHA. Coastal bluffs within the project site have been affected by frequent human disturbance and development. The beach habitat is highly dynamic and becomes inundated daily at the project site, with the tidal cycle. Therefore, while the beach habitat is suitable for foraging, it does not provide suitable nesting habitat for the special-status western snowy plover. Beach habitat adjacent to, but directly in contact with, the project site, that is less influenced by the tidal cycle, is readily available and would provide higher quality habitat. The coastal bluffs and beach habitat within the project site are not considered rare or especially valuable and, therefore, are not likely to be considered ESHA. The riparian corridor, associated with Arroyo de en Medio present within and adjacent to the project site, is defined as ESHA in the County LCP and City LUP.

- a) **Less-than-Significant with Mitigation Incorporated.** Mature trees and riparian habitat adjacent to the project site may provide nesting habitat for migratory birds, including raptors. Raptors and their nests are protected under the California Fish and Game Code Sections 3503 and 3503.5. These species and their nests could be disturbed during construction activities. An increase in noise disturbance due to construction related activities may result in nest abandonment. This is considered a potentially significant impact that can be reduced to a less-than-significant level with mitigation measures BIO-1A and BIO-1B identified below.

Other special-status wildlife species including California sea lion, may occur in the project area at any given time; however, these species would not be expected to permanently occupy the project site. California sea lions could haul-out on the RSP, where construction would occur. Interactions of construction workers with these animals could result in injury to both workers and/or California sea lions. Directed actions to provide incentive for animals to leave the work zone may be required. It may be necessary to deter, using non-lethal methods, hauled-out animals to safely gain access to the work site. Such actions are allowed under Section 109 of the MMPA, which permits federal, state, and local officials to take marine mammals in the course of official duties. Such duties include the protection or welfare of a marine mammal, protection of public health and welfare, and non-lethal removal of nuisance animals. This direct interaction with marine mammals is considered Level A harassment. Level A harassment is defined as any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal or marine mammal stock in the wild. These potential impacts to these species can be reduced to a less-than-significant level with implementation of mitigation measure BIO-1A and BIO-1D, identified below.

Special-status plants species coastal marsh milk-vetch, San Francisco Bay spineflower, and California strawberry may occur within the project site. If present on the project site, these species could be impacted by ground disturbance, vegetation removal, and other project construction activities. Potential impacts to these species can be reduced to a less-than-significant level with implementation of mitigation measures BIO-1A and BIO-1E below.

Impact BIO-1: The proposed project could result in potentially significant impacts to special-status species during construction activities. Implementation of mitigation measures BIO-1A through BIO-1E would reduce impacts to special-status species during construction to a less-than-significant level.

Mitigation Measures

BIO-1A Prior to construction activities, the project proponent shall retain a qualified biologist to conduct an Employee Education Program for the construction crew. The biologist shall meet with the construction crew at the project site at the onset of construction to educate the construction crew on the following: 1) the appropriate access route(s) in and out of the construction area and a review of the project boundaries; 2) all special-status species that may be present, their habitat, and proper identification; 3) the specific mitigation measures that will be incorporated into the construction effort; 4) the general provisions and protections afforded by the regulatory agencies; and 5) the proper procedures if a special-status species is encountered within the project site.

BIO-1B If possible, construction shall be scheduled between September 16 and January 31 to avoid the nesting season for raptors and other migratory birds. If this is not possible, pre-construction surveys for nesting raptors and other migratory birds shall be conducted by a qualified biologist or ornithologist to identify active nests that may be disturbed during project implementation onsite and within 250 feet of the site. The survey area of 250 feet is a typical distance that could be reduced or expanded at the discretion of the qualified biologist/ornithologist. Between February 1 and September 15, pre-construction surveys shall be conducted for raptors and nesting birds within 14 days prior to the initiation of ground disturbing activities. Pre-construction surveys will be conducted by a qualified biologist/ornithologist for nesting birds and raptors within the onsite trees as well as all trees within 250 feet of the site.

If an active nest is found in or close enough to the construction area to be disturbed by these activities, the biologist/ornithologist, shall designate a construction-free buffer zone around the nest. Buffer distances will be determined by the qualified biologist/ornithologist. The construction-free buffer zone shall be maintained until after the breeding season has ended and/or a qualified biologist/ornithologist has determined that the young birds have fledged.

BIO-1C To reduce potential impacts to special-status plant species with the potential to occur on site prior to the start of construction, a qualified botanist shall conduct surveys for sensitive plant species during the appropriate blooming season for each species. Surveys shall be conducted in accordance with *CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. If any special-status plant species are identified within the area of potential impact, they shall be avoided when possible or transplanted to appropriate areas in or adjacent to the project site prior to the initiation of construction activities and monitored annually for three years. If the transplanted species fail to survive during this monitoring period, they shall be replaced at a ratio of 1:1 and the three-year monitoring period shall re-commence. If the plants cannot be transplanted to another portion of the property, an alternate location near the project site may be utilized with permission of the landowner.

- b) **Less-than-Significant with Mitigation Incorporated.** The Arroyo de en Medio riparian corridor within and adjacent to the project site is a sensitive natural community and considered ESHA by the County LCP and City LUP and is under the jurisdiction of CDFW. Project activities would potentially result in impacts to the Arroyo de en Medio riparian corridor.

Potential impacts to the riparian corridor may occur during construction of the proposed project. Impacts to the riparian corridor within the project site as a result of construction activities would be temporary and would be reduced to a less-than-significant level through implementation of mitigation. No permanent impacts to the riparian corridor would occur as a result of the project. Implementation of mitigation measures BIO-2A through BIO-2F, identified below, would reduce impacts to the riparian corridor during construction to a less-than-significant level.

Impact BIO-2: The proposed project may result in impacts to sensitive riparian habitat through habitat modification. Impacts to sensitive habitat would be considered a potentially significant impact. This impact can be reduced to a less-than-significant level through implementation of mitigation measures BIO-2A through BIO-2F identified below.

Mitigation Measures

BIO-2A The project contractor shall implement applicable Best Management Practices (BMPs) and conservation measures detailed in the County of San Mateo Watershed Protection Program's Maintenance Standards and the San Mateo Countywide Pollution Prevention Program Construction BMPs during construction.

BIO-2B To protect water quality during construction, include the following measures on the construction specifications, with construction oversight by a qualified biological monitor:

- Stationary equipment such as motors, generators, and welders located within 100 feet of the stream shall be stored overnight at staging areas and will be positioned over drip pans.
- Any hazardous or toxic materials deleterious to aquatic life that could be washed into a basin shall be contained in watertight containers or removed from the project site.
- All construction debris and associated materials stored in staging areas shall be removed from the work site upon completion of the project.
- Whenever possible, refueling of equipment shall take place within turnouts or staging areas at least 50 feet from the top of bank or other wetland.
- All refueling shall be conducted over plastic bags filled with sawdust or other highly absorbent material. Clean-up materials for spills will be kept on hand at all times. Any accidental spills of fuel or other contaminants will be cleaned up immediately.

BIO-2C The project contractor shall install protective fencing prior to and during construction to keep construction equipment and personnel from impacting riparian vegetation outside of work limits. A qualified biological monitor with the education and experience necessary to delineate riparian vegetation shall supervise the installation of protective fencing. This measure shall be included in the project's plans and specifications.

BIO-2D For project activities that impact the riparian corridor (bed and bank features) of Arroyo de en Medio the project proponent shall consult with CDFW and, if required, shall acquire any necessary permits for project activities. The project proponent shall comply with all the conditions of permits issued for the project. Conditions may include, but are not limited to; development of revegetation and restoration plans and procedures, environmental awareness training, pre-construction wildlife surveys, and/or biological monitoring.

BIO-2E The project proponent shall obtain a Coastal Development Permit as required for project activities. The project proponent shall comply with all conditions of permit issued for the project. Conditions may include, but are not limited to, development of revegetation and restoration plans and procedures, environmental awareness training, pre-construction wildlife surveys, and/or biological monitoring.

BIO-2F All disturbed areas shall be revegetated with an appropriate native seed mix.

- c) **Less-than-Significant with Mitigation Incorporated.** The project site may contain wetland resources potentially under the jurisdiction of the USACE and/or the CCC and RWQCB. Wetlands and other waters may be impacted by development of site access and other construction activities. Additionally, USACE has jurisdiction over tidal waters of the United States and territorial seas. Construction activities occurring on the beach have the potential to impact tidal waters.

Impact BIO-3: The proposed project may result in impacts to wetlands and other waters potentially under the jurisdiction of the USACE, CCC, and/or RWQCB. Impacts to wetlands and other waters would be a potentially significant impact. This impact can be reduced to a less-than-significant level through implementation of mitigation measures BIO-2A through BIO-2C, identified above, and BIO-3A through BIO-3D below.

