II. PROJECT DESCRIPTION

A. OVERVIEW

Treasure Island and Yerba Buena Island (collectively, “the Islands”) are in San Francisco Bay, about halfway between the San Francisco mainland and Oakland. (See Figure II.1: Regional Location.) The Islands are the site of the former Naval Station Treasure Island (“NSTI”), which is owned by the U.S. Navy. NSTI was closed on September 30, 1997, as part of the Base Realignment and Closure Program. The Islands also include a U.S. Coast Guard Station and Sector Facility, a U.S. Department of Labor Job Corps campus, and Federal Highway Administration (“FHWA”) land occupied by the San Francisco-Oakland Bay Bridge (“Bay Bridge”) and tunnel structures.

The Treasure Island Development Authority (“TIDA”) is proposing to redevelop the portions of NSTI still owned by the Navy, once they are transferred to TIDA. The Development Plan would be carried out by Treasure Island Community Development, LLC (“TICD”), a private entity competitively selected as the prospective master developer, subject to approval of a Disposition and Development Agreement and related conveyance agreements governing redevelopment of NSTI. One or more Infrastructure Financing districts (“IFDs”) would be used to help finance public facilities and infrastructure improvements.

Currently, the former military base consists primarily of low-density residential uses, along with vacant and underutilized non-residential structures. There are about 1,005 total dwelling units\(^1\) on Treasure Island and Yerba Buena Island (of which about 805 are available for occupancy\(^2\)), about 100 buildings with existing and former non-residential uses, parking and roadways, open space, a wastewater treatment facility, and other infrastructure. The Development Plan Area would be redeveloped with a new, high-density, mixed-use community with a variety of housing types, a retail core, open space and recreation opportunities, on-site infrastructure, and public and community facilities and services. In all, there would be up to approximately 8,000 residential units; up to approximately 140,000 square feet (sq. ft.) of new commercial and retail space; approximately 100,000 sq. ft. of new office space; up to 500 hotel rooms; approximately 300 acres of parks and open space with possible cultural uses such as a museum; bicycle, transit, and pedestrian facilities; a Ferry Terminal and intermodal Transit Hub; and new and/or upgraded public services and utilities, including a new or upgraded wastewater treatment plant and a new recycled water plant. Three historic buildings on Treasure Island would be adapted to house

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\(^1\) Of the 1,005 total units, 908 are located on Treasure Island and 97 are on Yerba Buena Island.
\(^2\) About 200 units are not occupiable for a variety of reasons, including ongoing remediation of hazardous materials in buildings or hazardous materials in the soil.
FIGURE II.1: REGIONAL LOCATION
II. Project Description

up to 311,000 sq. ft. of commercial space.\textsuperscript{3} Nine historic buildings and four garages on Yerba Buena Island would be adaptively reused for various commercial activities such as a hotel/wellness center and possibly a restaurant. The Navy would remediate sites containing hazardous materials to standards consistent with applicable Federal laws governing base closure prior to transfer.\textsuperscript{4} Any remaining site remediation, to the extent that such remediation was not required of, or performed by the Navy, but is necessary to meet the requirements of applicable regulatory agencies for the proposed uses of the Treasure Island / Yerba Buena Island Area Plan (“Area Plan”) and Treasure Island / Yerba Buena Island Special Use District (“SUD”), would be carried out by TIDA as part of the implementation of the Area Plan/SUD. Finally, geotechnical improvements would be made to stabilize Treasure Island and the causeway that connects it to Yerba Buena Island. Buildout would be implemented in four phases, anticipated to occur from approximately 2011 through 2031, depending on market conditions.

Another document, the Design for Development for Treasure and Yerba Buena Islands (“Design for Development”), would be adopted in connection with the SUD. The draft Redevelopment Plan and an accompanying required report called the Preliminary Report are expected to be available in July 2010.\textsuperscript{5} Together, these documents would establish the land use controls and design standards and guidelines for the project site. The Area Plan/SUD would be implemented through a Disposition and Development Agreement (“DDA”) between TIDA and TICD, and related transactional documents. The Area Plan/SUD, the Design for Development, the DDA, and related transactional documents and policies that would be adopted to implement the Area Plan/SUD, and the development program described in the Area Plan/SUD and Design for Development collectively form the “Proposed Project”

\textsuperscript{3} The commercial adaptive reuse includes approximately 67,000 sq. ft. of additional retail use, which, when combined with the 140,000 sq. ft. of new retail, yields a total of approximately 207,000 sq. ft. of retail use proposed on the Islands.

\textsuperscript{4} Remediation activities on the Islands are currently underway and are being carried out by the Navy, which has conducted separate environmental review of the remedial activities pursuant to the National Environmental Policy Act. In limited circumstances, some portions of Treasure Island may be conveyed to TIDA pursuant to a Finding of Suitability for Early Transfer (“FOSET”), and remediation activities under the FOSET would be implemented by TIDA in accordance with the provisions of the FOSET, as further discussed in Section IV.P, Hazards and Hazardous Materials, in this EIR.

\textsuperscript{5} All of these documents are available for review in the Mayor’s Office of Economic and Workforce Development, Room 448, City Hall, San Francisco.
analyzed in this Environmental Impact Report ("EIR"). The anticipated program of development is also referred to in this EIR as the "Development Plan.”

CHAPTER ORGANIZATION

This chapter begins with a discussion of the project sponsors’ objectives and the location of the Islands. It then describes existing land uses. Next, it addresses Development Plan characteristics, the proposed Transportation Plan, the proposed utilities, the proposed geotechnical stabilization, proposed grading, and the proposed Sustainability Plan. The chapter concludes with a discussion of project phasing and construction, and of the intended uses of the EIR.

B. PROJECT SPONSORS’ OBJECTIVES

TIDA, a single-purpose public agency responsible for the Project Area, and TICD, a private entity competitively selected as the prospective master developer, are joint sponsors of the Proposed Project. The Proposed Project’s overall purpose is to convert approximately 367 acres on Treasure Island and approximately 94 acres on Yerba Buena Island from a former military base to a dense, mixed-use development with residential, commercial, cultural, hotel, recreational, and retail uses centered around an intermodal Transit Hub. Supporting infrastructure, public services and utilities, and a substantial amount of open space would also be provided, consistent with the following list of objectives.

Project Objectives Shared by TIDA and TICD

Land Use

- Create a unique San Francisco neighborhood that includes facilities and amenities necessary to support a diverse, thriving community, with a special emphasis on providing amenities for families and tools and services to ensure that the neighborhood has a cohesive feel and meets the needs of its residents.
- Provide a model of 21st century sustainable urban development that displays architectural and landscape design excellence befitting the Islands' history, location, and prominence and capitalizes on the spectacular views of San Francisco.
- Implement a land use program with high-density, compact residential and commercial development located within walking distance of an intermodal Transit Hub to maximize

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6 The basis for the proposed Area Plan/SUD is the Development Plan and Term Sheet for the Redevelopment of Naval Station Treasure Island (the “Development Plan”), which was endorsed by TIDA in October 2006 and by the Board of Supervisors in December 2006, and updated by the Development Plan Update endorsed by the TIDA Board in March 2010 and by the Board of Supervisors in June 2010. The Development Plan was prepared along with supporting studies that address project design concepts, transportation, infrastructure, sustainability, community services, affordable housing, jobs, and other aspects of the development. Copies of these documents are available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0903E, and available online at http://www.sftreasureisland.org/index.aspx?page=26.
II. Project Description

walking, bicycling, and use of public transportation and to minimize the use and impacts of private automobiles.

- Provide a comprehensive new regional waterfront system of parks and public open spaces that is programmed with a variety of uses, including recreational, passive open space, arts, cultural, and educational uses, and that establishes the Development Plan Area as a regional destination.

- Provide a high-quality public realm, including a pedestrian and bicycle-friendly environment with high design standards for public open spaces, parks, and streetscape elements.

- Activate and link the area surrounding the historic structures by providing a dense, urban retail/mixed-use environment that attracts residents and visitors to the area.

Housing

- Provide high-density, mixed-income housing with a variety of housing types, consistent with transit-oriented development, that include both ownership and rental opportunities, to attract a diversity of household types, especially families.

- Include enough residential density to create a sustainable community that supports neighborhood-serving retail, community facilities, and transit infrastructure and service.

Sustainability

- Demonstrate leadership in sustainable design and provide new benchmarks for sustainable development practices in accordance with the Treasure Island Sustainability Plan.

- Organize streets and open spaces to respond to Treasure Island’s microclimate of wind, sun, and fog and optimize solar exposure, in part by shifting the conventional street grid.

Transportation

- Create a circulation and transportation system that emphasizes transit-oriented development, discourages automobile use, and supports and promotes the use of public transportation and car-sharing, through a comprehensive transportation demand management program.

- Provide a range of public transit choices as part of the transportation system.

Infrastructure

- Provide geotechnical and infrastructure improvements and perform environmental remediation to standards necessary to achieve the land use objectives and all applicable building, regulatory, and seismic safety standards.

Additional TIDA Objectives

In addition to the shared objectives, TIDA has the following project objectives:

- Provide an affordable housing program that delivers 25 percent of all residential units at below market rates across a wide range of income levels, including units for formerly
II. Project Description

homeless persons, as provided in the City’s agreement with Treasure Island Homeless Development Initiative (“TIHDI”).

- Adaptively reuse historic buildings listed on the National Register either individually or as contributors to a National Register District in compliance with the Secretary of Interior Standards for Historic Rehabilitation.
- Create an organizational structure that provides for high-quality development, operations and maintenance of parks and open space.
- Maximize opportunities for on-site renewable energy production.
- Create a development that is financially feasible; that allows for the delivery of infrastructure, public benefits, and affordable housing subsidies; and that is able to fund the Proposed Project’s capital costs and ongoing operation and maintenance costs relating to the redevelopment and long-term operation of the project site.
- Provide a comprehensive jobs and community development program that includes the creation of significant numbers of construction and permanent jobs.
- Implement jobs programs that target employment opportunities to economically disadvantaged San Franciscans.
- Support TIHDI jobs and economic development programs.

Additional TICD Objective

In addition to the shared objectives, TICD has the following project objective:

- Construct a high-quality development project that is able to attract investment capital and construction financing and produces a reasonable return on investment.

C. LOCATION

Treasure Island and Yerba Buena Island are in San Francisco Bay, about halfway between the San Francisco mainland and Oakland, on Assessor’s Block 1939, Lots 001 and 002. Treasure Island contains approximately 404 acres of land, and Yerba Buena Island, approximately 160 acres. The Islands are within the City and County of San Francisco, near the boundary with Alameda County. The Bay Bridge provides direct access to Yerba Buena Island, which is linked to Treasure Island by a causeway.

As described on p. II.1, the Islands are the site of the former NSTI, which is owned by the Navy and was operated as a functioning military base until it was closed on September 30, 1997, as part of the Base Realignment and Closure Program. NSTI included all of the land on Treasure Island and about 94 acres of the land on Yerba Buena Island, plus approximately 540 acres of unfilled tidal and submerged lands adjacent to the Islands in San Francisco Bay. The Navy has transferred approximately 37 acres in the center of Treasure Island to the U.S. Department of Labor for the Job Corps facility, approximately 48 acres of land on Yerba Buena Island to the U.S. Coast Guard, and approximately 18 acres of land on Yerba Buena Island to the Federal Highway Administration. The remaining NSTI areas would be transferred as part of the
II. Project Description

Proposed Project to TIDA subject to environmental review and approval of an Economic Development Conveyance Memorandum of Agreement between TIDA and the Navy. TIDA currently serves as caretaker of the Islands, via a Cooperative Agreement with the Navy, and is responsible for overseeing the operations and maintenance of the base, and managing a variety of interim land uses through a Master Lease with the Navy.

The proposed Project Area includes all of Treasure Island and the portions of Yerba Buena Island not owned by the U.S. Coast Guard, plus the adjacent unfilled tidal and submerged lands mentioned above. (See Figure II.2: Proposed Project Area.) Although the Project Area includes the U.S. Department of Labor Jobs Corps campus and the approximately 18 acres under FHWA and the California Department of Transportation (“Caltrans”) jurisdiction, the Area Plan/SUD itself would not apply to, and TIDA would not have any jurisdiction over, any of those areas unless and until they leave State or Federal ownership. The Development Plan focuses only on the property that will be received by TIDA from the Navy that is not part of the Job Corps campus or subject to Caltrans’ exclusive control; that property is referred to as the “Development Plan Area.” The Development Plan Area includes portions of Lots 001 and 002 within Assessor’s Block 1939.

D. EXISTING LAND USES

TREASURE ISLAND

Treasure Island, which consists entirely of level, filled land, was constructed by the U.S. Army Corps of Engineers from 1936 to 1939 as the long-term site for the future San Francisco Airport and the short-term site for the 1939-1940 Golden Gate International Exposition. However, the land and buildings never served as an airport because the Navy took possession of Treasure Island from the City of San Francisco in 1941. Buildings remaining from the Exposition include Buildings 1, 2, and 3 (along with Building 111, an addition to Building 3), which are located along the south side of the island. Buildings 1, 2, and 3 are listed as individual resources on the National Register of Historic Places. Approximately 92 post-World War II-era buildings remain on the island, which appear to date primarily from the 1960s through the early 1990s.

Existing land uses at Treasure Island include approximately 110 acres of residential uses, 90 acres of open space, 95 acres of parking and roads, and 70 acres dedicated to former institutional, retail, office, and industrial uses. In addition, the U.S. Department of Labor owns an approximately
FIGURE II.2: PROPOSED PROJECT AREA
II. Project Description

37-acre parcel on Treasure Island that is occupied by the Job Corps educational and training program. The Jobs Corps campus includes dormitories, classrooms, and indoor and outdoor recreational facilities.\(^7\)

Outside of the Job Corps campus, Treasure Island alone currently has approximately 725 occupiable housing units out of 908 units total,\(^8\) and approximately 91 buildings with approximately 2.3 million sq. ft. of present and former non-residential uses. The housing units are mostly in two-, four-, and eight-unit two-story buildings; there are also barracks once used by military personnel (now unusable). Current non-residential uses include offices, a small restaurant, a convenience store, several event venues, a guard shack, warehouse/storage/manufacturing facilities, a childcare center, a fire station and fire training academy, a wastewater treatment plant, a gymnasium, film production facilities, a chapel, and a yacht club. Other buildings on the island are unoccupied but available for lease or are unoccupied because they are in hazardous condition or are within a site undergoing hazardous waste remediation. Treasure Island also includes outdoor recreation facilities and open space areas. Although the Navy has temporarily restricted access to portions of the northern shoreline for remediation activities, interim access to the perimeter pedestrian path and the boat launch is allowed for launching recreational watercraft, e.g. boardsailing and kayaks. Marine-related facilities include an approximately 100-slip marina in Clipper Cove, which is between Treasure Island and Yerba Buena Island. Pier 1, a long finger pier located on the southeast corner of Treasure Island, is occasionally used for berthing larger vessels that cannot use the marina or for loading and unloading barges.

The existing ground elevations on Treasure Island range from approximately 6 feet (above NAVD88\(^9\)) in the northwestern edge of the island to approximately 14 feet NAVD88 near the southern edge. The perimeter berm around Treasure Island generally ranges from 10 to 14 feet NAVD88. Landscaped areas on Treasure Island include mature ornamental trees, shrubs, and grasses.

**Clipper Cove Marina Project**

TIDA has entered into an Exclusive Negotiating Agreement and endorsed a Development Plan with Treasure Island Enterprises, LLC, for redevelopment and expansion of the Clipper Cove Marina (the “Marina Project”). The Marina Project was analyzed in the *Transfer and Reuse of

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\(^7\) Treasure Island Job Corps Center website, http://treasureisland.jobcorps.gov/about.aspx, accessed June 20, 2010. Job Corps is a no-cost education and technical career training program administered by the U.S. Department of Labor for young people ages 16 through 24.

\(^8\) The remaining 97 units are located on Yerba Buena Island, for a total of 1,005 housing units on both Islands.

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The Marina Project, as described in the 2005 EIR, included both landside and waterside improvements. The landside improvements are no longer being pursued as part of that project, and thus are no longer pending. The waterside improvements, approval of which is still pending, consist of phased demolition of the existing 100 boat berths, new construction of 400 boat berths, and a floating breakwater/public pier, and dredging.

The Proposed Project’s landside improvements along Clipper Cove would serve either the existing marina or the Marina Project’s waterside improvements in the event that the expansion from 100 slips to 400 slips is approved. These landside improvements include restrooms, laundry facilities, and other improvements that are designed to serve marina tenants as well as the existing Treasure Island Sailing Center, a separate facility that also uses Clipper Cove. All of these proposed landside improvements are part of the proposed Development Program and are therefore analyzed in this EIR. If the Proposed Project is approved, these landside improvements would be constructed regardless of whether the marina is expanded. The Marina Project waterside improvements are not part of the Proposed Project and are therefore analyzed only as part of the cumulative scenario in this EIR.

YERBA BUENA ISLAND

Yerba Buena Island is a natural island that has been used by private parties and by the U.S. Army, Navy and Coast Guard since the 1840s. It is steeply sloped and highly vegetated. In 1867, the U.S. Army established a post on the northeastern side of the island adjacent to present-day Clipper Cove, and it maintained a small base on the island until 1960. In 1898, the Navy established a training station there and, after 1923, operated the facility as a receiving station for servicemen returning from overseas. The Torpedo Assembly Building, built in 1891, and the Senior Officers’ Quarters District, constructed in the early 1900s as part of the Navy training station, both remain, along with houses constructed during the same period. Other buildings on the island date from various periods during World War I (1914-1919), World War II in the 1940s, and periods in between. Some residential buildings were constructed in the 1960s. In the areas outside of the Coast Guard and Caltrans facilities discussed below, Yerba Buena Island includes a total of 97 housing units (of which about 80 are occupiable), and 10 non-residential buildings. Quarters 1 (also known as the Nimitz House), the Torpedo Assembly Building, and Quarters 10 and its garage (Building 267) are listed as individual resources on the National Register of Historic Places. Yerba Buena Island also contains the National Register-listed Senior Officers’ Quarters Historic District.

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10 Transfer and Reuse of Naval Station Treasure Island Final Environmental Impact Report, Planning Department Case No. 94.448, State Clearinghouse No. 1996092073, May 5, 2005. A copy of this report is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0903E.
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comprised of Quarters 1 through 7, their garages (Building 83, Building 205, Building 230), and certain formal landscaping elements adjacent to the houses.

Caltrans occupies about 18 acres of land on Yerba Buena Island (land owned by the FHWA) with portions of the Bay Bridge and tunnel. Caltrans is now building a new east span of the Bay Bridge and demolishing the old one as part of the San Francisco-Oakland Bay Bridge East Span Seismic Safety Project (hereinafter “Bay Bridge East Span project”). Several structures on the south side of the Bay Bridge in this area were removed to allow construction of a temporary bridge structure in 2009. The new east span of the Bay Bridge is expected to be completed by 2013.\textsuperscript{11}

The existing ground elevations on Yerba Buena Island range from 0 feet NAVD88 near the water’s edge to 340 feet NAVD88 near the middle of the island. Yerba Buena Island contains landscaped areas, non-native eucalyptus stands, and several types of native habitat. The native vegetation communities are mainly on the western and northern edges of the island and include populations of dune gilia along the western shoreline, although there are special status species present throughout the island.

