DRAFT ENVIRONMENTAL IMPACT REPORT

TREASURE ISLAND / YERBA BUENA ISLAND REDEVELOPMENT PROJECT

Volume 1 – Chapters I – IV.H

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT
CASE NO. 2007.0903E

STATE CLEARINGHOUSE NO. 2008012105

DRAFT EIR PUBLICATION DATE: JULY 12, 2010

DRAFT EIR PUBLIC HEARING DATE: AUGUST 12, 2010

DRAFT EIR PUBLIC COMMENT PERIOD: JULY 12, 2010 - AUGUST 26, 2010

Written comments should be sent to:

Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

DATE: July 12, 2010

TO: Distribution List for the Treasure Island and Yerba Buena Island Redevelopment Project Draft EIR

FROM: Bill Wycko, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the Treasure Island and Yerba Buena Island Redevelopment Project (Planning Department File No. 2007.0903E)

This is the Draft of the Environmental Impact Report (EIR) for the Treasure Island and Yerba Buena Island Project Redevelopment Plan. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document titled "Comments and Responses," which will contain all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the Draft EIR will automatically receive a copy of the Comments and Responses document, along with notice of the date reserved for certification; others may receive a copy of the Comments and Responses and notice by request or by visiting our office. This Draft EIR together with the Comments and Responses document will be considered by the Planning Commission in an advertised public meeting and will be certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final EIR. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one document, rather than two. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR in Adobe Acrobat format on a CD or in a printed paper copy to private individuals only if they request them. Therefore, if you would like a copy of the Final EIR, please fill out and mail the postcard provided inside the back cover to the Major Environmental Analysis division of the Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACCMA	Alameda County Congestion Management Agency
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
ADRP	Archaeological Data Recovery Plan
AEP	Association of Environmental Professionals
afy	acre-feet per year
AGO	California Attorney General's Office
AMI	area median income
AMP	Archaeological Monitoring Program
amsl	above mean sea level
ARB	Air Resources Board
ARDTP	Archaeological Research Design and Treatment Plan
APS	alternative planning strategy
ASCE	American Society of Civil Engineers
AST	above ground storage tank
ATP	Archaeological Testing Plan
AWCS	automated waste collection system
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BATA	Bay Area Toll Authority
BAU	Business as Usual
Bay Bridge	San Francisco-Oakland Bay Bridge
BCDC	San Francisco Bay Conservation and Development Commission
BRAC	Base Realignment and Closure Act
BGM	BAAQMD GHG Model
bgs	below ground surface
BLIP	Branch Library Improvement Program
BMP	Best Management Practice
BOD_5	Biochemical Oxygen Demand
Btu	British thermal unit
Btu/hr	British Thermal Units per hour
CAB	(Treasure Island and Yerba Buena Island) Citizens Advisory Board
CalARP	California Accidental Release Prevention Program
Cal EPA	California Environmental Protection Agency
Cal OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	California Climate Action Team
CBC	California Building Code
CCAR	California Climate Action Registry
CCR	California Code of Regulations

Cd	Cadmium
CDFG	California Department of Fish and Game
CDPH	California Department of Health
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CGS	California Geological Survey
CH_4	methane
CHAPIS	Community Health Air Pollution Information System
CHP	California Highway Patrol
CIWMA	California Integrated Waste Management
CIWMB	California Integrated Waste Management Board
CLOMR	Conditional Letter of Map Revision
CMA	county congestion management agency
CMP	Congestion Management Plan
CMTP	construction traffic management plan
CNG	compressed natural gas
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	Carbon dioxide
CO_2e	CO_2 equivalents
COG	Council of Governments
COPC	Contaminants of Potential Concern
CPMC	California Pacific Medical Center
CPSC	Consumer Product Safety Commission
CPUC	California Public Utilities Commission
CRC	Citizen's Reuse Committee
CRHR	California Register of Historical Resources
CRL	Community Redevelopment Law
CTCDC	California Traffic Control Device Committee
CTMP	Construction Traffic Management Plan
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	decibel
dBA	A-weighted decibel
DBI	San Francisco Department of Building Inspection
DDA	Disposition and Development Agreement
DD-60	Caltrans Deputy Directive 60
DDC	deep dynamic compaction
DEM	digital elevation models
DMMO	Dredged Material Management Office
DoD	(U.S.) Department of Defense
DOE	(U.S.) Department of Energy
DOT	(U.S.) Department of Transportation
DPH	(San Francisco) Department of Public Health
DPM	diesel particulate matter