Mitigation Measures

BIO-3A Impacts to areas of wetland and other water shall be avoided to the greatest extent possible. If impacts to areas of wetlands and other water is unavoidable, the area impacted shall be confined to the smallest area possible.

BIO-3B For project activities that impact wetlands or other waters requiring permits from USACE and the RWQCB, the project proponent shall obtain permits and comply with all permit requirements.

BIO-3C If water is present in the creek during construction activities, the water shall be diverted around the work area to isolate it to prevent pollutant from entering and protect water quality. To isolate the work area, water-tight coffer dams shall be constructed upstream and downstream of the work area and water diverted through a suitably sized pipe, from upstream of the upstream coffer dam and discharged downstream of the downstream coffer dam. Cofferdams shall be constructed of a non-erodible material which does not contain soil or fine sediment. Cofferdams and the stream diversion system shall remain in place and functional throughout the construction period. If the coffer dams or stream diversion fail, they shall be repaired immediately. Flow diversions shall be done in a manner that prevents pollution and/or siltation and that provides flows to downstream reaches. Flows to downstream reaches shall mimic natural flow patterns. Said flows shall be of sufficient quality and quantity and appropriate temperature to support fish and other aquatic life both above and below the diversion structure. The water diversion shall be constructed with the least amount of disruption to the channel.

BIO-3D All contaminated (including muddy) water from construction activities shall be pumped into a holding facility or into a settling pond located in flat stable areas outside of the stream channel.

- d) **No Impact.** The proposed project would not impact the movement of fish or wildlife species, wildlife corridors, or the use of wildlife nursery sites. The surrounding residential land use decreases the suitability of the area as a wildlife corridor. The beach habitat is not suitable as nesting habitat for shorebirds, including the snowy plover, due to the daily inundation of the beach from the tidal cycle. No construction activities would occur when the beach is inundated. No impact to the movement of fish or wildlife species, wildlife corridors, or the use of wildlife nursery sites as a result of the project.
- e) **No Impact.** The proposed project would comply with local policies and ordinances protecting biological resources.
- f) **Less than Significant Impact.** The project site is located above the mean high tide line and, thus, outside the Monterey Bay National Marine Sanctuary. The project site is not subject to the provisions of any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

E. CULTURAL RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
5. CULTURAL RESOURCES. Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?				X	1, 2, 6
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X			6
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		X			1, 2

Explanation

A cultural resources evaluation was prepared by Holman & Associates (Holman) to evaluate the potential for archaeological resources that may be affected by the proposed project. This report is confidential and on-file with the County. This evaluation included an archaeological records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). The records search also included a search of the National Register of Historic Places data, the California Register, California Historical Landmarks, California Points of Historical Interest, the California Inventory of Historic Resources, Caltrans listings for State and local bridges, and other historic maps and archives at the NWIC. The records search identified several surface reconnaissance efforts near or within the project site; however, none of these field studies reported or recorded prehistoric archaeological or historical resources. Archival research revealed some potential for historical resources in the area.

A pedestrian general surface reconnaissance of the project site was conducted by Holman. The field survey did not find any archaeological or historical resources within the areas to be disturbed by the project. The only standing structures within the project site, the old and new pedestrian bridges over the Arroyo de en Medio, were not inventoried nor evaluated for significance, nor has either been evaluated by Caltrans as potential historical resources. Based on the results of the cultural resources evaluation, the potential for historical, archaeological, or tribal cultural resources to be impacted by the proposed project is considered low.

Holman contacted the Native American Heritage Commission (NAHC) on behalf of the County to request a search of the NAHC's Sacred Lands File, which was negative for tribal cultural resources in the project area. In addition, the County sent a consultation letter to the currently recognized Native American representatives for San Mateo County in accordance with Assembly Bill (AB) 52.

- a) **No Impact.** The project area does not contain any historical structures.
- b) **Less-than-Significant with Mitigation.** The cultural resources evaluation did not identify any evidence of archaeological or other historical resources in the areas of project disturbance where the native strata was exposed. Archival research, however, indicates that the project disturbance areas are sensitive for prehistoric archaeological resources, since 1) a significant site is recorded a few hundred feet from the project, and 2) historic research and maps indicate that activities took place along the coastal terrace edge early in the American period due to the former presence of a

pier dating to 1868. It is possible remnants of the pier apron and associated buildings exist under the surface on the terrace, but none were observed on the cliff face.

The only excavations proposed for the project are at the base of the walls in the culturally sterile granitic clay substrate and the sand on the beach. As the elevation of the beach drops and rises with scouring during annual storm cycles and sand deposition from the north, it is unlikely the upper two feet or so of sand at the base of the cliff could contain significant historical resources. The chances of encountering historical, archaeological, or tribal cultural resources are low, and no additional historical resources research or impact mitigation work was recommended by Holman.

Impact CR-1: Should the project require excavation near or on the top surface of the adjacent coastal terrace (i.e., the dark native strata at the top of the beach cliff), it is possible that prehistoric or historic archaeological resources could be encountered. This impact will be reduced to a less-than-significant level with implementation of the following mitigation.

Mitigation Measures

CR-1 If the project requires excavation near or on the top surface of the adjacent coastal terrace (i.e., the dark native strata at the top of the beach cliff), the County shall retain a qualified archaeologist to monitor excavation activities, identify any resources encountered, and develop and implement appropriate recommendations.

- c) **Less-than-Significant with Mitigation.** Though unlikely, human remains could be encountered during excavation activities.

Impact CR-2: Human remains could be encountered during excavation activities. This impact will be reduced to a less-than-significant level with implementation of the following mitigation.

Mitigation Measures

CR-2 In the event that human remains are discovered during construction, the contractor shall cease all excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The San Mateo County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, Coroner shall notify the Native American Heritage Commission to identify descendants of the deceased Native American.

F. ENERGY

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
6. ENERGY. Would the project:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X		1, 2
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X		1, 2

Explanation

- a) **Less than Significant Impact.** The proposed bank stabilization and bridge replacement would not require increased energy use after construction. The project would require demolition, site preparation, minor grading, site construction, paving, and architectural coating. The construction phase would require energy for the manufacture and transportation of building materials, preparation of the site (e.g., excavation, and grading), and the actual installation of the stabilization measures and bridge. Petroleum-based fuels such as diesel fuel and gasoline would be the primary sources of energy for these tasks.

The overall construction schedule and process is already designed to be efficient in order to avoid excess monetary costs. That is because equipment and fuel are not typically used wastefully due to the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, the opportunities for future efficiency gains during construction are limited. The proposed project does, however, include several measures that would improve the efficiency of the construction process. Implementation of the BAAQMD BMPs would restrict equipment idling times to five minutes or less and would require the applicant to post signs on the project site reminding workers to shut off idle equipment. The project would also recycle or salvage construction waste where possible. With implementation of the BAAQMD BMPs, the short-term energy impacts associated with use of fuel or energy related to construction would be less-than-significant.

In summary, the project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

- b) **Less than Significant Impact.** See discussion for a) above. The project would not result in the conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

G. GEOLOGY AND SOILS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
7. GEOLOGY AND SOILS. Would the project:						
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X	1, 2, 7
ii)	Strong seismic ground shaking?			X		1, 2, 7
iii)	Seismic-related ground failure, including liquefaction?			X		1, 2, 7
iv)	Landslides?			X		1, 2, 7
b)	Result in substantial soil erosion or the loss of topsoil?			X		1, 2, 7
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X		1, 2, 7
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X		1, 2, 7
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X	1, 7
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X	1, 2

Explanation

The project site is located on the Half Moon Bay coastal terrace, which extends from Montara to Seal Rock, at varying widths between the ocean and the Santa Cruz mountain range. The project area contains a variety of soils, ranging from beach sand to clay loam and sandy loam. Several active faults are located in the general project vicinity, including the San Andreas and San Gregorio Fault systems. The governing fault in the project area is the San Gregorio-Palo Colorado Fault, located about 1.5 miles west of the site (Parikh, 2001).

A geotechnical investigation was completed for the existing pedestrian bridge in 2001 (Parikh Consultants, July 23, 2001). In addition, Parikh prepared a memo for the proposed bridge replacement, dated January 12, 2018. The memo concluded that the findings of the 2001 report are still applicable to the new bridge. The 2001 geotechnical study found that based on data from two borings that the subsoils consist of a 19-23 foot-thick layer of interbedded very stiff, sandy, lean clay and medium dense, clayey sand and poorly graded sand. This layer is underlain by dense to very dense, silty sand/clayey sand, throughout the explored depth (46.5 feet). The liquefaction potential at the site was determined by Parikh to be relatively low. Another

geotechnical study was completed for the County's proposed seawall located north of the project along Mirada Road (WRECO, May 2017). This study had similar conclusions as those of the pedestrian bridge regarding liquefaction.