- U.S. Coast Guard facilities occupy approximately 48 acres of land on Yerba Buena Island adjacent to the Project Area. The U.S. Coast Guard Station and Sector Facility, on the southeast side of Yerba Buena Island, includes housing, administrative facilities, open storage and docks, buoy maintenance facilities, and a lighthouse built in 1872. Coast Guard facilities also include a vehicle tracking system facility on the northwestern part of Yerba Buena Island and Navigation Light No. 6 on the northern end of Treasure Island. The Coast Guard facilities are expected to remain in use in their present location for the foreseeable future.

**EXISTING INFRASTRUCTURE**

Water, wastewater, stormwater, and power services exist on the Islands. Water service is provided by the San Francisco Public Utilities Commission (“SFPUC”) through a 10-inch water line on the Bay Bridge from a pump station on Spear Street on the San Francisco mainland. The four existing water storage tanks on Yerba Buena Island are filled to substantially less-than-full capacity due to their age and poor condition. A water supply pipeline (used only in emergencies) extends under the east span of the Bay Bridge and is supplied by the East Bay Municipal Utility District (“EBMUD”). The service connection is on Beach Street in Oakland, with a pump station located in a column at the eastern end of the Bay Bridge. The Bay Bridge East Span project includes a replacement water supply pipeline that will be connected to the existing back-up water

service pipelines at each end once the new span is completed. The SFPUC is responsible for maintaining the line from the Beach Street meter to Treasure Island.

A wastewater treatment plant is located in the northeast quadrant of Treasure Island; the treatment plant provides secondary treatment prior to discharge. The Navy holds a National Pollution Discharge Elimination System (“NPDES”) permit for discharge to the Bay of an average of 2 million gallons per day (mgd) of treated effluent during dry weather. Stormwater runoff from streets and paved areas is collected in a separate storm drain system and is discharged untreated directly to the Bay through 31 outfalls around the perimeter of Treasure Island and 32 outfalls from Yerba Buena Island.

The distribution/collection pipeline systems for water, stormwater, and wastewater were installed by the Navy as they were needed; therefore, they are somewhat haphazard. They are generally in poor condition, and may not comply with current SFPUC standards. Some of the water distribution pipelines were replaced with new PVC pipe in 1990. The SFPUC maintains and operates all of the existing distribution and collection systems.

Electric service to the Islands is provided by the SFPUC. Electrical service for the Islands comes from a PG&E substation in Oakland and is routed through a substation located at Seventh Street and Maritime Street on Port of Oakland property operated by the Port and leased to the Navy. From the substation, a Navy-owned 12-kV overhead line conveys power to a location near the Bay Bridge, where two recently installed submarine transmission cables on the Bay bottom connect to Treasure Island. Currently, one of the two submarine cables is capped at both ends and needs underground switches at both ends to be operational. A submarine cable from Treasure Island under Clipper Cove provides electricity to Yerba Buena Island. Natural gas is provided by the SFPUC through a contract with the State of California Department of General Services (“DGS”). The contract with DGS provides for the transmission of natural gas through PG&E transmission lines in the East Bay to a submarine pipeline from Oakland. Portions of this gas pipeline have been replaced as part of the new Bay Bridge East Span project now underway.

Roadways, Access, and Transit

Treasure Island is served by a basic grid of collector roads and local roads; Avenue of the Palms, along the western edge of the island, provides access to Yerba Buena Island via a causeway, and access to the Bay Bridge on a series of viaducts. Parking is provided on Treasure Island on some of the roadways, in parking lots, and in off-street spaces within the residential areas. The road network on Yerba Buena Island consists primarily of Treasure Island Road (the primary access road to the Bay Bridge ramps) and Macalla Road. Yerba Buena Island provides off-street parking only.

12 Treasure Island Infrastructure Update, December 2008 (hereinafter cited as “Treasure Island Infrastructure Update”) Section 11, Dry Utilities, Subsection 11.1.4, Submarine Cables, dated August 18, 2009. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0903E.
Access to the Project Area is provided via the Bay Bridge ramps at Yerba Buena Island. There is one off-ramp and two on-ramps in the westbound direction, and two off-ramps and one on-ramp in the eastbound direction. The ramps are accessed from a series of short bridges, or viaducts, on the west side of Yerba Buena Island that are an integral part of the interchange, and from Hillcrest Road and South Gate Road on the east side of the island. The following series of interchange improvements are currently under construction or being studied:

- The existing eastbound on-ramp is being rebuilt as part of the Bay Bridge East Span project.
- Improvement and/or replacement of the other ramps on the east side of the Yerba Buena Island tunnel is under study by the San Francisco County Transportation Authority and Caltrans. Those agencies and FHWA are conducting environmental review to satisfy NEPA and the California Environmental Quality Act (“CEQA”) requirements for that project. Improvement or replacement of these ramps, if undertaken, would be a separate project from both the Bay Bridge East Span project currently under construction and the Proposed Project.
- Retrofit of the viaduct structures on the west side of the Yerba Buena Island tunnel is also under study by the San Francisco County Transportation Authority and Caltrans. Those agencies and FHWA will conduct environmental review to satisfy NEPA and CEQA requirements for that project.

The Islands are served directly by San Francisco Municipal Railway (“Muni”) bus line 108 Treasure Island, which runs between the Islands and the Transbay Terminal in San Francisco. There is no direct transit service between the Islands and the East Bay, and no public ferry serving the Islands.

ADJACENT AND NEARBY USES

The Islands are surrounded by San Francisco Bay waters. The San Francisco mainland is about 1.6 miles to the west and Oakland and Emeryville are about 3.5 miles to the east. Uses to the west along and adjacent to the San Francisco waterfront include the Ferry Building, The Embarcadero Promenade, pier bulkhead buildings and sheds, and the San Francisco downtown financial district. Nearby uses to the east include Port of Oakland container terminal shipping facilities; the former Oakland Army Base; the MacArthur Maze junction of I-80, I-580, and I-880; the joint Union Pacific Intermodal Terminal Oakland Naval Supply Center; and downtown high-rise office buildings in Oakland. Also to the east of the Project Area are high-rise office and residential buildings, a marina, and regional shopping centers in Emeryville. The former Alameda Naval Air Station on the north end of Alameda Island is southeast of Yerba Buena Island.
EXISTING ZONING AND THE TIDELANDS TRUST EXCHANGE

The entire Project Area is within the P (Public) Use District on the San Francisco Planning Code Zoning Map. According to the San Francisco Zoning Map and Section 105(f) of the San Francisco Planning Code, the Project Area is within a 40-X height and bulk district.

In addition, any portion of the Development Plan Area that consists of tidelands and submerged lands, or former tidelands and submerged lands that have been filled, will become subject to the use restrictions imposed under the California Tidelands Trust Doctrine and the statutory trust imposed by the 1997 Treasure Island Conversion Act (collectively, the “Tidelands Trust”) upon their conveyance from the Navy to TIDA. These areas include all of Treasure Island and all of the tidal and submerged lands within the Project Area. The approximately 37-acre Job Corps campus would not be subject to the Tidelands Trust as long as it remains in Federal ownership.

The Tidelands Trust generally prohibits residential, general office, non-maritime industrial, and certain recreational uses on lands that are subject to the Trust. Under the 1997 Treasure Island Conversion Act, existing uses on Treasure Island that are inconsistent with the Tidelands Trust, such as the existing residential buildings, are permitted to continue for their remaining useful life, defined as no less than 25 years or no more than 40 years from the date of the Act.

To facilitate proposed residential and other non-trust uses on the areas of Treasure Island that would be subject to the Tidelands Trust upon conveyance to TIDA, the State legislature authorized a Tidelands Trust exchange. Under the authorized exchange, the Tidelands Trust restrictions would be removed from the portions of Treasure Island that are planned for residential and other non-Trust uses and transferred to portions of Yerba Buena Island that would be used for Trust purposes (see Figure II.3: Tidelands Trust Land Exchange). The proposed Tidelands Trust exchange authorized by Senate Bill 1873 would be implemented through an Exchange Agreement entered into between the State Lands Commission and TIDA.

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13 California Health & Safety Code Section 33492.5.
14 The 1943 legislation that authorized the State to convey the property to the Federal Government removed the Tidelands Trust use restrictions from the property. However, the California Attorney General has opined that the Tidelands Trust will apply to the property once conveyed out of Federal ownership.
15 California Health & Safety Code Section 33492.5.
E. DEVELOPMENT PLAN CHARACTERISTICS

The Development Plan includes:

- Geotechnical stabilization of Treasure Island and the causeway connecting it to Yerba Buena Island, and addition of fill to raise the surface elevation on Treasure Island to address flood protection and potential future sea level rise;
- Up to approximately 8,000 residential units;
- Up to approximately 140,000 sq. ft. of new commercial and retail space;
- Up to approximately 100,000 sq. ft. of new office space;
- Adaptive reuse of Buildings 1, 2, and 3 with up to 311,000 sq. ft. of commercial/flex space (the adaptive reuse would include approximately 67,000 square feet of additional retail, which, when combined with the 140,000 square feet of new retail, yields a total of 207,000 square feet of retail space proposed on the Islands);
- Rehabilitation of the historic buildings on Yerba Buena Island;
- Retention and continued use of the existing chapel in its existing location for general assembly and non-denominational religious activities;
- Up to approximately 500 hotel rooms;
- New and/or upgraded public facilities, including a joint police/fire station, a school, and other community facilities;
- New and/or upgraded public utilities, including the water distribution system, wastewater collection and treatment, recycled water system, and stormwater collection and treatment;
- Approximately 300 acres of parks and public open space, including cultural uses such as a museum;
- New and/or upgraded streets and public ways;
- Bicycle, transit, and pedestrian facilities;
- Landside and waterside facilities for the Treasure Island Sailing Center;
- Landside services for the marina; and
- A Ferry Terminal and intermodal Transit Hub.

The proposed land uses are shown in Figure II.4: Conceptual Land Use Plan, and listed in Table II.1.
*Between 4 and 6 acres, located in a single location or in multiple smaller parcels located on Treasure Island but not to exceed an aggregate of 6 acres. Zoning for the PUC Site is a floating zone that will be fixed at the time the parcel(s) are selected.

SOURCE: Perkins+Will
Table II.1: Proposed Development Plan

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Total Amount Proposed</th>
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<tbody>
<tr>
<td>Residential</td>
<td>8,000 units</td>
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<tr>
<td>Retail (new)</td>
<td>140,000 sq. ft.</td>
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<tr>
<td>Office (new)</td>
<td>100,000 sq. ft.</td>
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<td>Adaptive Reuse (Buildings 1, 2, 3)</td>
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<tr>
<td>Entertainment</td>
<td>150,000 sq. ft.</td>
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<tr>
<td>Food Production</td>
<td>22,000 sq. ft.</td>
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<td>Retail</td>
<td>67,000 sq. ft.</td>
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<td>Community uses</td>
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<td>Circulation</td>
<td>42,000 sq. ft.</td>
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<td>Hotel</td>
<td>500 rooms</td>
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<tr>
<td>Police/Fire Station</td>
<td>30,000 sq. ft.</td>
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<td>Cultural/Museum</td>
<td>75,000 sq. ft.</td>
</tr>
<tr>
<td>Community Facilities¹</td>
<td>48,500 sq. ft.</td>
</tr>
<tr>
<td>School</td>
<td>105,000 sq. ft.</td>
</tr>
<tr>
<td>Sailing Center²</td>
<td>15,000 sq. ft.</td>
</tr>
<tr>
<td>Open Space</td>
<td>300 acres</td>
</tr>
</tbody>
</table>

Notes:
1 Several small community spaces in neighborhoods, such as a senior center, childcare facility, library, or similar uses, as well as an interpretive center or other open space facility.
2 Landside facilities such as classrooms, restrooms, and other facilities to support the Sailing Center’s programming; the Sailing Center also has proposed waterside improvements that are part of the Proposed Project.

PROJECT VARIANTS

The Proposed Project includes several variants to transportation and infrastructure features, which are briefly described in this chapter and fully described in Chapter VI, Project Variants. These variants are also listed in Table II.2. These variants are not part of the Proposed Project. They are being identified and analyzed, however, to provide the flexibility to allow the City to approve them. The variants are therefore analyzed at project level.

OVERALL DESIGN CONCEPT

The Area Plan/SUD would define the boundaries of the Project Area, set out allowable land uses and land use guidelines, establish maximum development and height limits within the Project Area, and authorize TIDA to adopt a Design for Development document for the Development Plan Area. The draft Design for Development sets forth the underlying vision and principles for redevelopment of the Islands and establishes land use and development standards and design guidelines to implement the vision and principles. It describes the character of the Islands’ districts, parks and open spaces, and the network of streets,
### Table II.2: Project Variants Overview

<table>
<thead>
<tr>
<th>Variant Category/Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Variants</strong></td>
<td></td>
</tr>
<tr>
<td>Variant A1 Renewable</td>
<td></td>
</tr>
<tr>
<td>Electricity Generation—</td>
<td>Increase in number of acres with ground or roof-mounted photovoltaic panels from 1.4-3 acres to up to 20 acres in open space areas on eastern and northern shorelines of Treasure Island and/or in center of island near the proposed Urban Agricultural Park.</td>
</tr>
<tr>
<td>Variant A2 District Heating and Cooling</td>
<td>Centralized District Energy(^1) plant to provide heating and cooling only.</td>
</tr>
<tr>
<td>Variant A3 District Energy Heating, Cooling, and Power</td>
<td>Centralized District Energy plant to provide heating, cooling, and electricity.</td>
</tr>
<tr>
<td><strong>Subvariants to Variants A2 and A3</strong></td>
<td>Subvariants could be applied to either Energy Variant A2 or A3 and are not mutually exclusive; they could be implemented separately or together. All the Subvariants assume that low-rise residential buildings on Treasure Island would not have cooling systems and would not be served by a district heating/cooling facility.</td>
</tr>
<tr>
<td>Energy Subvariant A</td>
<td>Use of alternative heat rejection (i.e., getting rid of waste heat) involving either dry cooling towers or combination wet-dry cooling towers.</td>
</tr>
<tr>
<td>Energy Subvariant B</td>
<td>Use of satellite District Energy plants in proposed Cityside and Eastside residential districts to provide redundancy and/or distribution efficiency.</td>
</tr>
<tr>
<td>Energy Subvariant C</td>
<td>Use of solar thermal energy to collect heat for district heating and to heat water that could provide heat and also drive chillers for district cooling.</td>
</tr>
<tr>
<td><strong>Ferry Terminal Breakwater Variants</strong></td>
<td>Variants on the breakwater configurations.</td>
</tr>
<tr>
<td>Breakwater Variant B1</td>
<td>Symmetrical breakwater design, with two angled breakwaters, each extending the same distance (about 600 feet) from the land connection. The 200-foot-wide harbor opening would be directly west of the shoreline and the ferry berths.</td>
</tr>
<tr>
<td>Breakwater Variant B2</td>
<td>Two symmetrical angled breakwaters extending about 500 feet from the land connection, with a south-facing harbor opening of about 300 feet, plus a third, detached breakwater on the north side of the Ferry Terminal extending further into the Bay at an oblique angle. The 300-foot harbor opening would face south.</td>
</tr>
<tr>
<td>Breakwater Variant B3</td>
<td>Same configuration as in the Proposed Project, but the northern breakwater would be constructed first as part of building the Ferry Terminal, and the southern breakwater would be constructed in a later phase.</td>
</tr>
</tbody>
</table>
II. Project Description

Table II.2 (continued)

<table>
<thead>
<tr>
<th>Variant Category/Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supplemental Firefighting Water Supply Variants</strong></td>
<td>Variants to use of recycled water as a supplemental water supply for firefighting. Use of potable water instead of recycled water for the supplemental water supply. It would add a 1.84-million-gallon storage tank with appropriate pumps and emergency generator on Treasure Island in the vicinity of the wastewater treatment plant to store potable water. Would result in an overall increase in storage on the Islands of about 840,000 gallons. The recycled water tank on Treasure Island would be reduced from 1.26 million gallons to 0.42 million gallons. The proposed suction hydrants and fire boat manifolds would be retained under this variant.</td>
</tr>
<tr>
<td><strong>Wastewater Wetlands Variants</strong></td>
<td>Variants for the wastewater treatment facility, each involving the use of wetlands in the wastewater treatment process. About 5 acres of constructed wetlands to provide tertiary treatment of the portion of the secondary-treated effluent from the treatment plant to be recycled; this would occur prior to the microfiltration step, reducing the need for reverse osmosis for the recycled water. Public access would be restricted.</td>
</tr>
<tr>
<td><strong>Automated Waste Collection System Variant</strong></td>
<td>Implementation of an automated, mechanical system to collect solid waste from new buildings on Treasure Island.</td>
</tr>
<tr>
<td><strong>Off-Site Electrical Transmission Facility Improvements Variant</strong></td>
<td>Upgrades to the off-site electrical system to improve capacity and reliability.</td>
</tr>
</tbody>
</table>

**Note:**

1. District Energy means using a centralized location to provide heating and cooling for a group of residential and commercial buildings. Hot water may be used for space heating and water heating. Chilled water may be used for space cooling. District Energy plants may provide higher efficiencies and better pollution control than boilers and chillers located in each building.

including pedestrian and bicycle routes. It also establishes specific land use controls, defines view corridors, establishes bulk limits and tower separation, as well as building design controls and guidance, and establishes parking and loading regulations that would be applicable to the Development Plan Area.

The draft Design for Development sets forth parameters for design. Under these guidelines, individual buildings would be designed and approved at a later date. For this reason, the analysis
in this EIR assumes maximum development within a given district; actual development may be less. The entitlement would provide flexibility to design buildings within a given district.

An overview of the Development Plan for the Treasure Island districts, the Yerba Buena Island District, and open space on both islands is shown in Figure IV.A.3: Proposed Districts, in Section IV.A, Land Use and Land Use Planning, p. IV.A.18, and is described below.

**Island Center District**

The Island Center District would occupy the southern portion of Treasure Island and would abut the southern/southeastern boundary of the Jobs Corps campus. This new neighborhood would include a dense mix of retail, restaurant, office, hotel, residential, transit, and community services uses. The Ferry Terminal and intermodal Transit Hub would be located in the Island Center at the southwestern shore of Treasure Island. A pedestrian link is planned between the Ferry Terminal and Clipper Cove, with pedestrian paths around and connecting to corridors through Buildings 1, 2 and 3, the historic structures (see Figure II.10: Proposed Street System, p. II.41). Buildings 1, 2, and 3 would be adaptively reused for commercial and recreation/entertainment uses. As part of the adaptive reuse, Building 111, which is an addition to Building 3, would be demolished. The existing chapel would be retained in its current location and used for general assembly and non-denominational religious activities.

The highest residential densities and tallest buildings are proposed in this district. A residential tower up to 650 feet tall is proposed adjacent to and north of Building 1. The Island Center could also include several additional high-rise towers up to 450 feet tall. (See Figure IV.B.10: Proposed Representative Massing Diagram, in Section IV.B, Aesthetics, p. IV.B.20, for an example of where towers could be located.)

