

San Francisco Bay Conservation and Development Commission

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Agenda Item #9

November 8, 2019

Application Summary

City of Foster City

Levee Protection Planning and Improvements Project

(For Commission consideration on November 21, 2019)

Permit Application Number:	2018.005.00
Applicant:	City of Foster City
Project Description:	Rehabilitate approximately 5.9 miles of the 6.5-mile Foster City levee system to regain FEMA accreditation and account for sea level rise to 2050 with an adaptation strategy beyond 2050.
Location:	In the Bay and within the 100-foot shoreline band and San Francisco Bay Plan-designated Waterfront Park, Beach and Wildlife Refuge Priority Use Areas, along the Foster City levee system and shoreline, in the City of Foster City, San Mateo County.
Application Filed Complete:	November 5, 2019
Deadline for Commission Action:	February 3, 2020
Staff Contact:	Walt Deppe (415/352-3622; walt.deppe@bcdc.ca.gov)

Project Overview

Project Description

The City of Foster City proposes to construct shoreline protection structures and redevelop public access along the shoreline levee system, in the City of Foster City, San Mateo County. The project would include levee rehabilitation work with new shoreline protection to rehabilitate approximately 31,300 linear feet of the 34,300-linear foot Foster City levee system to retain FEMA accreditation and account for sea level rise to 2050 with an adaptation strategy beyond 2050 (see Exhibits A and B). The project would also redevelop and widen approximately 32,800 linear feet of the levee Bay Trail, provide public access amenities and access to the Bay (see Exhibits C and D), and provide detours during construction (see Exhibit E). Additionally, the project would construct two bridges to increase tidal circulation to enhance O'Neil Slough in the southern segment of the project site.



Figure 1. The project site is located along the Foster City shoreline, shown in red.



Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

Public Access

The project would result in the construction of approximately 35.1 acres (1,527,850 square feet) of public access areas, including approximately 33.2 acres (1,445,020 square feet) within the Commission's 100-foot shoreline band jurisdiction and 1.9 acres (82,830 square feet) outside of the Commission's permitting jurisdiction. The project would include a widened, approximately 32,800-linear-foot section of the San Francisco Bay Trail (Bay Trail) along the project site.

The project also would provide access to the Bay and landside areas, plantings, and a variety of amenities, including an approximately 18,850-square-foot recreation area between the floodwall and shoreline with a connecting boardwalk, modifications to existing public access areas (see Exhibits C and D), and new bridges on either end of O'Neil Slough. The project would also provide bicycle and pedestrian detours as illustrated in Exhibit E.

Figure 2. Rendering (main panel) of the Bay Trail looking west to east as it crosses under the San Mateo Bridge, including the flood protection wall and a low seating wall (top left: existing conditions, bottom right: location).



