San Francisco Bay Conservation and Development Commission
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November 7, 2014

Application Summary
(For Commission consideration on November 20, 2014)

Number: BCDC Permit Application No. 2013.001.00
Date Filed: October 24, 2014
90th Day: January 22, 2015
Staff Assigned: Jaime Michaels (415/352-3613; jaime.michaels@bcdc.ca.gov)

Summary

Applicants: City of Burlingame and 350 Beach Road, LLC

Location: An approximately 20-acre site located west and south of Airport Boulevard and north of Beach Road, in the City of Burlingame, San Mateo County. Sanchez Channel is located along the site's western shoreline. The City of Burlingame's "Fisherman's Park" is northeast of the project site and San Mateo County's Coyote Point Recreation Area is located southeast of the project site. (Figure 1)

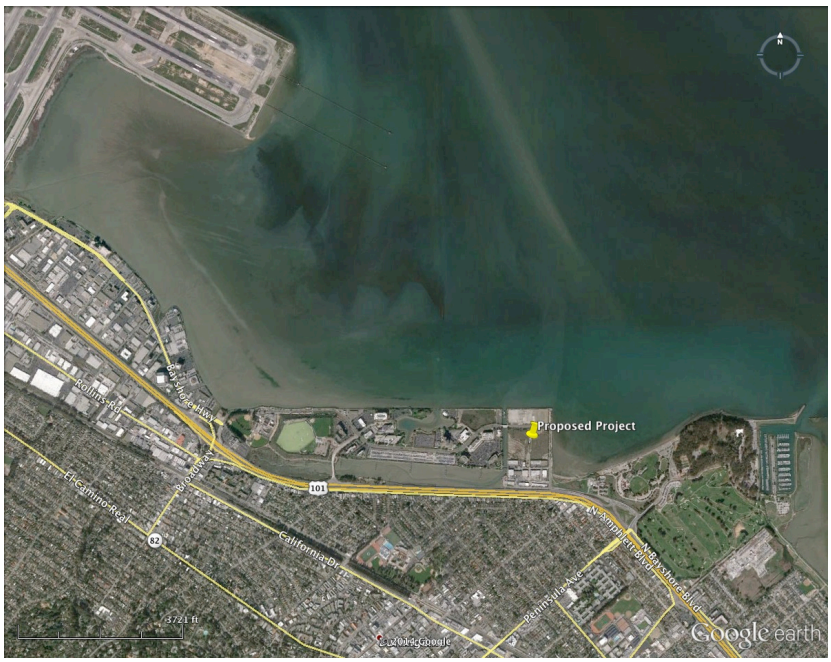

Figure 1

Project: The proposed office campus would be located at a site formerly occupied by a drive-in cinema constructed in early 1965 and demolished in 2002. A total of six buildings would be constructed: two, 5-story buildings (B1 and B2); one 7-story building (B3); one 8-story building (B4); one 2-story amenities center; and one 6-story parking structure (includes ground level). Several buildings would be constructed on single-level parking podiums. Total square footage of the buildings is 767,000 square feet with a capacity for 2,475 occupants and 2,344 employee vehicles. Landscaping, pavement, lighting, surface parking, and utilities are proposed throughout the campus. Airport Boulevard would be realigned away from the eastern shoreline and through the campus, and would provide access to vehicles, bicycles (Class III), pedestrians, and street-level public parking. These facilities and improvements would occur entirely outside of the Commission's jurisdiction with the exception of an approximately 6,000-square-foot area of the realigned Airport Boulevard, and stormwater outfalls extending through the Commission's 100-foot shoreline band jurisdiction (Exhibits A and B).

In the Commission's Bay jurisdiction, at the eastern site boundary, 13,822 square feet (0.32 acres) of unengineered concrete and rubble (1,547 cubic yards of solid fill) would be removed and, within a nearby identical footprint, a 13,822-square-foot engineered rock riprap revetment (1,481 cubic yards of solid fill) would be constructed. Approximately 17 cubic yards of additional solid fill covering 50 square feet of Bay surface area would also be placed to support public overlooks. This fill, installed in an area presently covered with concrete and rubble, would not change the existing area of in-water coverage. Overall, the proposed project would result in a net decrease of 49 cubic yards of solid fill in the Bay.

Within the Commission's shoreline band jurisdiction, two 100-foot-wide, 815-foot-long public shoreline areas (each approximately 1.85 acres for a total of approximately 3.7 acres) would be created at the eastern and western site boundaries. These public access areas would contain a variety of amenities, including 12-foot-wide bicycle and pedestrian paths, overlooks, outdoor dining

patios, seating, signage, and landscaping (Exhibit C). Other project elements that would be constructed in the shoreline band include a portion of the rock revetment, the south-eastern and north-western ends of the realigned roadway, and four below-ground outfalls.