**Cityside and Eastside Residential Districts**

The Cityside and Eastside Districts would provide high-density residential land uses adjacent to the retail and transit services in the Island Center. The Cityside District would occupy the western portion of Treasure Island and would abut the western and northern boundaries of the Job Corps campus. The Eastside District would be adjacent to and northeast of the Island Center.

Individual neighborhood blocks would consist primarily of dense, low-rise structures of up to 70 feet and mid-rise buildings of between 70 and 130 feet, with neighborhood high-rise towers (up to 240 feet) serving as neighborhood markers (see Figure IV.B.10). Housing in the Cityside District would be east of the Waterfront Park along the shoreline and sited around neighborhood parks of approximately 0.1 to 0.3 acres. The Eastside District housing would form the border of a six-block-long linear park. The buildings would be spaced to enhance views and preserve view corridors intended to contribute to a varied skyline when seen from San Francisco and the East Bay. Most residential parking would be in subsurface garages in residential buildings. Up to approximately 20 percent of residential parking is anticipated to be in centralized parking.
garages; neighborhood parking structures would be surrounded by residential or other active uses and screened to reduce visual impacts. Community and commercial spaces would be included at the ground-floor level of some of the buildings.

**Yerba Buena Island District**

Development on Yerba Buena Island would include limited uses and much lower densities than those planned for Treasure Island. A lodging facility/hotel is planned, and the historic Nimitz House and eight other Senior Officers’ Quarters (collectively, the “Great Whites”), and the Torpedo Assembly Building would be rehabilitated and programmed for public uses. New residential development (approximately 150 to 300 units) would be clustered and placed primarily on the sites of existing buildings, replacing the 97 existing housing units. A small amount of retail space is proposed for the Yerba Buena Island District. Development would be predominantly low-rise, stepping down hillsides, and would be designed to preserve and enhance views from and of the new hilltop park. Building height limitations would ensure that development would not substantially interfere with views as they existed on January 1, 2010, from the proposed new Trust Lands on the eastern and western hilltop public park areas (see Figure II.5: Yerba Buena View Corridors). New structures would be designed to complement Yerba Buena Island’s natural conditions and would not restrict access to the hillside open spaces and trail network.

**Open Space**

The system of open space on the Islands would include neighborhood- and visitor-serving parkland, ecological, recreational, neighborhood, and cultural areas (see Figure II.7, Proposed Open Space, on p. II.30). The approximately 300 acres of open space would include a wide variety of programmed and natural habitat elements, including public spaces and recreation areas; shoreline trails and access improvements, including the proposed extension of the San Francisco Bay Trail from the Bay Bridge bicycle and pedestrian path on the new east span, down Yerba Buena Island, and around the entire perimeter of Treasure Island; a stormwater wetland of about 10 to 15 acres to provide water quality treatment and natural habitat; an urban farm of approximately 20 acres (the “Urban Agricultural Park”); a cultural park adjacent to Building 1; the Building 1 Plaza adjacent to the Ferry Terminal and Transit Hub; a pedestrian promenade along Clipper Cove on the south shoreline of Treasure Island (the “Clipper Cove Promenade”); preserved, restored, and enhanced habitat areas on Yerba Buena Island; and a new hilltop park with vista points, overlooks, and trails on Yerba Buena Island. Also included in the 300 acres of open space are approximately 25-40 acres proposed on the east side of Treasure Island for a regional sports complex with baseball diamonds, soccer fields, and other sports facilities (the Sports Park). The Waterfront Plaza, Cityside Waterfront Park, Northern Shoreline Park, Eastern

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17 Senate Bill 833, Section 8 in Chapter 208 Statutes of 2009, establishes this height limit and the date of existing views to be preserved.
Section 1:
View Corridor A

Section 2:
View Corridor B1

Section 3:
View Corridor B2

View locations

Source: Perkins+Will
Shoreline Park, and Clipper Cove Promenade would provide public access to the shoreline on all sides of Treasure Island. A Habitat Management Plan ("HMP") is proposed to manage and improve plant and wildlife habitat in the undeveloped areas on Yerba Buena Island. The gardens adjacent to the historic Nimitz House on Yerba Buena Island would be improved as part of the open space program.

**LAND USES**

**Residential**

The proposed Development Program would include up to approximately 8,000 residential units, including approximately 7,700 to 7,850 units on Treasure Island and approximately 150 to 300 units on Yerba Buena Island. The residential units would be in approximately 100-125 buildings with a total of approximately 9.6 million net sq. ft. The proposed residences would include both market-rate and affordable rental and for-sale units in townhomes and low-, mid-, and high-rise buildings, including a 650-foot-tall tower in the Island Center District. A minimum of 20 percent of the proposed residences would be sized for families.  

**Building Heights**

A range of building heights is proposed for Treasure Island. Approximately 51 percent of all housing units are anticipated to be in low-rise buildings (building height 70 feet and lower), 34 percent would be in mid-rise buildings (generally buildings 85 to 125 feet in height) or neighborhood towers (building height between 125 and 240 feet), and 15 percent would be in high-rise buildings (building height greater than 240 feet). As noted above, the tallest buildings would be located in and adjacent to the Island Center District, near the proposed Ferry Terminal and Transit Hub, with one 650-foot-tall building in the “Main Tower” height zone across California Avenue from Building 1 (see Figure II.6a: Treasure Island Maximum Height Limit Plan). The Eastside and Island Center Districts would each have base height limits, ranging from 40 to 85 feet in the Eastside District and from 30 to 125 feet in the Island Center District. In addition, the Eastside and Island Center Districts would each have a “Tower Flex Zone” on either side of the linear park. These flex zones would allow about 11 to 13 towers that would be taller than what would be allowed under the base height limits; tower heights would be limited to 240 feet in the Eastside Tower Flex Zone and 450 feet in the Island Center Tower Flex Zone.

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18 Family-sized units are those with two or more bedrooms.
The remaining buildings in these Districts would be limited generally to 50, 70, 85, and 125 feet in height. The locations of tall towers would be limited (and, as a result, the number of towers would be limited) by the following rules in the draft Design for Development: (1) towers would be located on the corner lot of the block adjacent to the linear park or adjacent open space, with active ground floor uses oriented to the open space; (2) a minimum distance of 115 feet would be required between adjacent towers; and (3) a clear view corridor of at least 500 feet from building faces would be required above 85 feet, to be aligned to north-south avenues and extend in all four compass directions from the tower faces. The Eastside District would be filled in with low-rise buildings that are generally 5 stories and up to 70 feet tall. A Special Height District would surround most of Buildings 1, 2, and 3, limiting heights of new buildings adjacent to these historic structures.

The Cityside District would include a 240-foot height zone in seven of the eight blocks north of Fifth Street, a 450-foot height zone in the block north of the Main Tower, and multiple mid-rise height zones of up to 125 feet. If a tower is not built in one of the 240-foot Neighborhood Tower Zones, buildings in those zones located on the east side of a block would be limited to mid-rise heights (125 feet) and those on the west side of a block would be limited to low-rise heights (60 feet). A Shared Public Way (“Mews”) is proposed to bisect most Cityside District blocks in a north-south direction. Mews are proposed to have no on-street parking, with design features that are intended to create unified, single-surface (no vertical separations) public rights-of-way to encourage walking and bicycle use and discourage automobile use while providing visual and tactile cues to provide safe and accessible routes of travel. Buildings directly adjacent to the mews streets would be required to step back at a ratio of 1:1.2 above a height of 40 feet.

At full buildout there would be about 75 to 80 residential buildings of 2 to 5 stories, about 25-35 residential buildings of 6 to 22 stories, and about 5-7 residential buildings taller than 23 stories. All residential buildings on Yerba Buena Island would be 4 stories tall or lower, as measured from the adjacent grade, with the exception of one building on the east side of the island that could be up to 8 stories tall (see Figure II.6b: Yerba Buena Island Maximum Height Limit Plan).

Affordable Housing Program

- The Proposed Project includes several affordable housing initiatives that would allow up to approximately 25 percent (approximately 2,000) of the new housing units to be priced at a range of below-market rates. Specifically:

  - Inclusionary Housing. The Proposed Project would require a portion of the units in market-rate buildings be set aside as affordable. It is expected that approximately 5 percent of the units in market rate buildings, or up to 316 units, would be sold or leased.
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as inclusionary. The inclusionary housing units would generally serve moderate-income households (in the for-sale units) and low-income households (in the rental units).\(^{19}\)

- Treasure Island Homeless Development Initiative ("TIHDI"). The Proposed Project includes land and funding to replace the 250 units of housing in the existing TIHDI program, as well as land for an additional 185 residential units, expanding the program to a total of 435 units. The TIHDI units would generally be for formerly homeless (extremely low-income) families.

- Stand-alone Affordable Housing. Up to 1,684 units (which could be a mix of rental and for-sale units) would be in stand-alone, affordable buildings, of which up to around 1,249 units would be developed by developers selected by TIDA or its designee. The TIDA units would likely include a mix of rental and for-sale units and would target very-low-, low-, and moderate-income households.

- At least 20 percent of the affordable units would be affordable to very-low-income residents. To meet the State law requirement for replacement of affordable housing removed within an Infrastructure Financing District, the Proposed Project includes a replacement housing plan that would be adopted as part of the Infrastructure Financing planning process. Pursuant to State law, whenever residential units housing low- or moderate-income persons are destroyed or taken out of the low- and moderate-income market as part of the activities of an Infrastructure Financing District, the district must cause replacement of those units with new or rehabilitated low- and moderate-income units. In addition, the district must replace 20 percent of the units that are destroyed or removed that are occupied by persons above moderate income. The units must be replaced within 4 years after they are destroyed or removed from the housing market. Replacement units may be located anywhere within the district. All of the replacement units must be affordable to low- or moderate-income households.

- Transition Housing Program

As noted above, there are approximately 805 households currently residing on the Islands. A transition housing program would be established before existing residential units are

\(^{19}\) Moderate-income households are defined as earning no more than 120 percent of the area median income levels for San Francisco, as published by the California Department of Housing and Community Development (California Health & Safety Code Section 50093). Low-income households are those earning no more than 80 percent of area median income.
deconstructed, to ensure that existing qualifying households have the opportunity to continue living on the Islands if they choose. The program would be open to all existing qualifying households in good standing at the time the DDA is executed who continuously remain residents of the Islands in good standing during implementation of the Proposed Project.

**Open Space and Recreation**

The Development Program would include approximately 300 acres of publicly accessible pathways, parks, open space, and shoreline improvements, comprising more than one-half of Treasure Island and approximately three-quarters of the Development Plan Area of Yerba Buena Island (see Figure II.7: Proposed Open Space). The recreational and open space uses would include the following:

- A shoreline path for pedestrians and bicycles around the entire perimeter of Treasure Island; pedestrian and bicycle paths would continue on Yerba Buena Island to connect to the new pedestrian and bicycle path on the east span of the Bay Bridge and from there to the Bay Trail in the East Bay. The proposed alignment would also allow the Yerba Buena Island pedestrian and bicycle facilities to connect to any future pedestrian and/or bicycle path added to the west span of the Bay Bridge. The shoreline path and regional Yerba Buena Island facilities would be part of a network of bicycle and pedestrian trails connecting the various land uses that would serve as a recreational exercise system.

- The Great Park, an approximately 100-acre park with stormwater wetlands, passive open space, the existing sailboarding launch area, and space for an environmental education center that could include a gift shop, small café, interpretive center, and classrooms.\(^{20}\)

- About seven neighborhood parks and playgrounds of about 7,500 to 30,000 sq. ft. each in the Cityside District, some with community gardens, and connecting linkages between parks.

- A linear park, called the Eastside Commons, connecting the Island Center and Eastside District to the Eastern Shoreline Park.

- Off-leash dog areas in various open space areas and parks located on both islands.

- Spaces for public and private permanent and temporary art installations, including space in the Cityside Waterfront Park on the western shoreline and the Cultural Park across from Building 1 (see below), and spaces for festivals and other special events.

- The Urban Agricultural Park, an approximately 20-acre demonstration organic urban farm in the center of Treasure Island, with composting facilities to compost the portion of the green waste projected to be generated by households on the Islands, a plant nursery, and possibly some greenhouses. The compost would be used in the park and in other open spaces.

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\(^{20}\) The Great Park consists of the Northern Shoreline Park, the Wilds, and the Wetlands, as identified in Figure II.7 on p. II.30.
1 - Northern Shoreline Park *
2 - The Wilds *
3 - Sports Park
4 - Cityside Waterfront Park
5 - Eastern Shoreline Park & Pier 1
6 - Urban Agricultural Park
7 - Wetlands *
8 - Eastside Commons
9 - Cultural Park
10 - Waterfront Plaza
11 - Building 1 Plaza
12 - Clipper Cove Promenade
13 - Marina Plaza
14 - Cityside Neighborhood Park
15 - School Open Space
16 - Habitat Management Plan Areas
17 - Hilltop Park
18 - Senior Officers' Quarters Historic District
19 - Beach Park

* This park is part of an area collectively known as the Great Park.
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- The Sports Park, a regional recreational park of up to 40 acres with a variety of athletic fields and associated facilities. The facilities may include courts and fields for baseball (including batting cages), softball, soccer, rugby, lacrosse, and volleyball, as well as associated services such as a concessionaire, parking, and restroom facilities.

- The existing Sailing Center near Pier 1 would be improved with new vessel launch and retrieval facilities. The improvements would include a new pier on pilings to accommodate two vessel launch and retrieval cranes, entry landings and gangways, and floating docks. The waterside facilities would require dredging about 1,500 to 3,700 cubic yards, and would result in about 0.25 to 0.4 acre of pile-supported fill and 0.4 to 0.45 acre of floating fill in the Bay. Landside facilities would include restrooms, laundry facilities, and other improvements to serve the tenants of the Sailing Center (as well as future tenants of the separate Marina Project, if approved).

- Yerba Buena Island parks and open space (about 84 acres), including the 5- to 6-acre Hilltop Park, trails connecting the Hilltop Park to the shore and Treasure Island, improved and managed natural habitat areas, a beach, and the Nimitz Gardens and historic structures associated with the Senior Officers’ Quarters.

- A series of plazas for outdoor activities around Building 1 and Clipper Cove Promenade, a pedestrian promenade adjacent to the Clipper Cove Marina.

- Multi-use active public spaces linked to Pier 1, including landscaped areas linked to other nearby parks, and an approximately 35,000-sq.-ft. community building that could accommodate recreational activities and/or an interpretive center and other visitor-serving facilities.

- A 3-acre Cultural Park adjacent to Building 1. The park would include a future building site for a cultural institution, such as a museum, of up to 75,000 sq. ft. The existing chapel would be retained in its current location.

A range of possible additional open space and recreation improvements could be constructed within the proposed 300 acres as part of the Development Program. TICD would provide developable pads that could be used for the Treasure Island Sailing Center, an Environmental Education Center, and community gardens within the park system.

**Yerba Buena Island Habitat Management Plan**

The Development Program includes a proposed Habitat Management Plan (“HMP”) for Yerba Buena Island. The proposed HMP focuses on the island’s approximately 74 acres of natural open space areas, and the parks and gardens in the Development Plan Area covering all of the island except the portions owned and occupied by FHWA/Caltrans for the Bay Bridge and by the

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21 Draft *Yerba Buena Island Habitat Management Plan*, prepared for Treasure Island Community Development by ESA, Wood Biological Consulting, and CMG, December 2009 (hereinafter “HMP”). A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0903E.
U.S. Coast Guard. The areas proposed for development in the Proposed Project are addressed in the HMP in a more limited way than the open space areas. The HMP would be implemented and overseen by TIDA as the long-term owner of the habitat management areas. (The existing biological habitats and special status species are described in this EIR in Section IV.M, Biological Resources. That section is based in part on the information in the HMP.)
The HMP describes existing topography, geology, climate, and vegetation communities on Yerba Buena Island; establishes habitat management strategies and best management practices (“BMPs”); establishes habitat management zones; and presents detailed management recommendations for each of the zones. The HMP identifies two habitat management approaches that could be selected, managing for special-status species and managing for biodiversity, and recommends managing for biodiversity as the preferred approach. The basic management strategies described in the HMP are preservation, restoration, and enhancement. Preservation would involve further mapping of existing resources, establishing access restrictions where appropriate, and establishing educational programs and stewardship programs. Restoration could involve revegetating areas with native and ecologically appropriate plant species to re-create appropriate habitat, and removing invasive species.

The HMP identifies the following 11 BMPs: (1) revegetate with native species; (2) protect sensitive resource areas; (3) protect nesting birds and roosting bats; (4) remove invasive plants; (5) prevent spread of invasive plants; (6) survey for hazardous trees (trees that could fall) to determine if they need to be removed; (7) remove non-native trees, including eucalyptus, Monterey pine, and Monterey cypress; (8) prevent the occurrence of sudden oak death (not currently present on the island); (9) apply herbicides to non-native plants if necessary as part of habitat restoration or enhancement; (10) control erosion; and (11) minimize recreational impacts on natural areas. These BMPs provide guidance for protecting existing resources and for limiting disturbance during implementation of the habitat management actions.

Eight overall habitat management zones are identified in the HMP. One zone is made up of the areas to be redeveloped as part of the Development Plan; no HMP actions are proposed for these areas but management actions are recommended. In this zone, efforts would be made, to the extent feasible, to preserve important natural features, including specimen trees, that would contribute to the overall health and biodiversity of the habitats on Yerba Buena Island. The other seven management zones each have a group of attributes and threats that generate the overall management “prescription” or recommended approach for that zone. The recommended approaches emphasize preservation and restoration or enhancement, and suggest restrictions on public access where appropriate; however, site-specific plans would need to be developed in the future prior to carrying out some of the recommended actions that are analyzed in this EIR.

The HMP outlines an approach for implementation of the HMP, including direction for implementing the prescriptions; establishes ecological priorities in coordination with the Development Program; and provides a timeline for implementation. The HMP outlines a process for monitoring and maintaining the habitat management zones over the long term to assess the success of management actions, as well as steps for refining and adjusting the program based on future experience.
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Commercial

The Development Plan’s commercial component would include the following: (1) up to 311,000 sq. ft. of commercial and entertainment uses in the renovated historic Buildings 1, 2, and 3; (2) retail uses along a new main street between historic Buildings 1 and 2 on Block M1 (see Figure II.4 on p. II.17); (3) ancillary retail uses along the Clipper Cove Marina and in the residential neighborhoods, including about 5,000 sq. ft. of neighborhood-serving retail in the residential neighborhoods on Yerba Buena Island; (4) up to 100,000 sq. ft. of office space; and (5) up to 500 hotel rooms, which may include one or more full-service hotels near the Transit Hub, one or more boutique time-share hotels at Clipper Cove on Treasure Island, and a hotel on Yerba Buena Island. A variety of retail uses are anticipated, including neighborhood-serving uses such as personal services, restaurants and cafés, housewares and apparel shops, and health and fitness clubs. The Proposed Project would also include a grocery store or market to serve local residents on the Islands (about 30,000 sq. ft.), most likely in Building 2, along with approximately 22,000 sq. ft. of food production uses. Regional-serving retail uses could include specialty foods, specialty gift or crafts, and entertainment uses. As currently envisioned, Building 3 would be used for approximately 150,000 sq. ft. of entertainment/recreation uses, such as a movie theatre and/or indoor sports/recreational facilities that would also be regional-serving retail uses. Building 1 would have approximately 25,000 sq. ft. of retail/restaurant uses; the balance of the space in Building 1 would be used for civic/institutional purposes. The total amount of retail space provided in the Development Program would not exceed 210,000 sq. ft.

