

San Francisco Bay Conservation and Development Commission

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TO: Design Review Board Members

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SUBJECT: New Fire Boat Station 35 at Piers 22.5 and 24; First Pre-application Review, Joint Review with Port of San Francisco Waterfront Design Advisory Committee
(For Design Review Board consideration on February 26, 2018)

Project Summary

Project Proponents & Property Owner. San Francisco Fire Department (“SFFD”), San Francisco Public Works (“SFPW”), and Port of San Francisco (“Port,” Property Owner)

Project Representatives. Anthony Rivera (SFFD, Chief Deputy), Magdalena Ryor (SFPW, Project Manager), Jamie Hurley (Port, Project Development Manager), Dan Hodapp (Port, Senior Waterfront Planner), Ming Yeung (Port, Waterfront Planner), Bill Krill (Swinerton-Power Joint Venture, Swinerton Builders, Project Executive), William Knudson (Power Engineering Construction, Project Manager), Alan Kawasaki (Shah Kawasaki Architects, Project Architect), Erik Soderberg and Leah Olson (Liftech Consultants, Project Engineers), Ellen Johnck (Environmental Permitting Consultant)

Project Site. The project site is located on the City and County of San Francisco’s waterfront at Piers 22.5 and 24, on The Embarcadero, northeast of Harrison Street (Exhibit 2). The site is bound by Rincon Park including the Waterbar and Epic Steak restaurants to the north, the Bay to the east, Pier 24 to the south, and Herb Caen Way and the Embarcadero to the west. The Ferry Building is located approximately 2,250 feet to the north. The project site is within the Northeast Waterfront planning area as defined by the Commission’s San Francisco Waterfront Special Area Plan (SAP).

Existing Conditions. Pier 22.5 is a non-historic finger pier with a 2,200-square-foot shed, along which up to two fireboats are moored. The shed is used as a repair shop for the fireboats and living quarters for the fireboat pilots. A small parking lot is also located on the pier adjacent to Herb Caen Way. Directly south of Pier 22.5 is pile-supported marginal wharf structure, upon which SFFD Fire Station 35 is located. The two-story fire station was built in 1915, and is a designated San Francisco Landmark and a contributing resource to the Port of San Francisco’s Embarcadero Historic District, listed in the National Register of Historic Places. The fire station includes a garage

with capacity for one fire engine, lodging facilities serving a 21-person fire company, a kitchen, a fitness area, and equipment storage. The historic firehouse provides character, but does not meet modern design standards for firehouse facilities. A small parking lot is located directly south of the fire station on the marginal wharf, within which an auxiliary water supply system manifold (to draw water from the Bay for use in an emergency) and backup generator are also located. Off the marginal wharf to the south is a dilapidated pile supported pier which is a remnant portion of the former Pier 24. This pier is not in use due to its deteriorated condition.

Herb Caen Way runs parallel to the project site, and is a required public access area under BCDC Permit No. 1990.008. Herb Caen Way, which ranges from 40- to 80-feet-wide in front of the project site, doubles as the Bay Trail at this location, and is within a dedicated view corridor under BCDC Permit No. 1990.008 that runs along the shoreline to the north and south of the project site. Harrison and Folsom Streets are also dedicated view corridors under BCDC Permit No. 1990.008 (See Attachment A).

Proposed Project. The proposed project would demolish Pier 22.5 (including the shed), a portion of the marginal wharf (the south parking area), and the remaining section of Pier 24 (south finger pier) (Exhibit 5). A two-level, approximately 16,000-square-foot (151 feet by 52 feet), two-story fireboat station would be constructed on a 16,435-square-foot steel float (173 feet by 95 feet). The apron around the floating fire station (ranging from 10 feet to 33 feet in width) would provide mooring for at least three fireboats and one small rescue watercraft. A gangway and access ramp would connect the existing marginal wharf to the float and provide for pedestrian and vehicle access to the floating fireboat station. The floating fireboat station would be constructed off-site and transported to the project site by tug boat. The existing Fire Station 35 would remain in place and no renovation work is proposed for that structure nor the portion of the marginal wharf that would remain.