The existing San Francisco Bay Trail on Beach Road connecting to a pedestrian/bicycle bridge over Sanchez Channel and along Airport Boulevard (north-south direction) would remain. As proposed, the project would extend the Bay Trail along the northern and eastern site boundaries. Dedicated public bicycle and vehicle parking would be provided outside of the Commission's jurisdiction (Exhibit D).

Issues Raised: *The staff believes that the application raises three primary issues regarding the project's consistency with the McAteer-Petris Act and the San Francisco Bay Plan (Bay Plan): (1) whether the proposed fill would be consistent with the Commission's law regarding fill and relevant Bay Plan policies regarding fish, subtidal habitat, and water quality; (2) whether the proposed fill, mainly the shoreline revetment and proposed strategies for adapting to sea level rise would be consistent with the Commission's laws and policies regarding shoreline protection and climate change; and (3) whether the proposed public access would be the maximum feasible consistent with the project and would be designed and managed to avoid impacts from sea level rise and flooding.*

Project Description

Project Details: The co-applicants, City of Burlingame and 350 Beach Road, LLC, describe the proposed project as follows:

In the Bay:

a. Remove approximately 13,822 square feet (1,547 cubic yards) of unengineered concrete and debris at the eastern site boundary;

b. Install, use, and maintain in-kind an approximately 13,822-square-foot engineered rock revetment (1,481 cubic yards) at the eastern site boundary; and

c. Place, use, and maintain in-kind approximately 17 cubic yards of solid fill at an approximately 50-square-foot area to support an overlook (e.g., backfilled sheet pile wall or pile-supported deck) at the eastern site boundary.

Within the 100-foot shoreline band:

a. Construct, use, and maintain an approximately 1.85-acre public area adjacent to the site's eastern boundary and an 1.85-acre public area adjacent to Sanchez Channel (a total of 3.7 acres of shoreline access), with public-serving amenities including 12-foot-wide San Francisco Bay Trail bicycle and pedestrian paths, gathering "nodes", Bay overlooks, public outdoor dining patios, seating, signage, lighting, and landscaping with biotreatment zones;

b. Remove unengineered concrete and debris from the shoreline, and install, use, and maintain in-kind a shoreline revetment covering approximately 27,400 square feet (0.63 acres) of the site's eastern shoreline;

c. Construct, use, and maintain in-kind portions of the southern-eastern and north-western sections of Airport Boulevard covering a total of approximately 6,180 square feet;

d. Remove four outfalls, and install, use, and maintain in-kind two 30-inch-diameter below-ground outfalls and associated headwall structures at the site's eastern boundary; and

e. Remove two outfalls, and install, use and maintain in-kind two approximately 24-inch-diameter and a 42-inch-diameter below-ground outfalls and associated headwall structures at the site's western boundary.

Bay Fill: At the eastern site boundary, 1,547 cubic yards of solid fill covering an approximately 13,822-square-foot area below Mean High Water would be removed and, in its place, approximately 1,481 cubic yards of rock would be placed within the same footprint to create approximately 13,822 square feet of engineered riprap revetment. At an approximately 50-square-foot area, 17 cubic yards of solid fill would be placed to support public overlooks at the site's eastern shoreline. The proposed fill would involve 49 cubic yards less Bay fill than currently exists.

Fill (Proposed)	**Area (sf)**	**Volume (cy)**
Revetment to be Removed	-13,822	-1,547
Revetment to be Installed	+13,822	+1,481
Public Overlooks	+50 [1]	+17
Net Decrease in Existing Bay Fill	0	-49

[1] This fill would be placed at an area currently covered with concrete rubble and debris and, thus, would not substantively change the existing area of fill coverage.

Public Access: Within two 100-foot-wide, 815-foot-long areas (1.85 acres, each/3.7 acres, total) at the project site's eastern and western boundaries, public access would be developed with various amenities, including 12-foot-wide bicycle and pedestrian paths, overlooks, seating, and landscaping. The San Francisco Bay Trail on Beach Road and the north-south alignment of Airport Boulevard would remain, and be extended at the northern and eastern site boundaries. Bicycle and vehicle parking for the public would be provided outside the Commission's jurisdiction.

Schedule and Cost: The applicants propose to begin construction in mid-2015 and continue for a period of three to four years. The estimated total project cost is approximately $200 million.