Institutional and Public Services

The Development Program would provide space for a variety of community programs in the historic former Administration Building (Building 1), in some of the proposed residential buildings, and in a new 35,000-sq.-ft. building near Pier 1 expected to provide space for recreational or interpretive center activities. Space for public offices, such as TIDA, and childcare also would be provided. Space for an up to 75,000-sq.-ft. museum or other cultural institution is planned in the Cultural Park north of Building 1. The existing chapel, on the site of the proposed Cultural Park, would be retained in its current location and used for general assembly and non-denominational religious activities. The existing public grammar school on Treasure Island, now closed, would be improved or rebuilt as a K-8 public school in coordination with the San Francisco Unified School District. The existing wastewater treatment plant would be replaced by the SFPUC (as discussed below in “Proposed Utilities”). A recycling program would be established, and a recycling center/corporation yard would be provided. A joint police/fire station would be provided on Treasure Island. The existing Job Corps facility would remain in use in its current location on Treasure Island, under the jurisdiction of the U.S. Department of Labor.
II. Project Description

PROPOSED GENERAL PLAN AND PLANNING CODE AMENDMENTS

Although Treasure Island and Yerba Buena Island are located within the jurisdictional boundaries of the City and County of San Francisco, the *San Francisco General Plan* (“General Plan”) and its related planning and policy documents do not specifically address development on the Islands because the Islands have been under Federal ownership and jurisdiction. Consequently, land use planning within the Project Area has not been directly controlled by the City and was not considered in the *General Plan*, although many objectives and policies would be applicable. The Planning Code does, however, apply zoning and height and bulk classifications for both Treasure Island and Yerba Buena Island, although the Islands are not included on the Planning Code Zoning Map.

- The Proposed Project includes amendments to the *General Plan* and Planning Code that would identify the geographic and physical boundaries of Treasure Island and Yerba Buena Island. The Planning Code amendments would add a new Treasure Island / Yerba Buena Island Special Use District (“SUD”) that establishes the land use controls for Treasure Island and Yerba Buena Island and incorporates by reference the land use controls and design standards and guidelines in the *Design for Development*. The *General Plan* would be amended by adding a new Treasure Island / Yerba Buena Island Area Plan that would reference the new neighborhoods on Treasure Island and Yerba Buena Island and define City objectives and policies related to redevelopment of the Islands.

- The City would consider adopting amendments to the Planning Code that would establish the SUD, incorporating by reference the *Design for Development*. The Planning Code text amendments would also modify the provisions of Section 105(f) by removing the portion that currently imposes a height limit of 40 feet on all of Treasure Island and Yerba Buena Island pursuant to the Planning Code amendment process provided in Section 302; and would amend Section 201 to reference the new classes of land use districts on Treasure Island and Yerba Buena Island created by the SUD. The Planning Code would also be amended to establish a Treasure Island/Yerba Buena Island “TI Height and Bulk District” that would reference the permitted height and bulk standards from the SUD and *Design for Development*. Zoning Map amendments would add new Sheet ZN14 to change the zoning designation within the Development Plan Area from “Public” to the Treasure Island/Yerba Buena Island SUD. Areas remaining under the jurisdiction of the Job Corps, FHWA and Caltrans would remain as “P” districts within a 40-X height and bulk district. Zoning map amendments would also add new Sheet HT14 to change the height and bulk district within the Development Plan Area from 40-X to the TI Height and Bulk District, which would include the designations contained in the SUD. Zoning Map amendments would also add a new Sectional Map Sheet SU14 to establish the Treasure Island/Yerba Buena Island SUD.
Overall, average residential densities are proposed at approximately 100 to 110 units per acre, or approximately 1 unit for each 400 to 430 sq. ft. of developed residential land area. (Note that the proposed Area Plan/SUD does not include density limits similar to those in the existing Planning Code; these approximate densities are provided for comparison purposes. The Area Plan/SUD instead establishes a total maximum number of residential units allowed in the Development Plan Area.) Maximum height limits would be 40 feet for areas designated for open space uses, and would range from 30 to 650 feet in areas designated for residential, retail, and commercial uses, as shown on Figure II.6a, on p. II.25.
F. PROPOSED TRANSPORTATION PLAN

TRANSIT HUB

The proposed Transportation Plan relies on the use of alternative transit modes (buses and ferries) for off-island trips and shuttle/pedestrian/bike facilities for on-island travel. The Development Program would include the construction of a Transit Hub in the Island Center. The Transit Hub would have a new Ferry Terminal (described below), shelters for bus and shuttle transfers, and an area for ticket sales and travel and tourist information.

Bus stops and facilities for East Bay and San Francisco bus service providers, shuttle service stops, bicycle parking, a pool of shared bicycles (“Bicycle Library”), a car share pod, and administration/office space for the new Treasure Island Transportation Management Agency (“TITMA”) would be located at or near the Transit Hub. (See “Encouraging Use of Transit and Discouraging Automobile Use,” p. II.51, for a discussion of TITMA’s responsibilities.) TIDA and TICD would prepare the designs for transit facilities in consultation with SFMTA, AC Transit, and WETA.

Ferry Service

Ferry service between the west side of Treasure Island and the San Francisco Ferry Building is proposed as part of the project. The Proposed Project includes construction and operation of a new Ferry Terminal. The proposed Ferry Terminal is composed of a Ferry Terminal building housing ticket facilities and janitorial supplies, a ferry quay and docks, breakwaters, and the ferry basin enclosed by the breakwaters.

The Ferry Terminal, which would be located just north of the causeway, opposite Building 1, would have two ferry slips for bow-loading ferries. One slip would have a boarding float and gangway for side-loading ferries. Each ferry slip would have two wingwalls to secure the bow of the ferry vessel. Mooring dolphins and/or fender walls would be installed to protect the ferry from bumping against the slips and other structures. Riders would reach the bow-loading ferries by walking over covered transfer span ramps (similar to hinged gangways) that end in an apron between the transfer span and the ferry. The transfer spans would be approximately 110 feet long and 25 to 30 feet wide, supported on piles at the shore end and hinged at that end. They would adjust to the tides with hydraulic support towers located near the ferry ends. Each transfer span would also have handrails and lighting, and each slip would have navigation lights. The boarding float attached to one of the bow-loading slips would be held in place by six to eight guide piles, and would have a fixed platform and a gangway. The float would be about 30 feet wide and 70 feet long. A passenger waiting area on the shore would have railings, weather screens, a canopy or roof structure, an information kiosk, ticket vending machines, a ticket collection area, and

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22 Treasure Island Community Development, Treasure Island Transportation Plan, September 2006. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File 2007.0903E.
seating. The Ferry Terminal would also have staff facilities, a storage room, and maintenance facilities such as a trash/recycling room and a janitor’s closet.

The ferry slips would be in a basin protected by angled breakwaters made of precast concrete sheet piles. The basin would have a generally trapezoidal shape created by the angled breakwaters, with a waterside entry about 200 to 300 feet wide. Various configurations for the breakwater are being considered. The preferred configuration has asymmetrical breakwaters, with the longer one on the north side of the basin and the opening directed slightly southward (see Figure II.8: Proposed Ferry Terminal Site Plan). Three Breakwater Variants are under consideration: 1) symmetrical breakwaters with a 200-foot west-facing opening (Breakwater Variant B1); 2) two symmetrical breakwaters plus a third, separate, detached breakwater, and a 300-foot opening facing southwest (Breakwater Variant B2); and 3) phased construction of the breakwaters, configured as for the Proposed Project with the northern, longer breakwater constructed first, along with the ferry slips and passenger facilities. The southern breakwater could be constructed several years later depending on a range of factors including desired frequency of service and routine maintenance dredging requirements (Breakwater Variant B3). (These variants are discussed in Chapter VI, Project Variants, “B, Ferry Terminal Breakwater Variants,” p. VI.20.) Navigation lights would be provided on the breakwaters to mark the harbor entrance. The southern breakwater would have additional lighting for safety and accessibility if it is open to public access. Public access on the northern breakwater is not proposed, as it could occasionally be overtopped by high waves.

To construct the basin, about 4.9 acres (about 227,000 sq. ft.) would have to be dredged to a depth of about -16 feet at the basin shoreline. This depth includes approximately 2 feet of overdepth dredging to provide adequate depth for the ferry vessels and a boarding float. The two angled concrete sheetpile breakwaters, about 350 and 800 feet long, would be constructed, and riprap would be installed along the shore of the basin and the shore ends of the breakwaters for wave suppression. Piles for hydraulic supports for the two transfer spans and aprons leading to each ferry would be installed, as would guide piles to support the boarding float. Additional piles for wingwalls and guide piles, with mooring dolphins or fender walls, would also be installed. The transfer spans would be constructed and installed.

Approximately 32,000 cubic yards of dredge material would be removed from the ferry basin. Dredge material would be reused on-site if they are determined to be suitable after testing. The boarding float and gangway, transfer spans, and breakwaters would add a total of about 0.94 acre of new Bay fill: up to 0.73 acre of solid fill, about 0.01 acre of pile-supported fill, and about
FIGURE II.8: PROPOSED FERRY TERMINAL SITE PLAN
II. Project Description

0.2 acre of floating fill. In addition, the shoreline would be improved and some existing riprap would be replaced. The total area of embankment affected by this shoreline treatment (from the Bay floor to the mean high water level) would be about 1.12 acres.

The project sponsors would fund construction of the Ferry Terminal and Transit Hub improvements, and provide funds for lease of one ferry vessel; the project sponsors would also seek funding to lease additional vessels. Service would be implemented by the Water Emergency Transportation Authority (“WETA”). The Transportation Plan anticipates that ferry service would ultimately be provided to and from San Francisco at 15-minute intervals at peak periods, with the ferry operating between 5 AM and 9 PM. In the early phases of development, one ferry would provide service at approximately 50-minute intervals. The Proposed Project analyzed in this EIR assumes that one ferry is available and that it operates at 50-minute headways; additional ferries and shorter headways are included in the Expanded Transit Service Mitigation Measure analyzed in Section IV.E, Transportation, as Mitigation Measure M-TR-2, p. IV.E.74.

Ferry vessels could hold from 299 up to 699 passengers, and would be up to approximately 200 feet long and 55 feet wide, with a draft of about 8 feet. Two ferry vessels could overnight at the Ferry Terminal, although they might overnight at other locations away from Treasure Island. Routine operations, such as sewage pump-out, filling potable water storage containers, and light maintenance, would be carried out at the Ferry Terminal.

**Bus Service**

Buses from San Francisco and the East Bay would arrive and depart from the Transit Hub. They would stop at three locations within the Island Center area, but would not circulate around the Islands. The pick-up area for service from the Islands would be opposite the Ferry Terminal in front of Building 1 at the Transit Hub. Drop-off for service from San Francisco and the East Bay would occur in two locations: on First Street south of Building 1, and on Avenue D in front of historic Building 2. The Proposed Project includes maintaining the bus service to and from the Transbay Terminal via existing Muni route 108 Treasure Island; ultimately, it is planned that the service to the Transbay Terminal would be expanded and a second destination, such as the Civic Center or the Caltrain depot at 4th and King Streets, would be added. The project sponsors would fund 20 percent of the cost of the new Muni buses estimated for service on these two routes.

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24 The Proposed Project includes a variant that would utilize two 899-passenger vessels rather than three 699-passenger vessels at full buildout with Expanded Transit Service mitigation. Under this variant, the 699-passenger vessels would be reconfigured to accommodate up to 899 passengers, with additional crew required.

25 See Section IV.E, Transportation, “Transit Improvements,” beginning on p. IV.E.33, for more detail about proposed bus service.
Muni would establish the new route in coordination with TIDA and TITMA based on future demand. Operation of the Transbay Terminal route at existing service levels is assumed as part of the Proposed Project; expansion of that service and addition of a second line are not.

To initiate bus service to the East Bay, the project sponsors would fund the purchase of about 8 to 10 buses as necessary for service to the Islands. Service would be provided by AC Transit or another operator. The initial East Bay route would end on Broadway in downtown Oakland; additional service to the East Bay could be provided to the MacArthur BART Station or a similar location. The downtown Oakland service is assumed as part of the Proposed Project; additional service is not. Additional Muni service is included in the Expanded Transit Service Mitigation Measure analyzed in Section IV.E, Transportation, in Mitigation Measure M-TR-2, p. IV.E.74.

**ON-ISLAND SHUTTLE SERVICE**

The Development Program would include a fleet of up to four electric or alternative fuel shuttles for circulation around the Islands. The shuttles would be free to all users and would serve residential, commercial, and open space areas on Treasure Island and Yerba Buena Island. The shuttles would operate primarily on three routes: one would serve the west side of Treasure Island, another would serve the east side of Treasure Island, and the third would serve Yerba Buena Island. (The proposed routes are shown on Figure II.9: Proposed Shuttle Routes; however, the routes are intended to be flexible and can be modified to meet demand.) The two routes on Treasure Island could be extended to serve the open spaces and school during peak use periods. The shuttles would provide continuous service on each route from early morning to late evening. The free shuttles would be expected to operate on a “pulse” schedule, with departures and arrivals coordinated with the ferry and bus service at the Transit Hub. The shuttles would circulate around their respective neighborhoods and provide timed transfer connections for ferry and bus service. All three shuttle routes would provide stops at the Ferry Terminal/out-bound off-island bus stop in front of Building 1, and at the retail area near Building 2. Shuttle routes would be coordinated with the bicycle parking and route network and the proposed amounts and locations of parking (discussed in “Walking and Biking,” and “Parking,” on pp. II.45 and II.50).

**PROPOSED STREET SYSTEM**

The proposed street network is shown in Figure II.10: Proposed Street System. The roadway system would consist of three levels of public roadways: major and secondary arterial streets, collector streets, and Shared Public Ways. Yerba Buena Island would also have privately owned streets that provide access to the main residential districts. Standard typical cross sections for these streets are included in Figure II.11: Representative Street Cross Sections, and the sections are described below. All of the streets on Treasure Island would be new construction, and would meet the requirements of the San Francisco Fire Department (“SFFD”), SFPUC, San Francisco Department of Public Works (“SFDPW”), San Francisco Mayor’s Office of Disability, and the
PROPOSED SHUTTLE ROUTES

OPTIONAL EXTENDED WEEKEND ROUTE

PROPOSED SHUTTLE STOPS

* Shuttle stops locations subject to change in coordination with street design and layout.

SOURCE: Perkins+Will

FIGURE II.9: PROPOSED SHUTTLE ROUTES
The street names shown on this figure are for identification purposes only and subject to change.

LEGEND:
- Major Arterial
- Secondary Arterial
- Collector Street
- Shared Public Way/Private Street

SOURCE: Fehr & Peers, 2009

TREASURE ISLAND AND YERBA BUENA ISLAND REDEVELOPMENT PROJECT EIR

FIGURE II.10: PROPOSED STREET SYSTEM
The Shared Public Way is located in the Cityside Neighborhood.

Shared Public Way Street Section

Windrows Streets are orientated at 68 degrees to the streets that north south on Treasure Island

Typical Windrow Streetscape

Typical California Avenue-M1 Block Street Section

SOURCE: Perkins+Will
San Francisco Municipal Transportation Agency (“SFMTA”). Each type of street is briefly described below.

**Arterial Streets**

Major arterial streets would make up the main east/west and north/south streets on Treasure Island, including the access to the causeway in the Transit Hub area. The typical sections for these streets would include, in each direction, an 11- to 12-foot-wide traffic lane, an 8-foot-wide parking bay, and a 5-foot-wide Class II striped bike lane. Additional 10-foot-wide lanes may be added for exclusive turn lanes in high traffic areas. Landscaping and a 6- to 8-foot-wide sidewalk would be provided on each side of the road.

Two secondary arterial streets on Treasure Island – First Street (called Clipper Cove Avenue in the draft *Design for Development*) and the portion of Avenue D between First Street and California Avenue – would serve the retail area along the south edge of the island beside Buildings 1 and 2 and in front of Building 2. These streets would not provide direct access to the causeway and the Bay Bridge; therefore, they are not classified as a major arterial. Typical cross sections of secondary arterials would include 11-foot-wide traffic lanes and a 7-foot-wide parking bay in the eastbound direction and a 5-foot-wide Class II bicycle lane and an 8-foot-wide parking bay in the westbound direction. Where parking is adjacent to the bus route, there would be a 6-foot flex lane between the parking bay and the travel lane. As with major arterials, there would be landscaping and sidewalks on both sides of the street. Building setbacks would typically be about 6 feet from the right-of-way.²⁶ This space could be used for stoops, porches, or gardens for residential building entries.

**Collector Streets**

Collector streets would provide circulation loops for movement through and around the Island Center and residential neighborhoods, and for the historic hangars and Sailing Center along the southern edge of Treasure Island. Collector streets would also connect to the Job Corps campus and the Urban Agricultural Park and Sports Park. The typical section for these streets would include, in each direction, a 10-foot-wide traffic lane and a 7-foot-wide parking bay. Where a 5-foot-wide Class II bike lane is provided, parking bays would be 8 feet wide. Both sides of the street would have landscaping and sidewalks. Building setbacks would be similar to those for arterial streets.

**Shared Public Ways**

Shared Public Ways, sometimes called “Mews,” are proposed on Treasure Island in the Cityside District to provide access within large blocks, bisecting them in a north-south direction, and on

the south sides of the historic hangars (Buildings 2 and 3) adjacent to proposed new low-rise buildings. These Mews streets would have a single surface with no vertical separations, unlike typical traditional curb-and-gutter street design, with narrower rights-of-way than other streets at about 40 feet wide, and would be designed to emphasize pedestrian and bicycle travel, with slow-moving vehicles allowed. The travel lanes would be a total of 20 feet wide, and surface or architectural treatments would be used to provide delineation between pedestrian-only and shared pedestrian-vehicular areas. Building setbacks from the right-of-way along the Mews would vary from 0 to 6 feet.

The cross sections for these streets have been developed in collaboration with various City departments. In November 2008, TIDA and TICD initiated an interagency planning process to define design criteria and establish policy guidance to create a new street typology called Shared Public Ways, the formal designation for the Mews streets. This new street typology is intended to serve as a pedestrian-priority space, allowing occasional, low-speed vehicles to access local residential development. This collaborative effort culminated in the signing of a Letter of Agreement between senior staff at TIDA, TICD, SFMTA, SFPD, and the Mayor’s Office of Economic and Workforce Development. The Letter of Agreement expresses the intent of its signatories to work together to complete the design, public outreach, approvals, construction, and acceptance by the City of the Shared Public Ways for the Proposed Project as public rights-of-way, assuming that issues of public safety, accessibility, liability, and maintenance can be adequately addressed during the final design and approvals process. Any approvals necessary to select the design and implement the Shared Public Ways would not occur until after certification of this EIR.