Within the Commission's Bay jurisdiction, the proposed project includes the following:

1. **Steel Float (Exhibits 5-7, 9-11, 13, 15-17).** An approximately 16,435-square-foot (173-foot by 95-foot) steel float would be installed approximately 44 feet offshore of the marginal wharf and moored by six 48-inch vertical steel pipe guide piles. Lift cranes mounted on the float would be used to move equipment and small craft between the float and the water.
2. **Fireboat Station (Exhibits 6-13, 15-17).** A two-story, 36-foot tall fireboat station would be built atop the steel float. The perceived height of the fireboat station from the shoreline would vary as the float rises and falls along with the tides.

The first floor of the fireboat station would include the following facilities: a rescue boat bay, night watch room, mechanical room, space for gear cleaning and decontamination after emergency responses, equipment lockers, fireboat maintenance and repair equipment, backup generator (replacing the generator located at the south parking lot), fuel storage, and turn-around area to allow ambulances access to the station. The south side of the first floor would have large doors to allow ambulances to use the large open space on the first floor as a loading and turn-around area. The first floor operations, including the ambulance turn-around, determined the footprint of the structure.

The second floor would include a total of 28 beds (an open dormitory space with 16 beds and 4 private-bathroom officer dormitory rooms with 3 beds each), a laundry room, day room, dining area, kitchen with outdoor observation deck at the east end of the building, and lockers, showers and bathrooms. The roof would contain mechanical equipment. There would be two slide poles, two exit stairs, and one elevator that connects the first and second floor areas. A balcony would be located at the east end of the building facing out into the Bay, located off the common areas.

3. **Vehicular and Pedestrian Access Ramp (Exhibits 5, 11, 13, 15-16).** An approximately 80-foot-long, 18.5-foot-wide (1,482-square-foot) access ramp and associated corbel would provide vehicular and pedestrian access to the float, with a total footprint of approximately 1,800 square feet. The ramp would be striped for one lane of vehicular traffic and a pedestrian lane. A security gate would be installed at the landside end of the ramp. A triangular portion of the ramp is designed for hose laydown from the fireboats and floating firehouse to the AWSS manifold located on the marginal wharf.
4. **Pedestrian Gangway (Exhibits 5, 11).** A 40-foot-long by 4-foot-wide aluminum gangway (160 square feet) would be installed to connect the marginal wharf and historic firehouse to the floating firehouse.
5. **Fencing (Exhibits 11, 13).** Fencing would be installed on the marginal wharf north and south of the historic firehouse 35. Three-foot wide pedestrian access gates and 16-foot wide vehicle gates would be installed north and south of the historic fire station building. Fencing on the south side would extend beyond the face of the historic firehouse into Herb Caen Way to enclose an area that contains the auxiliary water supply manifold (AWSS).
6. **Public Observation Deck (Exhibits 5, 11, 13, 16).**¹ A 951-square-foot pile-supported public observation deck would be constructed adjacent to and flush with Herb Caen Way, directly south of the vehicular and pedestrian access ramp. It would include interpretive panels related to the fireboats and historic and modern fire stations.
7. **Sea Level Rise Public Art Exhibit (Exhibits 11, 13).** A sea level rise exhibit marker would be installed in the Bay next to the observation deck.

Project Approvals and Proposed Construction Timeline. The project has not yet received regulatory approvals. The San Francisco City Planning Department is the CEQA lead agency and is preparing an Initial Study and Preliminary Mitigated Negative Declaration, to be published for public comment in March 2018. The proposed construction timeline would be from approximately April 2019 through early 2021, pending regulatory approvals.

Operations & Maintenance. The construction of the new steel float and fireboat station is intended to improve the City of San Francisco's capacity for meeting current and future demands for water rescue and emergency response services, including the training of staff. The existing company of fire department personnel would be relocated from the historic firehouse to the floating fireboat station, to bring this station's company up to modern standards, in addition to consolidating SFFD's Marine Assets into a single location (Exhibit 4). During emergencies, the proposed facility will accommodate additional staff. The existing Fire Station 35 will continue to

¹ Exhibit 14 will be forthcoming, which provides larger context for public access at the site.

house and deploy Fire Engine 35, store firefighting gear, and include space for a fitness room for firefighters. The proposed fireboat station is a critical facility and is being designed to meet the Immediate Occupancy Performance Level in the event of a Design Earthquake, and the Life Safety Performance Level in the event of a Maximum Considered Earthquake, in addition to meeting Port Building Code requirements.