Staff Analysis

A. *The staff believes that the application raises three primary issues regarding the project's consistency with the McAteer-Petris Act and the San Francisco Bay Plan (Bay Plan): (1) whether the proposed fill would be consistent with the Commission's law regarding fill and relevant Bay Plan policies regarding fish, subtidal habitat, and water quality; (2) whether the proposed fill, mainly the shoreline revetment and proposed strategies for adapting to sea level rise would be consistent with the Commission's laws and policies regarding shoreline protection and climate change; and (3) whether the proposed public access would be the maximum feasible consistent with the project and would be designed and managed to avoid impacts from sea level rise and flooding.*

1. **Bay Fill.** The Commission may authorize fill when the fill proposal complies with the requirements identified in Section 66605 of the McAteer-Petris Act, including: (a) the public benefits of fill exceed the public detriment from the loss of water area, and the fill is limited to water-oriented uses or is "minor" to improve shoreline appearance or public access; (b) no alternative upland location exists for the fill, and the fill is the minimum amount necessary; (c) the fill should minimize harmful effects to the bay area, including water quality and fertility of fish and wildlife resources; (d) the applicants have valid title to the property proposed to be filled; and(e) the fill should be constructed in accordance with sound safety standards and to afford reasonable protection against the hazards of unstable geologic conditions or flooding.

    a. **Public Benefit, Water-Oriented Use, Shoreline Appearance, and Public Access.** The proposed project would involve the removal of 1,547 cubic yards of unengineered concrete and debris covering a 13,822-square-foot area of the Bay at the eastern shoreline and, within an approximately equivalent footprint, the placement of approximately 1,481 cubic yards of engineered rock revetment at a similarly sized area. In addition, the project would involve placing Bay fill to support one public overlook at the eastern shoreline.

    The site was formerly open Bay but was filled in the early 1960s by constructing a perimeter barrier of unengineered concrete and debris and, subsequently, disposing fill within the built perimeter. Sanchez Channel is a remnant of the open Bay that

existed at the site. According to the application, the existing top of bank elevations along the 815-foot-long shorelines are: at the western shoreline, +7.0 to 9.5 feet National Geodetic Vertical Datum 1929 (NGVD29) and, at the eastern shoreline, +8.5 to 10.0 feet NGVD29.

The current 100-year extreme water elevation (the Federal Emergency Management Agency's (FEMA)) Base Flood Elevation at the site is +7.2 feet NGVD29. Thus, with current sea levels, there is a 1% chance every year that extreme water levels would exceed the elevation of the bank in some areas for a period of several minutes to hours at a time. For this reason, the application states that existing shoreline embankments are not high enough to protect shoreline areas from projected flooding. Further, the unengineered material currently protecting the eastern shoreline is "dilapidated… [and] will erode and eventually fail," and would not protect the proposed project from wave action and erosion if left in place. In contrast, the perimeter of Sanchez Channel would adequately protect the site in the immediate future because the channel is relatively isolated and protected from wind generated waves associated with the open Bay.

At the eastern shoreline, the existing debris would be removed and, within an almost identical footprint, an engineered rock revetment constructed with less material in the Bay than currently exists. The proposed revetment would be constructed using appropriately-sized rock overlying geotextile fabric. According to the applicants, over time, sediment would wash in and settle within the system creating a continuous and natural grade. In addition, within an approximately 50-square-foot area where existing shoreline rubble and debris would be removed, 17 cubic yards of fill would be placed to support a public Bay overlook. At this location, the existing area of fill coverage would remain unchanged.

Although Section 66605 of the McAteer-Petris Act does not explicitly name shoreline revetment as a water-oriented use, the Bay Plan contains an entire set of policies on the activity recognizing it as a type of use common in San Francisco Bay. The applicants state that through the removal of dilapidated concrete and rubble and the construction of an engineered system the shoreline would be "aesthetically improve[d]." In addition, to providing a "long-term, engineered solution" for the shoreline at the site, the applicants state that the proposed fill would, in part, "provide sound structural support to the [proposed] public shoreline access."
It should be noted that the Bay Plan Public Access Policy 8 states, in part: "…a small amount of fill may be allowed if the fill is necessary and is the minimum absolutely required to develop the project in accordance with the Commission's public access requirements." As stated previously, the fill proposed to protect the shoreline from erosion and support a public overlook would, overall, result in a net reduction of solid fill in the Bay.

b. **Upland Alternative and Minimum Fill Necessary.** The proposed revetment is designed to provide shoreline protection from wave action and erosion and, thus, by its very nature, cannot be built upland. According to the application, a "[r]eduction in fill associated with the shoreline protection replacement work would require

placement of the shoreline protection landward of the existing location…[which] would [among other things] entail additional grading and removal of the existing shoreline thereby reducing the landward area available for public access." The fill proposed to support the overlook is designed to provide the public with an opportunity to experience the open water in a manner that an upland overlook would not achieve.

