CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

F15a

Prepared August 13, 2014 for August 15, 2014 Hearing

Click here to go to original staff report

To: Coastal Commissioners and Interested Persons

From: Susan Craig, District Manager
Katie Butler, Coastal Planner

Subject: STAFF REPORT ADDENDUM for F15a
Application Number 3-14-0569 (Custom House Causeway Embankment Repair)

The purpose of this addendum is to revise Special Condition 1(b) (see staff report page 5) and associated findings in response to new information provided by the Applicant. That condition provides for the retrieval of any rip rap rock that has migrated outside the configuration of the previously permitted revetment at the site. This is a fairly typical condition for revetment projects, and is intended to apply to rock visible in the immediate area. However, in this case, it is difficult to discern which rock represents migrated rip rap versus rock of other origins, including because the area has a wide variety of sizes of rock interspersed along the shoreline, some of which may date back fifty years or so to when the Harbor edge at this location was being shaped. The Applicant is concerned that the requirement in Special Condition 1(b) to remove all potentially errant rip rap at the site would be difficult to implement for this reason, and that, additionally, it would compromise the stability of the land portion of the site, and it would be difficult, costly, and time consuming. Staff concurs that the facts in this particular instance suggest that a more focused retrieval area would adequately meet Coastal Act objectives at this time, and is modifying the staff recommendation in this regard to require removal and restacking of rip rap that is located above the mean high water line. Other rock in the vicinity further seaward within harbor waters is best dealt with at such time as the City undertakes an overall harbor or wharf upgrade or major maintenance project. Revisions to the staff recommendation are shown in underline and ~~strikethrough~~ below. With these changes, the City and staff are in agreement on the staff recommendation.

Changes on Staff Report Page 5:

1(b) Rip Rap Restacking. Any errant rip rap rock at the site that is located above the mean high water line ~~that has migrated outside of the configuration of the permitted rip rap revetment~~ shall be removed from the ~~beach area and placed~~ site and/or be relocated as close as possible to the base of the new sheet pile wall. Such rip rap shall be either buried at the base of the wall or incorporated into the new faux rock treatment, or some combination of both.

Changes on Staff Report Page 12:

The Custom House was originally constructed at the water's edge in 1821 at one of the prime landing spots in Monterey. Early photographs show a narrow sandy beach with a rocky edge extending up to the building. In 1845, a wharf was constructed at this location and continued to expand in response to the growing sardine industry. In 1889, the railroad was extended from Monterey to Pacific Grove and this beach area seaward of the Custom House was filled to accommodate the tracks. Around 1960, the wharf was expanded to include a small craft harbor, and the area seaward of the Custom House and railroad tracks was further filled with dredge materials from harbor construction. At that time, a seawall and rip rap revetment ~~was~~ were also constructed from Fisherman's Wharf to Wharf II along this filled area.

Changes on Staff Report Page 25:

To further help offset the impacts of the proposed project, the City agrees to remove visible errant rip rap located above the mean high water line ~~on the beach~~ at the site and restack it at the toe of the sheet pile wall to open up the sandy beach. The rip rap is a combination of historic fill material that comprises the embankment, a rip rap revetment that the City indicates was placed there in the 1960s, and rock placed at the site under CDP 3-02-020-G (and ultimately authorized by 3-02-029-W). Additional rock exists below the mean high water line (buried and partially buried) that is part of the historic fill and 1960's revetment. A line of rock extends out into the water perpendicular from Sloat's Landing to Fisherman's Wharf. It appears as though this rock was intended to protect this area of the wharf as well as a building that no longer exists in this location. While the Commission might typically condition the project for the retrieval of visible rip rap rock that has migrated outside the configuration of the pre-Coastal Act and/or previously permitted revetment at the site, in this case it is difficult to discern which rock represents migrated rip rap versus rock of other origins, including because the area has a wide variety of sizes of rock interspersed along the shoreline, some of which may date back fifty years or so to when the Harbor edge at this location was being shaped. The City is concerned that a requirement to remove all potentially errant rip rap at the site would be difficult to implement for this reason, and that additionally it would compromise the stability of the land portion of the site, and it would be difficult, costly, and time consuming to do so. The Commission concurs and finds that the facts in this particular instance suggest that a more focused retrieval area would adequately meet Coastal Act objectives at this time, and instead requires removal and restacking of rip rap that is located above the mean high water line. Other rock in the vicinity further seaward within harbor waters is best dealt with at such time as the City undertakes an overall harbor or wharf upgrade or major maintenance project. Removal of the visible rock along the upper portion of the beach area above mean high water ~~This effort~~ would allow the public greater use of this small beach for those that are willing and able to traverse down the embankment, and would add to the existing access and recreational amenities at the site. **Special Condition 1** requires the errant ~~this~~ rip rap located above the mean high water line to be either buried at the base of the wall or incorporated into the new faux rock treatment, or some combination of both. ~~restacked and maintained in a manner that keeps the sandy beach portion of the site open and available.~~

Changes on Staff Report Pages 29-30:

The project itself is beneficial for public access and recreation because without it, the heavily used access amenities above the embankment are in danger of imminent failure. The Causeway

and its associated elements, including the Rec Trail, comprise a critical public access component in the City's network of such amenities for residents and visitors alike. The Commission recognizes that the project itself provides significant public access improvements because it restores access and ensures safe long-term access to the Rec Trail. However, the sand loss associated with repair of the damaged and failing embankment requires mitigation to offset the associated sand supply public access impacts. The City acknowledges that additional access improvements at Sloat's Landing, as well as at other nearby locations such as Fisherman's Shoreline Park, would be beneficial to public access. However, no such projects are ready for permitting or implementation at this time. As such, **Special Condition 8** requires a payment, in lieu of undertaking a public access or recreation project(s) at this time, in order to mitigate for the public access and recreation impacts associated with the proposed shoreline armoring. Therefore, the approved project includes a sand supply and public access mitigation fee to offset impacts from the loss of bluff materials and beach area (see **Special Condition 8**). The approved project also includes a requirement to ~~remove and restack~~ retrieve errant rip rap that is located above the mean high water line on the small beach and either dispose of it offsite or restack it (and bury it) at the site to improve the public's ability to recreate on the beach and offset impacts from the loss of bluff materials (see **Special Condition 1**). The payment and opening up additional beach area at Sloat's Landing represent appropriate mitigation measure to offset public recreational access impacts.

CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

F15a

Filed:	8/9/2014
Staff:	K. Butler - SC
Staff Report:	07/31/2014
Hearing Date:	08/15/2014

STAFF REPORT: CDP HEARING

Application Number:	**3-14-0569**
Applicant:	**City of Monterey**
Project Location:	Along an existing 230-foot long retaining wall and faux rock protection structures supporting the Custom House Plaza and Monterey Bay Coastal Recreation Trail adjacent to the Monterey Harbor between Fisherman's Wharf and Wharf II in the City of Monterey
Project Description:	Repair 90 linear feet of undermined existing retaining wall and faux rock structure, construct a new fiber reinforced polymer sheet pile wall covered with faux rock treatment, and restack existing rip rap to base of new wall
Staff Recommendation:	Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

The Applicant, the City of Monterey, proposes to repair 90 linear feet of an undermined existing 230-foot long retaining wall and faux rock structure located within the Monterey Harbor at the Custom House Causeway, adjacent to Fisherman's Wharf. The project involves installation of a 90-foot long sheet pile wall at the base of the existing retaining wall and faux rock structure that would be driven down into bedrock and secured with helical anchors, as well as restacking of existing riprap that has migrated onto the beach. The Causeway includes a portion of the Monterey Bay Coastal Recreation Trail (Rec Trail), public seating, landscape elements, lighting, and other pedestrian access improvements. The area is part of the Monterey State Historic Park, which includes the Custom House, California's State Historical Landmark No. 1 and the oldest

public building on the west coast. The existing wall and faux rock structure have been undermined by erosion caused by wave run-up, pedestrian foot traffic activity, and fill settlement. The City and its consulting geotechnical engineers have determined that the condition of the embankment could at any time lead to failure and the causeway is currently considered unsafe for use by the public. The retaining wall and faux rock structure are essential to maintaining the public access amenities associated with the Causeway.

Staff believes that shoreline protection is necessary to protect the Causeway and its associated public access amenities from danger and agrees that the sheet pile wall covered with faux rock is the most appropriate alternative available for this purpose at the current time. Alternative structural and non-structural protective alternatives were considered, but were dismissed mainly due to infeasibility. The impacts to sand supply from the proposed armoring would equate to roughly 1,913 cubic yards of sand being removed from the nearshore littoral system over a 20-year period. Staff recommends that the Commission find it is appropriate to mitigate for the project's access and sand supply impacts via an in-lieu sand supply and public access mitigation fee that will be used to fund future public access project(s) (or sand nourishment, if desired) along the City's shoreline. Staff believes that this represents a significant recreational benefit and appropriate mitigation measure to offset the project's sand supply impacts.

Accordingly, to define the approved project, and to fully mitigate for project impacts, staff is recommending a series of conditions related to the new armoring, including: (1) an approval that (a) ties the length of armoring authorization to the life of the existing development (i.e., Custom House Causeway) that the armoring is required to protect; (b) requires the Applicant to submit a complete permit amendment application to remove the armoring when the Causeway facilities warranting armoring are no longer present, or no longer require armoring; and (c) requires the Applicant to submit a complete permit amendment application to propose mitigation for impacts attributable to the armoring beyond the 20-year period upon which initial impact mitigation is based; (2) an in-lieu fee to mitigate for the loss of sand and materials that would otherwise contribute to the nearshore littoral system; (3) wall maintenance and a monitoring program; (4) submittal of as-built plans; (5) submittal of a construction plan; (6) water quality measures; and (7) restrictions on future development, indemnification, and other related conditions to address coastal resource impacts and issues.

As conditioned, staff recommends that the Commission approve a CDP for the proposed project. The motion to act on this recommendation is found on page 4 below.

TABLE OF CONTENTS

EXHIBITS

APPENDICES

I. MOTION AND RESOLUTION

Staff recommends that the Commission, after public hearing, **approve** a coastal development permit for the proposed development. To implement this recommendation, staff recommends a **YES** vote on the following motion. Passage of this motion will result in approval of the CDP as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Motion: *I move that the Commission approve Coastal Development Permit Number 3-14-0569 pursuant to the staff recommendation, and I recommend a yes vote.*

Resolution to Approve CDP: *The Commission hereby approves Coastal Development Permit Number 3-14-0569 and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittees or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittees to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Revised Final Plans.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit two copies of Revised Final Plans for Executive Director review and approval showing all development authorized by this CDP. The Revised Final Plans shall be in substantial conformance with the submitted project plans prepared by Whitson Engineers, and dated received in the Coastal Commission's Central Coast District Office on March 20, 2014 except that they should be revised as follows:

   (a) Faux Rock Treatment. The sheet pile wall shall be faced with a sculpted concrete faux rock surface that mimics natural and faux rock outcroppings at the site in terms of color, texture, and undulation. The faux rock work shall be constructed as narrow as possible against the sheet pile wall to minimize its footprint while maximizing consistency with adjacent faux and natural rock outcroppings. Surfaces shall be of similar or better visual quality in this respect to the best examples in the project area, including those in existence at the project site. The color, texture, and undulations of the faux rock work shall be maintained throughout the life of the structure. PRIOR TO COMMENCEMENT OF FINISH CONCRETE SURFACING, the Permittee shall submit to the Executive Director for review and approval the qualifications of the contractor who will perform the finish concrete work, including photos of similar completed projects. Finish concrete work shall not commence until the Executive Director has approved of the finish concrete contractor. The Permittee shall undertake development in accordance with the approved plan.

   (b) Rip Rap Restacking. Any rip rap rock at the site that has migrated outside of the configuration of the permitted rip rap revetment shall be removed from the beach area and placed as close as possible to the base of the new sheet pile wall. Such rip rap shall be either buried at the base of the wall or incorporated into the new faux rock treatment, or some combination of both.

   (c) Landscaping. All landscaping shall utilize native and noninvasive plant species that are tolerant of salt air and salt spray, with a preference for species capable of trailing vegetation that can colonize steeper bluff areas and also screen the top of the seawall as seen from the beach as much as possible. All plants shall be kept in good growing condition and shall be replaced as necessary to maintain the approved vegetation over the life of the project. Regular monitoring and provisions for remedial action (such as replanting as necessary) shall be identified to ensure landscaping success.

   All requirements of the approved Revised Final Plans shall be enforceable components of this CDP. The Permittee shall undertake all development in accordance with the approved Revised Final Plans.

2. **Construction Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT the Permittee shall submit two sets of a Construction Plan to the Executive Director for review and approval. The Construction Plan shall, at a minimum, include the following:

(a) Construction Areas. The Construction Plan shall identify the specific location of all construction areas, all staging areas, all storage areas, all construction access corridors (to the construction site and staging areas), and all public pedestrian access corridors. All such areas within which construction activities and/or staging are to take place shall be minimized in order to minimize construction encroachment on all publicly available pathways, beach, and beach access points, to have the least impact on public access.