Final project design will require review by the geologist to provide specific recommendations to be incorporated by the County during construction.

- ai) **No Impact.** The San Gregorio Fault and smaller faults including Denniston Creek and Seal Cove, which are part of this fault system, are identified as Alquist-Priolo Special Studies Zones and considered active. The project is located outside the Alquist-Priolo Zones, which lie to the north and west of the site. Surface rupture occurs along lines of previous faulting. The project site is not located on any faults and, thus, not subject to rupture.
- a ii) **Less than Significant Impact.** Due to its location in a seismically active region, the proposed walls and pedestrian bridge may be subject to strong seismic ground shaking during their design life in the event of a major earthquake. Seismic impacts will be minimized by using standard engineering and construction techniques in compliance with the requirements of the Uniform Building Code (UBC) and California and Uniform Building Code (CBC) for Seismic Zone 4.
- a iii) **Less than Significant Impact.** The geotechnical study prepared for pedestrian bridge included a liquefaction analysis. The study concluded that liquefaction potential on the site was low. The geotechnical study for the seawall project just north of the site also concluded that liquefaction potential was low and no modifications were recommended. Final project design will require review by the geologist to provide specific recommendations to be incorporated by the County during construction.
- a iv) **Less than Significant Impact.** Installation of the proposed soil nail walls are intended to stabilize the coastal bluff and prevent erosion and minor landsliding, which would potentially endanger people, infrastructure and structures if left unrepaired. The pedestrian bridge replacement will not affect landslide potential.
- b) **Less than Significant Impact.** The project may result in some short-term erosion during construction, which will be managed by implementation of standard control measures. Refer also to the discussion in *Section I. Hydrology and Water Quality* of this Initial Study. Construction of the project will not result in substantial soil erosion or loss of topsoil.

When the back of a beach or bluff is protected by a shoreline protective device, the natural exchange of material either between the beach and dune or from the bluff to the beach is interrupted; if the shoreline is eroding, there may be a loss of material to the beach. The County and City of Half Moon Bay will work with the CCC to determine if a net sand loss may be balanced by the overall benefits of the project to existing coastal resources and retain and restore the connectivity of the coastal trail over Medio de Arroyo. The City and County will comply with the requirements of the Coastal Development Permit. Please see *Section J. Land Use* for additional discussion.

- c) **Less than Significant Impact.** Refer to a iii) above.
- d) **Less than Significant Impact.** The geotechnical evaluations for the pedestrian bridge and seawall to the north of the site (Parikh 2001, 2018 and WRECO 2017) did not identify expansive soils in the project area.

- e) **No Impact.** The project does not involve any septic systems.
- f) **No Impact.** The project will not impact any known paleontological resources.

H. GREENHOUSE GAS EMISSIONS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
8. GREENHOUSE GAS EMISSIONS. Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		1, 4
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		1, 4

Explanation

- a) **Less than Significant Impact.** The BAAQMD establishes screening level sizes for a variety of projects to screen for operational GHG emissions; however, since the project is a shoreline protection and pedestrian bridge replacement, it would not generate any operational GHG emissions (e.g., from mobile or stationary sources). During construction, some GHG emissions will be generated by construction equipment. However, the BAAQMD does not establish a GHG threshold for construction emissions. Given the short duration of construction of approximately 12 weeks total, 45 working days for Phase 1 and 40 working days for Phase 2, construction GHG emissions would be minimal and considered less-than-significant.
- b) **Less than Significant Impact.** Refer to a) above. The proposed shoreline protection and pedestrian bridge replacement will not generate GHGs or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

I. HAZARDS AND HAZARDOUS MATERIALS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X	1, 2
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X		1, 2
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X		1, 2
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X		1, 2
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X	1, 2
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X	1, 2
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X	1, 2

Explanation

- a) **No Impact.** The project does not involve the routine transport, use, or disposal of hazardous materials. The proposed nail walls and bridge replacement are located along the shoreline and have not been historically used for agricultural, industrial, or other uses that involve hazardous materials.
- b) **Less than Significant Impact.** See response to a) above. The project would use fuels and other potentially hazardous substances during construction activities. Storage and use of hazardous materials on the project site could potentially result in the accidental release of small quantities of hazardous materials, exposing construction workers and/or the environment. The project contractor will implement construction BMPs to minimize the potential for release of hazardous materials during construction, including a concrete containment plan, in accordance with applicable best management practices (BMPs) and avoidance and minimization measures described in the County's Routine Maintenance Program Manual (see Chapter 9 and Appendix A of the manual) available at: https://publicworks.smcgov.org/sites/publicworks.smcgov.org/files/CSM%20RMP_Manual_combined_appendices.pdf.

These measures are identified in the project description. With proposed implementation of these measures, the potential for release of hazardous materials to the environment would be less-than-significant.

- c) **Less than Significant Impact.** The project is not located within ¼ mile of a school; regardless, the proposed project will not result in the release of hazardous materials.
- d) **Less than Significant Impact.** Based on a review of EnviroStor, the project site is not located on or near a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, will not create a significant hazard to the public or the environment.²
- e) **No Impact.** The project site is located more than two miles south of the Half Moon Bay Airport/Eddie Andreini Sr. Airfield. The proposed bank stabilization measures and bridge replacement would not result in a safety hazard or excessive noise for people residing or working in the project area.
- f) **No Impact.** The proposed bluff protection and bridge replacement will not adversely affect emergency response or evacuation plans.
- g) **No Impact.** The project will not expose people or structures to risk from wildland fires.

²Based on review of EnviroStor, accessed online April 2020. EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites.

J. HYDROLOGY AND WATER QUALITY

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
10. HYDROLOGY AND WATER QUALITY. Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X		1, 2
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X	1, 2
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
i) Result in substantial erosion or siltation on- or off-site;			X		1, 2
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X		1, 2
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X		1, 2
iv) Impede or redirect flood flows?			X		1, 2
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X		1, 2
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X		1, 2

Explanation

- a) **Less than Significant Impact.** The proposed improvements will not violate any water quality standards. The project will implement BMPs, conservation measures, and other techniques to minimize impacts on environmental resources during construction, in accordance with applicable best management practices (BMPs) and avoidance and minimization measures described in the County's Routine Maintenance Program Manual (see Chapter 9 and Appendix A) available at: https://publicworks.smcgov.org/sites/publicworks.smcgov.org/files/CSM%20RMP_Manual_combined_appendices.pdf. See also Section 2.4.3.
- b) **No Impact.** The proposed walls and pedestrian bridge replacement will not deplete or otherwise affect groundwater supplies or recharge since the new structures do not access groundwater. The project, therefore, would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- ci) **Less than Significant Impact.** The proposed soil nail walls are intended to protect the coastal bluffs and Mirada Road. The bank stabilization measures and pedestrian bridge replacement will

not substantially alter the existing drainage pattern of the area or result in substantial erosion or siltation. Erosion control measures are included in the project as described in Section 2.4.4.

- cii) **Less than Significant Impact.** The proposed soil nail walls are intended to protect the coastal bluffs and Mirada Road. The new walls and pedestrian bridge replacement will not substantially alter the existing drainage pattern of the site or increase runoff in a manner that will result in flooding on- or offsite.
- ciii) **Less than Significant Impact.** See above discussion. The project will not create or contribute runoff that will exceed the capacity of existing or planned storm water drainage systems or provide additional sources of polluted runoff.
- civ) **Less than Significant Impact.** The project site is located within three zones as identified in FEMA's Flood Insurance Rate Maps, as follows:

Zone AE	Special Flood Hazard Zone (100-Year Flood). Portions of the northern and southern soil nailing areas fall into this zone.
Zone VE	The Special Flood Hazard Area (100-Year Flood) subject to coastal high hazard flooding. Portions of the northern and southern soil nailing areas fall into this zone.
Zone X	Moderate flood hazard area, between limits of the base flood and the 0.2-percent annual-chance (500-year) flood. The proposed temporary access from the stream bank and pedestrian bridge are located in this zone.

The project will place portions of the proposed soil nail walls within the 100-year flood-hazard area AE and VE, as described above. However, due to the minimal depth of the walls (two feet), they would not impede or redirect flood flows. The pedestrian bridge is located in Zone X; however, the replacement structures will be comparable to the existing bridge structures and will not increase the development footprint nor impede or redirect flood flows.

- d) **Less than Significant Impact.** The project site is located outside the inundation area of both the Johnston and Pilarcitos Dams.

See discussion in civ) above. The project will place portions of the proposed soil nail walls within the 100-year flood-hazard area. The City of Half Moon Bay Safety Element (1991) and County LCP include policies related to tsunami and seiche risks, including requiring the development and maintenance of a Tsunami Warning Plan, and policies to avoid placement of critical facilities within the tsunami hazard zone. The project will incorporate BMPs during construction to minimize the release of pollutants that could occur due to project inundation. Potential release of pollutants will be higher in the long-term without the project, which is intended to protect existing development and coastal erosion.