The Bay Plan findings supporting the shoreline protection policies state, in part, "[b]ecause vast shoreline areas are vulnerable to flooding and because much of the shoreline consists of soft, easily eroded soils, shoreline protection projects are often needed to reduce damage to shoreline property and improvements," and, further, recognize that "[m]ost structural shoreline protection projects involve some fill." The fill proposed for the revetment and public overlook would involve slightly less fill (approximately 49 cubic yards less) than would be removed to prepare the site for the proposed revetment.

c. **Minimizing Harmful Effects.** In addition to relevant provisions in the McAteer-Petris Act (Section 66605), the Bay Plan addresses minimizing effects of fill projects on Bay resources, as demonstrated in the following policies. The Bay Plan **Fish, Other Aquatic Organisms, and Wildlife** Policy 4 states, in part, "[t]he Commission should: (a) consult with…the National Marine Fisheries Service whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species;…and (c) give appropriate consideration to the recommendations of… the National Marine Fisheries Service…to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat." The Bay Plan **Subtidal Areas** Policy 1 states, in part: "Projects in subtidal areas should be designed to minimize and, if feasible, avoid any harmful effects."

In addition, the Bay Plan **Water Quality** Policy 2 states, in part: "[w]ater quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the Regional Water Quality Control Board's [RWQCB] Basin Plan. The policies, recommendations, decisions, advice and authority of the State Water Resources Control Board and the Regional Water Quality Control Board, should be the basis for carrying out the Commission's water quality responsibilities."

On February 28, 2014, the National Oceanic and Atmospheric Administration Fisheries (NMFS) issued an Endangered Species Act (ESA) Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation Management Act Essential Fish Habitat Response for the proposed project, which includes a revetment and the installation of fill to support a public overlook—an activity likely to involve pile-driving. NMFS' letter identifies the federally-threatened Central California Coast steelhead (*Oncorhynchus mykiss*) and the North American green sturgeon (*Acipenser medirostris*) as species potentially affected by the proposed project.

NMFS' letter states that the Bay "adjacent to the project site supports a diverse invertebrate community that can provide prey resources for listed fish species" and, further, "the effects of the proposed action are reasonably likely to include degradation of water quality, elevated sound levels during pile driving, and disturbance of benthic organisms along the shoreline during construction." However, NMFS states that the applicants propose application of measures to minimize or avoid such impacts specifically: the restriction of activities below Mean High Water (MHW) during the period of June 15 to November 30; the restriction of work below MHW to low-tide events; the use of an environmental bucket or silt curtain for work occurring below MHW; the use of a vibratory hammer during sheet-pile installation; the prohibition of project barges from resting on the Bay bottom; and the use of land-based equipment for excavation and fill work.

The letter recognizes that restricting in-water work from June 15 to November 30 would avoid migration season of adult and juvenile CCC steelhead and, thus, "no CCC steelhead [are anticipated to] be present in the action area during construction." NMFS also states that the restricted in-water work, including limiting work to low-tide events and use of an environmental bucket or silt curtain for work below MHW, would "limit" turbidity effects on the green sturgeon whose feeding behavior and growth cycle could otherwise be affected. Moreover, the letter states that the sturgeon is "tolerant of levels of turbidity that exceed levels expected to result from this project" and is "highly mobile" and expected to disperse during construction. Further, the proposed use of a vibratory hammer for sheet-pile installation "is expected to avoid generation of underwater sound levels that are harmful to fish….[and] sound pressure levels generated by this project's construction activities should not present a risk of physical injury or mortality to threatened green sturgeon."

In terms of designated critical habitat for both species of concern, NMFS states that potential effects from turbidity are expected to be "temporary and minor given the small area impacted and work restrictions," including use of an environmental bucket or silt curtain. NMFS states that benthic invertebrates "may be temporarily disturbed by construction" but, following construction, these communities are expected to recolonize the area. In conclusion, NMFS found that "the proposed action is not likely to adversely affect the subject listed species and designated critical habitats."

NMFS' letter identifies the project area as Essential Fish Habitat (EFH) for species managed with the Pacific Coast Salmon Fishery Management Plans (FMP), the Pacific Groundfish FMP, and the Coastal Pelagic FMP, and asserts that the project "would adversely affect EFH" through increased turbidity, degradation to water quality, and direct disturbance of aquatic organisms. Further, the project would temporarily degrade EFH through "removal and disturbance of benthic prey organisms" during revetment construction, but such effects are expected to be temporary and the benthic community recovered within "several months to a few years." The letter, however, declares that "the project contains adequate avoidance and minimization measures so that these adverse effects to EFH are expected to be insignificant."