DPT	(Municipal Transportation Agency) Department of Parking and Traffic
DPW	Department of Public Works
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utilities District
EBRPD	East Bay Regional Park District
EBS	environmental baseline survey
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ENA	Exclusive Negotiating Agreement
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ERO	Environmental Review Officer
ESL	Environmental Screening Levels
ESU	Evolutionarily Significant UInit
FAA	Federal Aviation Administration
FARR	Final Archaeological Resources Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Maps
FMP	Fishery Management Plan
FOSL	Finding of Suitability to Lease
FOSET	Finding of Suitability for Early Transfer
FOST	Finding of Suitability to Transfer
FS	Feasibility Study
g	gravity
g/day	grams per day
GGBHTD	Golden Gate Bridge, Highway, and Transportation District
GGIE	Golden Gate International Exposition
GHG	greenhouse gas
gpm	gallons per minute
gsf	gross square feet
GWP	global warming potential
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HCM	Highway Capacity Manual
HDPE	high-density polyethylene
HEPA	High Efficiency Particulate Air Filter
HFC	hydrofluorocarbon
HHRA	Human Health Risk Assessment
HGL	hydraulic grade line
HMP	Habitat Management Plan
HOV	High Occupancy Vehicle
HRA	Historical Radiological Assessment
HRE	Historic Resource Evaluation (Report)
HRER	Historic Resource Evaluation Response

HRSA	Health Risk Screening Analysis
HUD	(U.S. Department of) Housing and Urban Development
I-80	Interstate 80
I-580	Interstate 580
I-880	Interstate 880
IBC	International Building Code
IOP	(Ferry) Implementation and Operations Plan
IPCC	Intergovernmental Panel on Climate Change
IR	Installation Restoration
ISCOTT	Interdepartmental Staff Committee on Traffic and Transportation
ITE	Institute of Transportation Engineers
km	kilometer
kV	kilovolt
kWh	kilowatt hour
L	liter
lbs	pounds
LCFS	Low Carbon Fuel Standard
L_{dn}	day-night noise level
LEED	Leadership in Energy and Environmental Design
L_{eq}	noise over a specified period of time
LID	low impact design
LIFOC	Lease in Furtherance of Conveyance
L_{max}	maximum instantaneous noise level
LOMR	Letter of Map Revision
LOP	local oversight program
LOS	level of service
LRA	local reuse authority
LTMS	long-term management strategy
M	Richter magnitude
MBTA	Migratory Bird Treaty Act
MEI	Maximally Exposed Individual
MEIR	Maximally Exposed Individual Resident
MEIW	Maximally Exposed Individual Worker
mg/L	milligrams per liter
mgd	million gallons per day
MHHW	Mean Higher High Water
MLD	Most Likely Descendent
MLLW	mean lower low water level
MM	Modified Mercalli (earthquake intensity scale)
mm/yr	millimeters per year
MMPA	Marine Mammal Protection Act
MMT	million metric tons
MMT CO_2e	million metric MT of CO_2-equivalent
MOA	Memorandum of Agreement
mph	miles per hour
MPO	Metropolitan Planning Organization
MPSA	Merritt-Posey-San Antonio sand and clays
MRSA	methicillin-resistant *staphylococcus aureas*
MS4	Municipal Separate Stormwater Systems

MSGP	multi-sector general permit
MT	metric tons
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
Muni	San Francisco Municipal Railway
MUTCP	Manual on Uniform Traffic Control Devices
MVA	megavolt ampere
MW	megawatt
Mw	Moment Magnitude
MWh	megawatt hour
NAHC	Native American Heritage Commission
NAVD88	North American Vertical Datum of 1988
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHL	National Historic Landmarks
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
N_2O	nitrous oxide
NOP	Notice of Preparation
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NPRA	National Park and Recreation Association
NSTI	Naval Station Treasure Island
NWIC	Northwest Information Center
OEHHA	Office of Environmental Health Hazard Assessment
OES	State Office of Emergency Services
OHP	California Office of Historic Preservation
OHWM	ordinary high water mark
OPR	California Office of Planning and Research
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyls
PCE	tetrachloroethene
PDA	Priority Development Area
PEA	Preliminary Endangerment Assessment
PEIR	Programmatic Environmental Impact Statement
PFC	perfluorocarbon
PG&E	Pacific Gas & Electric
PGA	peak ground acceleration
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppb	parts per billion
pphm	parts per hundred million
ppm	part per million
PPV	peak particle velocity
PRG	Preliminary Remediation Goals