Streets on Yerba Buena Island

The street improvements on Yerba Buena Island would generally follow the locations and layout of the existing streets, with improvements for fire access and connections for pedestrian and bicycle paths to the new east span of the Bay Bridge. Due to the topography, new streets would be constructed by cutting into hillsides or filling on downslopes, and adding retaining walls.

The major arterial streets would provide access to Treasure Island and to/from the Bay Bridge, including the causeway, Treasure Island Road, Macalla Road, and Hillcrest Road. The primary road on the west side of Yerba Buena Island (Treasure Island Road, converting to Hillcrest Road past the westbound Bay Bridge entrance) would include 12-foot-wide traffic lanes and a 5-foot-
wide Class II bicycle lane. Sidewalks are planned on the causeway portion of Treasure Island Road linking to Macalla Road at that intersection; no sidewalks are proposed on Treasure Island Road or Hillcrest Road for the remaining link to the Bay Bridge ramps. Macalla Road is proposed to become a one-way road from the Bay Bridge westbound on/off ramps down to the Treasure Island Causeway, with an 11-foot-wide traffic lane and a 5-foot-wide Class II bicycle lane on the right side of the road, and a 6-foot-wide contraflow bicycle lane and a 5-foot-wide sidewalk on the left side.

One secondary arterial would lead from Macalla Road into the residential neighborhood and the Hilltop open space, with 15-foot-wide travel lanes and a 5-foot sidewalk on only the north side of the street.

A one-way collector street would form a loop connecting to the middle and the hilltop end of the secondary arterial. This collector street would have one 20-foot-wide travel lane and 5-foot sidewalks on both sides of the street.

Access to homes on Yerba Buena Island would be from private streets with 11-foot travel lanes in each direction. The private streets would accommodate emergency vehicles and would have wider curb return radii at intersections.

**WALKING AND BIKING**

The proposed *Land Use Plan* and *Transportation Plan* are intended to encourage the use of walking and bicycling as primary on-Island travel modes. The proposed pedestrian and bicycle facilities are illustrated in Figure II.12: Proposed Bicycle Routes. The following aspects of the Proposed Project are aimed at enhancing walking and biking (see Figure II.13: Walking Times to Transit Hub):

- Approximately 50 percent of the residential units would be within an approximately 10-minute walk or less of the Transit Hub.
- All residential units on Treasure Island would be within an approximately 15-minute walk of the Transit Hub. In addition, all residents of both islands would be within an approximately 5-minute walk of a shuttle stop.
- Markets, the school, and other public/community facilities would be within short walk/bike distances from the majority of the Islands’ residential units.

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29 Mitigation Measure M-TR-24, identified in Section IV.E, Transportation, p. IV.E.100, could create a transit-only lane and remove the bicycle lane on Treasure Island Road if congestion on Treasure Island Road adversely affects transit operations. If the bicycle lane were removed, cyclists would continue to have access to the Bay Bridge and Yerba Buena Island. The bicycle lanes on Macalla Road would provide bicycle access on Yerba Buena Island to the east span of the Bay Bridge via Macalla Road, which would also provide access to the west span if a bicycle lane were to be constructed there in the future.
OVERLOOK POINT

CLASS 1
BIKE ONLY
MIX BIKE / PED

CLASS 2
TWO WAY
ONE WAY

SHARED PUBLIC WAY / MEWS - PED / BIKE / AUTO
CLASS 3 (BIKE / AUTO)

EASTSIDE AVENUE
CITYSIDE AVENUE
AVENUE C
CALIFORNIA AVENUE
FIRST STREET
TREASURE ISLAND ROAD

SOURCE: Perkins+Will

FIGURE II.12: PROPOSED BICYCLE ROUTES
0 - 5 MIN. WALK
5 - 10 MIN. WALK
10 - 15 MIN. WALK
15 - 20 MIN. WALK

* ALL DISTANCES TAKE FROM THE TRANSIT HUB

SOURCE: Perkins + Will
II. Project Description

- A network of bicycle, pedestrian, and shared-use paths would connect all of the Islands’ major destinations.
- A comprehensive way-finding signage program would support the network of proposed walkways and shared-use paths.
- Streets would be low speed, with the intent of creating an environment that is compatible with walking and bicycling and that emphasizes attractiveness and safety.
- Safe bike parking (e.g., bike lockers) would be provided at all major destinations, and a bicycle library program would make bikes available for all Island residents and visitors.
- Shareable-width outside lanes or bicycle lanes would be provided on the Islands’ busiest roadways, as appropriate for the traffic volumes and street function.
- The Islands’ walkways and bicycle route network would be connected as an extension of the San Francisco Bay Trail and the shared-use path on the Bay Bridge east span currently under construction, and to the recreational paths around the Islands. The walkways and bicycle routes would be designed to allow for possible future connections to other pedestrian and bicycle routes.

Class I mixed bicycle and pedestrian paths are proposed around the perimeter of Treasure Island, connecting to Class I bicycle-only bicycle paths in the open space areas. A Class I mixed-use, two-way bicycle/pedestrian path along the south side of Macalla Road would connect to the east span of the Bay Bridge on Yerba Buena Island. A Class II bicycle lane also would be provided on the north side of Macalla Road for cyclists heading downhill (with traffic) from the Bay Bridge. Class II bicycle lanes in streets are proposed for the two major arterials on Treasure Island – California Avenue and Avenue C – and on Yerba Buena Island, the causeway, Treasure Island Road, and Macalla Road. No designated Class III bike routes are proposed on Treasure Island, although all other streets are proposed to be designed to encourage shared use by bicycles and autos. A stretch of Treasure Island Road on Yerba Buena Island, east of the entrance to the west span of the Bay Bridge, that is not wide enough for a striped Class II bike lane is proposed to be signed as a Class III bike route. A Class I mixed-use, two-way bicycle pedestrian path would be provided west of and parallel to Treasure Island Road south of the causeway, leading to a scenic overlook to be provided about 500 feet south of the intersection with Macalla Road.

Minimum bicycle parking standards would be required for residential and commercial uses. Bicycle parking would be required in all residential buildings with four or more residential units. In buildings with up to 50 residential units, 1 bicycle parking space would be provided for each 2 residential units. In buildings with more than 50 units, 25 bicycle parking spaces would be required for the first 50 units and 1 space for every 4 units above 50 units. Office buildings...
would be required to provide bicycle parking at a rate of 3 spaces for buildings between 10,001 and 20,000 gross square feet (gsf), 6 bicycle spaces for buildings between 20,001 and 50,000 gsf, and 12 bicycle spaces for larger buildings. Retail buildings between 25,000 and 50,000 gsf would be required to have 3 bicycle parking spaces; those between 50,001 and 100,000 gsf would be required to have 6 bicycle parking spaces; and those over 100,000 gsf would be required to have 12 bicycle parking spaces.
II. Project Description

All streets on Treasure Island, except the Mews, would have sidewalks. The Mews would be a curbless pedestrian-priority street with a shared path of travel. The shared pedestrian/bicycle path around the perimeter of Treasure Island would provide pedestrian access to the shoreline. Pedestrian access would be particularly encouraged along the Shared Public Ways – the Mews – in the Cityside residential neighborhood. The linear park along the Third Street right-of-way in the Island Center and Eastside Districts would contain a pedestrian-only pathway along its entire length between California Avenue and Eastside Avenue. Sidewalks on Yerba Buena Island would be limited due to steep grades. Pedestrian paths would lead from Yerba Buena Road and Macalla Road into the adjacent residential neighborhoods, and pedestrian trails would be provided in the Hilltop Park and from the park to the residential neighborhoods.

BAY BRIDGE ACCESS

As a separate project, the San Francisco County Transportation Authority and Caltrans are studying the replacement or improvement of the westbound on- and off-ramps on the east side of Yerba Buena Island that connect the Islands to the Bay Bridge, to improve seismic conditions and traffic safety. Senate Bill 163 (Migden), chaptered October 13, 2007, requires Caltrans to work with TIDA on the design and engineering of replacement ramps connecting Yerba Buena Island to the Bay Bridge. A Project Study Report was executed by Caltrans on December 19, 2007, and designated the San Francisco County Transportation Authority as the Lead Agency for this project. Caltrans and the San Francisco County Transportation Authority are preparing a joint Environmental Impact Report/Environmental Impact Statement on the Ramps Project.30

Improvements to Bay Bridge ramps are not part of the Proposed Project. These improvements are being pursued by Caltrans and the San Francisco County Transportation Authority to address existing safety conditions. These improvements are not proposed in order to facilitate the Proposed Project and are proposed to be implemented whether the Proposed Project is implemented or not. For these reasons, the ramps are undergoing separate environmental review under the auspices of Caltrans and the San Francisco County Transportation Authority.

These ramp improvements have not yet been approved and funded; thus it is not known whether the ramp improvements will be constructed. For these reasons, this EIR analyzes the impacts of the Proposed Project with both the existing ramps and with the proposed new ramps.

Replacement of the only eastbound on-ramp (located on the east site of Yerba Buena Island) is part of Caltrans’ Bay Bridge East Span project, which is approved and currently under construction. Therefore, replacement of the eastbound on-ramp is assumed to be in place in the EIR’s analysis.

30 San Francisco County Transportation Authority, Notice of Preparation, Yerba Buena Island Ramps Improvement Project, September 5, 2008. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0903E.
PARKING

- The Development Program includes approximately 10,675 parking spaces to be provided on the Islands. All of these spaces would incur a charge for use. A breakdown of the proposed parking spaces by type of space is shown below:

<table>
<thead>
<tr>
<th>Type of Space</th>
<th>No. of Spaces*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Street Spaces</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>8,000</td>
</tr>
<tr>
<td>Hotel</td>
<td>220</td>
</tr>
<tr>
<td>Retail</td>
<td>415</td>
</tr>
<tr>
<td>Office</td>
<td>100</td>
</tr>
<tr>
<td>Open Space</td>
<td>465</td>
</tr>
<tr>
<td>Marina</td>
<td>235</td>
</tr>
<tr>
<td>Flex</td>
<td>205</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>9,640</strong></td>
</tr>
<tr>
<td>On-Street Spaces</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>1,035</strong></td>
</tr>
<tr>
<td><strong>Total Parking Supply</strong></td>
<td><strong>10,675</strong></td>
</tr>
</tbody>
</table>

* Numbers have been rounded

Off-street parking would not be required for any use. For residential uses, the draft Design for Development provides for an island-wide maximum ratio of one parking space per dwelling unit. The sale or rental of these spaces would not be bundled with the sale or rental of dwelling units, so that residents would have the option of purchasing or renting a parking space. In addition, up to approximately 30 percent of the spaces may not be located in the residential buildings, but rather in centralized garages in the residential neighborhoods and/or in the Island Center within walking distance of the residential neighborhoods. Car-share parking spaces would be required at a rate of 1 car share space for residential buildings with 50 to 200 units, and 2 car-share spaces plus 1 more space for every 200 additional units in buildings with 201 or more units. Off-street parking standards for commercial uses on Treasure Island would be reduced from those in the San Francisco Planning Code: 1 parking space for each 1,000 sq. ft. of gross floor area for office uses, 1 parking space for each 1,000 sq. ft. for retail uses, and 0.4 space for each hotel room. Car-share spaces would be required in commercial buildings at a rate of 1 space for each 50 parking spaces for all buildings with more than 25 parking spaces. Approximately 1,640 off-street and 1,035 on-street parking spaces are planned to serve the proposed commercial, retail, and hotel uses; the visitor-serving recreational uses; the uses in Buildings 1, 2, and 3; and the

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31 Thus, a 610-unit building would have 4 car-share parking spaces: 2 + 1 + 1.
Clipper Cove Marina. Retail and hotel parking spaces would be generally located in off-street parking garages. Both on- and off-street parking spaces would be provided for the other proposed uses. Visitors to these uses would pay for off-street or on-street parking, and the revenues would be combined.
with those from transit passes and a congestion pricing program to offset the transportation program’s operating costs for services, such as the off-island transit service, the on-island shuttle service, and the bicycle library.

ENCOURAGING USE OF TRANSIT AND OTHER MODES, AND DISCOURAGING AUTOMOBILE USE

The Proposed Project would include formation of the Treasure Island Transportation Management Agency (“TITMA”), a transportation management agency to be created by the Board of Supervisors after recommendation by TIDA to serve residents and visitors to the Islands. TITMA would be responsible for implementing a comprehensive transportation management program designed to discourage driving and promote use of alternative travel modes. TITMA would also oversee transit services and would implement a series of transportation demand management (“TDM”) measures included in the Proposed Project. These measures are described in more detail in Section IV.E, Transportation, beginning on p. IV.E.45. Some TDM measures would encourage the use of transit, carpooling, walking, and bicycling. These measures include free on-island shuttle service for both islands; a car-share program; a bicycle rental system; mandatory purchase of a pre-paid transit voucher by households and hotel visitors; and support for vanpool and carpool matching services. Other TDM measures are designed to discourage automobile use. These measures include parking pricing policies requiring that visitors to the Islands pay for parking and that residential parking be leased or purchased separately from the residential unit; a congestion pricing program; and ramp metering on the access ramps to the Bay Bridge. The congestion pricing program would allow for imposition of fees applicable to residents who drive on and/or off the Islands during peak travel periods. The congestion pricing fees could be adjusted to reflect traffic patterns, congestion levels, time of day, and other conditions that affect the roadway system. TITMA would have the authority to impose the congestion pricing fees on other uses of the Islands should it be deemed necessary. TITMA would also have the flexibility to adjust the TDM measures and transit services as needed to affect travel behavior and encourage the use of alternative travel modes.

LOADING

Residential buildings, office buildings, and hotels of over 100,000 sq. ft. would have one required loading space, and those over 200,000 sq. ft. would have two required loading spaces. Retail buildings of 10,000 sq. ft. or less would not require a loading space; buildings of 10,001 to 60,000 sq. ft. would provide one loading space; retail buildings of 60,001 to 100,000 sq. ft. would provide two loading spaces; and retail buildings over 100,000 sq. ft. would provide three loading spaces plus one for each additional 80,000 sq. ft. Required loading spaces may be provided in on-street or off-street locations. Where on-street loading is provided, the draft Design for Development standards require review of each proposed loading zone to ensure that on-street loading spaces would not obstruct vehicular, transit, bicycle, or pedestrian circulation, either by
location outside of the path of travel or by limiting the hours of operation of loading zones to times that would not result in conflicts. On-street loading would be prohibited in the Treasure Island transit loop adjacent to the Ferry Terminal and Buildings 1 and 2, unless the loading space(s) can be located outside of the travel path of buses and shuttles or loading hours are restricted to times that would not interfere with transit operations. Where off-street loading is provided, standards in the draft Design for Development establish minimum sizes for the first and additional loading spaces, similar to those in Planning Code Section 154(b), and require that access be designed to minimize conflicts with transit, bicycles, and pedestrians. Guidelines in the draft Design for Development call for locating off-street loading spaces away from intersections and major pedestrian and bicycle routes, and shared with parking entrances where possible.

G. PROPOSED UTILITIES

WATER

The following discussion summarizes the preliminary design for proposed water supply, storage, and distribution. The preliminary design is based on an estimated average daily demand for potable water of 1.21 million gallons per day ("mgd") if recycled water is able to be used for toilet flushing in residential units, or 1.32 mgd if recycled water cannot be used in residential units. These estimates are for full project buildout, and include demand from the Coast Guard and Job Corps facilities that will remain. (The Proposed Project would also include the use of recycled water, described in “Recycled Water,” p. II.60.)

A Water System Master Plan is proposed to be prepared in coordination with the City as part of the design and permitting process. The plan will be consistent with the supply, storage, and distribution information described below.

Proposed Water Supply

The Proposed Project would continue to use the existing primary water supply. Water is provided by the SFPUC through a 10-inch-diameter steel pipe attached to the west span of the Bay Bridge. Water is pumped across the bridge by a pumping station located on Spear Street in San Francisco. The maximum output of the pumping station is 1,500 gpm. The SFPUC chloraminates the water prior to transmission, and the water does not require additional treatment on Treasure Island. A booster chlorine station is available at the water line entry point to Treasure Island for emergencies.

The emergency water supply would continue to be provided by EBMUD, through a new 12-inch water main that is being constructed by Caltrans as part of the new east span of the Bay Bridge. Capacity of the new service will be equivalent to the in-place 12-inch main on the existing

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32 This potable water demand estimate is less than total water demand because of the production and use of recycled water. See Section IV.K, Utilities and Service Systems, pp. IV.K.17, IV.K.18, IV.K.55, and IV.K.60, for further explanation.
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east span of the Bay Bridge. A new 12-inch pipe would be constructed along North Gate Drive on Yerba Buena Island to connect the replacement emergency water supply line to the proposed new storage tanks (described below). The system has been designed to deliver approximately 1,500 gpm during emergency situations, with a typical average annual flow of 35 gpm, in keeping with current operations. The water would continue to be chloraminated by EBMUD prior to delivery. The system would only be used in emergencies when the water supply from San Francisco to the Islands is disrupted and for operational flows to maintain water quality.

**Proposed Water Storage**

The four existing water storage tanks on Yerba Buena Island are in poor condition and would be replaced with two new tanks. Proposed water storage is based on an estimated need for

- 4.0 million gallons of operational storage.\(^{33}\) The proposed locations for the new tanks are based on a detailed study that evaluated ten sites. The existing 1-million-gallon tank south of (uphill from) Macalla Road, located above an elevation of 230 feet, would be replaced with a new circular steel tank of approximately the same size. This tank would serve the lower elevations of Yerba Buena Island and all of Treasure Island. A second 3-million-gallon tank, divided into two 1.5-million-gallon cells, would be located either above the south (upper) portion of Yerba Buena Road at elevation 275 feet, or below the lower portion of Yerba Buena Road above Macalla Road at elevation 250 feet, adjacent to the 1-million-gallon tank. The second tank would be constructed of either concrete or steel. Both tanks would be approximately 35 feet tall. The upper 3-million-gallon storage tank would be supplied by water pumped directly from the 10-inch supply line from San Francisco and the supplemental supply from EBMUD during emergencies. Supply to the lower 1-million-gallon tank would flow by gravity from the larger tank. Water service to the upper elevations on Yerba Buena Island would require a booster pump system to meet operating pressure and flow requirements. The new pump station is proposed to be adjacent to the upper 3-million-gallon storage tank.

**Proposed Water Distribution System**

The existing water distribution piping on the Islands would be replaced completely, in phases. A preliminary water system model was developed to determine the required water line sizes, based

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\(^{33}\) “Operational storage” refers to the amount of recycled water that could be drawn from the storage tank at any one time. In addition to this operational storage, in any water storage tank there is a small amount of “dead storage,” which is water that cannot be accessed. The dead storage volume is typically small in relation to the overall tank volume.

\(^{34}\) This estimate is based on two days of peak maximum daily-water demand plus four hours of fire flow.
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on State requirements for firefighting water flows, the conceptual plans for water tank elevations, and the proposed site plan layout. The conceptual system is shown in Figure II.14: Proposed Water Distribution System. The proposed distribution system includes a series of 8-inch, 12-inch, and 18-inch lines of ductile iron pipe. During construction, continued, uninterrupted service would be provided to existing residents and commercial tenants.
FIGURE II.14: PROPOSED WATER DISTRIBUTION SYSTEM
**Firefighting Water Supply System**

The Proposed Project would provide stored potable water on Yerba Buena Island as the primary firefighting water supply for both islands. About 840,000 gallons of potable water in the storage tanks would be dedicated to providing firefighting water supply for 4 hours at 3,400 gpm.