(b) Construction Methods and Timing. The Construction Plan shall specify the construction methods to be used, including all methods to be used to keep the construction areas separated from public recreational use areas (including using the space available on the blufftop portions of the project area for staging, storage, and construction activities to the maximum extent feasible provided it does not significantly adversely affect public access, and including using unobtrusive fencing (or equivalent measures) to delineate construction areas), and including all methods to be used to protect harbor waters. All erosion control/water quality best management practices to be implemented during construction and their location shall be noted.

(c) Construction Requirements. The Construction Plan shall include the following construction requirements specified by written notes on the Construction Plan. Minor adjustments to the following construction requirements may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

- All work shall take place during daylight hours, and lighting of the beach area is prohibited.
- Construction work or equipment operations shall not be conducted below the mean high tide line unless tidal waters have receded from the authorized work areas, except removal of existing concrete, rip-rap, and rubble is allowed.
- Grading of intertidal areas is prohibited, except removal of existing concrete, rip-rap, and rubble is allowed in these areas.
- Only rubber-tired construction vehicles are allowed on the beach, except track vehicles may be used if the Executive Director determines that they are required to safely carry out construction. When transiting on the beach, all such vehicles shall remain as close to the bluff edge as possible and avoid contact with harbor waters.
- All construction materials and equipment placed seaward of the bluffs during daylight construction hours shall be stored beyond the reach of tidal waters. All construction materials and equipment shall be removed in their entirety from these areas by sunset each day that work occurs, except for erosion and sediment controls and/or construction area boundary fencing where such controls and/or fencing are placed as close to the toe of the coastal protection/bluff as possible, and are minimized in their extent.
- Construction (including but not limited to construction activities, and materials and/or equipment storage) is prohibited outside of the defined construction, staging, and storage areas.

- No work shall occur during weekends and/or the summer peak months (i.e., from the Saturday of Memorial Day weekend through Labor Day, inclusive) unless, due to extenuating circumstances (such as tidal issues or other environmental concerns), the Executive Director authorizes such work.

- Equipment washing, servicing, and refueling shall not take place on the beach, and shall only be allowed at a designated inland location as noted on the Plan. Appropriate best management practices shall be used to ensure that no spills of petroleum products or other chemicals take place during these activities.

- The construction site shall maintain good construction site housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain, including covering exposed piles of soil and wastes; dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the beach; etc.).

- All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday. At a minimum, silt fences, or equivalent apparatus, shall be installed at the perimeter of the construction site to prevent construction-related runoff and/or sediment from entering into the harbor.

- All public recreational use areas impacted by construction activities shall be restored to their pre-construction condition or better within three days of completion of construction. Any native materials impacted shall be filtered as necessary to remove all construction debris.

- The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office at least three working days in advance of commencement of construction or maintenance activities, and immediately upon completion of construction or maintenance activities.

All requirements above and all requirements of the approved Construction Plan shall be enforceable components of this coastal development permit. The Permittee shall undertake development in accordance with this condition and the approved Construction Plan.

3. **Construction Site Documents & Construction Coordinator.** DURING ALL CONSTRUCTION:

   (a) Construction Site Documents. Copies of the signed coastal development permit and the approved Construction Plan shall be maintained in a conspicuous location at the construction job site at all times, and such copies shall be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the coastal development permit and the approved Construction Plan, and the public review requirements applicable to them, prior to commencement of construction.

   (b) Construction Coordinator. A construction coordinator shall be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and the coordinator's contact information

(i.e., address, phone numbers, etc.) including, at a minimum, a telephone number that will be made available 24 hours a day for the duration of construction, shall be conspicuously posted at the job site where such contact information is readily visible from public viewing areas, along with an indication that the construction coordinator should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name, phone number, and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

4. **Future Monitoring and Maintenance.** This CDP requires ongoing monitoring of the permitted armoring, and authorizes future maintenance as described in this special condition. The Permittee acknowledges and agrees on behalf of City of Monterey and all successors and assigns that: (a) it is Permittee's responsibility to maintain the permitted armoring in a structurally sound manner and in its approved state; and (c) it is Permittee's responsibility to annually, or more often, if necessary, inspect the overall permitted armoring for signs of failure. Any such maintenance-oriented development associated with the permitted armoring shall be subject to the following:

   (a) Maintenance. "Maintenance," as it is understood in this condition, means development that would otherwise require a CDP whose purpose is to repair and/or maintain the permitted armoring in its approved configuration. Any proposed modifications to the approved as-built plans or required construction BMPs associated with any maintenance event shall be reported to planning staff of the Coastal Commission's Central Coast District Office with the maintenance notification (described below), and such changes shall require a CDP amendment unless the Executive Director determines that the proposed modifications will not result in additional coastal resource impacts, in which case an amendment would not be required.

   (b) Other Agency Approvals. The Permittee acknowledges that this maintenance condition does not obviate the need to obtain permits from other agencies for any future maintenance and/or repair episodes.

   (c) Maintenance Notification. Prior to commencing any maintenance event, the Permittee shall notify, in writing, planning staff of the Coastal Commission's Central Coast District Office of the proposed maintenance activities. Except for necessary emergency interventions, such notice shall be given by first-class mail at least 30 days in advance of commencement of work. The notification shall include a detailed description of the maintenance event proposed, and shall include any plans, engineering and/or geology reports, proposed changes to the maintenance parameters, other agency authorizations, and other supporting documentation describing the maintenance event. The maintenance event shall not commence until the Permittee has been informed by planning staff of the Coastal Commission's Central Coast District Office that the maintenance event complies with this CDP. If the Permittee has not received a response within 30 days of receipt of the notification by the Coastal Commission's Central Coast District Office, the maintenance event shall be authorized as if planning staff affirmatively indicated that the event complies with this CDP. The notification shall clearly indicate that the maintenance

event is proposed pursuant to this CDP, and that the lack of a response to the notification within 30 days of its receipt constitutes approval of it as specified in the permit.

(d) Maintenance Coordination. Maintenance events shall, to the degree feasible, be coordinated with other maintenance events proposed in the immediate vicinity with the goal being to limit coastal resource impacts, including the length of time that construction occurs in and around the harbor and bluff area. As such, the Permittee shall make reasonable efforts to coordinate the Permittee's maintenance events with other adjacent events, including adjusting maintenance event scheduling as directed by planning staff of the Coastal Commission's Central Coast District Office.

(e) Construction Site Documents and Construction Coordinator. All requirements set forth in **Special Condition 3** above ("Construction Site Documents & Construction Coordinator") shall apply to any maintenance event.

(f) Restoration. The Permittee shall restore all bluff and rocky shore platform areas and all access points impacted by maintenance activities to their pre-construction condition or better at the conclusion of any maintenance event. Any native materials impacted shall be filtered as necessary to remove all construction debris from the area within three days of completion of construction. The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office upon completion of restoration activities to arrange for a site visit to verify that all restoration activities are complete. If planning staff identifies additional reasonable measures necessary to restore the affected area, such measures shall be implemented as quickly as reasonably possible.

(g) Non-compliance with CDP. If the Permittee is not in compliance with the conditions of this permit at the time that a maintenance event is proposed, then the maintenance event that might otherwise be allowed by the terms of this future maintenance condition may not be allowed by this condition, subject to determination by the Executive Director.

(h) Emergency. Nothing in this condition shall serve to waive any Permittee rights that may exist in cases of emergency pursuant to Coastal Act Section 30611, Coastal Act Section 30624, and Subchapter 4 of Chapter 5 of Title 14, Division 5.5, of the California Code of Regulations (Permits for Approval of Emergency Work).

(i) Duration and Scope of Covered Maintenance. Future maintenance under this CDP is allowed subject to the above terms throughout the length of the armoring approval (see **Special Condition 6**) subject to Executive Director review and approval every ten years to verify that there are not changed circumstances associated with such maintenance that necessitate re-review. It is the Permittee's responsibility to request Executive Director approval prior to the end of each ten-year maintenance period (i.e., with the first period running through August 15, 2024. Maintenance can be carried out beyond August 15, 2024 (and beyond subsequent ten-year periods) if the Permittee requests an extension prior to the end of each ten-year maintenance period and if the Executive Director extends the maintenance term in writing. The intent of this permit is to allow for 10-year extensions of the maintenance term for as long as the seawall remains authorized unless there are changed circumstances that may affect the consistency of this maintenance authorization with the policies of Chapter 3 of the Coastal Act and thus warrant a re-

review of this maintenance condition. The Permittee shall maintain the permitted armoring in its approved state. No expansion or enlargement of the permitted armoring is allowed.

5. **Other Agency Review and Approval.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit to the Executive Director written evidence that all necessary permits, permissions, approvals, and/or authorizations for the approved project have been granted, including by the U.S. Army Corps of Engineers and the California Department of Fish and Wildlife. Any changes to the approved project required by these agencies shall be reported to the Executive Director. No changes to the approved project shall occur without a Commission amendment to this CDP unless the Executive Director determines that no amendment is legally necessary.

6. **Length of Armoring Approval.** This coastal development permit authorizes the approved armoring until the time when the public improvements inland of it are redeveloped, no longer present, or no longer require armoring, whichever happens first. If some portion of the public improvements is removed, while some portion is retained, the armoring shall be reduced or modified so that it is the minimum necessary to protect the public improvements that are retained. At such time (i.e., when public improvements are removed or when the public improvements no longer require armoring), the Permittee shall submit a complete coastal development permit amendment application to the Coastal Commission to remove or modify the approved armoring and to appropriately restore the affected area.

   (a) Amendment Required Proposing Mitigation for Retention of Armoring Beyond 20 Years. If the Permittee intends to keep the armoring in place after August 15, 2034, the Permittee must submit a complete CDP amendment application prior to August 15, 2034 proposing mitigation for the coastal resource impacts associated with the retention of the armoring beyond 20 years (including, in relation to any potential modifications to the approved project desired by the Permittee at that time that may be part of such CDP application).

7. **As-Built Plans.** WITHIN 90 DAYS OF COMPLETION OF CONSTRUCTION, or within such additional time as the Executive Director may grant for good cause, the Permittee shall submit two copies of As-Built Plans for Executive Director review and approval showing all development authorized by this CDP in relation to development located within 100 feet of the bluff edge. The As-Built Plans shall be substantially consistent with the approved Revised Final Plans (see **Special Condition 1**). The As-Built Plans shall include a graphic scale and all elevation(s) shall be described in relation to National Geodetic Vertical Datum (NGVD). The As-Built Plans shall include color photographs (in hard copy and jpg format) that clearly show the as-built project and the surrounding area, and that are accompanied by a site plan that notes the location of each photographic viewpoint and the date and time of each photograph. At a minimum, the photographs shall be from a sufficient number of upcoast, downcoast, inland and seaward viewpoints as to provide complete photographic coverage of the permitted project at this location.

8. **Sand Supply and Public Access Mitigation Fee.** WITHIN 6 MONTHS OF CDP APPROVAL (or within such additional time as the Executive Director may grant for good

cause), the Permittee shall submit to the Executive Director three valid bids for the cost of delivered beach quality sand for 1,913 cubic yards of sand. WITHIN 2 YEARS OF RECEIVING EXECUTIVE DIRECTOR APPROVAL OF THESE BIDS (or within such additional time as the Executive Director may grant for good cause), the Permittee shall provide evidence, in a form and content acceptable to the Executive Director, that a fee in an amount equal to the average of the three approved bids has been deposited into an interest bearing account held by the City of Monterey, or an Executive Director approved alternate entity, for the purposes of public access, recreation, or beach nourishment projects at or in the vicinity of the project site. The funds and any accrued interest shall be used for the above-stated purposes, in consultation with the Executive Director, within ten years of the funds being deposited into the account. The funds shall be released only upon approval of an appropriate project(s) by the Executive Director. Such approval shall set forth terms and conditions to assure that the funds will be expended in the manner intended by the Commission. If the funds are not spent on a project meeting the above-stated purposes within ten years of the funds being deposited in the account, the City of Monterey shall transfer the funds to an alternate entity, approved by the Executive Director, for use in a public access, recreation or beach nourishment project in the vicinity of the project site. No changes to this condition shall occur without an amendment to this CDP unless the Executive Director determines that no amendment is legally required.

9. **Assumption of Risk, Waiver of Liability, and Indemnity.** By acceptance of this permit, the Permittee acknowledges and agrees, on behalf of himself and all successors and assigns: (i) that the site is subject to hazards from episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunami, tidal scour, coastal flooding, and the interaction of same; (ii) to assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

IV. FINDINGS AND DECLARATIONS

A. PROJECT LOCATION

The project site is located within the Monterey Harbor on property owned by the California Department of Parks and Recreation (State Parks) and the City of Monterey. The City of Monterey is located at the southern end of the Monterey Bay (see **Exhibit 1** for regional location map). The Monterey Harbor is located adjacent to, but not within, the Monterey Bay National Marine Sanctuary, the largest marine sanctuary in the United States. The harbor includes berths for approximately 450 vessels as well as seasonal moorings for another 140 vessels. Monterey Harbor services commercial fishing, diving, whale watching, and sailing charter vessels, as well

as vessels with recreational fishing and sailing interests. The harbor is also a key entry point to Monterey Bay for the research/scientific community (e.g., Monterey Bay National Marine Sanctuary, Monterey Bay Aquarium, etc.) as well as the U.S. Coast Guard.