- e) **Less than Significant Impact.** See responses above, the project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

K. LAND USE

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
11. LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?				X	1, 2
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X		1, 3

Explanation

The project area is located within the Coastal Zone and subject to the California Coastal Act, administered through the CCC. The Coastal Act requires that local governments lying partly or wholly within the Coastal Zone develop, adopt, and implement Local Coastal Plans. The project will require coordination with and final permitting approval by the CCC.

The County maintains the existing shoreline boulder revetment located along the bluff below Mirada Road, from Magellan Avenue to the north side of the pedestrian bridge, and the City of Half Moon Bay maintains the portion from the south side of the pedestrian bridge to the Mirada Road cul-de-sac. Therefore, the project is located within the jurisdiction of both the City of Half Moon Bay and San Mateo County.

Half Moon Bay LUP

The General Plan Land Use Element and Local Coastal Land Use Plan (LUP), adopted in 1993, constitute the policy document for long-range development of the City of Half Moon Bay. The Local Coastal LUP incorporates the policies of the Coastal Act within Half Moon Bay, and serves as the policy framework for the Local Coastal Implementation Plan (IP), which is also the Half Moon Bay zoning code. Together both the LUP and IP comprise the City's LCP. The LUP provides policies and implementation strategies for management of resources and land uses in the City.

Coastal Resource Conservation Standards are described in Chapter 18.38 of the Half Moon Bay LUP and define sensitive habitat and coastal resource areas for conservation to include sand dunes; marine habitats; sea cliffs; riparian areas; wetlands, coastal tidelands and marshes, lakes, ponds, and adjacent shore habitats; coastal or off-shore migratory bird nesting sites; areas used for scientific study, refuges, and reserves; habitats containing unique or rare and endangered species; rocky intertidal zones; coastal scrub communities; wild strawberry habitat; and archaeological resources.

San Mateo County LCP

In late 1980, the County Board of Supervisors and the CCC approved the San Mateo County's LCP. In April 1981, the County assumed responsibility for implementing the State Coastal Act in the unincorporated area of San Mateo County. All development in the Coastal Zone requires either a Coastal Development Permit or an exemption from Coastal Development Permit requirements. For a permit to be issued, a project must comply with the policies of the LCP and the ordinances adopted to implement the LCP. The current 2012 edition of the County LCP contains all Local Coastal Program policies and amendments through August 8, 2012. The LCP identifies sensitive habitat areas that include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species. The LCP also identifies specific policies regulating development of shoreline structures, discussed in b) below.

Sand Supply

When the back of a beach or bluff is protected by a shoreline protective device, the natural exchange of material either between the beach and dune or from the bluff to the beach is interrupted; if the shoreline is eroding, there may be a loss of material to the beach. The County and City of Half Moon Bay will work with the CCC to determine if a net sand loss may be balanced by the overall benefits of the project to existing coastal resources and retain and restore the connectivity of the coastal trail over Medio de Arroyo. The City and County will comply with the requirements of the Coastal Development Permit.

- a) **No Impact.** The proposed walls and pedestrian bridge replacement are located along the coastline, where they will not physically divide an established community.
- b) **Less than Significant Impact.** Mirada Road is a County-maintained roadway located within unincorporated San Mateo County, while the beach is located within the City of Half Moon Bay. The project area (beach and bluffs) are designated "Regional Public Recreation" in the City of Half Moon Bay General Plan. The project is consistent with relevant land use plans and policies, including those of the Coastal Act, City of Half Moon Bay LUP, and San Mateo County LCP, as described below.

Coastal Act Conformance

The project must comply with the California Coastal Act in order to receive a Coastal Permit from the CCC. Relevant sections of the Coastal Act and project consistency with these requirements are described below.

Section 30235 of the Coastal Act states: "Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply."

Consistency: When the back of a beach or bluff is protected by a shoreline protective device, the natural exchange of material either between the beach and dune or from the bluff to the beach is interrupted; if the shoreline is eroding, there may be a loss of material to the beach. The County and City of Half Moon Bay will work with the CCC to determine if a net sand loss may be balanced by the overall benefits of the project to existing coastal resources and retain and restore the connectivity of the coastal trail over Medio de Arroyo. The City and County will comply with the requirements of the Coastal Development Permit. The project, therefore, will be consistent with Section 30235 of the Coastal Act.

Section 30240 of the Coastal Act states: “Environmentally sensitive habitat areas; adjacent developments (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.”

Consistency: As described in Section D. Biological Resources, the riparian corridor associated with Arroyo de en Medio present within and adjacent to the project site, is defined as ESHA by the LCP. Impacts to the riparian corridor within the project site as a result of construction activities would be temporary and reduced to a less-than-significant level through implementation of identified mitigation measures. No permanent impacts to the riparian corridor would occur as a result of the proposed project. Therefore, the project is considered consistent with Section 30240 of the Coastal Act.

San Mateo County LCP

Relevant policies of the County’s LCP and the project’s consistency with those policies are described below.

Policy 9.12 Limiting Protective Shoreline Structures:

- a. Permit construction of shoreline structures such as retaining walls, groins, revetments, and breakwaters only in accordance with the following conditions when: (1) necessary to serve coastal-dependent uses, to protect existing development, or to protect public beaches in danger of erosion, (2) designed to eliminate or mitigate adverse impacts on local shoreline sand supply, and (3) non-structural methods (e.g., artificial nourishment) have been proved to be infeasible or impracticable.
- b. Protect existing roadway facilities which provide public access to beaches and recreational facilities when alternative routes are not feasible and when protective devices are designed in accordance with the requirements of this component and other LCP policies.

Consistency: The project is proposed to repair the eroding bluff and protect the coastline, coastal access, and Mirada Road. When the back of a beach or bluff is protected by a shoreline protective device, the natural exchange of material either between the beach and dune or from the bluff to the beach is interrupted; if the shoreline is eroding, there may be a loss of material to the beach. The County and City of Half Moon Bay will work with the CCC to determine if a net sand loss may be balanced by the overall benefits of the project to existing coastal resources and retain and restore the connectivity of the coastal trail over Medio de Arroyo. The City and County will comply with the requirements of the Coastal Development Permit.

Policy 9.14 Shoreline Structure Design

- a. Require that all protective structures are designed to: (1) minimize visual impact by using appropriate colors and materials, (2) utilize materials which require minimum maintenance, and (3) provide public overlooks where feasible and safe.
- b. Require that shoreline protective structures not impede lateral access along beach areas and provide vertical access where feasible.
- c. Require that any shoreline alteration or structure project shall mitigate project impacts by adequate fish and wildlife preservation measures.

Consistency: The project will maintain the scenic and visual qualities of the coastal area by designing the soil nail walls with shotcrete that is textured, sculpted, and colored to resemble the natural exposed bluff face. The new aluminum truss pedestrian bridge will replace the existing deteriorating steel truss bridge and, although it will be somewhat larger, it will not significantly affect the visual quality of the coastal area.

Access to the beach occurs approximately 0.3 miles to the north at Magellan Avenue and 0.2 miles south at Alcatraz Avenue. The project will not impact existing access to the beach.

As described in Section D. Biological Resources, impacts to the riparian corridor within the project site from construction activities would be temporary and reduced to a less-than-significant level through implementation of identified mitigation.

Policy 9.16 Geologic Reports for Shoreline Structures

Require that all applications involving shoreline structures shall be accompanied by a report prepared by a certified engineering geologist or a soils engineer, as appropriate, which analyzes the effect that the project will have on physical shoreline processes.

Consistency: Geological studies were performed for the project as described in F. Geology and Soils. See additional discussion of sand supply above.

Half Moon Bay LUP Conformance

The project must comply with the relevant policies in the General Plan. Relevant policies and project consistency are described below.

Policy 4-1: Seawalls and cliff-retaining structures shall not be permitted unless the City determines they are necessary for preservation of existing structures, and has determined that there are no other less environmentally damaging alternatives for protection of existing development. If such structures are permitted, they shall be designed to preserve the maximum amount of existing beach, to ensure lateral access along the shoreline, and to assure that all existing endangered development within the area of the improvement is protected as a part of the project; such structures shall not be designed so as to encompass an area larger than that necessary to protect existing structures. An applicant for such a structure shall include a geologic report indicating that the structure will succeed in stabilizing that portion of the shoreline which is subject to severe erosion and will not aggravate erosion in other shoreline areas.

Consistency: The project is proposed to protect existing development, coastal access, and coastal resources. The County and City of Half Moon Bay will work with the CCC to determine if a net sand loss may be balanced by the overall benefits of the project to existing coastal resources and retain and restore the connectivity of the coastal trail over Medio de Arroyo. The City and County will comply with the requirements of the Coastal Development Permit.