Further, after construction, "benefits to EFH will be gained through the removal of debris along the shoreline and the net reduction of bay fill..." In conclusion, NMFS states that the proposed project's avoidance and minimization measures "offset the adverse effects to EFH….and [it] has no practical EFH conservation recommendations to provide to avoid or educe the magnitude of these effects."

On July 28, 2014, the RWQCB issued a water quality certification for the project, which identifies turbidity as a temporary impact on beneficial uses of the Bay, including recreation, wildlife, and commercial uses. To mitigate this impact, the RWQCB's certification requires, among other things, that the excavation of existing concrete and rubble from the shoreline and the construction of a new shoreline revetment be sequenced to "avoid leaving unprotected segments of shoreline, not undergoing construction, exposed for longer than two weeks." Other requirements of the certification include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and, as previously discussed, limiting in-water work to low tide events. As conditioned, the certification states that the proposed project would minimize or avoid potential water quality impacts.

d. **Valid Title.** The applicants provided a grant deed covering the majority of the upland area at the project site, including the western shoreline. However, the lease between one of the applicants, 350 Beach Road, LLC, and the State Lands Commission for the eastern shoreline, including the water area where a proposed revetment and a portion of one public overlook would be constructed, has not been finalized or provided. The State Lands Commission approved the lease in 2013, but it cannot execute the document until two lease conditions have been met. These conditions require that 350 Beach Road, LLC: (1) obtain the consent of an adjacent land owner to the proposed lease; and (2) initiate a coordination process with stakeholders demonstrating good faith efforts to facilitate future improvements at Fisherman's Park and the Bay Trail. According to the State Lands Commission staff, it fully expects this issue to be resolved and the subject lease to be signed and executed at which time this remaining title issue would be fully resolved. The applicants agree to obtain an executed lease and provide evidence of the lease to BCDC staff prior to the proposed project construction. Fulfillment of such condition would likely be a condition of Commission authorization for the proposed project.

   The lease with State Lands requires the applicants to maintain and repair the proposed improvements. It expires on September 19, 2062. According to the applicants, the life of the project is through end of century. The applicants state that it is their intention to continue maintenance of all improvements "for the life of the improvements" and, further, to enter into a new or extended lease at the end of the initial 49-year lease period to ensure that the authorized improvements are maintained for their life.

e. **Sound Safety Standards**. According to the application, "[t]he project provides shoreline protection and grading which takes into account the potential for flooding resulting from the combined effect of wave and water surface elevations, based on FEMA guidance for flood protection along the west coast of the United States. Flood

protection has been designed to address present day 100-year flood elevations and increases in sea level rise beyond 2050, with an adaptive (*sic*) to address high levels in the future." The shoreline protection system was designed under the guidance of licensed engineers.

The Commission should determine whether the proposed fill would be consistent with its law regarding fill and the Bay Plan policies on resources, including fish, subtidal habitat, and water quality.

2. **Climate Change and Shoreline Protection.** The Bay Plan Climate Change Policy 2 states: "When planning shoreline areas or designing larger shoreline projects, a risk assessment should be prepared by a qualified engineer and should be based on the estimated 100-year flood elevation that takes into account the best estimates of future sea level rise and current flood protection and planned flood protection that will be funded and constructed when needed to provide protection for the proposed project or shoreline area. A range of sea level rise projections for mid-century and end of century based on the best scientific data available should be used in the risk assessment. Inundation maps used for the risk assessment should be prepared under the direction of a qualified engineer. The risk assessment should identify all types of potential flooding, degrees of uncertainty, consequences of defense failure, and risks to existing habitat from proposed flood protection devices." Policy 3 states: "To protect public safety and ecosystem services, within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety, all projects—other than repairs of existing facilities, small projects that do not increase risks to public safety, interim projects and infill projects within existing urbanized areas—should be designed to be resilient to a mid-century sea level rise projection. If it is likely the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise based on a risk assessment using the best available science-based projection for sea level rise at the end of the century."