PRMMP	Paleontological Resources Monitoring and Management Plan
psi	pound per square inch
PV	photovoltaic
PVC	polyvinyl chloride
R&D	research and development
RAB	Restoration Advisory Board
RAP	Remedial Action Plan
RCFZ	Rodgers Creek Fault Zone
RCRA	Resource Conservation and Recovery Act
REB	Resource Efficient Building
REL	reference exposure level
RHA	Rivers and Harbors Act of 1899
RHNA	Regional Housing Needs Assessment
RI	Remedial Investigation work plan
RO	reverse osmosis
ROD	Record of Decision
ROG	reactive organic gases
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SAV	submerged aquatic vegetation
SB 1016	Senate Bill 1016
SBR	styrene butadiene rubber
SCBA	self-contained breathing apparatus
SDC	Seismic Design Category
SEL	single event noise level
SF_6	sulfur hexafluoride
SFBC	San Francisco Building Code
SFCAP	San Francisco Climate Action Plan
SF CHAMP	San Francisco Chained Activity Modeling Process
SFCTA	San Francisco County Transportation Authority
SFDPH	San Francisco Department of Public Health
SFDPT	San Francisco Department of Parking & Traffic
SFDPW	San Francisco Department of Public Works
SFFD	San Francisco Fire Department
SFMTA	San Francisco Municipal Transportation Agency
SFOBB	San Francisco-Oakland Bay Bridge
SFPD	San Francisco Police Department
SFPL	San Francisco Public Library
SFPUC	San Francisco Public Utilities Commission
SFRPD	San Francisco Recreation and Parks Department
SFUSD	San Francisco Unified School District
SGMP	Site and Groundwater Management Plan
SLR	Sea Level Rise
SO_2	sulfur dioxide
SOMA	South of Market
sq. ft.	square feet
SSO	sanitary sewer overflow

SVOC	semi-volatile organic compounds
SVP	Society for Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TASC	Transportation Advisory Committee
TCE	trichloroethene
TCM	Transportation Control Measures
TCDP	Transit Center District Plan
TDM	transportation demand management
Te	tellurium
TEP	Transit Effectiveness Project
TF/SC	Trickling Filter / Solids Contact
TI	Treasure Island
TICD	Treasure Island Community Development, LLC
TIDA	Treasure Island Development Authority
TIHDI	Treasure Island Homeless Development Initiative
TITMA	Treasure Island Transportation Management Agency
TMDL	Total Maximum Daily Loads
TMP	Transportation Management Plan
TRB	Transportation Research Board
TRP	traffic related pollutants
TSCA	Toxic Substances Control Act
ULI	Urban Land Institute
USACE	U.S. Army Corps of Engineers
U.S. EPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UCSF	University of California, San Francisco
USGS	U.S. Geological Survey
UST	underground storage tank
UV	ultraviolet light
UWMP	Urban Water Management Plan
VCA	Voluntary Clean-Up Agreement
VdB	vibration decibels
VMT	vehicle miles traveled
VOC	volatile organic compound
VTS	Vessel Traffic Service program
WAPA	Western Area Power Authority
WDR	Waste Discharge Requirements
WETA	Water Emergency Transit Authority
WHO	World Health Organization
WSA	water supply assessment
WSIP	Water System Improvement Program
WTP	water treatment plant
WWTP	waste water treatment plant
µg/L	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter

SUMMARY

This Summary chapter for the Treasure Island / Yerba Buena Island Redevelopment Project Environmental Impact Report ("EIR") begins with a brief description of the Proposed Project. It then lists the impacts and mitigation measures identified in this EIR and outlines the alternatives to the Proposed Project that were considered. The chapter concludes with an overview of the areas of controversy associated with the Proposed Project and issues to be resolved.