Chapter 18.37 of the Zoning Ordinance specifically addresses Visual Resource Protection Standards. The beach viewshed area standards, presented below, are relevant to the proposed project:

18.37.025 Beach viewshed area standards.

- A. Structures shall be set back from the bluff edge far enough to ensure that the structure does not infringe on views from the beach and along the bluff top parallel to the bluff edge. In areas where existing structures on both sides of the proposed structure already impact public views from the beach or along the bluff top, new structures shall be located no closer to the bluff edge than adjacent structures.
- D. New development shall be sited and designed so as to avoid or minimize destruction or significant alteration of significant existing plant communities identified in the local coastal program land use plan and general plan.

Consistency: The project will maintain the scenic and visual qualities of the coastal area by designing the soil nail walls with shotcrete that is textured, sculpted, and colored to resemble the natural exposed bluff face. The new aluminum truss pedestrian bridge will replace the existing deteriorating steel truss bridge and, although it will be somewhat larger than the existing bridge, it will not significantly affect the visual quality of the coastal area. See Section A. Aesthetics and Figures 11 to 14. In addition, as described in Section D. Biological Resources, impacts to the riparian corridor within the project site from construction activities would be temporary and reduced to a less-than-significant level through implementation of identified mitigation.

The City's LUP includes coastal access policies consistent with the California Coastal Act. Section 2.1 states that "The public's right of access to all beach areas below the ordinary high water mark (mean high tide line) is guaranteed by the California Constitution. The Legislature, in passing the Coastal Act, did not alter these basic public rights but did establish a policy framework for achieving the goal of providing maximum opportunities for public use and enjoyment of the coast."

Consistency: The project will not affect public access to the sea. The only impact on access will occur from temporary closure of the pedestrian bridge during construction.

Other Permitting Agencies

The project may require permits and/or regulatory oversight from several resource regulatory agencies, as summarized below. The project will need to comply with all regulatory and land use requirements of these agencies as part of the discretionary process.

- U.S. Army Corps of Engineers, Section 404 (Clean Water Act) /Section 10 (Harbors and Rivers Act)
- California Coastal Commission, Coastal Development Permit

- California Department of Fish & Wildlife, Section 1602 Streambed Alteration Agreement
- RWQCB Section 401 (Clean Water Act) Water Quality Certification or waiver

The project is proposed to protect existing development, coastal access, and coastal resources. The County and City of Half Moon Bay will work with the CCC to determine if a net sand loss may be balanced by the overall benefits of the project to existing coastal resources and retain and restore the connectivity of the coastal trail over Medio de Arroyo. The City and County will comply with the requirements of the Coastal Development Permit.

In conclusion, the project will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

L. MINERAL RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
12. MINERAL RESOURCES. Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X	1
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X	1

Explanation

a-b) **No Impact.** The project will not adversely affect mineral resources.

M. NOISE AND VIBRATION

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
13. NOISE. Would the project result in					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X		1, 2
b) Generation of excessive groundborne vibration or groundborne noise levels?				X	1, 2
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X	1, 2

Explanation

- a) **Less than Significant Impact.** The project is located in a residential area. The proposed bank stability and pedestrian bridge replacement will not result in a substantial permanent increase in ambient noise levels or generate stationary noise or operational noise in the long term. However, noise from construction of the project will have a short-term impact on nearby sensitive receptors. Noise impacts from construction activities depend on the type of construction equipment used, the timing and length of activities, the distance between the noise generating construction activities and receptors, and shielding. The anticipated duration of construction activities is 45 working days for Phase 1 and 40 working days for Phase 2. Work will only occur on non-holiday weekdays between the hours of 7 am and 5 pm.

Sensitive receptors in the project vicinity include residences to the north, east, and south. A bed and breakfast is also located near the project site to the north along Mirada Road. The City of Half Moon Bay has established restrictions limiting construction and similar noise generating activities to between the hours of 7 am to 6 pm Monday through Friday; 8 am to 6 pm Saturdays; and 10 am to 6 pm Sundays and holidays. The City Engineer may approve exceptions to these hours, if necessary, to facilitate the orderly completion of work and minimize disruption to the community. As described previously, project construction would occur Monday through Friday within the allowable timeframe. Given the nature of the project, temporary noise would not exceed established noise standards. Construction noise will be reduced to a less-than-significant level with implementation of standard noise abatement measures. During construction, the project contractor will implement the following measures to minimize construction noise impacts:

- Choose construction equipment that is of quiet design, has a high-quality muffler system, and is well-maintained.
- Install superior intake and exhaust mufflers and engine enclosure panels wherever possible on gas diesel or pneumatic impact machines.

- Limit construction to 7 am – 5 pm Monday through Friday.
 - Eliminate unnecessary idling of machines when not in use.
 - Locate all stationary noise-generating construction equipment, such as portable power generators, as far as possible from existing residences.
- b) **No Impact.** See a) above. The project will not involve any permanent sources of ground borne vibration or ground borne noise.
- c) **No Impact.** The project is not located near any private airstrips.

N. POPULATION AND HOUSING

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
14. POPULATION AND HOUSING. Would the project:					
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X	1
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X	1

Explanation

- a) **No Impact.** The proposed bank stability and pedestrian bridge replacement is a public safety and improvement project and will not directly or indirectly facilitate growth.
- b) **No Impact.** The proposed bank stability and pedestrian bridge replacement will not displace people or housing, necessitating the construction of replacement housing elsewhere. Without the project, bluff erosion will continue unabated and existing homes could be lost at a future date.

O. PUBLIC SERVICES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
15. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
a) Fire protection?				X	1, 2
b) Police protection?				X	1, 2
c) Schools?				X	1
d) Parks?				X	1
e) Other public facilities?			X		1, 2

Explanation

- a)–d) **No Impact.** The proposed walls will not impact fire, police, school, or park services. See also e) below.
- e) **Less than Significant Impact.** The pedestrian bridge, which is part of the Half Moon Bay Coastal Trail, was closed by the County on July 27, 2020 due to its condition and potential public safety concerns. The pedestrian bridge will remain closed throughout construction of the project. The purpose of the project is to protect existing recreational facilities and promote bicycle and pedestrian access to coastal recreational areas.

P. RECREATION

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
16. RECREATION. Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X	1
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				X	1

Explanation

a)–b) **No Impact.** The project will not increase the use of or expand any recreational facilities.

See 15 e) above. The pedestrian bridge, which is part of the Half Moon Bay Coastal Trail, was closed by the County on July 27, 2020 due to its condition and potential public safety concerns. The pedestrian bridge will remain closed throughout construction of the project. The purpose of the project is to protect existing recreational facilities and promote bicycle and pedestrian access to coastal recreational areas.

Q. TRANSPORTATION

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
17. TRANSPORTATION/TRAFFIC. Would the project:					
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X	1
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				X	1
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X	1
d) Result in inadequate emergency access?			X		1

Explanation

- a) **No Impact.** Construction of the project is anticipated to last 45 working days for Phase 1 and 40 working days for Phase 2. The installation of the soil nail walls and replacement of the pedestrian bridge will not generate a substantial amount of vehicle trips. Short-term construction traffic is expected to be minimal construction activities during installation could result in short-term traffic disruptions along Mirada Road. These disruptions will be minimized by implementing traffic control plans to assure access is maintained during construction.

The pedestrian bridge, which is part of the Half Moon Bay Coastal Trail, was closed by the County on July 27, 2020 due to its condition and potential public safety concerns. The pedestrian bridge will remain closed throughout construction of the project.

For the above reasons, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

- b) **No Impact.** CEQA Guidelines Sec. 15064.3(b)(1) identifies that Vehicle Miles Traveled (VMT) is the metric for determining the significance of transportation impacts of proposed development. Using VMT for analyzing transportation impacts emphasizes reducing the number of trips and distances vehicles are used to travel to, from, or within a development project. The shift to VMT analysis under CEQA is intended to encourage the development of jobs, housing, and commercial uses in closer proximity to each other and to transit. The proposed bank stabilization and pedestrian bridge replacement are public improvements to existing facilities and would not generate additional VMT.
- c) **No Impact.** The project will not increase traffic hazards due to any design features or incompatible uses. See discussion a) above.
- d) **Less than Significant Impact.** The project will not significantly impact emergency access.

R. TRIBAL CULTURAL RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
18. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
ai) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			X		1, 2, 6
aii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			X		1, 2, 6

Explanation

- ai) **Less than Significant Impact.** Tribal cultural resources consider the value of a resource to tribal cultural tradition, heritage, and identity, in order to establish potential mitigation and to recognize that California Native American tribes have expertise concerning their tribal history and practices. Assembly Bill (AB) 52 requires lead agencies to conduct formal consultations with California Native American tribes during the CEQA process to identify tribal cultural resources that may be subject to significant impacts by a project.