   The Bay Plan Shoreline Protection Policy 1 states, in part, "[n]ew shoreline protection projects and the maintenance or reconstruction of existing projects and uses should be authorized if: (a) the project is necessary to provide flood or erosion protection for (i) existing development, use or infrastructure, or (ii) proposed development, use or infrastructure that is consistent with other Bay Plan policies; (b) the type of the protective structure is appropriate for the project site, the uses to be protected, and the erosion and flooding conditions at the site; (c) the project is properly engineered to provide erosion control and flood protection for the expected life of the project based on a 100-year flood event that takes future sea level rise into account; (d) the project is properly designed and constructed to prevent significant impediments to physical and visual public access; and (e) the protection is integrated with current or planned adjacent shoreline protection measures." Additionally, Shoreline Protection Policy 2 states, in part: "Riprap revetments, the most common shoreline protective structure, should be constructed of properly sized and placed material that meet sound engineering criteria...," and Policy 3 states that shoreline protection projects should be maintained.

The proposed project involves the removal of unengineered fill at the eastern shoreline and its replacement with an approximately 13,822-square-foot (1,481 cubic yards of solid fill) engineered rock revetment. According to the project engineer, the 100-year flood elevation at the project site is +7.2 feet NGVD29.

At the western site boundary, additional flooding associated with wind-driven waves is not expected due to the isolated and protected nature of Sanchez Channel. At the eastern shoreline, however, flood conditions associated with an open water area are expected, e.g., wind-driven waves, and a total water level of 11.6 feet NGVD29 is projected at current sea levels. Future sea level projections at the site are shown below:

Future Sea Level

Year	Future Sea Level Rise	Projected Tidal Elevation at Eastern Shoreline	Projected Tidal Elevation at Western Shoreline
2050	12" (1 foot) NGVD29	12.6' NGVD29;	8.2' NGVD29;
2070	19" (1.6 feet) NGVD29	13.2' NGVD29;	9.8' NGVD29;
2100	36" (3 feet) NGVD29	14.6' NGVD29	10.2' NGVD29

As proposed, the project is designed to remain in place through the end of the century. The site's existing elevations would be raised with imported material prior to constructing the proposed facilities. At the western shoreline, the proposed at-grade project elevations would be between 10.6' and 11.8' NGVD29, elevations above the projected 10.2' NGVD 29 Base Flood Elevation projected for flooding and sea level rise at 2100.

At the eastern shoreline, finished site elevations would vary between 12.9' NVGD at the public overlooks and revetment crest, and 13.4' NGVD29 within the public access area. Consequently, all these areas would be subject to flooding at 2100, though above projected flooding until 2065. To adapt the eastern shoreline areas to flooding projected beyond 2065, the applicants state that the shoreline has been designed to allow the proposed shoreline improvements and public access areas to be raised above the current design elevation, by 11 inches. The proposed strategy would raise elevations to approximately 13.8 and 14.3 inches, below the end-of-century projection, as shown in the table above. At that time, the applicants propose to adapt to projected flooding conditions:

> "For sea level rise greater than this, the ability to go even higher…with either the same or a different structural configuration is retained. Features to address this amount of sea level rise may include modifications to create a raised promenade and bay trail with retaining walls or realign the Bay Trail and reconfigure the shoreline protection to provide flatter slopes and wave breaks. This will ensure continued protection of the bay trail and open spaces areas from flooding."

Furthermore, following construction, the applicants propose to develop a monitoring program for tracking future sea level rise at the site to understand its effect on proposed structures, as follows:

> "…the Monitoring Program could stipulate that every 5-years the owner would obtain tidal data, perform a topographic survey of the [revetment] crest, and review the prevailing forecasts for [sea level rise]; this would provide the information necessary to determine whether trigger criteria [for implementing adaptation strategies] have been met or will soon be met….This monitoring program would be detailed and incorporated into Site Operation and Maintenance manuals. This monitoring program would also assist in modifying future triggers as the science and understanding of sea level rise continues to develop."

As stated previously, site and hydrological conditions combined with the dilapidated nature of the shoreline require a new revetment to protect the proposed campus and public access areas along the shoreline. The applicants considered other potential shoreline protection systems. The proposed revetment would dissipate "local currents and [minimize] wave run-up as opposed to vertical revetments constructed of sheet-pile, which can deflect wave energy and cause bank erosion in adjacent, nearshore environments. Furthermore, aquatic organisms can utilize the interstitial spaces found within multi-layered, free-draining engineered revetments." Further, the "construction of the non-structural improvements [for shoreline protection] requires a gradual slope, which, will likely [would involve]…placing [more] material in the Bay....With a 6:1 slope [for non-structural methods], the amount of excavation required to meet proposed grades would be impractical…."