The existing retaining wall at the project site supports the Custom House Causeway, which includes a portion of the Monterey Bay Coastal Recreation Trail (Rec Trail), between Fisherman's Wharf (Wharf I) and the Municipal Wharf (Wharf II). This causeway area above the retaining wall is part of the Monterey State Historic Park, which includes the Custom House, California's State Historical Landmark No. 1 and the oldest public building on the west coast. It was here that the United States flag was first officially raised by Commodore John Drake Sloat on July 7, 1846, at the beginning of the war with Mexico, which brought California into U.S. ownership. A small sandy beach area exists in front of the retaining wall and is known as "Sloat's Landing" (see **Exhibit 2** for project site location).

B. PROJECT BACKGROUND AND DESCRIPTION

The Custom House was originally constructed at the water's edge in 1821 at one of the prime landing spots in Monterey. Early photographs show a narrow sandy beach with a rocky edge extending up to the building. In 1845, a wharf was constructed at this location and continued to expand in response to the growing sardine industry. In 1889, the railroad was extended from Monterey to Pacific Grove and this beach area seaward of the Custom House was filled to accommodate the tracks. Around 1960, the wharf was expanded to include a small craft harbor, and the area seaward of the Custom House and railroad tracks was further filled with dredge materials from harbor construction. At that time, a seawall was also constructed from Fisherman's Wharf to Wharf II along this filled area.

In 1991, the Coastal Commission issued a CDP (3-91-72) to the City of Monterey and State Parks to rehabilitate the Custom House grounds and integrate the plaza area with the Rec Trail and shoreline. The project included limiting vehicular access on the causeway; removal of the railroad tracks and berms to level the causeway and Rec Trail area; new paving, landscape elements, lighting, benches, and other pedestrian access improvements; and retaining walls at the shoreline to retain new backfill materials. The project also included new faux rock structures/outcroppings at the shoreline to mimic natural rock formations at the site. The existing concrete seawall along the site that is connected to a natural rock formation was retained and covered with a granite rock wall and faux rock structures. These improvements were completed the following year, in 1992. The shoreline at this location therefore includes a mix of old walls, fill consisting of sand and rip rap, and faux rock structures.

In March 2002, the Coastal Commission issued an emergency permit (3-02-020-G) to the City to repair two areas in the embankment that were undermined by erosion. The emergency repair included placement of boulders at the toe of the slope and sand embankment. A follow-up CDP waiver was issued in July 2002 to recognize the emergency work and also included planting along the top of the slope.

In early 2012, the City Engineer identified the causeway embankment as unsafe because a portion of the granite retaining wall and one of the artificial rock outcroppings had been severely undermined, causing the slope to be moving seaward at a rapid rate. According to the City's

geotechnical engineer, the wall and faux rock structure have been undermined by erosion caused by wave runup, pedestrian foot traffic activity, and fill settlement. The condition of the embankment could at any time lead to failure and the causeway was considered unsafe for use by the public. The City subsequently declared a state of emergency for the site and City crews installed sandbags to help temporarily support the exposed retaining wall footing and the affected artificial rock outcropping. The City also placed a temporary barrier railing along the length of the top of the undermined retaining wall and faux rocks to prevent the public from using the walkway immediately above it as well as the beach below it.

The City hired consultants to evaluate both temporary (10-20 year) and long term solutions to the problem. Two of the alternatives considered included an anchored pier and grade beam system or an anchored sheet pile wall system, both independent of the existing retaining structure, but both able to support the fill beneath that structure and provide additional stability to the existing retaining wall. The sheet pile wall option was selected by the City as the environmentally superior alternative. It would be driven into the existing fill slope in front of the existing wall and faux rock outcropping, and the existing void under the wall and outcropping would be filled with a concrete grout mix.

The previous geotechnical study for the Custom House Plaza project (Terratech Inc., 1991) described the site as being underlain with manmade fill ranging from 1 to 12 feet deep overlying poorly graded beach sand, which is underlain by weathered granite bedrock. The beach area at the base of the existing walls is approximately 12 feet in elevation. The existing retaining wall and faux rock structure range in elevation from 12 to 20 feet. According to the 2013 Haro, Kasunich and Associates, Inc. (HKA) report prepared for the current project, portions of the existing retaining wall and faux rock outcroppings are founded on the manmade fill.

The proposed sheet pile wall would be 90 linear feet and would be driven down through the fill and sand to the top of the granite bedrock. Helical anchors would be used as tiebacks to secure the piling in place, and may also be used to underpin the existing wall and faux rock structure. The visible portion of the sheet pile wall would be covered with faux rock treatment to match the adjacent faux rock and natural rock outcroppings. Once covered with faux rock treatment, the height of the visible portion of the wall would range from an elevation of 8 to 14 feet, and the underground portion would range from an elevation of 0 to 8 feet. Restoration of grade and planting of the disturbed hillside will be accomplished after installation of the wall. The sandbags and temporary safety fencing will be removed as well.

See **Exhibit 3** for photographs of the project site and see **Exhibit 4** for project plans.

C. STANDARD OF REVIEW

The proposed project is located within the Commission's retained CDP jurisdiction and thus the standard of review is the Coastal Act. The City of Monterey does not have a certified Local Coastal Program. The City's Harbor Land Use Plan (LUP) was updated in 2003, but the Implementation Plan has not yet been certified. Although the certified LUP can provide non-binding guidance, the Coastal Act is the standard of review. However, the LUP and Coastal Act policies are very similar in regards to allowing shoreline armoring and eliminating or mitigating for its impacts. Thus, the LUP policies do not provide significantly different policy direction in

this case.

The project consists both of repairs to an existing retaining wall and construction of new shoreline armoring. Although the Commission may only regulate the method of repair and maintenance when reviewing repair and maintenance projects, because this project involves new development, specifically the new sheet pile wall and associated development, the Commission must find that the new shoreline armoring itself is consistent with the Coastal Act.

D. HAZARDS

Coastal Act Section 30235 addresses the use of shoreline protective devices:

> *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. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.*

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and to avoid landform altering protective measures in the future. Section 30253 provides, in applicable part:

> *New development shall do all of the following:*
>
> *(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> *(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Coastal Act Section 30235 acknowledges that seawalls, revetments, retaining walls, groins and other such structural or "hard" methods designed to forestall erosion also alter natural landforms and natural shoreline processes. Accordingly, Section 30235 limits the construction of shoreline protective works to those required to serve coastal-dependent uses, or to protect existing structures or public beaches in danger from erosion. The Coastal Act provides these limitations because shoreline structures can have a variety of negative impacts on coastal resources that are inconsistent with the Chapter 3 policies of the Coastal Act, including adverse effects on sand supply, public access, coastal views, natural landforms, and overall shoreline beach dynamics on and off site.

Shoreline armoring has a number of direct impacts on beach area and sand supply, including but not limited to impacts from beach encroachment, fixing the back of the beach, and preventing the natural erosion of coastal bluffs that provides sandy material to the nearby beaches. As a result, the Coastal Act is premised on both hazard avoidance and shoreline armoring avoidance. However, when required to protect existing structures or to serve coastal-dependent uses, under

Coastal Act Section 30235, shoreline protective structures may be approved if the required protection is designed to eliminate or mitigate the adverse impacts on shoreline sand supply.

Existing Structures to be Protected
The Custom House Causeway includes the Monterey Bay Coastal Recreation Trail (Rec Trail) and associated public amenities such as built-in seating along the top of the existing embankment, benches, lighting, viewpoints, and directional and interpretive signage. The segment of the two-lane Rec Trail at the project site is part of the larger 17-mile trail that stretches from Castroville in the north to Pacific Grove in the southwest. The 20-foot wide portion of the trail at the project site is heavily used by local residents as well as visitors, and by bicyclists and pedestrians. The trail expands in width at this location with the addition of the causeway area, and the size combined with its location at the entrance to Fisherman's Wharf and within the State Historic Park make it a popular resting spot along the trail. The historic Custom House, which is open to the public as a museum, sits approximately 60 feet inland of the embankment.

The causeway area, including the trail and associated public amenities, is an important public access resource that is the existing structure to be protected by the proposed shoreline protection.

Danger from Erosion
The Coastal Act allows shoreline armoring to protect existing structures in danger from erosion, but it does not define the term "in danger." There is a certain amount of risk involved in maintaining development along a California coastline that is actively eroding and can be directly subject to violent storms, wave attack, flooding, earthquakes, and other hazards. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm energy at particular stretches of coastline. As a result, some would say that all development along the immediate California coastline is in a certain amount of "danger." The Commission evaluates the immediacy of any threat in order to make a determination as to whether an existing structure is "in danger." While each case is evaluated based upon its own particular set of facts, the Commission has previously interpreted "in danger" to mean that an existing structure would be unsafe to occupy within the next two or three storm season cycles (generally, the next few years) if nothing were to be done (i.e., in the "no project" alternative).

In this case, the proposed shoreline protection would be installed within the Monterey Harbor in an area of historic fill. Evidence of the unconsolidated fill nature of the embankment is apparent in the visible mix of rip rap, sand, cobbles, and concrete that protrudes out from under the existing retaining wall structures. As described above, a 90-linear foot section of the existing 230-foot long retaining wall and faux rock structure at the top of the embankment has been undermined and is currently supported by sandbags. The site is located in an area of the Harbor between Fisherman's Wharf and the boat docks that is exposed to wave action from the Harbor entrance, as well as boat wakes and swash generated within the harbor from boat traffic. The harbor is periodically dredged to maintain boat access to the docks and slips, and it is likely that such dredging also contributes to instability and erosion of the shoreline configuration and profile. According to the City's geotechnical consultant, the existing shoreline protection at the project site retards erosion, but does not appear to extend down to the bedrock, and has therefore proved insufficient to protect the Causeway. Furthermore, the 1991 geotechnical study prepared

for the Custom House Plaza project (Terratech Inc., 1991) states that the retaining wall was not intended as a seawall or wave protection structure, likely because of its foundation on fill.

As described above, the City declared a state of emergency for the site in 2012 and placed barriers to prevent the public from entering onto the embankment as well as the walkway immediately above it and the beach below it. The City and its geotechnical consultants have determined that the existing retaining wall and faux rock structure (i.e., the 90-linear foot segment) are in imminent danger of structural failure, and that additional damage is likely during the 2014-2015 winter season if repairs or a new armoring structure are not completed. The Commission's Senior Engineer concurs that the retaining wall and faux rock outcropping, as well as the Causeway just inland, are in danger of erosion.

Accordingly, the existing structure is "in danger from erosion" as that term is understood in a Coastal Act context, and thus the project meets the second test of Section 30235 of the Coastal Act.

Feasible Protection Alternatives

The third Section 30235 test that must be met is that the proposed armoring must be "required" to protect the existing threatened structures. In other words, shoreline armoring shall only be permitted if it is the only feasible alternative capable of protecting the existing endangered structures.[1] Other, less environmentally damaging alternatives typically considered include: the "no project" alternative; planned retreat, including abandonment and demolition of threatened structures; relocation of threatened structures; beach and sand replenishment programs; drainage and vegetation measures on the blufftop; and combinations of each.

The "no project" alternative would result in further undermining and eventual failure of the damaged portion of the embankment as well as likely domino effects on the remainder of the retaining walls connected to it. This would result in loss of portions of the Causeway and Rec Trail as well as loss of the small beach area below the embankment due to slumping of the fill slope. The loss of the important waterfront public access amenities at this site makes this alternative infeasible.

Relocation of the threatened structures is not possible because the Causeway is connected to the historic Custom House and Custom House Plaza, all of which cannot be moved due to the historical significance of the site and its location as part of the Monterey State Historic Park. Furthermore, the Causeway includes the Rec Trail, which is a heavily used oceanfront pedestrian and bicycle thoroughfare that constitutes part of the California Coastal Trail. This portion of the Rec Trail is located within the densely developed City of Monterey and it follows the former railroad alignment through this area. No feasible alternative alignments for the trail exist in this area.

Another potential alternative is support of the retaining wall and faux rock structure without full toe protection. This alternative was considered as a low-cost interim (10-20 years) solution by the City and would entail underpinning the retaining wall and faux rock structure foundation with helical anchors. However, the slope would continue to recede under the exposed retaining

[1] Coastal Act Section 30108 defines feasibility as follows: "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

wall footings, resulting in eventual loss of soil support under the Causeway and eventual failure of the Causeway and Rec Trail.