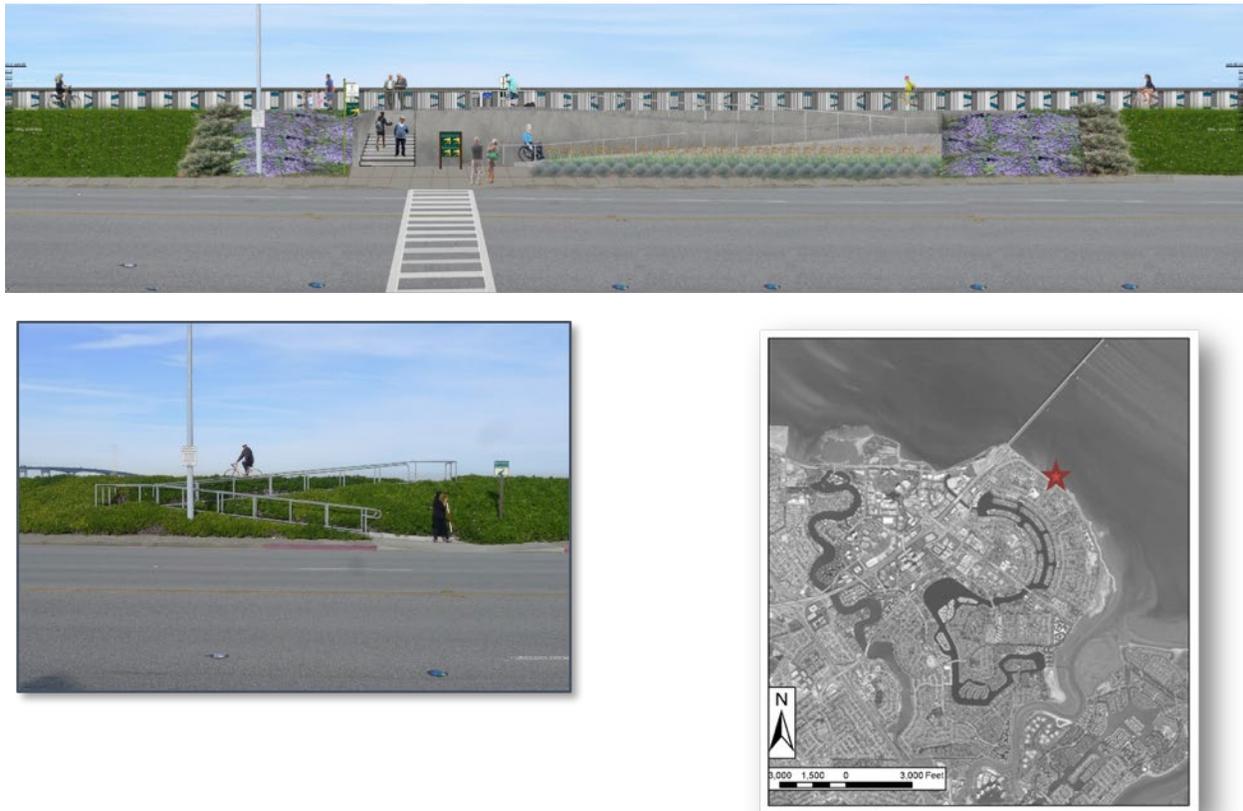
Bay Fill

The proposed project would replace existing water access ramps, including riprap, resulting in approximately 2,000 square feet (approximately 250 cubic yards) of new Bay fill and the removal of approximately 1,070 square feet (approximately 78 cubic yards) of existing Bay fill, for a net Bay fill increase of approximately 930 square feet (approximately 172 cubic yards).

The project would also construct two bridges to replace the existing earthen fill pedestrian pathways which separate the O'Neil Slough remnant channel from Belmont Slough, resulting in 510 square feet of cantilevered fill. The construction of the bridges at either end of the muted tidal channel would include excavation at the shoreline that would open an approximately 2,750-square-foot area at both ends of what is currently a muted tidal marsh to allow for full tidal exchange through the excavation of open channels beneath the bridge spans and hydrologically connect O'Neil Slough with Belmont Slough. Currently, the tidal flow at the slough is received from only one culvert which is blocked with sediment, muting the tidal action. The excavation would result in restoration of the salt marsh and a net improvement in aquatic habitat value, especially from the standpoint of suitability to support federally-listed species such as Ridgway's Rail and salt marsh harvest mouse.

The project would temporarily impact approximately 10,500 square feet of the Bay during construction of water access ramps and bridges and the reconstruction of lagoon intake and outfall structures, associated with cofferdams for dewatering and environmental construction measures used during construction, such as silt curtains. Temporary impacts are estimated to occur for less than 1 year at any given location. Locations of permanent and temporary Bay fill are illustrated in Exhibit F.

Figure 3. Rendering (top panel) of a typical trail access ramp from Beach Park Boulevard, landscaping along the levee slope, and the Bay Trail on top of the levee (bottom left: existing conditions, bottom right: location).