Resilience and Adaptation to Rising Sea Level. According to the Federal Emergency Management Agency (“FEMA”), current 100-year-base flood elevation (BFE) for the project site is +9.8’ NAVD88². As proposed, the steel float and new fireboat station are intended to accommodate projected sea level rise through the floating design with the piles extending to +25’ NAVD88. The top of the float would rise and fall with tides on its proposed guide piles. The existing fixed pier and Herb Caen Way are situated at elevation +10.90’ NAVD88. The proposed public access observation area would also be at +10.90’ NAVD88. For planning purposes, the project proponents have estimated 2.8 feet (33.6 inches) of sea level rise by 2070 (BFE+2.8’SLR = +12.6’ NAVD88). The design total water level (TWL) in 2070 is +14.9’ NAVD88.

The steel float and fireboat station have a design life of 50 years. The top of the steel float guide pile collars at the design high water will be approximately +18.2’ NAVD88, and the guide piles have a top elevation of +25’ NAVD88, which indicates that the steel float and fireboat station would not be inundated by sea level rise projections for 2070, as they would rise with increased water levels. The access ramp and gangway connection would be inundated by 2070 at their current land-based elevations; the design of these connections is intended to accommodate disconnection and reinstallation if the shoreline needs to be raised in the future due to sea level rise. The public access observation area and existing pier, including Fire Station 35 and Herb Caen Way, would not be inundated daily by 2070, but will likely flood beginning with the 2-year Still Water Flood Event (elevation +10.66’ NAVD88) when wave action is taken into consideration. Herb Caen Way, the historic Fire Station, and the proposed public access will be inundated by the 100 year BFE in 2070.

Commission Findings, Policies & Guidelines

San Francisco Waterfront Special Area Plan (SAP). The Commission’s SAP for the San Francisco waterfront includes general and geographic-specific policies related to public access, waterfront design, and views at and near the project site.

The SAP policies on **Public Access** state, in part, that public access should "provide direct connections to the Bay, both physical and visual," should "focus on proximity to the Bay and on the views and unique experiences that nearness to the Bay affords," and handrails should "maximize visual access to the Bay, particularly for children and persons in wheelchairs." Further, public access improvements should be low-maintenance, have longevity "commensurate with the longevity of the development improvements for which they are required," and should "generally be accessible at any time" but may have reasonable restrictions. The SAP policies note that when

² Elevation +9.8’ NAVD88 represents the Still Water Level Base Flood Elevation. This area may have a higher Total Water Level Base Flood Elevation that would need to be considered for shoreline flooding.

"maritime use projects create public safety concerns, public access may be restricted or not required..." Public access should address microclimates and should provide interpretive and directional signage. Additionally, "[p]ublic overlooks and viewing areas with convenient pedestrian access should be provided on piers..." and a "continuous public access system called the PortWalk between Pier 35 and China Basin which includes Herb Caen Way" should be created. The public access policies also state that "[v]ehicle circulation in public access areas should be limited to service and maintenance vehicles necessary to serve the facility and should be concentrated during late night and early morning hours."

Further, the SAP states that "[o]n-pier public access areas should be located to take advantage of the Open Water Basins, views of the Bay and its shoreline, views back to the City, wind protection and solar access. They should incorporate unique and special amenities that draw the public to them, including cultural expression (e.g. public art, event programming or unique views)." Additionally, "[h]istoric structures should be showcased as an important amenity in the design of public access areas."

The SAP policies on **Waterfront Design** state, in part, that "[d]evelopment should take advantage of its location on the Bay and reflect and recognize the unique identity of the waterfront districts..." The finger pier configuration of the waterfront should be maintained "to the maximum practicable extent." Further, "[b]uilding height and bulk should generally be low scale in order to preserve views to the Bay, minimize shading of on-pier public access areas and reflect the historic character of the waterfront." Waterfront design should "[t]ake advantage of the Bay as a design asset by encouraging transparent buildings and other design treatments..." Additionally, waterfront design should avoid the use of reflective glass as well as the placement of "mechanical equipment, pipes, or ducts on roof surfaces."

The SAP policies on **Bay Views** state, in part, that "[d]iverse views of the Bay, the City and waterfront and maritime activities along the water's edge should be provided at frequent intervals along The Embarcadero and Herb Caen Way...and from public plazas and public access on piers..." Additionally, "[s]treet rights-of-way that connect with the waterfront should be preserved and improved as view corridors to the Bay, maritime activities, or waterfront structures. ..." The SAP states that Bay views from Folsom Street and Bay Bridge views from Harrison Street should be preserved or improved as part of new development on piers. Minor encroachments that would modify these views may be permitted, in part, "[w]here essential maritime facilities cannot reasonably be located and designed to avoid view blockage." The SAP policies further state that "[v]iews of the water should be maximized by designing handrails, fences, marina gates, canopies and other shoreline accessory structures with maximum practicable transparency.