Another alternative is installation of a rip rap revetment along the seaward side of the existing retaining wall and faux rock structure. This would entail placement of rock from the granite bedrock up to the base of the retaining wall and faux rock structure footings. According to the project's geotechnical engineer, the revetment would need to be approximately 15 feet high and would encroach 27.5 feet seaward of the existing wall and rock structure towards the Harbor, and would be 110 feet long to protect the 90 lineal feet of shoreline in need of protection. This alternative would cover all of the existing beach area at the base of the embankment. Some rip rap slope protection currently exists along the seaward side of the wall and rock structure near the waterline; however, it does not extend deep enough nor is it sized adequately to provide complete protection for the embankment slope. It is beneficial as toe protection along the waterline because it does retard erosion, and according to the project's geotechnical engineer, should be maintained in any project alternative.

Finally, vegetated berms and other "soft" fixes such as beach nourishment are not suitable at this location within the harbor, which experiences wave action, scour, and tidal currents. The shoreline edge is made up of mainly sandy soils and unconsolidated earthen materials which are easily and quickly eroded, and under these circumstances any such soft alternatives would require constant maintenance to remain effective. Even then, it is not clear that they could be successfully used to protect the Causeway.

Therefore, the proposed sheet pile wall at the base of the existing retaining wall and faux rock structure is the least damaging feasible alternative at this time. It is sized and designed to match adjacent natural and faux rock at the site, ensuring an appropriate level of protection and visual continuity. Thus, the project as proposed is the least environmentally damaging, feasible alternative.

Duration of Authorization

Section 30235 only authorizes shoreline protection devices when necessary to protect an existing structure in danger of erosion, and shoreline protective devices are no longer authorized by Section 30235 after the existing structures they protect are redeveloped, no longer present, or no longer require armoring.

Specifically, although the purpose of this project is to protect a public accessway, the proposed shoreline armoring nevertheless impedes public access to and along the shoreline, adversely impacts beaches and related habitats, increases erosion on adjacent properties, and visually impairs this coastal area. A portion of the proposed project is also located within historic tidelands that are subject to the public trust. The proposed armoring is inconsistent with several Chapter 3 policies of the Coastal Act and, as detailed herein, will cause impermissible adverse impacts to coastal resources that are protected by the Coastal Act, including but not limited to substantial alteration and destruction of natural landforms inconsistent with the requirements of Sections 30251 and 30253. Additionally, although design modifications and access improvements can help mitigate sand supply and beach access impacts, including by allowing for the purchase or provision of comparable low-cost access and recreational opportunities, these impacts can never be entirely eliminated or mitigated. The proposed armoring is nevertheless

being approved by the Commission, however, based on the "override" provision of Section 30235 that instructs the Commission to approve a shoreline protective device to protect an existing structure if specified criteria are satisfied.

In such a circumstance, the only applicable basis for the Commission to approve proposed armoring such as this that is otherwise inconsistent with the Coastal Act is when it is required to protect an existing structure in danger from erosion. If there was no existing structure in danger from erosion and the armoring was not required to protect it, the shoreline protection would be denied. That the project satisfies the tests of the Section 30235 "override," and thereby must be authorized despite its other impacts that cannot be fully mitigated, therefore presumes the existence of a legally authorized existing structure that the armoring is required to protect.

Accordingly, one reason to limit the length of a shoreline protective device's development authorization is to ensure that the armoring being authorized by Section 30235 is only being authorized as long as it is required to protect a legally authorized existing structure. If an applicant must seek reauthorization of the armoring before the structure that it was constructed to protect is demolished or redeveloped, then Section 30235 instructs the Commission to approve the shoreline protective device if it is still required to protect an existing structure in danger of erosion. However, once the existing structure that the armoring is required to protect is demolished or redeveloped, the armoring is no longer authorized by the override provisions contained in Section 30235 of the Coastal Act. Accordingly, if there is no existing structure in danger from erosion, then the Commission cannot approve an otherwise inconsistent shoreline protective device relying on the provisions of Section 30235 of the Coastal Act.

Another reason to limit the authorization of shoreline protective devices is to ensure that the Commission can properly implement Coastal Act Section 30253 together with Section 30235. If a landowner is seeking new development along the shoreline, Section 30253 requires that such development be sited and designed such that it will not require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. Sections 30235 and 30253 prohibit such armoring devices for new development and require new development to be sited and designed so that it does not require the construction of such armoring devices. These sections therefore should not be read to permit landowners to rely on such armoring devices when siting new structures on blufftops and/or along shorelines. If a shoreline protective device exists in front of a lot, but is no longer required to protect the existing structure it was authorized to protect, it is no longer consistent with the provisions of 30235, so it should not form the basis for approving new development that would not meet geologic setback requirements. Otherwise, if a new structure is able to rely on shoreline armoring that is no longer required to protect an existing structure, then the new structure could be sited without a sufficient setback, perpetuating an unending reconstruction/redevelopment loop that prevents proper siting and design of new development, as required by Section 30253. By limiting the length of development authorization of a new shoreline protective device to the existing structure it is required to protect, the Commission can more effectively apply Section 30253 when new development is proposed.

Therefore, the Commission hereby authorizes the proposed armoring in this case coincident with the existing structures it is authorized to protect, and requires removal of the armoring when the structures it was authorized to protect are redeveloped, no longer present, or no longer require armoring. **Special Condition 6** also requires the Applicant to submit a complete permit

amendment application to remove the armoring when the existing structures warranting armoring are redeveloped, are no longer present, or no longer require armoring. In this manner, new development will not be able to rely on armoring that no longer meets the override provisions of Section 30235 of the Coastal Act.

Mitigation for Impacts of Project

In terms of impact mitigation for the approved project, and as discussed further below, the mitigation for the impacts associated with the proposed shoreline protection have used a twenty-year time period to calculate passive erosion and sand retention impacts, both of which are tied to the future rates of erosion and are time dependent. These impacts will continue to occur, though, for the full time that the approved armoring system is in place, including beyond twenty years if it continues to be necessary to protect the existing endangered structures identified. This CDP approval requires the Applicant to submit a complete permit amendment application to propose mitigation for impacts attributable to the armoring beyond the twenty-year period upon which initial impact mitigation is based. And as such, additional mitigation will be required after the initial twenty-year period.

Using a twenty-year period for initial impact mitigation is appropriate in this case. Such initial twenty-year mitigation framework uses available information on historic trends for the projection of future erosion. In siting new development, proposed setbacks attempt to anticipate future acceleration of erosion through using the highest historic erosion rate or by developing relationships between erosion and sea level. And, on an eroding coastline, if the proposed erosion rate is higher than the actual rate, the result is only that the development will be safe from erosion for a longer time period than initially assumed. However, for shoreline armoring mitigation, the Commission has often based the calculations upon average or moderate historic erosion rates so that the mitigation is unlikely to cover unanticipated impacts over the mitigation period (e.g., associated with higher actual erosion rates and associated problems than anticipated and applied in a mitigation context). While long-term erosion rates for mitigation calculations can be expected to provide a reasonable estimate of future erosion for the coming one or two decades, projections much farther into the future are far more uncertain; and the uncertainty concerning future erosion only increases with time. Using a time period of twenty years for the mitigation calculations ensures that the mitigation will cover the likely initial impacts from the armoring, and then allows a recalculation of the impacts based on better knowledge of future erosion rates and associated impacts accruing to the armoring when the twenty years has elapsed. Efforts to mitigate for longer time periods would require the use of much higher erosion rates and would bring a higher amount of uncertainty into a situation where a single, long-term mitigation effort is not necessary to be effective.

Therefore, **Special Condition 6** ties the length of development authorization to the timeframe of the structure being protected and requires the Applicant to submit an application for a permit amendment to remove the armoring when the currently existing structures warranting armoring are redeveloped, are no longer present, or no longer require armoring. However, since the mitigation is calculated based on the first twenty years of impact (again see Mitigation of Shoreline Sand Supply Impacts Section below), **Special Condition 6a** also requires the Applicant to submit an application for a permit amendment prior to the expiration of the twenty-year period, proposing mitigation to address the impacts of the armoring beyond the twenty-year period.

Sand Supply Impacts
The final test of section 30235 is that shoreline armoring must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply.

Shoreline Processes
Beach sand material comes to the shoreline from inland areas, carried by rivers and streams; from offshore deposits, carried by waves; and from coastal dunes and bluffs, typically becoming beach material when the bluffs or dunes lose material due to wave attack, landslides, surface erosion, gullying, and other processes (collectively termed mass wasting by geomorphologists). Along the Central Coast, examples of each of these beach-forming processes can be seen.

The natural shoreline processes affecting the formation and retention of the beach and beach material can be significantly altered by the construction of shoreline armoring structures. When the back-beach or toe of slope is armored by a shoreline protective device, the natural contribution of loose material to the beach will be interrupted. To the extent that the slopes produce material, and to the extent that the shoreline is eroding, shoreline armoring will deprive the beach of a measurable amount of replacement material.

Some of the effects of armoring structures on the beach and shoreline (such as scour, end effects and modification to the beach profile) are temporary or are difficult to distinguish from all the other actions that modify these areas. Others are more qualitative (e.g., impacts to the character of the shoreline and visual quality). Some of the effects that a shoreline structure may have on natural shoreline processes can be quantified, however, including: (1) the loss of the beach area on which the structure is located; (2) the long-term loss of beach which will result when the back beach location is fixed on an eroding shoreline; and (3) the amount of material which would have been supplied to the beach if the back beach or bluff were to erode naturally.[2]

Encroachment on the beach
Shoreline protective devices are all physical structures that occupy space. When a shoreline protective device is placed on a beach area, the underlying beach area cannot be used as beach. This typically results in a loss of public access as well as a loss of sand and/or areas from which sand-generating materials can be derived. The area where the structure is placed will be altered from the time the protective device is constructed, and the extent or area occupied by the device will remain the same over time, until the structure is removed or moved from its initial location, or in the case of a revetment, as it spreads seaward over time. The beach area located beneath a shoreline protective device, referred to as the encroachment area, is the area of the structure's footprint. In this case, the total footprint of the proposed armoring occupies roughly 675 square feet resulting in a 675 square-foot beach encroachment area.[3]

The loss of a square-foot of beach area can be roughly converted to the volume of sand that would be required to nourish an equivalent area of beach. Within the Harbor, the Applicant's geotechnical consultants determined that the appropriate conversion factor is 0.5 cubic yard of

[2] The sand supply impact refers to the way in which the project impacts creation and maintenance of beach sand. Although this ultimately typically translates into beach impacts, the discussion here is focused on the first part of the equation and the way in which the proposed project would impact sand supply processes.

[3] The wall would be 90 feet long, with an average width of 7.5 feet.

sand nourishment per square foot. Using this conversion factor, the sand volume equivalent for the direct loss of beach due to encroachment would be 338 cubic yards of sand.

Fixing the back beach

Experts generally agree that where the shoreline is eroding and armoring is installed, as is the case here, the armoring will eventually define the boundary between the sea and the upland. On an eroding shoreline, a beach will exist between the shoreline/waterline and the toe of the slope behind the beach, as long as sand and/or material is available to form a beach. As shoreline erosion proceeds, the profile of the beach also retreats and the beach area migrates inland with the bluff. This process stops, however, when the backshore is fronted by a hard protective structure such as a revetment or a seawall. While the shoreline on either side of the armor continues to retreat, the shoreline in front of the armor eventually stops at the armoring. The beach area will narrow, being squeezed between the moving shoreline and the fixed backshore. Eventually, there will be no available dry beach area and the shoreline will be fixed at the base of the structure. This phenomenon is often referred to as passive erosion. In the case of an eroding shoreline, this represents the loss of a beach as a direct result of the armor.

In addition, sea level has been rising slightly for many years. There is also a growing body of evidence that there has been an increase in global temperature and that acceleration in the rate of sea level rise can be expected to accompany this increase in temperature (the most recent projections for the coast of California south of Cape Mendocino indicate that sea level could rise 1.38 to 5.48 feet by the year 2100).[4] Mean sea level affects shoreline erosion several ways, and an increase in the average sea level will exacerbate all these conditions. On the California coast the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore. This, too, leads to loss of the beach as a direct result of the armor as the beach is squeezed between the landward migrating ocean and the fixed backshore.

The Commission has established a methodology for calculating passive erosion, or the long-term loss of beach due to fixing the back beach. This impact is equivalent to the footprint of the bluff area that would have become beach due to erosion and is equal to the long-term average annual erosion rate multiplied by the width of property that has been fixed by a resistant shoreline protective device.[5] In this case, the proposed sheet pile wall would extend along the base of an undermined existing retaining wall and faux rock structure, fixing a total of 90 linear feet of shoreline with a protective device. The armoring footprint would also cover some area of beach (as described above) and for purposes of determining the impacts from fixing the back beach, it is assumed that new beach area would result from landward retreat of the bluff.

At the project site, the lower part of the embankment has receded 10.1 feet laterally in a shore-normal direction in 13 years, which is approximately 9 inches (0.75 feet) per year. This average rate is appropriate to calculate passive erosion impacts. Therefore, the impacts from fixing the back beach, as calculated using the Commission's identified methodology, will be the annual

---

4 *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future.* National Research Council. 2012.