The Proposed Project would include use of recycled water as a supplemental water supply system for firefighting on Treasure Island (see the discussion of recycled water provided below on p. II.60). This system would enable the SFFD to use recycled water to fight large fires on Treasure Island or to fight fires in the event of a total disruption to both sources of water supply to the Islands. An additional 840,000 gallons of recycled water storage would be constructed, which, with the proposed 420,000 gallons of operational storage for landscaping irrigation and other uses, results in a total of 1.26 million gallons of stored recycled water on Treasure Island. The recycled water storage tank would be either steel or concrete and would be about 80 feet in diameter and 30 feet tall. Pumping facilities with the supplemental firefighting water supply would be larger than those proposed for the recycled water system alone, and the recycled water distribution mains would be larger and would include hydrants connected to this separate water supply. The supplemental firefighting water supply system would also include facilities to connect to fireboats, located on either side of Treasure Island, near the Ferry Terminal and near Pier 1.

The firefighting water supply on Yerba Buena Island would be drawn from the 3 million gallons of stored potable water. A supplemental supply would not be needed.

Two variants to the Supplemental Firefighting Water System are under consideration by the project sponsors: Supplemental Water Variant C1 would use potable water by installing additional storage and pumping facilities on Treasure Island; and Supplemental Water Variant C2 would use Bay water for the supplemental supply. The larger recycled water storage system, larger recycled water pipes, and recycled water hydrants would not be constructed with either variant.

Supplemental Water Variant C1 would include a 1.84-million-gallon circular steel or concrete storage tank on Treasure Island in the vicinity of the wastewater treatment plant (described in “Proposed Wastewater Treatment,” p. II.58). It would be approximately 105 feet in diameter and 30 feet tall and would store potable water. With this volume of storage on Treasure Island, the potable water storage tanks on Yerba Buena Island would be reduced by 1 million gallons to a total of 3.0 million gallons, resulting in an overall increase in storage on the Islands of about 840,000 gallons.
As part of Supplemental Water Variant C1, a pump station and back-up diesel generator would also be constructed on Treasure Island near the water storage tank. Some 8-inch water mains would need to be increased to 12-inch mains for fire flow and domestic water pressure. Several pressure-sustaining and/or pressure-reducing valves also would be installed.

In addition to the potable water storage on Treasure Island, as part of Variant C1, two fireboat manifolds and two suction hydrants could be installed along the southern shore of Treasure Island and near Pier 1 and the Ferry Terminal, if required by the Fire Department.

Supplemental Water Variant C2 would use Bay water as the exclusive source for the supplemental firefighting water supply. This variant would consist of a pump station with a saltwater intake pipe; facilities to connect to fireboats; up to 3 suction hydrants located around the perimeter of Treasure Island; up to 29 fire hydrants connected to this separate firefighting water supply; and a main trunk line distribution piping system to connect the pump station, the same fireboat connections as with the proposed supplemental system, and the fire hydrants.

WASTEWATER

Under the Proposed Project, the existing wastewater collection system would be completely replaced, and the existing wastewater treatment facility would be rebuilt in essentially its current location in the northeastern corner of Treasure Island. (Stormwater flows would continue to be collected in a separate system, discussed in “Stormwater,” p. II.61.)

A Master Wastewater System Plan is proposed to be prepared in coordination with the SFPUC. Design criteria for the new treatment facility will also be coordinated with the SFPUC to determine the design requirements. The plan will be consistent with the components of the wastewater system described below.

Proposed Wastewater Collection

The existing wastewater collection gravity lines, pump stations, and force mains would be completely replaced over time with a new collection system. The conceptual system is shown in Figure II.15: Proposed Wastewater Collection System. As shown in the figure, the proposed collection system would include a series of gravity sewer pipelines and force mains located under the new or (in the case of Yerba Buena Island) rebuilt streets. The pipe materials would be mainly vitrified clay for the gravity pipelines and ductile iron for the force mains, or an alternative material such as high-density polyethylene (“HDPE”) if approved by reviewing City agencies. The existing 27 pump stations and lift stations would also be replaced with 10 to 12 pump or lift stations. The western side of Yerba Buena Island would be served by gravity pipelines flowing down to a pump station at the south end of the causeway.

A force main is a pipe through which liquid is pumped (forced) rather than conducted by gravity flow.
FIGURE II.15: PROPOSED WASTEWATER COLLECTION SYSTEM
The eastern side of Yerba Buena Island would be served by gravity-flow to the east, to a new pump station under the east span of the Bay Bridge, replacing an existing pump station. This pump station would pump wastewater to the top of the island, where it would flow by gravity to the causeway pump station, and then be pumped along with wastewater from the west side of Yerba Buena Island into the Treasure Island wastewater collection system. The proposed system would be connected to the existing U.S. Coast Guard and Job Corps systems at their respective property lines.

The existing wastewater system would be retained to the extent feasible while the new system is under construction. The system would be repaired and upgraded as necessary by the SFPUC to keep it operational until it is replaced.

**Proposed Wastewater Treatment**

The SFPUC operates the existing wastewater treatment plant, located at the northeastern corner of Treasure Island, under a Cooperative Agreement between TIDA and the Navy.\(^3^6\) The plant treats wastewater from existing development on the Islands. The treatment plant provides secondary treatment and has a peak treatment capacity of 2.0 mgd. As part of the Proposed Project, a new or upgraded wastewater treatment plant would be constructed at or near the existing plant site.

- The new or upgraded treatment plant would be financed, built, owned, and operated by the SFPUC. The new or upgraded treatment plant would have the capacity to treat the estimated average dry-weather buildout flow of 1.3 mgd (based on 95 percent of domestic water demand and all of the recycled water demand except that used for irrigation) and the estimated peak wet-weather flow of 2.9 mgd (based on SFPUC standard peaking factors and inflow and infiltration allowance).

The treatment process would start with primary and secondary treatment. The primary treatment process would remove settleable solids in a primary sedimentation tank. Solids would be dewatered and processed in a digester. The secondary treatment process would use trickling filters and solids contact tanks to remove suspended solids. Up to 0.42 mgd of the effluent would undergo further treatment by microfiltration and, to the extent required, reverse osmosis for use as recycled water in appropriate plumbing fixtures in commercial buildings and residential buildings to the extent permitted by regulations in effect at the time each building is constructed, and for irrigation (see “Recycled Water” on p. II.60). These additional processes remove solids and salts.

- Either ultraviolet light or chlorination would be used to disinfect both the treated water to be

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\(^{36}\) Regional Water Quality Control Board San Francisco Bay Region, NPDES Permit No. CA0110116, August 1, 2004, p. 5.
recycled and the remaining secondary-treated effluent prior to discharge through the existing outfall from the existing treatment plant to the Bay. If chlorination were selected, the treatment plant would use sodium hypochlorite to disinfect, and then sodium bisulfite to dechlorinate the effluent. Solids generated in the primary and secondary treatment processes would be digested and dewatered, and the resulting biosolids would be trucked to an off-island landfill for disposal, as with the existing treatment system.
Two variants in the wastewater treatment process, each involving wetlands, are under consideration. These wetlands, if constructed, would be separate from the 10-15 acre wetland proposed to treat stormwater before discharge to the Bay, discussed in “Proposed Stormwater Treatment,” p. II.64. Under Wastewater Wetland Variant D1, treated effluent to be recycled would be discharged to constructed (man-made) wetlands for tertiary treatment before microfiltration. This would improve the quality of the water prior to microfiltration; microfiltration would be accomplished at a higher rate than in the system included in the Proposed Project. Reverse osmosis would be used when necessary to remove salts before the recycled water was used for irrigation. The wetlands would occupy about 5 acres and would include both open water areas and planted areas, with the water depth varying from 1.5 to 4 feet. Public access to the constructed wetlands would be restricted. Bulrushes and native wetland plant species would be used in the shallower wetlands areas. Mosquitofish would be added to the wetlands to minimize the number of mosquitoes. Effluent that is not recycled would be disinfected after tertiary treatment in the wetland, and then discharged through the existing outfall.

Under Wastewater Wetland Variant D2, effluent would undergo microfiltration and disinfection, and then the wetlands would further reduce pollutants such as nitrogen, phosphorus, and trace metals for most of the treated effluent, which would be discharged through the outfall. Recycled water, however, would not pass through the wetlands. About 0.27 mgd would be diverted from the treatment plant and treated with reverse osmosis; this water would be used for landscape irrigation. An additional approximately 0.15 mgd would be diverted from the treatment plant and used for commercial and residential toilet flushing. The remainder of the disinfected effluent from the treatment plant (about 0.9 mgd) would be directed to the wetlands. The wetlands would be smaller than the Variant D1 wetlands, occupying about 2 to 4 acres of land. These wetlands would be suitable to serve as wildlife habitat. Public access to the constructed wetlands in Wastewater Wetlands Variant D2 would not be restricted because the wetlands water would be disinfected. The impacts of these variants are discussed briefly in Chapter VI, Project Variants, “D, Wastewater Wetlands Variants.”

The treated effluent would be routed to the existing outfall. The existing NPDES permit discharge limit of 2.0 mgd average dry weather flow would continue to cover the expected dry weather discharge of about 1.3 mgd if none of the treated effluent were recycled. The existing treatment plant would remain in operation as long as feasible during the first phases of new construction. Portions of the new treatment plant would be constructed as needed and as feasible during each phase to meet the flow requirements of the project.

New technologies for processing effluent or biosolids could be tested and possibly used at the new or upgraded wastewater treatment plant. For example, a small-scale co-generation facility could possibly be installed. This facility would use digester gas to generate electricity for
a portion of the wastewater treatment plant’s needs. The SFPUC plans on retaining the flexibility to add different equipment or processes and would then assess the effectiveness of these additions at a demonstration level. No specific processes or equipment have been identified for addition to the new treatment plant. If any are identified, they would be subject to separate review and approval, including CEQA review, as applicable.

In addition to constructing and operating the new or upgraded wastewater treatment plant, the SFPUC would have the use of an additional 4 to 6 acres near the treatment plant on Treasure Island. The SFPUC would use this property for a range of uses that may include infrastructure improvements furthering the objectives in the Sustainability Plan (see Section J, Proposed Sustainability Plan, p. II.77, for additional discussion of the objectives in this Plan). No detailed plans have been prepared for any of these potential uses. After feasibility studies, concepts that are selected for construction or installation would be subject to further review and approval, including CEQA review, as applicable. For this reason, impacts associated with the use of this 4- to 6-acre area have not been analyzed.

- As noted elsewhere, the Proposed Project includes supplying 5 percent of the project’s peak electrical demand from on-site renewable sources. This can be met by means of rooftop solar photovoltaic facilities; thus, the Proposed Project would not depend on development of the 4- to 6-acre site to meet the 5 percent objective.

RECYCLED WATER

The following discussion summarizes the preliminary design for the proposed recycled water system. A detailed Master Recycled Water Plan will be prepared in coordination with the SFPUC. The plan will be consistent with the overall recycled water program described below.

The Proposed Project includes a program to use recycled water on Treasure Island that would be treated to tertiary levels. The recycled water would be used for irrigation of open space areas, the Urban Agricultural Park, roadside plantings, and landscape water features, and in appropriate plumbing fixtures in commercial and residential buildings to the extent permitted at the time of construction. Recycled water would also be used to maintain water levels in the stormwater treatment wetlands during the dry season (see the discussion under “Stormwater,” p. II.61).

The recycled water would be provided by an on-island recycled water plant, sized to meet the average long-term demand (estimated to be approximately 0.42 mgd). A storage tank with 0.42 million gallons of operational storage would be constructed adjacent to the recycled water plant to meet peak demand of about 0.5 mgd. Treatment of secondary wastewater effluent by microfiltration and reverse osmosis to meet California standards for recycled water is described

- This tank may be reduced in size if either of the Supplemental Firefighting Water System Variants is implemented, as described on pp. II.55-II.56, and in Chapter VI, Project Variants.
above in “Wastewater” on pp. II.58 and II.59. The Development Program would provide a developable pad for the plant, which would be constructed as a part of the wastewater treatment plant. The facility would be constructed and operated by the SFPUC.

Distribution piping for recycled water would be provided throughout Treasure Island (see Figure II.16: Proposed Recycled Water Distribution System). The pipe material would be selected to meet SFPUC requirements. The recycled water would be distributed using a pumping system constructed near the storage tank at the recycled water plant. Recycled water is not proposed to be supplied to Yerba Buena Island due to the island’s distance from the recycled water treatment plant and the pumping that would be required to reach its high elevations.

○ The California Department of Housing and Community Development allows the use of gray water (water from sinks, showers, and similar sources, captured for local reuse) under certain circumstances.\(^\text{38}\) Use of gray water is not part of the Proposed Project at this time; any future proposed use of gray water would conform to all applicable State and local requirements. Because it is not known where or whether these gray water sources would be used, they are not evaluated further in this EIR.

**STORMWATER**

The following discussion summarizes the preliminary design for the proposed stormwater collection and treatment system. A Master Storm Drainage Plan and Stormwater Control Plan will be developed in coordination with the SFPUC. The plan would be consistent with stormwater collection and treatment systems described below.

**Proposed Stormwater Collection**

The existing stormwater collection system would be replaced with a new collection system, which would include gravity pipelines, force mains, lift stations, pump stations, and new outfalls to the Bay. Figure II.17: Proposed Stormwater Collection System, shows the preliminary pipeline locations, pump stations, and outfall locations. As currently envisioned, the gravity pipelines would range from 12 inches to 60 inches and would generally follow the proposed road layout. Force mains and pump stations would be used to direct a portion of the stormwater to the treatment wetlands in the northeast quadrant of Treasure Island. The pipe materials would be a combination of reinforced concrete for gravity pipelines and ductile iron for the two proposed forcemains. HDPE pipes could be used if approved by the SFPUC. The system would comply

\(^{38}\) California Code of Regulations, Title 24, Part 5, Chapter 16A. See footnote regarding gray water on p. IV.K.19 in Section IV.K, Utilities and Service Systems.
FIGURE II.16: PROPOSED RECYCLED WATER DISTRIBUTION SYSTEM
LEGEND

- → DIRECTION OF FLOW

〜 PROPOSED SWALE

★ PUMP STATION

LS LIFT STATION FOR TREATMENT FLOW

○ PROPOSED OUTFALL

☒ EXISTING OUTFALL TO REMAIN OR BE REPLACED

☒ EXISTING OUTFALL TO BE ABANDONED OR REMOVED

Source: BKF

Treasure Island and Terra Buena Island Redevelopment Project EIR

Figure II.17: Proposed Stormwater Collection System
with SFPUC storm drainage requirements and California Regional Water Quality Control Board, San Francisco Bay Region ("RWQCB") requirements for treatment of stormwater flows.\textsuperscript{39}

Based on SFPUC requirements, the storm drain pipes would be sized to accommodate rainwater flows from a 5-year storm. Stormwater flows resulting from a storm of 0.2 inch per hour ("treatment flows") would be directed to treatment areas. Flows larger than the treatment flows, up to the 5-year storm event plus the 100-year high tide, would flow in the pipes, bypassing the treatment devices, and flow directly to the Bay. Flows larger than 5-year storm events would flow overland through the streets of the Development Plan Area toward the open spaces around the perimeter of Treasure Island and Yerba Buena Island. The flows would collect in these areas and drain out to the Bay through inlets attached to the 12 proposed new consolidated outfall structures serving Treasure Island and 2 serving Yerba Buena Island. The inlets and outfalls would be sized to accommodate the 100-year storm event, and to account for higher tide elevations resulting from estimated potential future sea level rise. The outfall locations would be designed to accommodate future pump stations to account for estimated potential future sea level rise.\textsuperscript{40}

\textbf{Proposed Stormwater Treatment}

The proposed stormwater treatment system includes a range of best management practices ("BMPs") distributed throughout the Development Plan Area. One of the main elements of the proposed stormwater treatment system is the creation of a 10- to 15-acre wetland area in the northeast area of Treasure Island. This wetland would be separate from the wastewater wetland that may be constructed as part of Wastewater Variants D1 or D2. In addition to the stormwater treatment wetland, "localized" stormwater BMPs would be included to provide treatment of all runoff in stormwater treatment areas on Treasure Island and Yerba Buena Island. BMPs are measures and procedures used to reduce pollution in stormwater; facilities included as BMP measures would be sized and designed in relation to localized building sites and land spaces in each of several stormwater watersheds for Treasure Island and Yerba Buena Island. Stormwater controls on Yerba Buena Island would include provisions for erosion control, given the steep topography of much of that island. The BMPs would be based on SFPUC Stormwater Design

\textsuperscript{39} The Treasure Island Infrastructure Update assumes that SFPUC Stormwater Design Guidelines will require treatment of 90 percent of the average yearly flow, using volume-based BMPs. For design of flow-based BMPs, the SFPUC would require treatment of flows from a storm of greater intensity than 0.2 inch per hour (see Treasure Island Infrastructure Update, Section 10, and Memorandum from PWA to Treasure Island EIR Team dated December 1, 2009). The Memorandum from PWA is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0903E.

\textsuperscript{40} See Section IV.O, Hydrology and Water Quality, for a discussion of sea level rise, where it is expected that the amount of sea level rise predictions range from 12 inches to 55 inches or higher by the year 2100. The Proposed Project designs account for a rise of 36 inches with an adaptive management plan to accommodate greater increases if they occur in the future.
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Guidelines,\textsuperscript{41} and could include features such as bioretention/infiltration planters and swales, rain gardens, and permeable paving.

The stormwater wetland area is proposed to provide both stormwater treatment during the winter months and a wildlife habitat area on Treasure Island. The wetland would be sized based on the water treatment requirements for discharge of stormwater set by the RWQCB in compliance with the City’s NPDES discharge permit and the SFPUC Stormwater Design Guidelines. A sediment and trash collection area, or forebay, would be provided at the entrance to the stormwater wetlands in advance of the main perennial wetland area. Flows to the perennial wetland areas from the forebay would be controlled by a weir structure. Perennial wetlands remain moist or wet throughout the year. Seasonal wetland areas—meadow-like areas that flood only during the rainy season—would be adjacent to the main, permanent wetland pool to provide additional treatment and habitat area. Water from the main perennial pool would expand into the seasonal areas during and after storm events. Pollutants would be removed through settling, adsorption, filtering, and nutrient uptake by wetland vegetation. The stormwater wetland would discharge to the Bay. Any desired permanent water level during the dry months would be maintained with water from the recycled water system.

Public access would be provided to the stormwater wetland area. In some parts of the wetlands, low fences may be needed to separate people and dogs from the habitat areas and to ensure public safety. Signs would be posted to advise visitors that the water is non-potable. Access to the habitat areas in the wetlands would also be controlled with pathways and planting. An Integrated Pest Management program for Treasure Island would include vector control for the wetland area. Mosquitofish would be used, and plants that attract mosquitoes would be avoided. The edges of permanent pool areas of the wetlands would be designed to allow access to mosquito predators. In addition, water levels in the wetland would be varied to discourage mosquito development by occasional drawdown at some times and augmentation with recycled water at other times. Vegetation maintenance would reduce breeding habitat.