As part of the cultural resources evaluation for the project, Holman & Associates contacted the Native American Heritage Commission (NAHC) on behalf of the County to request a search of the NAHC's Sacred Lands File. This search did not identify tribal cultural resources in the project impact area. San Mateo County also sent a consultation letter to the currently recognized Native American representatives for San Mateo County in accordance with AB 52 and no specific concerns were received from the tribes. The County's letters to the tribes are contained in Appendix B.

- aii) **Less than Significant Impact.** See above.

S. UTILITIES AND SERVICE SYSTEMS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
19. UTILITIES AND SERVICE SYSTEMS. Would the project:					
a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X		1, 2
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X	1, 2
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X	1, 2
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				X	1, 2
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X		1, 2

Explanation

- a) **Less than Significant Impact.** The project will require some utility relocations; however, these relocations would not result in significant environmental effects.

Prior to initiating work on the project site, public utilities including Pacific Gas and Electric (PG&E) and Granada Community Services District (GCSD) that possess infrastructure on the existing pedestrian bridge, will relocate their facilities. PG&E has both primary and secondary circuits in conduits crossing the pedestrian bridge. For the temporary relocation, PG&E will install utility poles on either side of the pedestrian bridge to facilitate the placement of overhead electrical cables. Once the project is complete, PG&E will deactivate the circuits and remove both the poles and conductors.

GCSD is currently working to re-route the 2-inch force main currently located on the pedestrian bridge. If this cannot be completed prior to the bridge's removal, GCSD may install a temporary bypass.

- b) **No Impact.** The project will not require additional water supply.
- c) **No Impact.** The project will not generate any wastewater treatment demand.
- d) **No Impact.** The project will not generate substantial solid waste that would adversely affect landfills.

- e) **Less than Significant Impact.** The project will comply with federal, state, and local management and reduction statutes and regulations related to solid waste, including salvaging construction debris where possible. The contractor for the project would determine the need and obtain, if required, a Demolition Plan and Permit from the BAAQMD.

T. WILDFIRE

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
20. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X		9
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X		9
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X		9
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X		9

Explanation

The project site is located on a coastal bluff and trail and is surrounded by Miramar Beach to the southwest and a visitor-serving lodging use to the northeast. The project site is located within a Non-Very-High Fire Hazard Severity Zone (Non-VHFHSZ) for wildland fires, as designated by the California Department of Forestry and Fire Protection (Cal Fire, Fire Hazard Severity Maps 2008 and Cal Fire, California Fire Hazard Severity Zone Viewer, 2020).

- a) **Less than Significant Impact.** The project would not substantially impair an adopted emergency response plan or emergency evacuation plan. As stated above in *Section I. Hazards and Hazardous Materials*, the project would not create any barriers to emergency or other vehicle movement in the area and final design would incorporate all Fire Code requirements. This represents a less-than-significant impact.
- b) **Less than Significant Impact.** The project would not exacerbate wildfire risks due to slope, prevailing winds, and other factors due to the project's urbanized location away from natural areas susceptible to wildfire. The project involves the replacement of an existing pedestrian bridge and the installation of bank stabilization. The project site is not located within an area of moderate, high, or very high fire hazard severity for the Local Responsibility Area nor does it contain any areas of moderate, high, or very high fire hazard severity for the State Responsibility Area. This represents a less-than-significant impact.
- c) **Less than Significant Impact.** The project would not require the installation or maintenance of infrastructure that may exacerbate fire risk or result in impacts to the environment. The project involves the replacement of an existing and deteriorating steel pedestrian bridge with a new aluminum bridge, and the installation of erosion control measures along Mirada Road. These improvements would not result in the installation of any roads, fuel breaks, emergency water

sources, power lines or any other utilities that may exacerbate fire risk. All vegetation will be cleared prior to initiating construction activities to avoid potential for ignition. This represents a less-than-significant impact.

- d) **Less than Significant Impact.** See above discussion. The project would not expose people or structures to significant wildfire risks given its highly urban location away from natural areas susceptible to wildfire. This represents a less-than-significant impact.

U. MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
21. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X			1-9
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.			X		1-9
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X		1-9

Explanation

- a) **Less-than-Significant with Mitigation.** Based on the analysis provided in this Initial Study, the project may result in significant impacts on the environment in the area of biological resources. Mitigation and standard practices have been identified to reduce this impact to a less-than-significant level. In conclusion, the project will not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history.
- b) **Less than Significant Impact.** Based on the analysis provided in this Initial Study, the project would not have significant cumulative impacts. The primary environmental impacts from the proposed walls are temporary construction effects that will be reduced to a less-than-significant level with measures and standard practices identified herein. The County and City of Half Moon Bay will work with the CCC to determine if a net sand loss may be balanced by the overall benefits of the project to existing coastal resources and retain and restore the connectivity of the coastal trail over Medio de Arroyo. The City and County will comply with the requirements of the Coastal Development Permit with the CCC.
- c) **Less than Significant Impact.** Based on the analysis provided in this Initial Study, the project would not cause substantial adverse effects on human beings, either directly or indirectly. The impacts of the project will be reduced to a less-than-significant level with measures and standard practices identified herein. The proposed bluff stabilization is proposed to protect existing development, coastal access, and coastal resources, resulting in beneficial effects on human beings.

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Chapter 4. References

LEAD AGENCY

San Mateo County Department of Public Works

Krzysztof Lisaj, Senior Civil Engineer

REPORT PREPARATION

Denise Duffy & Associates, Inc.

Environmental Consultant

Lianne Humble, Project Manager

Matthew Johnson, Environmental Scientist

Robyn Simpson, Assistant Planner

PERSONS CONTACTED

Julie Casagrande, San Mateo County Department of Public Works

Matthew Clark, Holman & Associates

Theresa Engle, San Mateo County Department of Public Works

Krzysztof Lisaj, San Mateo County Department of Public Works

Wency Ng, San Mateo County Department of Public Works

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CHECKLIST SOURCES

1. CEQA Guidelines and professional expertise of consultant
2. Project Plan and Site Review
3. San Mateo County Important Farmlands Map
4. BAAQMD CEQA Guidelines, 2017
5. Biological Investigation, 2018
6. Cultural Resources Investigation, 2016
7. Geotechnical Studies, 2001, 2017, 2018
8. Consultation with County Staff
9. Cal Fire, Fire Hazard Severity Maps 2008 and Cal Fire, California Fire Hazard Severity Zone Viewer, 2020

Appendix A
Biological Investigation Attachments

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Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad< IS (Half Moon Bay (3712244) OR La Honda (3712233) OR Montara Mountain (3712254) OR San Gregorio (3712234) OR San Mateo (3712253) OR Woodside (3712243))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAA01180	<i>Ambystoma californiense</i> California tiger salamander	Threatened	Threatened	G2G3	S2S3	WL
AAAAD01070	<i>Aneides flavipunctatus niger</i> Santa Cruz black salamander	None	None	G3	S3	SSC
AAAAH01020	<i>Dicamptodon ensatus</i> California giant salamander	None	None	G3	S2S3	SSC
AAABH01022	<i>Rana draytonii</i> California red-legged frog	Threatened	None	G2G3	S2S3	SSC
AAABH01050	<i>Rana boylei</i> foothill yellow-legged frog	None	Candidate Threatened	G3	S3	SSC
ABNFD01020	<i>Phalacrocorax auritus</i> double-crested cormorant	None	None	G5	S4	WL
ABNGA04010	<i>Ardea herodias</i> great blue heron	None	None	G5	S4	
ABNKD06030	<i>Falco columbarius</i> merlin	None	None	G5	S3S4	WL
ABNKD06071	<i>Falco peregrinus anatum</i> American peregrine falcon	Delisted	Delisted	G4T4	S3S4	FP
ABNME03041	<i>Laterallus jamaicensis coturniculus</i> California black rail	None	Threatened	G3G4T1	S1	FP
ABNME05016	<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	Endangered	Endangered	G5T1	S1	FP
ABNNB03031	<i>Charadrius alexandrinus nivosus</i> western snowy plover	Threatened	None	G3T3	S2S3	SSC
ABNNN06010	<i>Brachyramphus marmoratus</i> marbled murrelet	Threatened	Endangered	G3G4	S1	
ABNSB10010	<i>Athene cunicularia</i> burrowing owl	None	None	G4	S3	SSC
ABPAU08010	<i>Riparia riparia</i> bank swallow	None	Threatened	G5	S2	
ABPBX1201A	<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	None	None	G5T3	S3	SSC
ABPBXA301S	<i>Melospiza melodia pusillula</i> Alameda song sparrow	None	None	G5T2?	S2S3	SSC
AFCHA0209G	<i>Oncorhynchus mykiss irideus pop. 8</i> steelhead - central California coast DPS	Threatened	None	G5T2T3Q	S2S3	
AFCHB03010	<i>Spirinchus thaleichthys</i> longfin smelt	Candidate	Threatened	G5	S1	SSC