The proposed project would develop a public observation deck adjacent to Herb Caen Way, with views of the Bay and Bay Bridge as well as the fireboat station. Interpretive signage and handrails are also proposed.

San Francisco Bay Plan Policies. The Bay Plan **Public Access** policies state, in part, that "...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..." and that "[a]ccess 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." Further, these policies state, in part: that "... 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,” and that access should be designed consistent with the physical and natural environment.

The proposed public observation area would extend over the Bay from Herb Caen Way. The public observation area would be constructed flush with the pedestrian promenade and would be universally accessible.

Bay Plan Public Access policies, as they relate to sea level rise, state that “[p]ublic access should be sited, designed, managed, and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding,” and that “[a]ny 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.”

The steel float and fireboat station would float with the tides. The pile supports would function until such time as sea level rise exceeds the height of the guide pile collars. The marginal wharf, the gangway landing connecting to the float, and the public access area would be inundated by the 100 year base flood elevation at 2070.

The Bay Plan **Appearance, Design, and Scenic Views** policies state, in part, that “all bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay” and that “[m]aximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas...” Further more, “[s]tructures and facilities that do not take advantage or complement the Bay should be located and designed so as not to impact visually on the Bay and shoreline. ...”

The public observation deck would provide views of the Bay and Bay Bridge, as well as views of the maritime activities at the floating fireboat station. The proposed fireboat station, float, piles, and access ramp can be seen from along the shoreline at Herb Caen Way and The Embarcadero, as well as from Harrison Street (Exhibits 7, 9-10).

Public Access Design Guidelines. The Commission’s Public Access Design Guidelines state that public access should be designed “so that the user is not intimidated nor is the user’s appreciation diminished by large nearby building masses....” Furthermore, “public access improvements should be designed for a wide range of users,” should provide “interpretation of historical, cultural or natural attributes of the site,” and should “[orient] the development to Bay views and provid[e] physical connections at every opportunity.” The guidelines also state that viewing the Bay is the “most widely enjoyed ‘use’ and projects should be designed to “enhance and dramatize views of the Bay.”

Board Questions

The Board's advice and recommendations are sought on the following issues regarding the project's design:

Visual Impacts:

1. Has the fireboat structure been sited and designed to avoid and minimize potential view impacts from the shoreline with respect to its orientation to the shoreline, building massing, proposed building materials, guide piles, and other design considerations? Conversely, does the proposed design preserve and enhance the view corridors to the Bay along the pedestrian promenade and Harrison Street, and otherwise maximize views to the Bay?
2. Are there alternative designs that should be explored to balance the operational and functional needs of the project with the Commission's mandate to protect and enhance the visual resources provided by the Bay?
3. Are the proposed improvements, including the float and new fireboat station, sufficiently transparent and appropriate in terms of height, bulk, and location to minimize potential adverse impacts to Bay views, given the operational needs?

Physical Public Access:

4. Does the proposed pier-supported public access deck provide the best opportunity to enhance shoreline public access and enhance Bay views in the vicinity of the project site, or are there additions and/or alternative improvements and locations that should be considered?
5. Are there opportunities to avoid or reduce conflicts between the continued active use of the fire station on the marginal wharf and public access use of Herb Caen way?
6. Does the proposed public access take advantage of views to the Rincon Point Open Water Basin to the north of the site?
7. Does the proposed public observation area incorporate unique and special amenities that will draw the public to the site? Are there additional opportunities to increase this draw through incorporating more forms of historical, cultural, and natural resource interpretive expression?
8. Do the proposed fences around the historic firehouse minimize potential adverse impacts to Bay views, and create a sense of public connection at the proposed public access space, while maintaining public safety?

Sea Level Rise:

9. How could the public access for this project be appropriately designed to be resilient and adaptive to sea level rise?

Mid Embarcadero Roadway Project, BCDC Permit #8-90

Exhibit A - Sheet 9 of 12

Port of San Francisco
July 2010

Scale: 1" = 100'



View Corridor
within Project Limits



Public Access -
Dedicated



Preserve
View Corridor



Approximate Location
of BCDC Jurisdiction