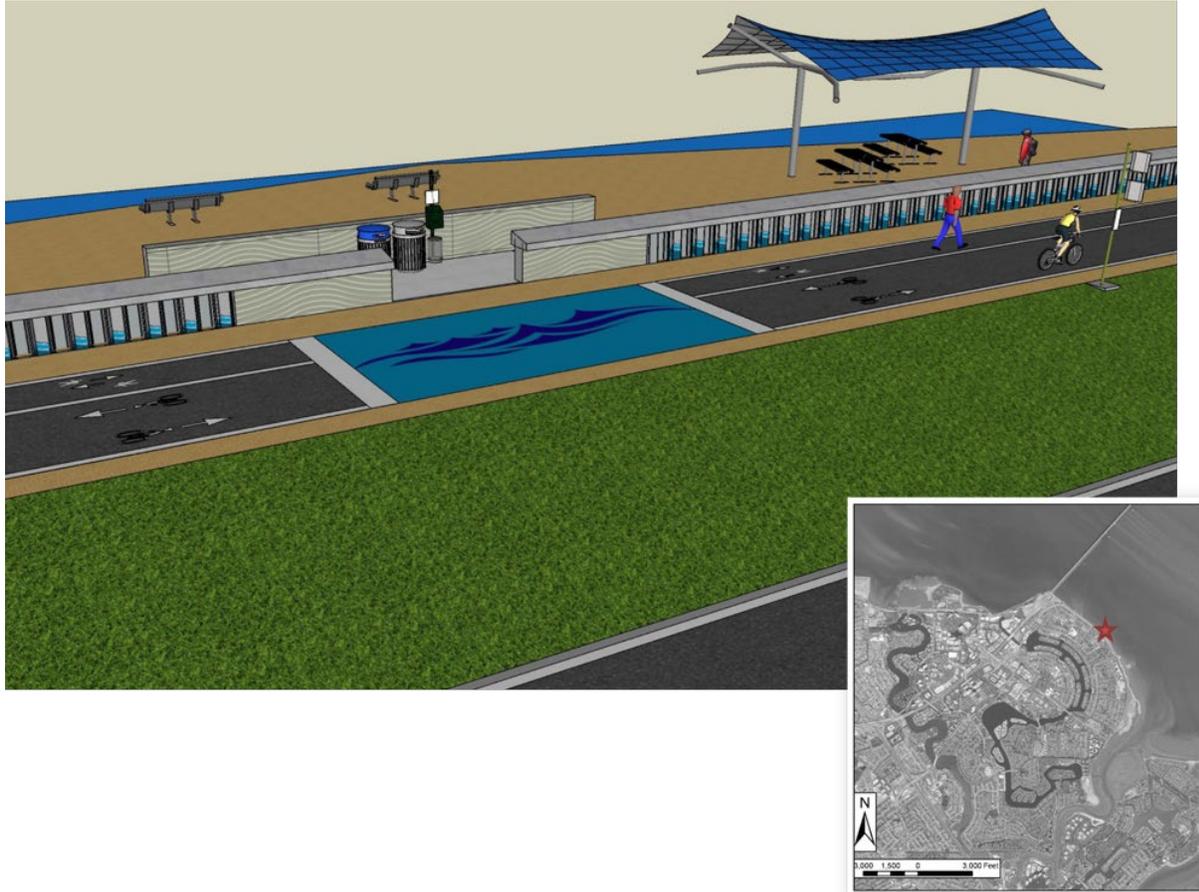


Flooding and Sea Level Rise

The anticipated life for the project is 80 years. Using the methodology outlined in the 2018 California Sea Level Rise Guidance from the Ocean Protection Council and Natural Resources Agency (“2018 State Guidance”), the project plans for 1.9 feet of projected sea level rise at 2050. The public access required by the project would primarily be sited behind shoreline improvements (see Exhibit A) designed so that these areas would not experience flooding during a 100-year storm event today. Nor is it anticipated that they would be subject to flooding during a 100-year flood at a mid-century projection of 1.9 feet of sea level rise (see Exhibit B). It is also anticipated that both the lower shoreline paths on the waterside of the flood walls and the section of trail beneath the San Mateo Bridge would not be subject to flooding during a 100-year flood at a mid-century projection of sea level rise. Thus, the public

access would be anticipated to be resilient to mid-century sea level rise based on the best available scientific data.

Figure 4. Rendering of proposed picnic area between Sanderling Street and Gull Avenue adjacent to Beach Park Boulevard, with an opening in the flood protection wall, and including public access amenities, wayfinding trail stenciling, and wall treatments.