Selected Elements by Element Code
California Department of Fish and Wildlife
California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AFCQN04010	<i>Eucyclogobius newberryi</i> tidewater goby	Endangered	None	G3	S3	SSC
AMACC01090	<i>Myotis thysanodes</i> fringed myotis	None	None	G4	S3	
AMACC05030	<i>Lasiurus cinereus</i> hoary bat	None	None	G5	S4	
AMACC08010	<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None	None	G3G4	S2	SSC
AMACC10010	<i>Antrozous pallidus</i> pallid bat	None	None	G5	S3	SSC
AMACD04020	<i>Nyctinomops macrotis</i> big free-tailed bat	None	None	G5	S3	SSC
AMAFD03042	<i>Dipodomys venustus venustus</i> Santa Cruz kangaroo rat	None	None	G4T1	S1	
AMAFF02040	<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	Endangered	Endangered	G1G2	S1S2	FP
AMAFF08082	<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	None	None	G5T2T3	S2S3	SSC
AMAJF04010	<i>Taxidea taxus</i> American badger	None	None	G5	S3	SSC
ARAAD02030	<i>Emys marmorata</i> western pond turtle	None	None	G3G4	S3	SSC
ARADB3613B	<i>Thamnophis sirtalis tetrataenia</i> San Francisco gartersnake	Endangered	Endangered	G5T2Q	S2	FP
CALA1360CA	Sacramento-San Joaquin Coastal Lagoon Sacramento-San Joaquin Coastal Lagoon	None	None	GNR	SNR	
CARA2633CA	N. Central Coast Calif. Roach/Stickleback/Steelhead Stream N. Central Coast Calif. Roach/Stickleback/Steelhead Stream	None	None	GNR	SNR	
CARA2637CA	North Central Coast Steelhead/Sculpin Stream North Central Coast Steelhead/Sculpin Stream	None	None	GNR	SNR	
CTT37C10CA	Northern Maritime Chaparral Northern Maritime Chaparral	None	None	G1	S1.2	
CTT42110CA	Valley Needlegrass Grassland Valley Needlegrass Grassland	None	None	G3	S3.1	
CTT42130CA	Serpentine Bunchgrass Serpentine Bunchgrass	None	None	G2	S2.2	
CTT52110CA	Northern Coastal Salt Marsh Northern Coastal Salt Marsh	None	None	G3	S3.2	
IICOL5V010	<i>Hydrochara rickseckeri</i> Ricksecker's water scavenger beetle	None	None	G2?	S2?	
IICOL67020	<i>Lichnanthe ursina</i> bumblebee scarab beetle	None	None	G2	S2	



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
IIHYM24250	<i>Bombus occidentalis</i> western bumble bee	None	None	G2G3	S1	
IIHYM24380	<i>Bombus caliginosus</i> obscure bumble bee	None	None	G4?	S1S2	
IILEPE2202	<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	Endangered	None	G4T1	S1	
IILEPG801A	<i>Plebejus icarioides missionensis</i> Mission blue butterfly	Endangered	None	G5T1	S1	
IILEPJ608C	<i>Speyeria zerene myrtleae</i> Myrtle's silverspot butterfly	Endangered	None	G5T1	S1	
IILEPK4055	<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	Threatened	None	G5T1	S1	
IILEPP2012	<i>Danaus plexippus pop. 1</i> monarch - California overwintering population	None	None	G4T2T3	S2S3	
IIODO72010	<i>Ischnura gemina</i> San Francisco forktail damselfly	None	None	G2	S2	
ILARA13020	<i>Calicina minor</i> Edgewood blind harvestman	None	None	G1	S1	
ILARA47010	<i>Microcina edgewoodensis</i> Edgewood Park micro-blind harvestman	None	None	G1	S1	
IMGASJ7040	<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	None	None	G2	S2	
NBMUS2W0U0	<i>Fissidens pauperculus</i> minute pocket moss	None	None	G3?	S2	1B.2
NBMUS7S010	<i>Triquetrella californica</i> coastal triquetrella	None	None	G2	S2	1B.2
NLLEC5P420	<i>Usnea longissima</i> Methuselah's beard lichen	None	None	G4	S4	4.2
NLT0032640	<i>Hypogymnia schizidiata</i> island tube lichen	None	None	G2	S1	1B.3
PDAST2E050	<i>Cirsium andrewsii</i> Franciscan thistle	None	None	G3	S3	1B.2
PDAST2E161	<i>Cirsium fontinale var. fontinale</i> Crystal Springs fountain thistle	Endangered	Endangered	G2T1	S1	1B.1
PDAST3N060	<i>Eriophyllum latilobum</i> San Mateo woolly sunflower	Endangered	Endangered	G1	S1	1B.1
PDAST470D3	<i>Grindelia hirsutula var. maritima</i> San Francisco gumplant	None	None	G5T1Q	S1	3.2
PDAST4R0P2	<i>Centromadia parryi ssp. parryi</i> pappose tarplant	None	None	G3T2	S2	1B.2
PDAST5L0C5	<i>Lasthenia californica ssp. macrantha</i> perennial goldfields	None	None	G3T2	S2	1B.2



Selected Elements by Element Code
California Department of Fish and Wildlife
California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDAST5S0C0	<i>Lessingia arachnoidea</i> Crystal Springs lessingia	None	None	G2	S2	1B.2
PDAST6E0D0	<i>Microseris paludosa</i> marsh microseris	None	None	G2	S2	1B.2
PDAST6G010	<i>Monolopia gracilens</i> woodland woollythreads	None	None	G3	S3	1B.2
PDAST6X030	<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	Endangered	Endangered	G1	S1	1B.1
PDAST8H060	<i>Senecio aphanactis</i> chaparral ragwort	None	None	G3	S2	2B.2
PDASTE5011	<i>Hesperevax sparsiflora var. brevifolia</i> short-leaved evax	None	None	G4T3	S2	1B.2
PDBOR01070	<i>Amsinckia lunaris</i> bent-flowered fiddleneck	None	None	G3	S3	1B.2
PDBOR0V061	<i>Plagiobothrys chorisianus var. chorisianus</i> Choris' popcornflower	None	None	G3T1Q	S1	1B.2
PDCAR0U1MC	<i>Silene scouleri ssp. scouleri</i> Scouler's catchfly	None	None	G5T5	S2S3	2B.2
PDCAR0U213	<i>Silene verecunda ssp. verecunda</i> San Francisco campion	None	None	G5T1	S1	1B.2
PDERI04030	<i>Arctostaphylos andersonii</i> Anderson's manzanita	None	None	G2	S2	1B.2
PDERI041C0	<i>Arctostaphylos regismontana</i> Kings Mountain manzanita	None	None	G2	S2	1B.2
PDERI042W0	<i>Arctostaphylos montaraensis</i> Montara manzanita	None	None	G1	S1	1B.2
PDFAB0F7B2	<i>Astragalus pycnostachyus var. pycnostachyus</i> coastal marsh milk-vetch	None	None	G2T2	S2	1B.2
PDFAB400R5	<i>Trifolium hydrophilum</i> saline clover	None	None	G2	S2	1B.2
PDLAM01040	<i>Acanthomintha duttonii</i> San Mateo thorn-mint	Endangered	Endangered	G1	S1	1B.1
PDLIM02039	<i>Limnanthes douglasii ssp. ornduffii</i> Ornduff's meadowfoam	None	None	G4T1	S1	1B.1
PDLIN01060	<i>Hesperolinon congestum</i> Marin western flax	Threatened	Threatened	G1	S1	1B.1
PDMAL0Q0E0	<i>Malacothamnus arcuatus</i> arcuate bush-mallow	None	None	G2Q	S2	1B.2
PDPGN04081	<i>Chorizanthe cuspidata var. cuspidata</i> San Francisco Bay spineflower	None	None	G2T1	S1	1B.2
PDPLM09170	<i>Leptosiphon croceus</i> coast yellow leptosiphon	None	Candidate Endangered	G1	S1	1B.1