In addition to the stormwater treatment wetland, localized stormwater runoff BMPs would be included to provide required levels of treatment for stormwater on Treasure Island and Yerba Buena Island. These treatment techniques could include, but are not limited to:

- Bioretention. Bioretention areas are vegetated systems that rely on solid infiltration and biogeochemical processes to slow, store, and remove pollutants from stormwater. Examples are soil- and plant-based filtration devices, including a planted buffer strip, a sand bed, a ponding area, and a planted area with an organic (or mulch) layer and planting soil.

• Vegetated swale. A vegetated swale is a broad, shallow channel with plants on the sides and bottom to collect and slowly convey rainwater runoff, with treatment provided through filtering by the vegetation and soil or infiltration into the underlying soils.

• Vegetated buffer strip. Vegetated buffer strips are sloping planted areas designed to treat and infiltrate sheet flow from adjacent impervious areas.

• Infiltration basin. An infiltration basin is a shallow impoundment over permeable soil that captures stormwater, stores it, and allows it to infiltrate. These function like bioretention areas, but are usually larger.

• Infiltration trench. An infiltration trench is a long, narrow, rock-filled trench that allows stormwater to infiltrate.

• Permeable pavement. Permeable pavement is a paving system that includes an underlying layered structure to temporarily store rainwater prior to infiltration or drainage to a collection facility. Examples are porous asphalt, porous concrete, interlocking concrete blocks, or grass pavers.

• Vegetated roofs. Vegetated roofs are covered partially or entirely with vegetation and soils. These filter contaminants. They also absorb stormwater, thereby reducing runoff, and slow stormwater, thereby delaying the peak flow.

• Rainwater harvesting. Rainwater harvesting is the practice of collecting rainwater from impervious surfaces, such as roofs or patios, and using it for irrigation.

Combinations of these features and similar BMPs are expected to be used in each stormwater treatment area. The options for localized stormwater treatment, along with the stormwater treatment wetland, will be reviewed in detail with SFPUC and the RWQCB, and will be subject to a final Stormwater Control Plan.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

The following discussion summarizes the preliminary design for the proposed dry utility systems (electricity, natural gas, and telecommunications). Master utility plans for the electrical and gas system service will be prepared in coordination with the City and utility providers, as appropriate.

Electricity

The existing electrical power supply for Treasure Island and Yerba Buena Island is from the Davis Substation located at 7th Street and Maritime Street on Port of Oakland property, where power is stepped down to 12 kilovolts (“kV”). The supply uses a 12-kV overhead line to connect to two submarine cables at the Port of Oakland shoreline near the end of the Bay Bridge. The old submarine cable that previously served the Islands has been replaced with two cables, each with adequate capacity to serve the proposed development. No changes are anticipated to be needed in this part of the supply system to adequately serve the Proposed Project and the needs of the U.S.
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Coast Guard and Department of Labor Job Corps, although improvements or upgrades to this off-site electrical distribution system could occur in the future and are described below. The existing submarine cable connecting Yerba Buena Island to the Treasure Island power supply is also proposed to remain.

The existing electrical distribution system on Treasure Island and Yerba Buena Island would be replaced in phases during project buildout. The new on-island distribution system would include new switchgear in an outdoor fenced enclosure, connecting to both existing submarine cables, and an underground distribution system in a proposed joint trench layout (see Figure II.18: Proposed Dry Utilities System). The joint trench would follow the proposed roadway layout, and would accommodate electric, natural gas, and telecommunications lines. In order to avoid interruptions, existing service would remain in place until new service is established. The new switchgear would also be connected to two trailer-mounted diesel-powered generators (2 megawatt [“MW”] each) that currently serve as the Islands’ source of emergency back-up power. The generators would be relocated near the new switchgear from their existing location near Building 3.

On-Site Generation

The proposed Treasure Island Infrastructure Update includes a renewable energy component, involving solar power and possibly small vertical-axis wind turbines. A minimum of 5 percent of peak power demand would be created through on-site renewable resources. This target would be achieved by designing building rooftops to accommodate photovoltaic systems, potentially using solar water heating, and potentially providing demonstration-level wind energy production.

The Proposed Project also includes strategies that could enable more than 5 percent of estimated peak demand to be generated on site. These could include:

- Involving third-party investors and power providers, through power purchase agreements, or other delivery/business models, in the implementation of renewable energy systems that would produce substantially more than 5 percent of estimated peak demand.

- Encouraging future development of wind power. Wind energy production facilities and locations are expected to be selected at some time in the future and would undergo appropriate environmental review at that time; wind power is not evaluated in this EIR.

- Allowing for solar photovoltaic systems. The draft Design for Development would permit development of either ground-mounted or roof-mounted photovoltaic systems. With current technology, about 1.4 to 3 acres of photovoltaic panels would be required to meet the goal of 5 percent of the peak power demand. Roof-mounted panels could also satisfy this goal. The Proposed Project includes Variant A1, which would provide up to 20 acres of ground-mounted photovoltaic panels in open space areas on the eastern or northern shorelines of Treasure Island and/or in the center of the island near the Urban Agricultural Park. A total of 28 acres has been tentatively identified as potentially
FIGURE II.18: PROPOSED DRY UTILITIES SYSTEM

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available for this use. Photovoltaic panels would be oriented to the south and tilted at approximately 20 degrees (from parallel to the ground or a flat roof) to maximize energy generation. If panels were installed on the roofs of historic Buildings 1, 2, or 3, they would be required to meet the Secretary of the Interior’s Standards for Rehabilitation.

Off-Site Distribution

The electrical service to Treasure Island from Oakland is considered a “radial service;” that is, it has one point of connection to the grid. For demand less than 20 MW, utility best practices do not typically require a redundant service point for reliability. Although the existing capacity is sufficient, a number of upgrades to the existing off-site electrical distribution system could be made to improve capacity, reliability, or redundancy of service. These upgrades could be a combination of several of the following:

- Add fans at the Davis Street Substation to cool equipment, improving capacity and reliability.
- Add switchgear tying the Davis Street Substation to the adjacent Cuthbertson Substation to provide reliability and redundancy.
- Re-conductor the existing overhead distribution line between the Davis Street Substation and the submarine cable, using the existing poles and pole framing, to provide increased capacity.
- Rebuild the existing overhead distribution line at the same or greater capacity, with new poles, between the Davis Street Substation and the submarine cable, to provide additional capacity and reliability.
- Add one or two new underground lines between the Davis Street Substation and the submarine cable, to either expand (one underground line plus existing overhead line) or replace and expand (two underground lines with no overhead line) capacity, reliability, and redundancy.
- Connect the existing submarine cable to the existing PG&E distribution system via a short overhead wire, to provide reliability and redundancy if capacity is available in that part of the distribution system.

The Proposed Project does not include any of the above upgrades. Variants to the Proposed Project that are studied in this EIR include three possible combinations of upgrade: combining both improvements at the Davis Street Substation, to add fans and tie the substation to the adjacent Cuthbertson Substation; adding fans at the Davis Street Substation and undergrounding existing overhead lines; or tying the Davis and Cuthbertson Substations, re-conductoring the existing overhead lines, and connecting the submarine cable to the existing PG&E distribution system. It is less likely that undergrounding the overhead lines would be combined with retaining or improving the overhead lines.

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42 Treasure Island Infrastructure Update, Chapter 11, Section 11.2.2.
As noted above, these upgrades may be carried out and are analyzed in this EIR, but none are necessary to serve the proposed development on Treasure Island and Yerba Buena Island.

**Natural Gas**

It is expected that PG&E would continue to be the natural gas provider. Natural gas would be supplied to the Islands through an existing PG&E submarine pipeline, portions of which have been upgraded as part of the construction of the east span of the Bay Bridge. Proposed natural gas distribution lines would be installed in the joint trench described above. As with electrical service, existing gas lines would be left in place until new infrastructure has been completed to avoid interruptions in service.

**Telecommunications**

The entire telecommunication system would be replaced as part of the Development Program. Project sponsors will identify, and negotiate with, telecommunication service providers to design and construct a system to serve the Islands. It is anticipated that the telecommunication distribution network would be included in the joint trench described above.

**DISTRICT HEATING AND COOLING OPTIONS**

Heating and cooling is proposed to be generated in each building, as is typical of residential and commercial buildings throughout San Francisco and the region. However, the project sponsors are considering several central heating and cooling plant variants for Treasure Island. The two main variants under consideration are a district heating and cooling plant with a distribution system for heated and chilled water (Energy Variant A2, discussed in Chapter VI, Project Variants, p. VI.12), or a district plant that would generate power and use the resulting waste heat for heating purposes and/or to chill water for cooling (Energy Variant A3). Subvariants applicable to either option include (A) use of alternative ways to address cooling (heat rejection) with either wet or dry cooling towers or a combination of both; (B) use of satellite plants in the Cityside and Eastside Districts to provide redundancy and/or distribution efficiency; and (C) use of solar thermal collectors to heat water that could provide heat and also drive chillers. All of these variants assume that low-rise residential buildings would not have cooling systems.

The central plant facility would most likely be located in the Island Center area (see Figure II.19: Proposed Representative District Heating and Cooling System), either as a separate structure or integrated into a parking garage. It could vary in size from about 12,000 to 18,000 sq. ft. and from 30 to 40 feet tall, assuming that cooling towers were on the roof.

A central heating and cooling plant (Energy Variant A2) would have natural gas boilers providing “low temperature” hot water (less than 250 degrees), and electrically driven chillers with water-cooled chilling towers. The plant structures would include acoustical insulation to meet the
NOTE 1
CENTRAL PLANT SHOULD BE LOCATED WITHIN THIS REGION TO
MAXIMIZE DISTRIBUTION EFFICIENCY FOR HEATING AND COOLING.

NOTE 2
THIS IDENTIFIES HOW A CENTRAL PLANT MIGHT INTERCONNECT TO
THE MAIN DISTRIBUTION INFRASTRUCTURE.

NOTE 3
SATELLITE PLANTS MAY BE DISTRIBUTED THROUGHOUT THE
PROJECT IN ORDER TO PROVIDE PHASING, REDUNDANCY
AND/OR DISTRIBUTION EFFICIENCY. THE LOCATION AND SCALE
OF THESE PLANTS HAVE NOT BEEN IDENTIFIED. LOCATIONS
SHOWN ON THE PLANS HAVE BEEN INCLUDED TO ILLUSTRATE
HOW THE PLANTS MIGHT INTERCONNECT TO THE OVERAL
DISTRIBUTION NETWORK.
requirements of the San Francisco Noise Ordinance. The plant would also have water treatment equipment for both the heating and chilling processes, pumps, and other similar equipment. Cooling towers require high volumes of air to reject the heat from the chilling process; therefore, it is assumed that they would be on the roof of the plant. Architectural and acoustical screening would be used around the cooling towers, with sufficient clearances to allow for necessary air circulation. Baffles would be installed with the cooling towers to limit “drift”—droplets of water that are carried out of the cooling tower with tower exhaust air. (These baffles are called drift eliminators.) Water treatment chemicals would be used to remove scale and avoid corrosion of pipes and equipment, address hard or soft water conditions, and otherwise maintain equipment efficiency. Back-up generators may be provided, along with fuel storage for the generators.

Heated and chilled water for heating and cooling buildings would be distributed through hydronic piping networks using 12-inch pipes and pumps providing flows of about 2,800 gallons per minute for hot water and 2,200 gallons per minute for chilled water. The pipe systems would be sufficiently separated to avoid transfer of heat between the two systems. Buildings that use this heated and chilled water would not be required to construct individual building-level heating and cooling plans.

A subvariant to use dry cooling towers or a combination of dry and wet cooling towers could be selected (Energy Subvariant A). Dry cooling towers would be about 30 to 50 percent larger and taller than wet cooling towers.

If satellite district plants were included as in Energy Subvariant B, they would be located in the residential neighborhoods on Treasure Island and would be built in phases as development occurs to serve nearby buildings. Satellite facilities would have smaller footprints than the central plant, would be a similar height, with acoustical and architectural screening, and could either be separate structures or be integrated into one or more buildings in their neighborhood. Inclusion of satellite district plants would allow the central plant to be smaller, but the overall footprint of all facilities in this subvariant would be larger than with the use of one central plant.

A subvariant to integrate solar thermal panels with the central plant is also under consideration (Energy Subvariant C). The collectors would be on building roofs or the upper level of a parking structure, adjacent to the central heating and cooling plant. Other equipment to operate the solar collectors would include pumps, heat exchangers, storage tanks, and control systems in an approximately 800-square-foot structure for about 10,000 sq. ft. of solar collectors. The hot water generated would be used either in the heating system or to drive an absorption chiller to produce chilled water.

Energy Variant A3 would provide heating and cooling, as with the Central Plant in Energy Variant A2, and would also generate about 1 to 3 MW of electricity. This variant would likely use natural gas-fired steam boilers for heating and making steam, and steam turbines or natural
gas-fired combustion turbines to produce electricity. Waste heat from the turbines would be captured and converted to heat water via a heat exchanger or used in absorption chillers to make chilled water. Cooling towers would still be needed, as for the central heating and cooling plant. Back-up generators may be provided, along with fuel storage for the generators. Other features and the size of this central plant would be similar to those described for the central plant without power generation.

H. GEOTECHNICAL STABILIZATION

The proposed geotechnical stabilization is intended to improve seismic safety on the Islands and to meet all applicable building and seismic safety standards. As outlined in the *Treasure Island Infrastructure Update*, the proposed geotechnical stabilization would address the following major components:

- Stabilization of the causeway connecting Treasure Island and Yerba Buena Island;
- Densification of existing fill throughout the portions of the development area on Treasure Island where buildings and roads are proposed to be built;
- Elevation of the ground surface in areas proposed for development on Treasure Island with fill to compensate for lowering caused by densification and to provide long-term protection against flooding and drainage, including an allowance for estimated potential future sea level rise;
- Strengthening and raising the perimeter berm around Treasure Island;
- Surcharging to reduce or avoid effects of future settlement of Young Bay Mud beneath the existing fill in the development area of Treasure Island;
- Construction of appropriate building foundations on Treasure Island, to include one or two basement levels for most buildings except townhomes and, in general, pile foundations for buildings over ten stories; and
- Repair and rebuilding of concrete retaining walls on Yerba Buena Island as necessary.

CAUSEWAY IMPROVEMENTS

The causeway is an on-grade roadway constructed on fill connecting Yerba Buena Island to Treasure Island. In addition to being the only vehicular access route to Treasure Island, the causeway also contains water supply mains and telecommunications lines serving Treasure Island. The causeway connecting Treasure Island and Yerba Buena Island would be stabilized through densification. The likely geotechnical techniques to strengthen the embankment of the causeway include deep dynamic compaction, vibro-compaction, and vibro-replacement, all described below under “Densification of Areas to Be Developed.”

DENSIFICATION OF AREAS TO BE DEVELOPED

Treasure Island is made up of sandy shoal areas and dredged sand fill to depths up to 50 feet below the ground surface. These sands are subject to liquefaction and settlement during
earthquakes. Settlement could also occur due to continued consolidation of the Young Bay Mud under the sand fill. Densification of these sandy soils is proposed to create a stable “platform” in the approximately 100-acre area proposed to be developed with new buildings and roads (see Figure IV.N.2: Areas of Proposed Geotechnical Improvements, in Section IV.N, Geology and Soils, on p. IV.N.26). The techniques likely to be used on Treasure Island are deep dynamic compaction (repeatedly dropping a large weight onto the soil), and vibro-compaction (using a vibrating probe). Vibro-replacement may also be used in areas near existing buildings (including the Job Corps buildings) or along the perimeter; this method is initiated with vibro-compaction and the hole left by the vibration probe is filled with gravel to create a stone “column.”

In addition to densification, development areas would generally be surcharged. Whereas densification improves the strength of the sand layer, surcharging preloads the layer of Young Bay Mud that lies beneath the 50 feet of sand, minimizing the impact of gradual settlement from the placement of new fill or building weight on the densified sand layer. Surcharging is anticipated to involve temporarily placing approximately 15 to 30 feet of soil on the area to be surcharged. The material, acting as a static weight on the underlying compressible soils, is then left in place for a period of time; the surcharge height and exact length of time would be determined during a design-level geotechnical study. Prefabricated vertical (wick) drains may be placed during the surcharge to accelerate the process. Following completion of the surcharge program, the surcharge soil is removed to the depth of proposed finished grades.

The large open space areas in the northeast corner of Treasure Island would not be densified or surcharged. Geotechnical improvements would not be made on the Job Corps site.

**ELEVATION OF TREASURE ISLAND GROUND SURFACE**

Densification would result in lowering the existing ground surface. Fill is proposed to be used to raise the surface, to compensate for the change due to densification, and also to raise the surface of the entire development area to a level that would provide long-term protection from flooding during storm surges and/or from estimated potential future sea-level rise. Fill material would be obtained from excavation of building basements, grading in undeveloped areas, and from off-site sources, where possible. The thickness of the fill would vary from approximately 2 to 7 feet, with the minimum finished floor elevations in new buildings proposed to be approximately 12.6 feet NAVD88. The proposed elevation of the new ground surface in the developed area takes into account current storm drainage and freeboard requirements, as well as an allowance for potential sea level rise of up to 3 feet. Overall amounts of fill materials are provided below in Section I, Proposed Grading, p. II.76.

Minor amounts of cut and fill are proposed in the large open space area in the northeast corner of Treasure Island; grading of the open spaces is planned to create varied terrain in The Wilds area.
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of the Great Park. Similarly, minor cut and fill is proposed in the sports complex area northeast of the Eastside District.

No grade changes are proposed where existing buildings would remain: on the Job Corps campus, the existing school, and Buildings 1, 2, and 3. The difference in grade between raised developed areas and adjacent existing areas to remain would vary, but would generally be less than 2 feet. These differences would be accounted for on the land that is being raised by gradually grading out the elevation difference or treating it architecturally through low-seat walls or planters.

STRENGTHENING OF TREASURE ISLAND PERIMETER BERM

Portions of the perimeter of Treasure Island would need to be strengthened. Detailed study and laboratory analyses of the perimeter would be conducted prior to construction. If these studies indicate that all or portions of the perimeter need strengthening, the proposed approach would include densification of the fills via impact or vibratory methods, temporary surcharging, or using deep soil mixing or jet grout techniques to create vertical soil-cement columns. The work would be done in a 50-foot-wide area inside the existing shoreline riprap and dike, with no construction activities proposed on the waterside of the berm.

It is likely that, following any strengthening work, portions of the perimeter berm would need to be raised. The finished height for the berm would vary around the perimeter in response to the differing wind and wave conditions that exist in different locations. It is estimated that on the north and west sides of Treasure Island, the perimeter berm would be raised to heights of about 14 to 16 feet. The perimeter berm could be raised further in the future, in response to more frequent wave overtopping resulting from rise in sea level coupled with increased wave action.

BUILDING FOUNDATIONS

The type of foundation used for each building within the Development Plan Area would be based on a detailed geotechnical exploration for the building site. Foundation systems on Treasure Island would range from mat foundations for low-rise buildings and one-level basements, and mat foundations for most mid-rise buildings up to ten stories, to pile foundations and one- or two-level basements for high-rise buildings, depending on site-specific subsurface conditions.