5 The area of beach lost due to long-term erosion (Aw) is equal to the long-term average annual erosion rate (R) times the number of years that the back-beach or bluff will be fixed (L) times the width of the property that will be protected (W). This can be expressed by the following equation: Aw = R x L x W. The annual loss of beach area can be expressed as Aw' = R x W.

loss of 68 square feet of beach. Over a 20-year permit horizon, this would result in a loss of 1,350 square feet of beach that would have been created if the bluff had not been fixed by the armoring. Within the Harbor, the Applicant's geotechnical consultants determined that the appropriate conversion factor is 0.5 cubic yard of sand nourishment per square foot. Using this conversion factor, the sand volume equivalent for the direct loss of beach due to encroachment would be 675 cubic yards of sand.

Retention of potential beach material

Finally, if natural erosion were allowed to continue at the project site, some amount of beach material would be added to the beach at this location, as well as to the larger littoral cell sand supply system outside the harbor. The volume of total material that would have gone into the sand supply system over the lifetime of the armoring would be the volume of material between (a) the likely future bluff-face location with the shoreline protection; and (b) the likely future bluff-face location without the shoreline protection. Since the main concern is with the sand component of this bluff material, the total material lost must be multiplied by the percentage of bluff material that is beach sand, giving the total amount of sand that would have been supplied to the littoral system for beach deposition if the proposed device were not installed. In this case, the project's geotechnical engineer assumed that 100% of the underlying material would nourish the beach if eroded. The Commission has established a methodology for identifying this impact[6] that equates to 45 cubic yards of sand per year for the proposed project. Over the course of a 20-year horizon, this equates to a retention impact of 900 cubic yards of beach quality sand.

Mitigation of Shoreline Sand Supply Impacts

The proposed project would result in quantifiable shoreline sand supply impacts. There would be loss of beach area due to: 1) placement of a shoreline protection onto approximately 675 square feet of beach that otherwise would be available for public use (converted to a sand volume of 338 cubic yards); 2) fixing of the back beach location, resulting in the loss of 1,350 square feet of beach that would have been created over the 20-year horizon (68 square feet of loss annually, and a total of 675 cubic yards over 20 years when converted to sand volume); and; 3) retention of 900 cubic yards of beach quality sand over the 20-year horizon that would have been added to the littoral cell (roughly 45 cubic yards of sand material per year). Over twenty years, these impacts would equate to a total of 2,025 square feet of lost beach area and the loss of 1,913 cubic yards of beach quality sand.

As discussed above, the proposed project would be located within the Monterey Harbor. The small existing beach at the project site (known as Sloat's Landing) consists of approximately 100

[6] The equation is Vb = (S x W x L) x [(R x hs) + (1/2hu x (R + (Rcu - Rcs)))]/27. Where: Vb is the volume of beach material that would have been supplied to the beach if natural erosion continued (this is equivalent to the long-term reduction in the supply of bluff material to the beach resulting from the structure); S is the fraction of beach quality material in the bluff material; W is the width of property to be armored; L is the design life of structure, if assumed a value of 1, an annual amount is calculated; R is the long term average annual erosion rate; hs is the height of the shoreline structure; hu is the height of the unprotected upper bluff; Rcu is the predicted rate of retreat of the crest of the bluff during the period that the shoreline structure would be in place, assuming no seawall were installed (this value can be assumed to be the same as R unless the Applicant provides site-specific geotechnical information supporting a different value); Rcs is the predicted rate of retreat of the crest of the bluff, during the period that the armoring would be in place, assuming the armoring has been installed (this value will be assumed to be zero unless the Applicant provides site-specific geotechnical information supporting a different value); and divide by 27 (since the dimensions and retreat rates are given in feet and volume of sand is usually given in cubic yards, the total volume of sand must be divided by 27 to provide this volume in cubic yards, rather than cubic feet).

lineal feet of narrow sandy and rocky shore. The beach is infrequently used by members of the public who cross over the existing three-foot tall rock wall at the top of the embankment and traverse the 5-10 feet down the face of the embankment on several informal trails. Although not an officially sanctioned public beach, it is also not closed to the public via signage or physical impediments. The shoreline on the downcoast (west) side of Fisherman's Wharf (approximately 100 feet from the project site), while also narrow in width and located within the harbor, is more heavily used by the public. It can be accessed by an existing stairway and experiences greater sand accumulation than at Sloat's Landing during certain times of the year. The Monterey Municipal Beach, which is the largest and widest beach in the city, begins on the upcoast (west) side of the Municipal Wharf, approximately 1,000 feet to the southeast. This beach is essentially the starting point of the sandy Monterey Bay coastline as it extends northward all the way to Moss Landing and beyond, with a multitude of public access points.

The proposed shoreline protection would not cover sandy beach area per se, but instead would be located on the sandy, rocky, and vegetated embankment that comprises much of the site. The wall area in this case is mostly not suitable for beach recreation, so the footprint of the sheet pile wall would not directly displace public access and recreation. However, sand trapped within the inner harbor contributes to the sand supply system, including the Monterey Bay littoral cell and area beaches. The Harbor Department dredges sediment to keep navigation channels and berths open for safe passage of commercial fishermen, recreational boating, and research vessels. Dredged materials are disposed of at two sandy beach areas along Del Monte Beach just upcoast of Municipal Wharf II in order to nourish the beaches there. The Harbor Department has a permit (CDP 3-10-040) to dredge up to 10,000 cubic yards of sediment annually for ten years. Thus, the 1,913 cubic yards of beach quality sand that would be withheld by the proposed project over the 20-year horizon can be considered a potential source of beach sand that will be lost due to the project.

It has proven difficult over the years to identify appropriate mitigation for such impacts. Partly this is because creating an offsetting beach area is not an easy task, and finding appropriate properties that could be set aside to become beach area over time (through natural processes, including erosion) is difficult both due to a lack of such readily available properties and the cost of such coastal real estate more broadly. There are no readily available properties of this sort in the vicinity. In similar cases, the Commission has approved other types of mitigation for public recreational impacts, such as compensatory beach access and other similar access improvements, and in-lieu fees and/or beach nourishment.

The use of public recreational access improvements to offset impacts from encroachment, passive erosion and loss of bluff materials has been applied by the Commission to public agencies that manage public access when they have applied for armoring projects[7] as well as to private applicants.[8] In the project area, and particularly at the project site, public access is well defined. As described above, the Custom House Causeway (i.e., the structure in danger of

[7] For example, as required for recreational access improvements along the Pleasure Point shoreline area of Santa Cruz County as part of the Commission's approval of a seawall fronting East Cliff Drive (CDPs A-3-SCO-07-015 and 3-07-019; December 13, 2007); and similar improvements associated with the Commission's approval of a seawall at Twin Lakes Beach in Santa Cruz County in CDP 3-12-055; August 15, 2013.

[8] See, for example, CDP 3-02-107, Podesto, and CDP 3-12-018, Gravelle's Boatyard.

erosion) includes public access amenities such as the Rec Trail, seating, lighting, vista points, and informative and interpretive signage. This area is part of a series of tourist attractions in the City (including the State Historic Park, Fisherman's Wharf, Cannery Row, and the Monterey Bay Aquarium) that can be considered one of the most heavily visited along the California coastline. The Rec Trail is used by local residents as well to travel within the City and beyond to other areas of the coastline along the Monterey Bay. The proposed project itself is a public access improvement in that the existing embankment, which supports an important public access amenity, is currently in danger of failing. Without the proposed repairs, the existing retaining wall and faux rock structure would likely not be able to support the Causeway through another winter season, putting the public in danger and potentially resulting in closure of portions of the Rec Trail. In particular, given that the embankment and Causeway are founded on fill and the existing retaining wall and faux rock structure were never intended to function as a seawall, it is possible that damage associated with settling or slumping could extend further inland than just the immediate shoreline, eventually up to the Custom House itself. However, although the project itself is beneficial to public access, the project still has an adverse impact to shoreline processes, and those impacts still must be mitigated.

As described above, the area also includes two beaches on the up and downcoast sides of the project site that are popular and easily accessible by the public. The City has begun the initial planning process for public access improvements at Sloat's Landing, such as stairs and a ramp to the beach. These improvements are not part of the current proposal, but the City has ensured that the design of the proposed sheet pile wall would not preclude such improvements in the future. The City has not identified any other new needed public access improvements along its shoreline at this time. Absent any readily apparent necessary public access projects, mitigation through completion of such a project does not appear feasible at this time.

With regards to beach nourishment, a formal sand replenishment strategy can introduce an equivalent amount of sandy material back into the system over time to mitigate the loss of sand that would be caused by a protective device over its lifetime. Obviously, given the right circumstances such an introduction of sand, if properly planned, can feed into the Monterey Bay littoral cell sand system to mitigate the impact of the project. If this impact were to be mitigated through a beach nourishment effort, the impacts would be comparable to the deposition of about 1,913 cubic yards of beach quality sand over the 20-year period. Absent a larger comprehensive program that provides a means to coordinate and maximize the benefits of several mitigation efforts in the area now and in the future, the success of piecemeal mitigation efforts, such as an Applicant-only project to drop equivalent amounts of sand over time at this location, is questionable. More importantly, such a sand nourishment effort is likely to be futile in this case given that the project site is within a harbor that is regularly dredged to remove sand buildup.

As an alternative mitigation mechanism, the Commission oftentimes uses a mitigation payment when in-kind mitigation of impacts is not available.[9] In situations where ongoing sand replenishment or other appropriate mitigation programs are not yet in place, the mitigation payment is deposited into an account until such time as an appropriate program is developed, and the funds can then be used to offset the designated impacts. When mitigation funds are pooled in

[9] See, for example, CDP A-3-SCO-06-006 (Willmott), CDP A-3-SLO-01-040 (Brett), CDP 3-98-102 (Panattoni) and CDP 3-97-065 (Motroni-Bardwell).

this way for multiple projects in a certain area, the cumulative impacts can also be better addressed inasmuch as the pooled resources can sometimes provide for a greater mitigation impact than a series of smaller mitigations based on individual impacts and fees. Based on an estimated range of costs for beach quality sand in this vicinity ranging from $25 to $50 per cubic yard delivered (or possibly more), a mitigation payment in this case would range from about $47,825 to $95,650[10] for the twenty-year authorization of the project impact. In other words, there could be quite a range, depending on actual costs. In cases of uncertainty like this, the Commission typically allows the Applicant to submit three bids for the cost of delivered beach quality sand, and allows the payment to be adjusted to the average for these three bids. In this case, an in-lieu fee that the City pays into a City account restricted for use for future public access, recreation or beach nourishment projects at or in the vicinity of the project site appears to be the appropriate mitigation for the project's sand supply impacts. **Special Condition 8** requires deposition of a fee in an interest-bearing account to be held by the City for no more than 10 years after the funds have been deposited in the account. The City must obtain the Executive Director's written approval of a mitigation project before it can spend these funds on a project meeting the required criteria.

To further help offset the impacts of the proposed project, the City agrees to remove errant rip rap on the beach at the site and restack it at the toe of the sheet pile wall to open up the sandy beach. The rip rap is a combination of historic fill material that comprises the embankment and rock placed at the site under CDP 3-02-020-G. This effort would allow the public greater use of this small beach for those that are willing and able to traverse down the embankment, and would add to the existing access and recreational amenities at the site. **Special Condition 1** requires this rip rap to be restacked and maintained in a manner that keeps the sandy beach portion of the site open and available.

Absent a readily available public access mitigation project that the City is currently able to undertake, the Commission finds that an in-lieu fee for future public access or recreation improvements or beach nourishment along the City's shoreline constitutes feasible mitigation of sand supply impacts of the proposed project. The fee, combined with removal and restacking of errant rip rap at Sloat's Landing in the manner described, represents a significant recreational benefit to offset the project's sand supply impacts. Therefore, the project satisfies the Coastal Act Section 30235 requirements regarding mitigation for sand supply impacts.

Long-Term Stability, Maintenance, and Risk

Coastal Act Section 30253 requires the project to assure long-term stability and structural integrity, minimize future risk, and avoid additional, more substantial protective measures in the future. Given the location within the harbor, which is susceptible to waves, tidal surges, and episodic tsunami events, the main Section 30253 concern is in ensuring that the proposed project is maintained in its approved state. In order to ensure that the Applicant and the Commission know when repairs or maintenance are required, the Applicant must regularly monitor the condition of the subject armoring, particularly after major storm events. Such monitoring will ensure that the Applicant and the Commission are aware of any damage to or weathering of the armoring and can determine whether repairs or other actions are necessary to maintain the seawall structure in its approved state before such repairs or actions are undertaken.

[10] Based on 1,913 cubic yards of such sand purchased today for $25 per cubic yard ($47,825) or $50 per cubic yard ($95,650).

To ensure that the proposed project is properly maintained to ensure its long-term structural stability, **Special Condition 4** requires regular monitoring of the armoring. Said monitoring shall provide for evaluation of the condition and performance of the proposed project and shoreline stability, and shall provide for necessary maintenance, repair, changes or modifications. **Special Condition 4** further allows the Applicant to maintain the project in its approved state, subject to the terms and conditions identified by the special conditions. Such future monitoring and maintenance activities must be understood in relation to clear as-built plans. Therefore, **Special Condition 7** of this approval requires the submittal of as-built plans to define the footprint and profile of the permitted armoring in its approved state.