Selected Elements by Element Code
California Department of Fish and Wildlife
California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDPLM09180	<i>Leptosiphon rosaceus</i> rose leptosiphon	None	None	G1	S1	1B.1
PDPLM0E050	<i>Polemonium carneum</i> Oregon polemonium	None	None	G3G4	S2	2B.2
PDROS0W043	<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	None	None	G4T1?	S1?	1B.1
PDROS0W0B0	<i>Horkelia marinensis</i> Point Reyes horkelia	None	None	G2	S2	1B.2
PDROS1B0U0	<i>Potentilla hickmanii</i> Hickman's cinquefoil	Endangered	Endangered	G1	S1	1B.1
PDSCR0H0B0	<i>Collinsia multicolor</i> San Francisco collinsia	None	None	G2	S2	1B.2
PDSCR0J0C3	<i>Chloropyron maritimum ssp. palustre</i> Point Reyes salty bird's-beak	None	None	G4?T2	S2	1B.2
PDSCR2T010	<i>Triphysaria floribunda</i> San Francisco owl's-clover	None	None	G2?	S2?	1B.2
PDTHY03010	<i>Dirca occidentalis</i> western leatherwood	None	None	G2	S2	1B.2
PMLIL021R1	<i>Allium peninsulare var. franciscanum</i> Franciscan onion	None	None	G5T2	S2	1B.2
PMLIL0V031	<i>Fritillaria biflora var. ineziana</i> Hillsborough chocolate lily	None	None	G3G4T1	S1	1B.1
PMLIL0V0C0	<i>Fritillaria liliacea</i> fragrant fritillary	None	None	G2	S2	1B.2
PMPOA04060	<i>Agrostis blasdalei</i> Blasdale's bent grass	None	None	G2	S2	1B.2

Record Count: 95

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Appendix B
SB 52 Documentation

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James C. Porter
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

August 10, 2020

Ms. Irenne Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, CA, 94062

**RE: Tribal Cultural Resources under the California Environmental Quality Act (AB 52) –
Formal Notification of Decision to Undertake a Project and Notification of
Consultation Opportunity pursuant to Public Resources Code (PRC) §21080.3.1.
Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project**

Dear Ms. Zwierlein:

The County of San Mateo Department of Public Works (County) has determined that it is necessary to undertake the following project: Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project (Project).

Below please find a description of the proposed project and the names of our project point of contact, pursuant to PRC §21080.3.1 (d). Enclosed is a map showing the project location.

The Project proposes to stabilize an eroding bluff on the Pacific Ocean that experienced extensive erosion associated with storm events during the 2015/2016 and 2016/2017 rainy seasons using a combination of soil nail walls and rock slope protection (RSP), and replace a deteriorating pedestrian bridge along Mirada Road in the unincorporated area of San Mateo County. The proposed Project is located approximately 0.15 miles west of State Route 1 near the current pedestrian bridge that crosses Arroyo De En Medio Creek. The Project will include removal of the existing pedestrian bridge, the concrete arch bridge beneath the current pedestrian bridge, and partial removal of the abutments and piles, as necessary, to install the new bridge system. The Project will also include relocation of utilities supported by the existing bridge. The Project will be constructed in two phases due to the anticipated narrow work windows.

Potential effects to Tribal, historical, and archaeological resources have been researched for the Project and documented in a report which has been submitted to the Regulatory Division of the United States Army Corps of Engineers San Francisco District. The report contains the results from the research, a field inventory, and a record of consultation with the Native American Heritage Commission (NAHC) Sacred Lands Filesearch, concluding that no recorded potential Tribal cultural resources are within the



Ms. Irenne Zwierlein, Chairperson, Amah Mutsun Tribal Band of Mission San Juan Bautista

**RE: Tribal Cultural Resources under the California Environmental Quality Act, (AB 52) –
Formal Notification of Decision to Undertake a Project, and Notification of
Consultation Opportunity, pursuant to Public Resources Code (PRC) §21080.3.1.
Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project**

August 10, 2020

Page 2

Project's areas of effects and that potential for Tribal or prehistoric archaeological resources is low. A copy of the report will be furnished upon request if consultation is requested, as will other relevant documents that may exist (e.g., construction plans, geotechnical report).

Pursuant to PRC §21080.3.1 (b), the Tribe has 30 days from the receipt of this letter to request consultation, in writing, with the County.

If you have questions or concerns, please contact Theresa Engle or Krzysztof Lisaj of my staff at 650-363-4100. They can also be reached by e-mail at:

tengle@smcgov.org
klisaj@smcgov.org

Very truly yours,



Mark Chow, P.E.
Principle Civil Engineer
Utilities-Flood Control-Watershed
Protection

MC:KL:te

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Enclosure: Project Location Map

cc: Krzysztof Lisaj, P.E., Senior Civil Engineer, Utilities-Flood Control-Watershed Protection
Wency Ng, P.E., Senior Civil Engineer, Engineering Services
Julie Casagrande, Resource Conservation Specialist, Utilities-Flood Control-Watershed Protection
Theresa Engle, Resource Conservation Specialist, Utilities-Flood Control-Watershed Protection



MAP 1: Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project Location.
(USGS Half Moon Bay 7.5 minute topographic quadrangle, 2015)



James C. Porter
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

August 10, 2020

Tony Cerda, Chairperson
Costanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomona, CA 91766

**RE: Tribal Cultural Resources under the California Environmental Quality Act (AB 52) –
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Tony Cerda, Chairperson, Costanoan Rumsen Carmel Tribe

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August 10, 2020

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If you have questions or concerns, please contact Theresa Engle or Krzysztof Lisaj of my staff at 650-363-4100. They can also be reached by e-mail at:

tengle@smcgov.org
klisaj@smcgov.org

Very truly yours,



Mark Chow, P.E.
Principle Civil Engineer
Utilities-Flood Control-Watershed
Protection

MC:KL:te

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Enclosure: Project Location Map

cc: Krzysztof Lisaj, P.E., Senior Civil Engineer, Utilities-Flood Control-Watershed Protection
Wency Ng, P.E., Senior Civil Engineer, Engineering Services
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MAP 1: Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project Location.
(USGS Half Moon Bay 7.5 minute topographic quadrangle, 2015)



James C. Porter
Director

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555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

August 10, 2020

Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA, 95024

**RE: Tribal Cultural Resources under the California Environmental Quality Act (AB 52) –
Formal Notification of Decision to Undertake a Project and Notification of
Consultation Opportunity pursuant to Public Resources Code (PRC) §21080.3.1.
Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project**

Dear Ms. Sayers:

The County of San Mateo Department of Public Works (County) has determined that it is necessary to undertake the following project: Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project (Project).

Below please find a description of the proposed project and the names of our project point of contact, pursuant to PRC §21080.3.1 (d). Enclosed is a map showing the project location.

The Project proposes to stabilize an eroding bluff on the Pacific Ocean that experienced extensive erosion associated with storm events during the 2015/2016 and 2016/2017 rainy seasons using a combination of soil nail walls and rock slope protection (RSP), and replace a deteriorating pedestrian bridge along Mirada Road in the unincorporated area of San Mateo County. The proposed Project is located approximately 0.15 miles west of State Route 1 near the current pedestrian bridge that crosses Arroyo De En Medio Creek. The Project will include removal of the existing pedestrian bridge, the concrete arch bridge beneath the current pedestrian bridge, and partial removal of the abutments and piles, as necessary, to install the new bridge system. The Project will also include relocation of utilities supported by the existing bridge. The Project will be constructed in two phases due to the anticipated narrow work windows.

Potential effects to Tribal, historical, and archaeological resources have been researched for the Project and documented in a report which has been submitted to the Regulatory Division of the United States Army Corps of Engineers San Francisco District. The report contains the results from the research, a field inventory, and a record of consultation with the Native American Heritage Commission (NAHC) Sacred Lands Filesearch, concluding that no recorded potential Tribal cultural resources are within the



Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan

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Project's areas of effects and that potential for Tribal or prehistoric archaeological resources is low. A copy of the report will be furnished upon request if consultation is requested, as will other relevant documents that may exist (e.g., construction plans, geotechnical report).

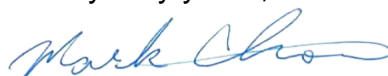
Pursuant to PRC §21080.3.1 (b), the Tribe has 30 days from the receipt of this letter to request consultation, in writing, with the County.

If you have questions or concerns, please contact Theresa Engle or Krzysztof Lisaj of my staff at 650-363-4100. They can also be reached by e-mail at:

tengle@smcgov.org

klisaj@smcgov.org

Very truly yours,



Mark Chow, P.E.
Principle Civil Engineer
Utilities-Flood Control-Watershed
Protection

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Enclosure: Project Location Map

cc: Krzysztof Lisaj, P.E., Senior Civil Engineer, Utilities-Flood Control-Watershed Protection
Wency Ng, P.E., Senior Civil Engineer, Engineering Services
Julie Casagrande, Resource Conservation Specialist, Utilities-Flood Control-Watershed Protection
Theresa Engle, Resource Conservation Specialist, Utilities-Flood Control-Watershed Protection



MAP 1: Mirada Road Pedestrian Bridge Replacement and Bank Stabilization Project Location.
(USGS Half Moon Bay 7.5 minute topographic quadrangle, 2015)



James C. Porter
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
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650-361-8220 F
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August 10, 2020

Rosemary Cambra, Chairperson
Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
P.O. Box 360791
Milpitas, CA, 95036

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Ms. Cambra, Chairperson, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area

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Very truly yours,



Mark Chow, P.E.
Principle Civil Engineer
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