The proposed revetment would be composed of three layers: geotextile fabric (sub-layer), a mid layer of smaller rock and gravel and rock. The geotextile fabric would prevent release of fine-grained subgrade material thereby preventing slumping of rock and structure failure. The midlayer is composed of small to medium sized rocks and protects the geotextile fabric from damage during installation of larger rocks and provides additional erosion and scour protection. The upper layer of rock provides protection from wave energy. All materials are consistent with standardized procedures used in San Francisco Bay.

The applicants propose to maintain the revetment through the life of the project. At the properties adjacent to the project site, shoreline materials consist of concrete debris and rubble and are not currently planned for removal or improvement. According to the application, the proposed revetment "will not be structurally integrated into the shore-line protection at the adjacent properties. The proposed revetment will be graded to match the existing grade at the adjacent properties to provide a gradual transition between the two."

The Commission should determine whether the proposed fill, mainly a shoreline revetment, and proposed strategies for adapting to future sea level rise would be consistent with the Commission's laws and policies regarding shoreline protection and climate change.

3. **Public Access and Views.** Section 66602 of the McAteer-Petris Act provides, in part, "existing public access to the shoreline and waters of the San Francisco Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided." The Bay Plan Public Access Policy 1 states, in part: "A proposed fill project should increase public access to the Bay to the maximum extent feasible…" Policy 2 states, in part: "…maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry…" Policy 5 states, in part: "Public access should be sited, designed, managed and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding." Policy 6 states in part: "Whenever public access to the Bay is provided as a condition of development…the access should be permanently guaranteed…. Any public access provided as a condition of development should either be required to remain viable in the event of future sea level rise or flooding, or equivalent access consistent with the project should be provided nearby." Policy 7 states, in part: "Public access improvements…should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier free access for persons with disabilities to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs." Policy 9 states in part: "Access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available." Policy 10 states in part: "Roads near the edge of the water should be designed as scenic parkways for slow-moving, principally recreational traffic. The roadway and right-of-way design should maintain and enhance visual access for the traveler, discourage through traffic, and provide for safe, separated, and improved physical access to and along the shore." Lastly, the Bay Plan Appearance, Design and Scenic Views Policy 2 states, in part: "All bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay."

   The proposed project site currently provides limited public access. In 1997, the Commission issued administrative Permit No. M1997.018.00 authorizing the City of Burlingame to provide a five-foot-wide pedestrian path at the site's eastern shoreline, five-foot-wide (Class III) bicycle paths on Airport Boulevard, 16 public parking spaces, and landscaping. The site's western shoreline along Sanchez Channel is closed to the public, except where a vehicular bridge and a pedestrian bridge cross Sanchez Channel.

   The proposed office campus would be designed to provide office space for 2,475 employees and 2,344 employee vehicles. In addition to the six campus buildings, proposed site improvements include a realigned Airport Boulevard with sidewalks, bike access, and street parking, landscaping, walkways, and utilities. These activities would

occur entirely outside of the Commission's jurisdiction, with the exception of the installation of stormwater outfalls and approximately 6,000-square-foot portions of the realigned Airport Boulevard that would be built within the Commission's 100-foot shoreline band jurisdiction.

Within the 100-foot shoreline band, two 100-foot-wide, 815-foot-long public areas (each 1.85 acres and totaling approximately 3.7 acres) at the eastern and western shorelines are proposed. A variety of public-serving amenities, including 12-foot-wide bicycle and pedestrian paths, gathering "nodes", outdoor public dining patios with transparent wind screens, seating, lighting, trash receptacles, drinking fountains, art sculptures, telescopes, signage and interpretive panels, landscaping with stormwater treatment zones, and Bay overlooks—one at Sanchez Channel and three at eastern shoreline, including one involving a small amount of fill below the MHW. Dedicated public bicycle (30 spaces) and vehicle parking (20 spaces) would also be provided. The proposed improvements would comply with the accessibility requirements of the California Building Code. The proposed public areas would be permanently guaranteed and maintained by the applicants or their successors in interest. Visitors to the site would be provided with a variety of viewing opportunities of the Bay and shoreline area, including along the trails, Airport Boulevard, and through the proposed campus to be built in a clustered configuration.

The proposed public areas would be connected to adjacent public access areas: From the realigned Airport Boulevard, access to the shoreline would be provided at various points through the proposed campus. At the southeast corner, the eastern shoreline area would be reached via Airport Boulevard and would be connected to Fisherman's Park at the northeast corner of the project site. Along the northern site boundary, a Bay Trail extension connecting the project's east and west shorelines would be constructed and would remain in place until the ultimate connection located further north of the site along the Bay shoreline is developed at a later date. Lastly, at the northwest corner of the site, the proposed public area would be connected via Airport Boulevard and an existing bridge crossing Sanchez Channel. The western shoreline area would dead-end at the site's southwest corner, but would be designed and developed in a manner that would allow it to extend along the shoreline when the adjacent property is developed to include access. The proposed public access amenities would be graded to generally slope down from the development area to the shoreline and to properties located to the immediate north (Fisherman's parking lot) and south which are lower than the proposed facilities and raised site elevations.