In terms of recognizing and assuming the hazard risks for shoreline development, the proposed project has been designed to maximize the safety and stability of the Custom House Causeway. However, given that the amenities associated with the Causeway are located within and immediately adjacent to a working boat harbor, the project still has the potential to be subject to hazards associated with episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunami, tidal scour, coastal flooding, and the interaction of same. Therefore, **Special Condition 9** has been included to require that the Applicant assume the risks of injury and damage associated with these potential hazards as they relate to the proposed project and indemnify and hold harmless the Commission against any claims, damages, or costs associated with damage caused by such hazards.

For the reasons discussed above and as conditioned herein, the Commission finds that the proposed project is consistent with Sections 30235 and 30253 of the Coastal Act.

E. VISUAL RESOURCES

Coastal Act Section 30251 states:

> ***Section 30251.*** *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

The fill embankment at the site sits above a small manmade cove and contains a mix of existing elements, including granite rock-faced retaining walls, faux rock structures, real rock outcroppings, displaced rip rap, and a small cobble and sand beach **(Exhibit 3)**. The site is bounded by Fisherman's Wharf on the downcoast side and boat docks on the upcoast side. The entire upper portion of the embankment contains artificial walls or natural rock outcroppings. Although surrounded by harbor and wharf development, the natural rock outcroppings and relatively calm, clear water at the cove make it a pleasant sight for passersby along the Causeway and from the entrance to Fisherman's Wharf, as well as for those who traverse down the fill slope to visit the waterline. The proposed removal of existing displaced rip-rap on the small beach area would be a visual improvement in the public viewshed **(Special Condition 1).** The

proposed sheet pile wall would be covered with faux rock treatment to match and mimic the existing faux and real rock outcroppings at the site to minimize the wall's visual impact to the maximum degree feasible. To ensure that the shoreline protection is constructed and maintained in a way that mimics these rocks, **Special Condition 1** specifies that the entire seaward face of the proposed project must be sculpted, colored, and textured to approximate the existing faux and natural rocks at the site. **Special Condition 1** also requires native plant landscaping around the area of the wall. This would improve the overall appearance of the site and help soften the appearance of the new rock structures.

Overall, as conditioned, the proposed project would improve the public viewshed as seen from the Causeway, the small beach at the site, and the entrance to Fisherman's Wharf. As conditioned, the Commission finds the project consistent with the above-cited Coastal Act public viewshed policies.

F. MARINE RESOURCES

The relevant Coastal Act policies state:

> ***Section 30230:*** *Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*
>
> ***Section 30231:*** *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

The Monterey Harbor is located at the south end of Monterey Bay. Monterey Bay supports a diverse complex of marine and marine-related habitats including open ocean, kelp forests, rocky seashore, nearshore intertidal, sandy beaches, coastal streams, estuarine systems, and wetlands. These habitats support a wide variety of marine life, including benthic communities, marine mammals, and fish, including sensitive species such as the state threatened long-fin smelt (*Spirinchus thaleichthys*), the locally rare California grunion (*Leuresthes tenius*), the federally threatened South/Central California Coast steelhead (*Oncorhynchus mykiss irideus*), the federally threatened Chinook salmon (*Oncorhynchus tshawytscha*), and the federally threatened North American green sturgeon (*Acipenser medirostris*).

In 1992, Monterey Bay proper became part of the Monterey Bay National Marine Sanctuary, though the Monterey Harbor area was explicitly excluded from this designation. Although Monterey Bay is known for its aquatic diversity and habitat value, the Harbor is not known to be particularly sensitive in this respect. There are no creeks or tributaries that occur in the area of the Harbor, and the sandy substrate underlying the marina area is generally devoid of sea grasses

or kelp. In short, the project area is a fully developed and functioning marina that has been managed and maintained for such purposes for many decades, and there is generally a lower abundance and diversity of marine life at this location due to the ongoing uses of the site for these purposes.

Southern sea otters (*Enhydra lutris nereis*), California sea lion (*Zalophus californianus*), harbor seals (*Phoca vitulina*), and California brown pelican (*Pelecanus occidentalis californicus*) are known to occur within or immediately adjacent to the site, including at the small beach at the site. However, all of 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 proposed project site. These animals are highly adapted to the continuous human disturbances that occur at the Monterey Harbor, including intensive boat use. Although these species are known to occur here, they would not be expected to be impacted by the project due to their mobility, the short duration of construction, and the highly disturbed nature of the project site.

The proposed work would occur above the high tide line and the project materials and construction equipment would be separated from the beach and marine environment by a barrier of 150 lineal feet of silt fence. Project construction, as well as future maintenance activities, would likely occur from the Causeway, avoiding the need for equipment in the water, and minimizing impacts on marine resources and water quality. However, construction activity at the water's edge always has the potential to cause adverse impacts. Therefore, **Special Condition 2** requires construction and maintenance activities to be conducted in accordance with the construction methods typically required by the Commission to protect water quality and marine resources during armoring construction, including maintaining good construction site housekeeping controls and procedures, the use of appropriate erosion and sediment controls, a prohibition on equipment washing, refueling, or servicing on the beach, etc. **Special Condition 3** requires that all persons involved in the construction be educated on these CDP requirements, and that there be a designated construction coordinator who is the contact for both those working on the project as well as the public should questions or emergency situations (such as material spills) arise. As conditioned, the project is consistent with Coastal Act Sections 30230 and 30231 regarding protection of marine resources and offshore habitat.

G. PUBLIC ACCESS AND RECREATION

Coastal Act Sections 30210 through 30224 specifically protect public access and recreational opportunities, including visitor-serving resources. In particular:

> ***Section 30210:*** *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*
>
> ***Section 30211:*** *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*
>
> ***Section 30212(a):*** *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects….*

Section 30213. *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

Section 30220. *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

Section 30221. *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

Section 30223. *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

Section 30224. *Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.*

As discussed in the Hazards finding above, shoreline structures can have a variety of negative impacts on coastal resources including adverse effects on beaches and sand supply, which ultimately result in the loss of the beach with associated impacts to public recreational access. In this case, the proposed sheet pile wall, which will encroach onto 675 square feet of the beach and will narrow the beach space by approximately 1,350 square feet over the 20-year authorization period (due to passive erosion), would impact public recreational access to the available beach area at the site. In addition, the retention of 900 cubic yards of beach quality material over the 20-year authorization period would also impact public recreational access at the site, as well as other nearby beaches, because such materials would contribute to beach formation and retention but for the wall.

The project itself is beneficial for public access and recreation because without it, the heavily used access amenities above the embankment are in danger of imminent failure. The Causeway and its associated elements, including the Rec Trail, comprise a critical public access component in the City's network of such amenities for residents and visitors alike. The Commission recognizes that the project itself provides significant public access improvements because it restores access and ensures safe long-term access to the Rec Trail. However, the sand loss associated with repair of the damaged and failing embankment requires mitigation to offset the associated sand supply public access impacts. The City acknowledges that additional access improvements at Sloat's Landing, as well as at other nearby locations such as Fisherman's Shoreline Park, would be beneficial to public access. However, no such projects are ready for permitting or implementation at this time. As such, **Special Condition 8** requires a payment, in lieu of undertaking a public access or recreation project(s) at this time, in order to mitigate for the public access and recreation impacts associated with the proposed shoreline armoring. Therefore, the approved project includes a sand supply and public access mitigation fee to offset impacts from the loss of bluff materials and beach area (see **Special Condition 8**). The approved

project also includes a requirement to remove and restack errant rip rap on the small beach at the site to improve the public's ability to recreate on the beach and offset impacts from the loss of bluff materials (see **Special Condition 1**). The payment and opening up additional beach area at Sloat's Landing represent appropriate mitigation measure to offset public recreational access impacts.

With respect to construction impacts, this project will: require the movement of large equipment, workers, materials, and supplies in and around the shoreline area and public access points; include large equipment operations in these areas; result in the temporary loss of public access use areas to a construction zone; and generally intrude and negatively impact the aesthetics, ambiance, serenity, and safety of the recreational experience at these locations. These public recreational use impacts are temporary and can be mitigated through construction parameters that limit the area of construction, limit the times when work can take place (to avoid both weekends and peak summer use months when recreational use is highest), clearly fence off the minimum construction area necessary, keep equipment out of coastal waters, require off-beach equipment and material storage during non-construction times, clearly delineate and avoid to the maximum extent feasible public use areas, and restore all affected public access areas at the conclusion of construction. A construction plan is required to implement these measures (s**ee Special Condition 2**), the Applicant must maintain copies of the CDP and approved plans available for public review at the construction sites, as well as provide a construction coordinator whose contact information is posted at the sites to respond to any problems and/or inquiries that might arise (**see Special Condition 3**).

In conclusion, and because the approval includes a requirement that the Applicant return for a CDP amendment to address the public access impacts of the project beyond the 20-year timeframe (see **Special Condition 6**), these mitigations can appropriately offset the public recreational access impacts associated with the proposed project for the initial twenty years of the project's authorization. As conditioned, the project is consistent with the Coastal Act access and recreation policies sited above.

H. OTHER AGENCY APPROVALS

California Department of Parks and Recreation (State Parks) and the City of Monterey own the project site. State Parks has authorized the City to perform work on its property. The Applicant has obtained notice from the State Lands Commission that no portion of the project would occur on state tidelands, and because the Harbor is outside the limits of the Monterey Bay National Marine Sanctuary, no approval or authorization is required by that agency. However, some work may be located within the jurisdiction of the Army Corps of Engineers and the California Department of Fish and Wildlife. Accordingly, this approval is conditioned to ensure that the project (as conditioned and approved by this CDP) has received all necessary authorizations (or evidence that none are necessary) from other agencies (**Special Condition 5**).

I. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with CDP applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available

which would substantially lessen any significant adverse effect which the activity may have on the environment.

The City of Monterey, acting as lead agency, is scheduled to adopt a Mitigated Negative Declaration for the proposed project on August 19, 2014. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. The preceding coastal development permit findings discuss the relevant coastal resource issues with the proposal, and the permit conditions identify appropriate modifications to avoid and/or lessen any potential for adverse impacts to said resources. All public comments received to date have been addressed in the findings above, which are incorporated herein in their entirety by reference.

As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as conditioned, would have on the environment within the meaning of CEQA. Thus, if so conditioned, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

1. *Geotechnical Report, Monterey Causeway Shoreline Embankment,* Haro, Kasunich and Associates, Inc., December 2013
2. *Response to California Coastal Commission Letter Dated April 18, 2014, Custom House Plaza, Monterey Bay Recreation Trail and Monterey Harbor,*, Haro, Kasunich, and Associates, Inc., July 2014
3. *City of Monterey Causeway Shoreline Embankment Repair Project Mitigated Negative Declaration*, City of Monterey, April 2014.
4. *Biological Study for the City of Monterey Causeway Embankment Repair Project*, Denise Duffy & Associates, Inc., February 2014.
5. *Custom House Causeway – Emergency Regarding Slope Stability Memo,* Tom Reeves, City Engineer, City of Monterey, April 2013.

CCC Exhibit 1 (page 1 of 1 pages)