PROJECT SYNOPSIS

EXISTING USES

Treasure Island and Yerba Buena Island (collectively, "the Islands") are in San Francisco Bay, about halfway between the San Francisco mainland and Oakland, on Assessor's Block 1939, Lots 001 (Treasure Island) and 002 (Yerba Buena Island). 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 Closure and Realignment Program. Currently, the former military base consists primarily of low-density residential buildings; vacant and underutilized non-residential buildings that housed institutional, retail, office, and industrial uses; playing fields and other open space; several designated historic buildings; and several active institutional uses. There are about 1,005 total dwelling units on Treasure Island and Yerba Buena Island (of which about 805 are available for occupancy), about 100 buildings with existing and former non-residential uses, parking and roadways, a wastewater treatment facility, and other infrastructure. The designated historic buildings on the Islands are Buildings 1, 2 and 3 on Treasure Island, and the Torpedo Assembly Building, the Nimitz House, and Quarters 10 and its garage on Yerba Buena Island. In addition, the National Register-listed Senior Officers' Quarters Historic District is located on Yerba Buena Island; it is comprised of Quarters 1 through 7, their garages and formal landscaping elements. The Islands also include U.S. Coast Guard facilities on Yerba Buena Island, a U.S. Department of Labor Job Corps campus on Treasure Island, and Federal Highway Administration ("FHWA") land occupied by the San Francisco-Oakland Bay Bridge ("Bay Bridge") and tunnel structures on Yerba Buena Island.

PROPOSED REDEVELOPMENT PLAN

The Treasure Island Development Authority ("TIDA"), the redevelopment agency for the Proposed Project, is proposing a *Redevelopment Plan for the Treasure Island / Yerba Buena Island Redevelopment Project* ("*Redevelopment Plan*") that would provide the basis for redevelopment of the portions of NSTI still owned by the Navy, once transferred to TIDA. The proposed *Redevelopment Plan* addresses development within the "Redevelopment Plan Project Area" (or "Project Area"), which includes all of Treasure Island and Yerba Buena Island and the

immediately surrounding waters, except for land and water owned and occupied by the U.S. Coast Guard. The Proposed Project analyzed in this EIR includes only the NSTI property that is expected to be transferred by the Navy to TIDA, referred to as the "Development Plan Area." The Development Plan Area excludes land within NSTI currently occupied by the Jobs Corps on Treasure Island, and land owned by the FHWA on Yerba Buena Island. The Development Plan would be carried out by Treasure Island Community Development, LLC ("TICD").

Another document, the draft *Design for Development for Treasure and Yerba Buena Islands* ("*Design for Development*"), would be adopted in connection with the *Redevelopment Plan.* The proposed *Redevelopment Plan* and an accompanying required report called the Preliminary Report are expected to be available in July 2010. Together, these documents would establish the land use controls and design standards and guidelines for the project site. The proposed *Redevelopment Plan* would be implemented through a Disposition and Development Agreement ("DDA") between TIDA and TICD, and related transactional documents. The proposed *Redevelopment Plan,* the draft *Design for Development,* the DDA, and related transactional documents and policies that would implement the *Redevelopment Plan,* and the development program described in the *Redevelopment Plan* and the *Design for Development* collectively form the "Proposed Project" analyzed in this EIR. The anticipated program of development is also referred to in this EIR as the "Development Plan."

PROPOSED DEVELOPMENT PROGRAM

The Proposed Project would include development of up to 8,000 residential units; up to 140,000 square feet ("sq. ft.") of new commercial and retail space; up to 100,000 sq. ft. of new office space; adaptive reuse of about 311,000 sq. ft. for commercial, retail, and/or flex space uses in the historic buildings on Treasure Island; up to approximately 500 hotel rooms; rehabilitation of the historic buildings on Yerba Buena Island; new and/or upgraded public facilities and public utilities; about 300 acres of parks and public open space including shoreline access and cultural uses such as a museum; new and upgraded streets and public ways; bicycle, transit, and pedestrian facilities; landside and waterside facilities for the existing Treasure Island Sailing Center; landside services for an expanded marina;[1] and a new Ferry Terminal and intermodal Transit Hub. Construction and buildout of the proposed Development Plan would be phased and would be anticipated to occur over an approximately 15- to 20-year period.

Treasure Island would be developed with three neighborhoods. The Island Center District would occupy the southern portion of Treasure Island, adjacent to the southern and southeastern boundaries of the Job Corps campus. This neighborhood would include a dense mix of retail,

[1] The marina expansion is not part of the Proposed Project. It was analyzed in a prior environmental review document, the *2005 Transfer and Reuse of Naval Station Treasure Island Final Environmental Impact Report*, Case No. 94.448E. However, landside facilities and improvements that would serve the expanded marina are included in the Proposed Project.

restaurant, office, hotel, residential, transit, and community service uses. The Ferry Terminal and intermodal Transit Hub would be located in this district. A pedestrian link is planned between the Ferry Terminal and Clipper Cove, with pedestrian paths around and connecting to corridors through historic Buildings 1, 2, and 3. The Cityside and Eastside Districts would provide high-density residential land uses, with ground-floor community and commercial spaces in some buildings. The Cityside District would be on the western portion of Treasure Island, adjacent to the western and northern boundaries of the Job Corps campus, east of the proposed Waterfront Park along the shoreline. Buildings in the Eastside District, extending east from the Island Center, would form the border of a six-block-long linear park, the Eastside Commons.