As discussed above, surcharging is likely to be necessary before individual building foundations are constructed for most buildings on Treasure Island, to limit settlement. Flexible utility connections and transition slabs around the buildings would be used to accommodate additional settlement.

The majority of the proposed buildings on Yerba Buena Island would be two to four stories tall, and would likely use shallow mat, spread footings with slab-on-grade or drilled pier foundations.
The mid-rise buildings that could be constructed on Yerba Buena Island would likely have drilled pier, slab-on-grade, or thickened mat foundations.

I. PROPOSED GRADING

A Master Grading and Drainage Plan will be prepared for the Proposed Project. The Master Grading Plan would be developed in consultation with the City.

On Treasure Island, the proposed grading for the development would be dictated in part by a combination of the 1 percent chance of flooding due to a 100-year high tide under existing circumstances, allowances for estimated potential future sea level rise of up to 36 inches in development parcel areas (including streets and utilities), and anticipated settlement of the Bay Mud beneath the island. Accounting for these factors, the minimum finished floor elevations on the development sites would need to be at least 12.6 feet NAVD88. Existing ground elevations range from about 6 feet to 14 feet NAVD88.

As noted in the discussion of geotechnical stabilization, elevation of the ground surface for the developed areas of Treasure Island would ensure that these areas are outside the Federal Emergency Management Agency floodplain zones. Perimeter improvements would raise the ground level in these areas, providing protection from wave run-up during unusual storm surges or tsunami. The perimeter berm could be raised in the future adjacent to the open space areas if necessary to avoid frequent overtopping as a result of estimated potential sea level rise. Similarly, a short wall (approximately 2 feet) could be constructed along the southern perimeter within the proposed pedestrian promenade area to protect this portion of the island in the event of sea level rise; such a wall could be treated as a seating area. A range of features to address potential sea level rise could be made, as needed, depending on edge conditions and wave run-up characteristics.

Grading on Yerba Buena Island would be mainly for improving roads for access, preparing development pads, and erosion control. The existing topography would be retained wherever possible.

The combination of geotechnical stabilization and increased ground elevations for Treasure Island would require approximately 2 million cubic yards of soil fill. Excavation for building basements would generate approximately 0.5 million cubic yards of fill material, and grading in the open space areas would generate approximately 0.4 million cubic yards. Up to 100,000 cubic yards of fill material could be generated from grading on Yerba Buena Island. The remaining approximately 1.1 million cubic yards of fill material would need to be imported to the project site. Grading would be completed in phases over approximately 10 to 15 years, coinciding with geotechnical stabilization and phased building construction. Imported soil would be barged and/or trucked to the site. If only barges were used, approximately 1,000 barge round trips would
be required; if trucks were used, approximately 110,000 round trips would be required.\(^43\) It is likely that a combination of barges and trucks would be used.

**J. PROPOSED SUSTAINABILITY PLAN**

A major component of the Proposed Project is the *Sustainability Plan*. The *Sustainability Plan* documents the guiding principles for the Development Program and identifies implementation measures to be undertaken by TICD and other stakeholders. The *Sustainability Plan* includes a framework that encompasses ten key focus areas:

- Site design and land use;
- Landscape and biodiversity;
- Transportation;
- Energy;
- Water and wastewater;
- Solid waste;
- Materials;
- Health, safety, and security;
- Community and society; and
- Economic development and viability.

A series of specific goals and obligations has been established for each of the focus areas; the plan includes strategies and targets to support each goal.

Many of these measures are integral to the Proposed Project, and are intended to facilitate progressively higher levels of sustainability over time. These include the proposed residential densities, proximity to transit facilities, orientation of streets and buildings, and green building specifications, which would be incorporated into the Proposed Project’s *Design for Development* guidelines and conditions of approval. In addition, the Proposed Project would include strategies intended to achieve Gold certification under the U.S. Green Building Council’s Leadership in Energy and Environmental Design-2009 for Neighborhood Development (“LEED-ND”) rating system, and good-faith efforts to achieve Platinum certification.

Because new technologies and higher performance standards would likely emerge during the phased buildout of the Proposed Project and beyond, the *Sustainability Plan* also describes goals, strategies, and targets that could be achieved through collaboration between TIDA, TICD, other government agencies, utility providers, and various organizations. These include a number of proposed transportation strategies, including transit-oriented development, parking capacity

\(^{43}\) *Treasure Island Infrastructure Plan*, Section 5.6.
controls, congestion pricing, ramp metering, and a comprehensive TDM program, including the
establishment of an on-island transportation coordination office intended to achieve greater
sustainability through reduced automobile use. Other strategies include provision of
infrastructure to maximize the on-site production of renewable energy as technologies and
delivery mechanisms become available; a parks and open space program to create, restore, and
maintain habitat and landscape areas; and other features that would reduce potable water usage.
A number of the variants studied in this EIR are intended to implement these sustainability goals,
in the event the variants become feasible projects over time.

TICD has committed to include the following sustainability components in the Proposed Project:

- Green building specifications for all new buildings in the Development Plan Area, which
  would be incorporated into the project design guidelines and conditions of approval;
- Strategies intended to achieve Gold certification under the LEED-ND rating system
  (TICD would use good faith efforts to achieve Platinum certification, the highest level);
- The proposed Land Use Plan, which includes a dense, compact, walkable design around
  an intermodal Transit Hub; orientation of streets and buildings to maximize the effects of
  sun and minimize the effects of wind; and the establishment of neighborhood-serving
  retail and services;
- The Land Use Plan’s proposed open space elements, which include (among other
  components) the use of native or regionally appropriate species for landscaping,
  protection of sensitive species in accordance with applicable laws, and establishment of a
  temporary plant nursery for the propagation of native species;
- Those elements of the transportation programs included in the proposed Transportation
  Plan and corresponding funding for capital improvements and operating subsidies that
  are identified in the Sustainability Plan and DDA as being funded by TICD;
- Design standards that require most building roofs to enable the installation of
  photovoltaic panels;
- Infrastructure system components including stormwater treatment wetlands, water
  storage, and a recycling and composting center;
- Measures to protect public health and safety including supplemental environmental
  remediation, geotechnical stabilization, and emergency support services;
- Deconstruction and re-use of existing buildings and materials;
- Adaptive re-use of existing historic structures;
- Provision of public and community facilities;
- Affordable housing, including a transition housing component; and
- A Jobs and Equal Opportunity Program.

In addition, TICD would commit to good faith efforts to work toward implementing other stated
goals and objectives of the Sustainability Plan.
In May 2009, the Proposed Project was selected as one of a total of 17 projects worldwide to join the Climate Positive Development Program, a joint initiative of the Clinton Climate Initiative, a project of the William J. Clinton Foundation, and the U.S. Green Building Council. The Climate Positive Development Program supports the development of large-scale urban projects that are striving to reduce the amount of on-site greenhouse gas emissions to below zero. The Climate Positive Development Program was created to meet the dual challenge of rapid urban growth and climate change by setting a new global benchmark for leadership in large-scale urban development. The Proposed Project is participating in the program’s efforts to develop a “Climate+” greenhouse gas metric and measurement standard. The Proposed Project is also leveraging the program’s technical support, business and financial analysis, and partnership facilitation to advance the sustainability and renewable energy objectives of the Proposed Project.

K. PROJECT PHASING AND CONSTRUCTION

Construction and buildout of the proposed Development Program would be phased and would be anticipated to occur over an approximate 15- to 20-year period. Assuming that construction would begin in approximately 2011, the last building constructed would be ready for occupancy in about 2030. However, the actual timing of construction would depend on market conditions and other factors.

The Development Program is expected to involve four major phases. The first phase would include the installation of the infrastructure backbone and portions of the geotechnical stabilization; the subsequent phases would include the extension of infrastructure and ground improvements and the development of the residential, commercial, open space/recreational, cultural, and institutional and public uses. The second phase is expected to overlap with the first phase; phases three and four may also overlap with other phases.

To ensure that existing households are accommodated in the proposed redevelopment, the Proposed Project would include a transition housing program for all eligible residents of the Islands at the time of the execution of the DDA who continuously remain Island residents in good standing during project development.

Affordable housing would be constructed in phases such that approximately 30 percent of the residential units in each phase would be affordable housing. Infrastructure and public facilities would be phased with the intent of providing continuous service to existing residents and businesses. Open space and recreational uses would be developed proportionally with the proposed housing and commercial uses; the proposed Great Park would be developed in the final phase to allow retention of the existing housing in that location until that time.

To the extent practical, existing structures would be “deconstructed,” allowing for reuse or recycling of wood, concrete, metals, and other materials. Demolition/deconstruction would begin...
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with removal and abatement of any hazardous materials such as lead paint and asbestos. Where possible, concrete and asphalt pavements would be recycled or used on site or made available for use elsewhere; a concrete/asphalt crushing plant would be operated on Treasure Island to assist in recycling/reuse of these materials. The crushing plant would be a temporary facility in use for up to 15 years. It would be placed on different sites, located for efficiency during the various demolition and construction phases, taking into consideration the need to limit impacts on existing and future businesses and residents. It would occupy approximately 3 to 5 acres and would operate on weekdays during typical construction hours of about 7:00 a.m. to about 3:00 or 4:00 p.m. Mounds of materials could be 10 to 30 feet high. Metals in utilities would be recycled as feasible. Significant trees and other major plantings would be retained or relocated whenever feasible based on an arborist’s report, or recycled by composting for on-site uses. Plants to be retained would be relocated to a temporary nursery until they could be permanently installed in new locations. A Master Deconstruction and Demolition Plan would be prepared according to the City’s requirements, and would likely identify hazardous materials on a building-by-building basis, list recyclable materials, and recommend demolition or deconstruction as the preferred approach for each building.

The proposed demolition and deconstruction would likely occur in three main phases in conjunction with building construction. Each phase of demolition would include work in several smaller areas to tailor the demolition/deconstruction process to the area required for individual building sites in each phase, allowing existing utilities and streets serving active uses to remain in place as long as possible.

As the Development Program is implemented, the phasing could be adjusted for economic or constructability reasons, to the extent permitted by the DDA. It is anticipated that the DDA will provide flexibility in implementing the Proposed Project and permit modifications to the phasing. Such adjustments to the phasing could affect the number, order, and timing of phases. This flexibility is necessary for a project of this length and complexity in order to respond to availability of contractors and materials in the marketplace as well as possible changes in market conditions, including both the capital and housing markets. For purposes of this analysis, a representative phasing plan was analyzed. The major components of the representative phasing that are assumed in this analysis include the following:

**Phase 1 (Infrastructure Only)**
- Stabilization of causeway;
- Establishment of construction staging area around Pier 1 on Treasure Island;
- In areas adjacent to Phase 1 and Phase 2 development sites, stabilization of perimeter and regrading;
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- Remediation of sites within Phase 1 to standards required by applicable regulatory agencies (to the extent that such remediation is not required to be performed by the Navy under applicable Federal Base Closure law prior to transfer);
- Construction of Ferry Terminal;
- Start of construction of bike and pedestrian paths;
- Establishment of on-site plant nursery;
- Ground improvement, including compaction, surcharge, and placement of fill to raise some ground surfaces in initial development areas on Treasure Island;
- Construction of initial backbone infrastructure; and
- Start of deconstruction activities, including deconstruction of the existing residential units on Yerba Buena Island.

Phase 2 (Building Construction and Associated Infrastructure; would occur with Phase 1)

- Remediation of sites within Phase 2 to standards required by applicable regulatory agencies (to the extent that such remediation is not required to be performed by the Navy under applicable Federal Base Closure law prior to transfer);
- Development of residential units in a portion of the Cityside District on Treasure Island and residential units on Yerba Buena Island;
- Construction and installation of new water storage tanks and infrastructure improvements on Yerba Buena Island;
- Development of neighborhood-serving retail uses, Transit Hub, and maritime support uses in the Island Center District on Treasure Island;
- Development of southern portion of Cityside Waterfront Park;
- Implementation of bus and ferry service and TDM measures by TITMA;
- Renovation of Building 2 on Treasure Island;
- Construction of Clipper Cove Marina edge and Sailing Center improvements;
- Construction of police/fire facility;
- Renovation or reconstruction and reopening of Treasure Island school;
- Establishment of localized stormwater measures (BMPs); and
- Phased construction of wastewater treatment and recycled water facilities (by SFPUC).

Phase 3 (Building Construction and Associated Infrastructure)

- Remediation of sites within Phase 3 to standards required by applicable regulatory agencies (to the extent that such remediation is not required to be performed by the Navy under applicable Federal Base Closure law prior to transfer);
- Development of residential units, linear park, and portions of Eastern Shoreline Park in the Eastside District on Treasure Island and new residential units in Yerba Buena Island East area;
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- Establishment of localized stormwater measures (BMPs) and stormwater wetlands, continued from Phase 2;
- Phased construction of wastewater treatment and recycled water facilities (by SFPUC) continued from Phase 2;
- Additional development of retail district in the Island Center District behind Building 1;
- Renovation of Building 1 on Treasure Island;
- Development of the regional sports complex on Treasure Island; and
- Development of hotel on Yerba Buena Island.

**Phase 4 (Building Construction and Associated Infrastructure)**

- Remediation of sites within Phase 4 to standards required by applicable regulatory agencies (to the extent that such remediation is not required to be performed by the Navy under applicable Federal Base Closure law prior to transfer);
- Development of remaining residential units in Cityside and Island Center Districts, Main Tower in Island Center District, and hotel uses on Treasure Island;
- Development of remaining portion of Cityside Waterfront Park;
- Development of the Great Park on Treasure Island;
- Development of the Cultural Park around the existing Navy chapel, which would be retained;
- Renovation of Building 3 on Treasure Island;
- Development of the Senior Officers’ Quarters Historic District and landscaping improvements on Yerba Buena Island;
- Development of Urban Agricultural Park;
- Development of Pier 1 facilities; and
- Demolition of temporary utilities and other temporary facilities.

Construction materials would be transported to Treasure Island by a combination of trucks and/or barges, which would be off-loaded at Pier 1 on the east side of the island and then trucked to each construction site. Construction equipment would generally be trucked to Treasure Island.

L. INTENDED USES OF THE EIR

The Planning Department will distribute the Draft EIR to State agencies through the State Clearinghouse, to local agencies, and to interested members of the public. Following publication of the Draft EIR there will be a 45-day written comment period and a joint public hearing before the San Francisco Planning Commission and TIDA to solicit public comment on the adequacy and accuracy of the Draft EIR. At the close of the comment period, the Planning Department will prepare responses to written and oral comments, including revisions to the Draft EIR text where appropriate, and will publish these in a Comments and Responses document. The Planning Department will present the Draft EIR and Comments & Responses to the Planning Commission.
and TIDA for certification as to their accuracy, objectivity, and completeness. Certification of the Final EIR (Planning Commission and TIDA as joint lead agencies, appealable to Board of Supervisors) is required before any discretionary approvals or permits can be issued.

Ultimately, TIDA and the San Francisco Planning Commission would consider an action recommending that the Board of Supervisors approve the Area Plan/SUD, and the San Francisco Board of Supervisors would consider approval of the plan. The Area Plan/SUD would define the boundaries of the Project Area and set forth land use guidelines such as the basic land use designations and allowable land uses, and maximum development and heights. In addition, the SUD would incorporate by reference a Design for Development, which would establish specific land use controls, development standards, and design guidelines. TIDA would also adopt a Design Review and Document Approval Procedure, which would set forth the approval processes and standards for development. The Design Review and Document Approval Procedure would be an attachment to the DDA. All City departments having jurisdiction over part or all of the project site would also approve and enter into an Interagency Cooperation Agreement that would set forth the procedures and standards for permit review. Additionally, all City agencies providing services to the Islands would approve and enter into a Sustainability Memorandum of Agreement to use best faith efforts to deliver services in a manner that is consistent with the sustainability goals of the Proposed Project.

As described in “Existing Zoning and the Tidelands Trust Exchange,” on p. II.14, the Islands include areas that would be subject to the Tidelands Trust upon transfer from the Navy. The Tidelands Trust generally prohibits residential, general office, non-maritime industrial, and certain recreational uses. Under an Exchange Agreement authorized by the California State Legislature, the Trust would be lifted from the portions of Treasure Island that are planned for residential and other non-Trust uses and transferred to portions of Yerba Buena Island that currently are not subject to the Trust.

The EIR is intended to be a project-level EIR on the Area Plan/SUD and the Development Program. The required approvals for the Proposed Project include (but are not limited to) the following:

- Adoption of CEQA findings and mitigation monitoring program (TIDA, Planning Commission, Board of Supervisors, SFMTA, SFPUC, SFDPW);
- Actions on Planning Code, Zoning Map, and General Plan amendments (Planning Commission, Board of Supervisors), including adoption of Area Plan and SUD;
- Planning Code Section 101.1 (Priority Policies) and General Plan findings for the Area Plan/SUD (Planning Commission, Board of Supervisors);
- Approval of DDA and related transactional documents (TIDA, Board of Supervisors);
II. Project Description

- Recommendation by TIDA to adopt Area Plan/SUD (TIDA);
- Filing report and recommendation for approval of Area Plan with the Board of Supervisors by the Planning Commission (waived if no action within 30 days after receipt of Area Plan);
- Adoption of Design for Development (TIDA and Planning Commission, subject to final approval of DDA by Board of Supervisors);
- Adoption of a Treasure Island/Yerba Buena Island Subdivision Code (Board of Supervisors);
- Adoption of Owner Participation Rules (TIDA);
- Approval of an Interagency Cooperation Agreement (TIDA, San Francisco Board of Supervisors, SFMTA, SFPUC, San Francisco Port Commission, SFFD, SFDPW);
- Approval of subdivision maps (SFDPW, Board of Supervisors);
- Approval of Tidelands Trust Exchange Agreement (TIDA, Board of Supervisors, State Lands Commission);
- Permits for fill and dredging in San Francisco Bay and improvements within the 100-foot shoreline band (San Francisco Bay Conservation and Development Commission), which may include consultation with the California Department of Fish and Game or other agencies as directed by BCDC;
- Section 10 and/or 404 permit(s) (U.S. Army Corps of Engineers, after agency consultation), including, if and as required, consultation with the U.S. Fish and Wildlife Service, NOAA, and other agencies as directed the Corps of Engineers;
- Encroachment permit if construction occurs in right-of-way owned by the California Department of Transportation (Caltrans District 4);
- Water quality certification, NPDES permit, and waste discharge requirements (Regional Water Quality Control Board);
- Approval of agreement between TIDA and SFPUC for the financing, construction, operations, and maintenance of the proposed wastewater treatment plant and recycled water plant and transfer of the 4- to 6-acre parcel from TIDA to the SFPUC;
- Approval of permits (such as Authority to Construct and Permit to Operate) if a new wastewater treatment plant is constructed (Bay Area Air Quality Management District);
- Approval of operating agreement for supplemental (emergency) water supply line from Oakland (EBMUD);
- Creation or designation of a Treasure Island Transportation Management Agency (Board of Supervisors);
- Approval of metering system for Bay Bridge ramps (Caltrans) if located on Caltrans property; and
- Demolition and building permits for individual projects within the Development Plan Area (DBI).