The permittee provided as part of the application for this project a risk assessment and adaptive management plan (RAAMP) that addresses the 2018 State Guidance and explains how the project is designed to be resilient to mid-century sea level rise projections during a 100-year storm event, including wave run-up, along the distinct segments of the project site. The RAAMP also outlines a suite of feasible adaptation measures given site conditions, and establishes an adaptation pathways approach for future adaptation through 2100 with sea level rise projections of 6.9 feet and a 100-year storm event.

Schedule and Cost

The applicant states that construction is anticipated to begin in March 2020 and end in March 2023. The total project cost is projected at \$90 million.

Issues Raised

The staff believes the central issues raised by the proposed project are whether it is consistent with the Commission's law and policies related to: (1) allowable Bay fill; (2) maximum feasible public access; and (3) flooding and sea level rise. A list of applicable McAteer-Petris Act and San Francisco Bay Plan policies is included below.

Staff Notes

The staff notes the following considerations for the Commission:

- **Design Review Board.** The Design Review Board (Board) reviewed the project on February 11, 2019, and August 5, 2019. At the February 2019 meeting, the Design Review Board requested to see the project again, made some suggestions regarding public access design, and requested more information regarding the feasibility of expanding landward into publicly owned lands in areas such as along Beach Park Boulevard. At the August 2019 meeting, the City provided a landward constraints analysis and presented a number of project design changes based on discussions with the Commission's staff and with members of the boardsailing community, and the input received from the Board. At that meeting the Board reviewed the project and advised staff to continue to work with the project team to ensure that the project includes comprehensive wayfinding, interpretive elements, and amenity design considerations. The Board also suggested that the City should acknowledge and account for recreational uses, such as boardsailing, and their predominant seasons when scheduling construction activities in those heavily-used areas. In addition, the Board suggested that public access at the project site would benefit from future review of the adequacy of the amenities provided. The City plans to submit additional public access design plans to the staff prior to construction of the project in response to the Board's comments.
- **Flooding and Sea Level Rise.** Adaptation measures considered in the RAAMP provided as part of the application for this project include landward ecotone levees, traditional shoreline revetments with landward expansion, ecotone levees with Bay fill, adaptive offshore structures, and traditional shoreline revetments. This version of the RAAMP also references the San Francisco Bay Adaptation Atlas (published by the San Francisco Estuary Institute, April 2019) and acknowledges that different segments of the Foster City levee project site may require different adaptation requirements and the project site may require a mix of different kinds of adaptation measures as necessary.
- **Public Access.** Although views to the Bay from adjacent roads and public areas are already impacted by the existing levee, raising the levee will further impact views. The project, as a result of discussions with staff during the application process, would include features to enhance physical and visual access, including railed overlook platforms, a trail-elevation picnic area, and access points to the Bay through the flood walls.

- **Construction Closures and Detours.** The City would close and detour the Bay Trail and other public access areas for the duration of construction. The City would provide a detour plan to the Commission for approval, install signs, and conduct outreach to the public, including recreation groups such as the boardsailing community, to communicate closure plans, and would reopen completed sections of the Bay Trail between completed access facilities where feasible if construction lasts longer than anticipated.

Applicable Policies

The following policies are applicable in the Commission's review of the proposed project:

- McAtteer-Petris Act: Sections 66605 (Allowable Bay Fill), 66602 (Water-Oriented Land Uses and Public Access), and 66632.4 (Maximum Feasible Public Access).
- San Francisco Bay Plan policies on: Water Surface Area and Volume; Water Quality; Tidal Marshes and Tidal Flats; Fish, Other Aquatic Organisms, and Wildlife; Public Access; Recreation; Appearance, Design, and Scenic Views; Safety of Fills; Shoreline Protection; and Climate Change; and Bay Plan Map No. 6 policies.

Exhibits

- A. Flood Improvement Elevations
- B. Sea Level Rise Cross Sections
- C. Existing Access Points
- D. Bay Trail Improvements and Access Points
- E. Bay Trail Construction Detours
- F. Bay Fill Locations