3-14-0569

San Jose
Salinas
CA

Title: **Vicinity Map**

File: VicinityMap.mxd

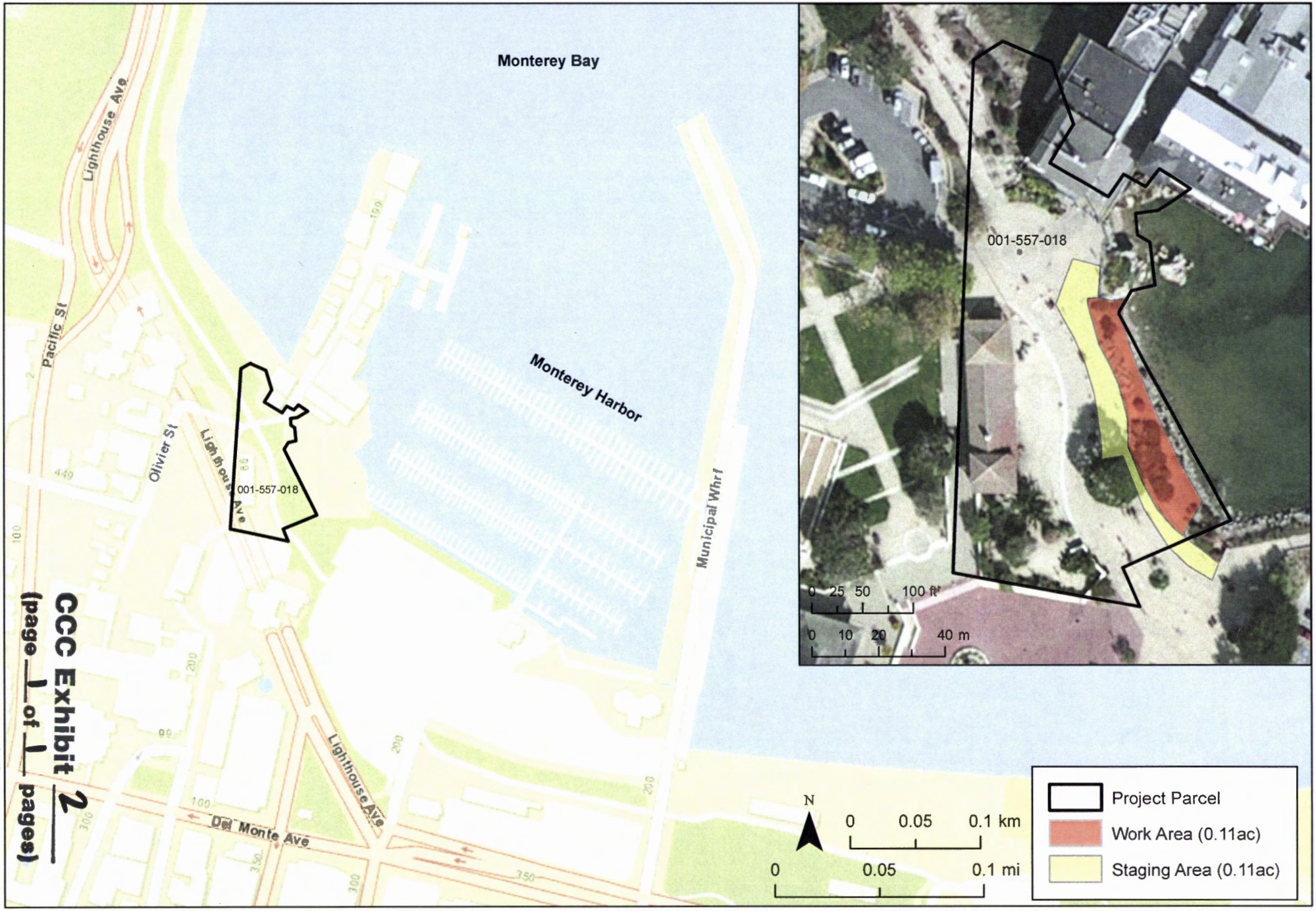
Date: 01-27-2014

Scale: 1 inch = 2.16 miles

Project: 2013-52 Causeway

Monterey | San Jose
Denise Duffy and Associates, Inc.
Environmental Consultants Resource Planners
947 Cass Street, Suite 5
Monterey, CA 93940
(831) 373-4341

Attachment 6a



CCC Exhibit 2 (page 1 of 1 pages)

3-14-0569

San Jose
Salinas

Title: **Location Map**

File: Location Map.mxd

Date: 03-13-2014
Scale: 1 inch = 0.06 miles
Project: 2013-52 Causeway

Monterey | San Jose
Denise Duffy and Associates, Inc.
Environmental Consultants Resource Planners
947 Cass Street, Suite 5
Monterey, CA 93940
(831) 373-4341

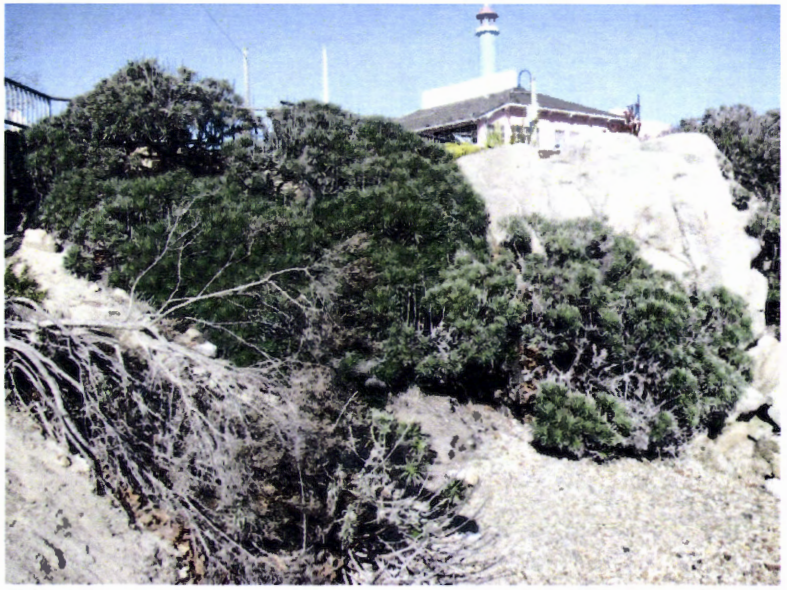
Attachment 6b

CCC Exhibit 3
(page 1 of 5 pages)
3-14-0569

CCC Exhibit 3 (page 2 of 5 pages)

3-14-0569

Attachment 6b	Title: **Monterey Causeway Embankment Repair Project Erosion Area Photos**	Denise Duffy and Associates, Inc.
Date: 01-24-2014		Environmental Consultants Resource Planners 947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341



CCC Exhibit 3
(page 3 of 5 pages)

3-14-0564

Attachment 6a	Title: **Monterey Causeway Embankment Repair Project Site Vegetation Photos**	Denise Duffy and Associates, Inc.
Date: 01-24-2014		Environmental Consultants Resource Planners 947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341

CCC Exhibit 3
(page 4 of 5 pages)
3-14-0569

CCC Exhibit 3
(page 5 of 5 pages)
3-14-0569

CITY OF MONTEREY

CAPITAL IMPROVEMENT PROGRAM
CAUSEWAY EMBANKMENT REPAIR

PROJECT NUMBER 64C1409

FOR USE IN CONJUNCTION WITH THE STANDARD DETAILS OF THE CITY OF MONTEREY AND THE STANDARD PLANS & STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, 2010 EDITION.

ABBREVIATIONS

±	PLUS OR MINUS; APPROX
@	AT
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
APPROX	APPROXIMATE
ASB	AGGREGATE SUBBASE
BC	BEGIN CURVE
BVC	BEGIN VERTICAL CURVE
BVCE	BVC ELEVATION
BVCS	BVC STATION
BS	BOTTOM OF STAIR
BW	BACK OF WALK
C&G	CURB AND GUTTER
CATV	CABLE TV
CDSW	CURB, GUTTER AND SIDEWALK
℄	CENTERLINE
CL	CLASS
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONST	CONSTRUCT
CONT	CONTINUOUS
DEMO	DEMOLISH AND DISPOSE OF
D.G.	DECOMPOSED GRANITE
DI	DRAIN INLET
DIA	DIAMETER
DS	DOWNSPOUT
(E)	EXISTING
EC	END CURVE
EG	EXISTING GRADE
EJ	EXPANSION JOINT
ELEV	ELEVATION
EQ.	EQUAL
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EVCE	EVC ELEVATION
EVCS	EVC STATION
E.W.	EACH WAY
EX	EXISTING
FC	FACE OF CURB
FF	FINISHED FLOOR
FG	FINISHED GRADE
FL	FLOWLINE
FR	FIRE RISER
FRP	FIBER REINFORCED POLYMER
FS	FINISHED SURFACE
GB	GRADE BREAK
GBE	GB ELEVATION
GBS	GB STATION
GM	GAS METER
GRT	GRATE
GV	GAS VALVE/VAULT
HP	HIGH POINT
HORIZ.	HORIZONTAL
INV	INVERT
JP	JOINT UTILITY POLE
LDG	LANDING
LF	LINEAR FEET
LFF	LOWER FINISH FLOOR
LP	LOW POINT
LT	LEFT
MATCH	MATCH EXISTING GRADE
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N.I.C.	NOT IN CONTRACT (BY OTHERS)
O.W.	ON CENTER
OG	ORIGINAL GROUND
P.A.	PLANTER AREA
P.O.C.	POINT OF CONNECTION
POC	POINT OF CURVATURE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PTDF	PRESSURE TREATED DOUG-FIR
R	RADIUS
R.C.	RELATIVE COMPACTION
RCP	REINFORCED CONC PIPE
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RW	RECYCLED WATER
RWL	RAIN WATER LEADER
SD	STORM DRAIN
SS	SANITARY SEWER
STA	STATION
SW	SIDEWALK
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TD	TOP OF AC DIKE
TFC	TOP OF FLUSH CURB
TG	TOP OF GRATE
TOP	TOP OF PIPE
TS	TOP OF STAIR
TW	TOP OF WALL
TYP	TYPICAL
UFF	UPPER FINISH FLOOR
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
UP	UTILITY POLE
UNKN	UNKNOWN
VAR	VARIES
VERT.	VERTICAL
W	WATER
WM	WATER METER
WV	WATER VALVE

GENERAL NOTES

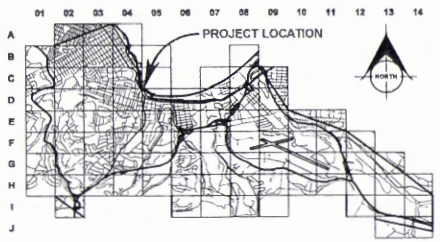
1. CONTRACTOR SHALL COORDINATE ALL WORK, INCLUDING SUBCONTRACTOR'S WORK, SO AS TO ELIMINATE CONFLICTS AND WORK TOWARDS THE GENERAL GOOD AND COMPLETION OF THE ENTIRE PROJECT WITHIN THE SPECIFIED TIME PERIOD.
2. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ANY CURRENTLY APPLICABLE SAFETY LAW OF ANY JURISDICTIONAL BODY. FOR INFORMATION REGARDING THIS PROVISION, THE CONTRACTOR IS DIRECTED TO CONTACT THE STATE OF CALIFORNIA, DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, FREMONT, CALIFORNIA, PHONE (510) 794-2521. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES, AND CONTROL OF TRAFFIC WITHIN THE CONSTRUCTION AREA. FOR ALL TRENCH EXCAVATION FIVE (5) FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, 39141 CIVIC CENTER DRIVE, SUITE 310, FREMONT, CALIFORNIA, 94538, PRIOR TO THE BEGINNING OF ANY EXCAVATION. A COPY OF THIS PERMIT SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
3. CONTRACTOR SHALL EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING TREES, UTILITIES AND SURFACE IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, AND SHALL BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS AND MARKERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB AND SHALL NOTIFY THE ENGINEER OF ANY VARIATION FROM THE DIMENSIONS AND CONDITIONS SHOWN. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
7. ANY DISCREPANCIES OR OMISSIONS FOUND IN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE ENGINEER WILL CLARIFY DISCREPANCIES OR OMISSIONS IN WRITING WITHIN A REASONABLE TIME.
8. THE EXISTENCE, LOCATION AND ELEVATION OF ANY UNDERGROUND FACILITIES ARE SHOWN ON THIS PLAN IN A GENERAL WAY ONLY. THE UTILITIES SHOWN ON THIS PLAN ARE A COMPILATION OF A FIELD SURVEYING INFORMATION AND RECORD DRAWING SEARCH. IT IS MANDATORY THAT THE CONTRACTOR EXPOSE AND VERIFY THE TOP AND BOTTOM OF ALL UTILITIES PRIOR TO ANY WORK ON SUBSEQUENTLY EFFECTED FACILITIES. IT IS THE RESPONSIBILITY AND DUTY OF THE CONTRACTOR TO MAKE THE FINAL DETERMINATION AS TO THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AND TO BRING ANY DISCREPANCY TO THE ATTENTION OF THE ENGINEER.
9. REMOVE AND SALVAGE, TO PROPERTY OWNERS, EXISTING IMPROVEMENTS WITHIN THE RIGHT OF WAY THAT CONFLICT WITH PROPOSED IMPROVEMENTS.
10. BIDDER SHALL VISIT THE SITE, EXAMINE AND NOTE EXISTING SITE CONDITIONS, AS TO THE CHARACTER AND EXTENT OF WORK INVOLVED, AND BID ACCORDINGLY.
11. ANY TRIMMING OR REMOVAL OF LANDSCAPING MUST BE APPROVED BY THE ENGINEER.

SURVEY AND EXISTING CONDITIONS

1. TOPOGRAPHY SHOWN WAS PREPARED BY CITY OF MONTEREY, DATED JAN 17, 2013.
2. BENCHMARK AND DATUM: MEAN LOW LOW WATER BASED ON NATIONAL GEODETIC SURVEY TIDAL BENCH MARK, DESIGNATION 941 3450 N TIDAL, PID GU4177. ELEVATION =14.82 ABOVE MLLW.
3. COORDINATES SHOWN HEREON ARE GRID COORDINATES BASED ON CALIFORNIA COORDINATE SYSTEM OF 1983 (1992) ZONE 4. COORDINATES ARE BASED ON COORDINATE VALUES SHOWN FOR FOUND MONUMENTS ON PARK AVENUE ON THE OFFICIAL FILED IN VOLUME 19 OF CITIES AND TOWNS AT PAGE 59 IN THE OFFICE OF THE COUNTY RECORDER OF MONTEREY COUNTY AND ARMY CORPS OF ENGINEERS MONUMENT MB 71 AS SHOWN ON RECORD OF SURVEY FILED IN VOLUME 21 OF SURVEYS AT PAGE 14.
4. DISTANCES SHOWN HEREON ARE GRID DISTANCES, IN U.S. SURVEY FEET. TO OBTAIN GROUND DISTANCES DIVIDE THE DISTANCES SHOWN BY COMBINED FACTOR OF 0.999944845.
5. BEARINGS SHOWN HEREON ARE GRID BEARINGS BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS-83) (1992) ZONE 4.
6. DISTANCES AND DIMENSIONS SHOWN ARE EXPRESSED IN FEET AND DECIMALS THEREOF, UNLESS OTHERWISE NOTED.
7. ALL "MATCH" OR "JOIN" CALLOUTS ON THE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATION AND ELEVATION PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER IN THE CASE OF ANY FIELD DISCREPANCY.
8. THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL DEVIATIONS FROM THE WORK PROPOSED IN THESE PLANS AND SPECIFICATIONS, AND A RECORD DRAWING SET SHALL BE PREPARED AND PROVIDED TO THE ENGINEER AT THE COMPLETION OF WORK. CHANGES SHALL NOT BE MADE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE DESIGN ENGINEER.