A variety of retail uses is expected on Treasure Island, including neighborhood-serving uses, a grocery store or market, regional-serving retail uses such as specialty gifts or crafts, and entertainment uses. The existing school building would be rehabilitated or rebuilt as a kindergarten through eighth grade public school in coordination with the San Francisco Unified School District.

A range of building heights is proposed on Treasure Island. Approximately 50 percent of housing units would be in low-rise buildings of up to 70 feet, with a range of taller mid-rise and high-rise buildings from 85 to 240 feet. The tallest buildings would be located in and adjacent to the Island Center District, with one 650-foot-tall building located there.

Yerba Buena Island would be developed primarily with low-rise residential buildings in generally the same locations as existing housing, with a small amount of neighborhood-serving commercial space. A new hilltop park would be provided. The Nimitz House and the Senior Officers' Quarters historic buildings would be adaptively reused for various commercial activities such as a hotel/wellness center and possibly a restaurant. A proposed *Habitat Management Plan* would manage and improve plant and wildlife habitat in the undeveloped areas on this island. The gardens adjacent to the Nimitz House would be improved.

Most residential parking on Treasure Island would be in subsurface garages under the residential buildings; up to 30 percent of the residential parking could be in centralized parking structures surrounded by active uses. A maximum of about 10,120 off-street parking spaces could be provided on the Islands; there would be no minimum number of parking spaces required. About 1,035 metered on-street parking spaces would be provided. Car-share parking would also be provided.

The approximately 300 acres of open space would include public spaces and recreation areas, with small neighborhood parks and community gardens, a Great Park of about 100 acres on the northern portion of Treasure Island, and the Eastside Commons connecting the Island Center and Eastside District to the eastern shoreline open space. There would be shoreline trails, 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 perimeter of Treasure Island. An approximately 20-acre urban farm (the "Urban Agricultural Park") is planned, as is a "cultural park" adjacent to Building 1. Approximately 25 to 40 acres on the east side of Treasure Island would be a regional sports complex with baseball diamonds, soccer fields, and other sports facilities.

The Proposed Project would include approximately 2,400 affordable housing units. Some would be located in market-rate buildings and others would be in stand-alone affordable housing buildings. A total of 435 affordable units for the Treasure Island Homeless Development Initiative would be provided (replacing the existing 250 units). A transitional housing program would be established to assist qualifying households in residence at the time the DDA is executed who continuously remain residents of the Islands to have the opportunity to continue living on the Islands if they choose.

Transportation facilities would include construction of a Transit Hub in the Island Center District. Bus service is planned to the East Bay, expected to serve downtown Oakland, and the existing Muni 108-Treasure Island bus line would continue to provide bus service between the Islands and downtown San Francisco. A free shuttle service would be provided on both islands, replacing and expanding the existing bus route on Treasure Island. Ferry service between the west side of Treasure Island and the San Francisco Ferry building is planned as part of the Proposed Project. A new Ferry Terminal would be constructed, including a Ferry Terminal building, a ferry quay and docks, breakwaters, and the ferry basin enclosed by the breakwaters. Sidewalks would be provided on all new streets on Treasure Island except the Shared Public Ways (a proposed new street designation with no on-street parking and designed to encourage walking and bicycling and discourage automobile use). A network of bicycle, pedestrian, and shared-use paths would connect the Islands' major destinations.

New or upgraded utilities would include water distribution piping throughout the Islands; new water storage tanks on Yerba Buena Island; a new recycled water treatment plant, with use of recycled water for irrigation and appropriate plumbing facilities in commercial and residential buildings on Treasure Island; new or upgraded wastewater collection facilities and a new or upgraded wastewater treatment plant, a new stormwater collection and treatment system, to include a 10- to 15-acre wetland in the northeast area of Treasure Island and localized features such as bioretention areas, vegetated swales, and permeable paving; new electricity, natural gas, and telecommunications facilities; and solar power generation facilities.

The Proposed Project includes a system for geotechnical stabilization to improve seismic safety. Components would include stabilization of the causeway connecting Treasure Island and Yerba Buena Island; densification of existing fill in the areas of Treasure Island where buildings and roads are proposed; elevation of the ground surface in areas proposed for development on

Treasure Island to provide long-term protection against flooding, including an allowance for estimated future potential sea level rise; strengthening the perimeter berm around Treasure Island; and repairing or rebuilding retaining walls on Yerba Buena Island.