As described above in the section addressing sea level rise, the proposed elevations of the western shoreline would be between 10.6' and 11.8' NGVD29, elevations that are above the projected end-of-century Base Flood Elevation of 10.2' NGVD29. Within the eastern shoreline proposed public access areas, the elevations would vary between 12.9' NVGD at the overlooks and 13.4' NGVD29 within the remaining public areas. The overlooks would be resilient to projected flooding through approximately 2065, and other public areas resilient through about 2070. Beyond 2070, the applicants propose to adapt to flooding conditions projected with rising tides by raising site elevations an additional 11.0 inches, to approximately 13.8 and 14.3 feet NGVD. According to the appli-

cants: "For sea level rise greater than this, the ability to go even higher…with either the same or a different structural configuration is retained. Features to address this amount of sea level rise may include modifications to create a raised promenade and bay trail with retaining walls or realign the Bay Trail and reconfigure the shoreline protection to provide flatter slopes and wave breaks. This will ensure continued protection of the bay trail and open spaces areas from flooding."

In evaluating whether the proposed public access is the maximum feasible consistent with the project, the Commission looks, in part, to its past actions on comparable projects. In 1997, the Commission considered and issued Permit Application No. 1997.009.00 for the development of an office campus located in the City of Alameda (Alameda County) in which five buildings were proposed for construction located only partly in the Commission's jurisdiction. The project included the construction of an approximately 31,000-square-foot shoreline revetment system. Lastly, the project involved the creation of an approximately 4.0-acre dedicated public shoreline area with a variety of public-serving amenities. In 2008, the Commission considered and issued Permit Application No. M2008.019.00 for the development of a five-building office campus in the City of Brisbane (San Mateo County), most of which was located outside of the Commission's jurisdiction but which included implementation of a 3.6-acre dedicated public shoreline area.

The Commission should determine whether the proposed public access is the maximum feasible consistent for the project and is designed and would be managed, over time, to avoid impacts from sea level rise and flooding.

B. **Engineering Criteria Review Board.** The Commission's Engineering Criteria Review Board did not review the proposed project because in light of the project's proposed design and location, the staff determined that the project did not warrant additional input on seismic safety, flooding issues, or public access.

C. **Design Review Board.** The Bay Plan Public Access Policy 12 states, in part, "[t]he Design Review Board should advise the Commission regarding the adequacy of the public access proposed." The DRB reviewed the proposed project on July 11, 2011 and also on October 8, 2012. In its first review, the DRB requested that the project proponent consider the following: (1) incorporation of design options in the landscaped topography to create wind protected areas; (2) revisions to the northern alignment of the Bay Trail and the pedestrian connection from Beach Road through a corridor located between the amenities center and parking structure; (3) the preparation of more developed plans showing the Bay overlooks, landscaping, site furniture, and lighting; (4) the illustration of proposed stormwater treatment features; and (5) the identification of public parking areas. The applicants revised the plans to incorporate the DRB's recommendations and, during its second review, the DRB fully supported the proposed public access areas and improvements.

D. **Environmental Review.** In June 28, 2012, the City of Burlingame certified the Final Environmental Impact Report. All potentially significant impacts associated with the proposed project can be mitigated to a level below significance (Exhibit E).

E. **Coastal Zone Management Act**. The Commission further finds, declares, and certifies that the activity or activities authorized herein are consistent with the Commission's Amended Management Program for San Francisco Bay, as approved by the Department of Commerce under the Federal Coastal Zone Management Act of 1972, as amended.

F. **Relevant Portions of the McAteer-Petris Act**

1. Section 66605
2. Section 66602

G. **Relevant Policies of the San Francisco Bay Plan (Bay Plan)**

1. Fish, Other Aquatic Organisms, and Wildlife
2. Subtidal Areas
3. Water Quality
4. Shoreline Protection
5. Climate Change
6. Public Access
7. Appearance, Design and Views

Exhibits

A. **Exhibit A:** Site Plan

B. **Exhibit B:** Site and Building Character Sketches

C. **Exhibit C**: Public Access

D. **Exhibit D:** Shoreline Access, Pedestrian, and Parking Plan

E. **Exhibit E:** Final DEIR for Proposed Project, Summary of Impacts, Mitigation Measures and Improvement Measures (2012)