SHEET INDEX (REV 30% DESIGN SUBMITTAL)

PROJECT LOCATION

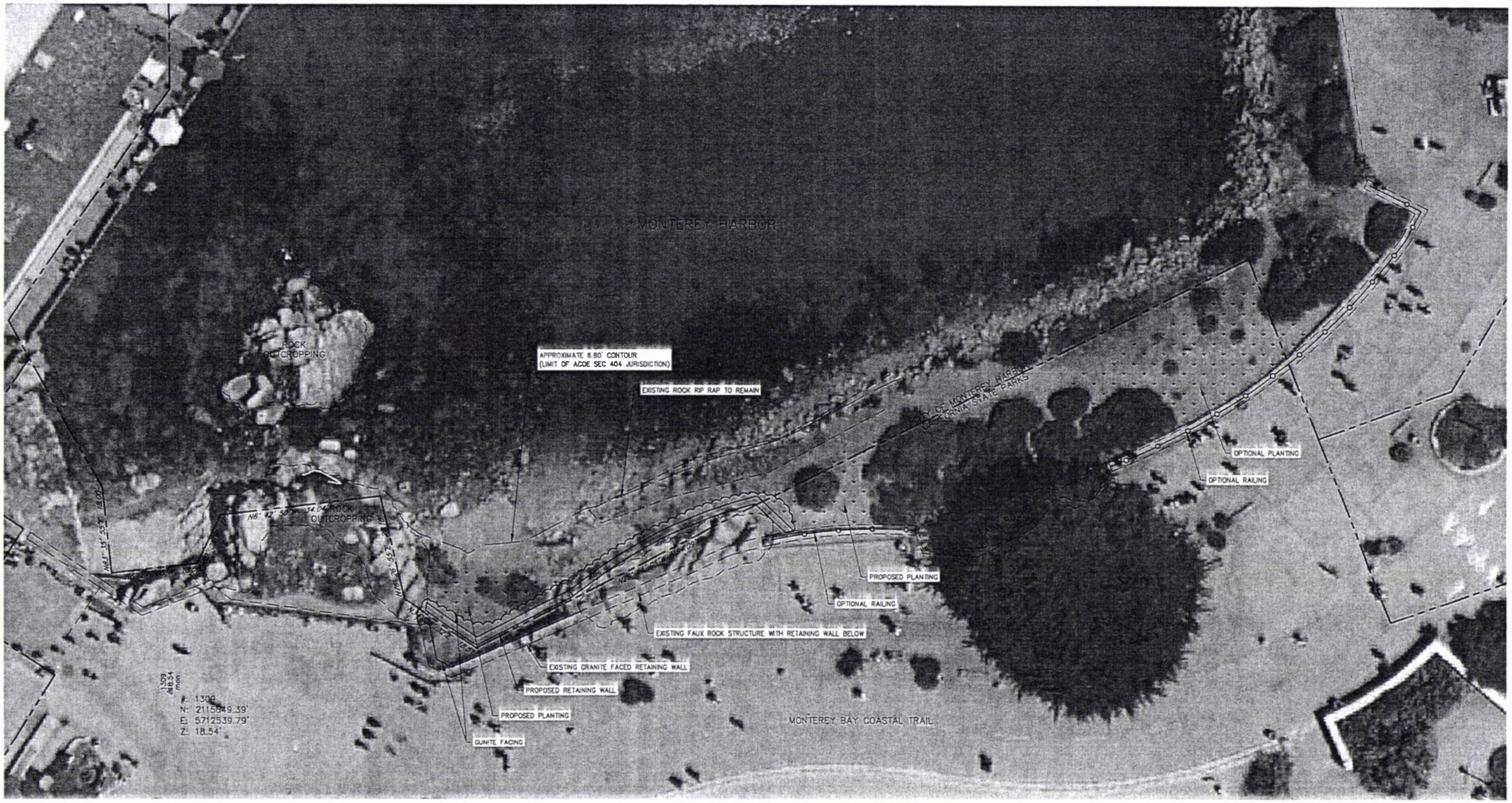


WHITSON ENGINEERS
9699 Blue Larkspur Lane • Suite 105 • Monterey, CA 93940
831 649-5225 • Fax 831 373-5065
CIVIL ENGINEERING • LAND SURVEYING • PROJECT MANAGEMENT
W.E.PROJ.# 2089.00

DESIGNED BY: NDM	CITY OF MONTEREY DEPARTMENT OF PLANS AND PUBLIC WORKS	DIGALERT 811	CAPITAL IMPROVEMENT PROGRAM CAUSEWAY EMBANKMENT REPAIR	REVISIONS	DATE	No	SCALE: AS NOTED CAD Dwg. NAME: 3069-DRAFT-30 R1 PROJECT NAME: CAUSEWAY CIP 64C1409 DRAWER NO. PRINT NO.
DRAWN BY: NDM							SHEET No: C0.1 OF 4
CHECKED BY: RPW	APPROVED FOR CONSTRUCTION:		COVER SHEET				
DATE: 12/11/13	ROBERT HARARY, Principal Engineer / Capital Programs Manager — DATE		CUSTOM HOUSE PLAZA / MONTEREY HARBOR PROJECT No. 64C1409				

30% DRAFT

CCC Exhibit 4 (page 1 of 3 pages)
3-14-0529



SCALE: 1" = 10'

10 0 10 20 30 Feet

WHITSON ENGINEERS

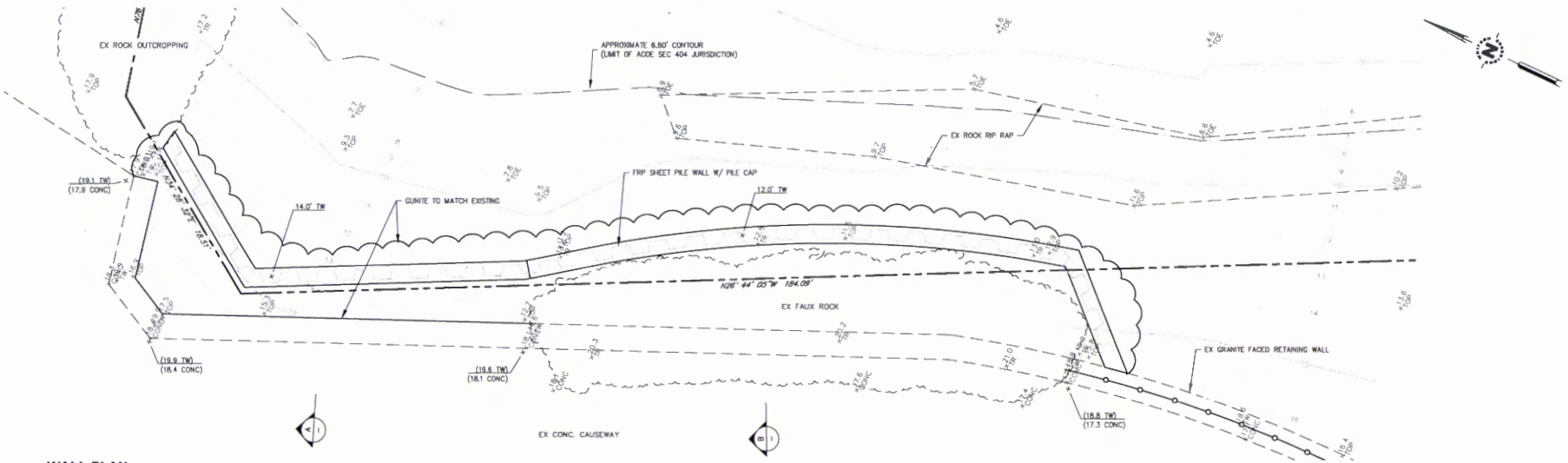
9699 Blue Larkspur Lane • Suite 105 • Monterey, CA 93940
831 649-5225 • Fax 831 373-5065
CIVIL ENGINEERING • LAND SURVEYING • PROJECT MANAGEMENT
WE PROJ.# 3069.00

DESIGNED BY: NDM	CITY OF MONTEREY DEPARTMENT OF PLANS AND PUBLIC WORKS	DIGALERT 811	CAPITAL IMPROVEMENT PROGRAM CAUSEWAY EMBANKMENT REPAIR	REVISIONS	DATE	No.	SCALE: 1" = 10'	SHEET No. C1.1 OF 4
DRAWN BY: NDM	APPROVED FOR CONSTRUCTION		SITE PLAN				CAD Dwg. NAME: 3069-DRAFT-30 R1	
CHECKED BY: RPW	ROBERT HARARY, Principal Engineer / Capital Programs Manager — DATE		CUSTOM HOUSE PLAZA / MONTEREY HARBOR PROJECT No. 64C1409				PROJECT NAME: CAUSEWAY CIP 64C1409	
DATE: 12/11/13							DRAWER NO. PRINT NO.	

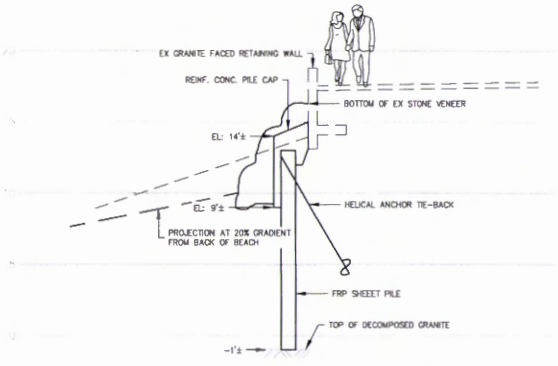
DRAFT — REGISTERED PROFESSIONAL ENGINEER, RICHARD P. WEBER, CIVIL, STATE OF CALIFORNIA

3-14-0569

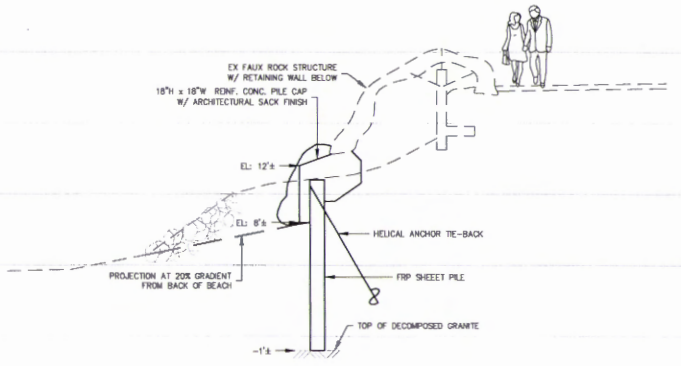
CCC Exhibit 4
(page 2 of 3 pages)



WALL PLAN
SCALE: 1" = 4'



A TYPICAL SECTION
SCALE: 1" = 4'



B TYPICAL SECTION
SCALE: 1" = 4'

WHITSON ENGINEERS
9699 Blue Larkspur Lane · Suite 105 · Monterey, CA 93940
831 649-5225 · Fax 831 373-5065
CIVIL ENGINEERING · LAND SURVEYING · PROJECT MANAGEMENT

DESIGNED BY	NDM
DRAWN BY	NDM
CHECKED BY	RPW
DATE	12/11/13

CITY OF MONTEREY
DEPARTMENT OF PLANS AND PUBLIC WORKS

APPROVED FOR CONSTRUCTION

ROBERT HARARY, Principal Engineer / Capital Programs Manager — DATE

DIGALERT 811

CAPITAL IMPROVEMENT PROGRAM
CAUSEWAY EMBANKMENT REPAIR
WALL PLAN AND SECTIONS
CUSTOM HOUSE PLAZA / MONTEREY HARBOR
PROJECT No. 64C1409

REVISIONS	DATE	No.

SCALE	1" = 4'
CAD Dwg. NAME	3069-DRAFT-30 R1
PROJECT NAME	CAUSEWAY CIP 64C1409
DRAWER NO.	
PRINT NO.	

SHEET No: **S1.2** OF 4

REGISTERED PROFESSIONAL ENGINEER RICHARD P. WHITSON No. 17951 CIVIL STATE OF CALIFORNIA

90% DRAFT

CCC Exhibit 4 (page 2 of 3 pages)

3-14-0569