One component of the Proposed Project is a *Sustainability Plan*, containing guiding principles for the Development Plan and identifying goals, strategies, and implementation measures to facilitate sustainability. The Proposed Project would include green building specifications, programs to encourage use of transit, design standards that would enable installation of photovoltaic panels on most roofs, use of recycled water, recycling and composting facilities, deconstruction and reuse of existing building materials, adaptive re-use of existing historic structures, and other features promoting sustainability.

GENERAL PLAN AND PLANNING CODE AMENDMENTS

The Proposed Project includes amendments to the text and maps of the *San Francisco General Plan* and amendments to the Planning Code. The *General Plan* would be amended by adding a new Area Plan for the Redevelopment Plan Project Area and would reference the *Redevelopment Plan*. Planning Code amendments would change the zoning district from P (Public) to a Redevelopment Agency – Treasure Island / Yerba Buena Island District that references the designations in the *Redevelopment Plan*. Zoning Map amendments would change the height and bulk district within the Development Plan Area from 40-X to refer to the designations contained in the *Redevelopment Plan*.

TIDELANDS TRUST

Any portion of the Redevelopment Plan Project 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 Tidelands Trust upon conveyance from the Navy to TIDA. These areas include all of Treasure Island, about 2 acres of land on Yerba Buena Island, and all of the tidal and submerged lands within the Redevelopment Plan Project Area. The Job Corps campus would not be subject to the Tidelands Trust so 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. 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 Treasure Island Conversion Act. 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.

This project-level EIR on the proposed *Redevelopment Plan* is being prepared to evaluate the proposed *Redevelopment Plan* and the Development Program that could be carried out pursuant to the *Redevelopment Plan*.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table S.1 summarizes the impacts of the Proposed Project found to be significant or potentially significant and their corresponding mitigation measures. Table S.2 lists the improvement measures identified to address impacts found to be less than significant.

Table S.1: Summary of Significant Impacts and Mitigation Measures

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
IV.B Aesthetics			
Impact AE-1: Development under the proposed *Treasure Island and Yerba Buena Island Redevelopment Plan* would adversely alter scenic vistas of San Francisco and San Francisco Bay from public vantage points along the eastern shoreline of San Francisco, Telegraph Hill, the East Bay shoreline, and from the Bay Bridge east span.	S	No feasible mitigation measure available.	SU
IV.D.1 Cultural and Paleontological Resources (Archeological Resources)			
Impact CP-1: Project construction activities could disturb significant archaeological resources, if such resources are present within the Redevelopment Plan Project Area.	S	**Mitigation Measure M-CP-1: Archaeological Testing, Monitoring, Data Recovery and Reporting.** Based on a reasonable presumption that archaeological resources may be present within the Redevelopment Plan Project Area, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archaeological consultant having expertise in California prehistoric and urban historical archaeology. The archaeological consultant shall undertake an archaeological testing program as specified herein. In addition, a professionally qualified geo-archaeologist shall undertake a geo-archaeological assessment of the project area. The archaeological consultant shall be available to conduct an archaeological monitoring and/or data recovery program if required pursuant to this measure. The archaeological consultant's work shall be conducted in accordance with this measure and the requirements of the ARDTP (Archeo-Tec, Archaeological Research Design and Treatment Plan, Treasure Island Redevelopment Plan Project, City and County of San Francisco, CA, October 2009) at the direction of the Environmental Review Officer ("ERO"). In instances of inconsistency between the requirements of the project ARDTP and the requirements of this mitigation measure, the requirements of this archaeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archaeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a	LS

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		suspension is the only feasible means to reduce to a less-than-significant level of potential effects on a significant archaeological resource as defined in *CEQA Guidelines* Section 15064.5 (a)(c). *Archaeological Testing Program* The archaeological consultant shall prepare and submit to the ERO for review and approval an archaeological testing plan ("ATP"). The archaeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archaeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archaeological testing program will be to determine, to the extent possible, the presence or absence of archaeological resources and to identify and to evaluate whether any archaeological resource encountered on the site constitutes an historical resource under CEQA. At the completion of the archaeological testing program, the archaeological consultant shall submit a written report of the findings to the ERO. If based on the archaeological testing program the archaeological consultant finds that significant archaeological resources may be present, the ERO, in consultation with the archaeological consultant, shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archaeological testing, archaeological monitoring, and/or an archaeological data recovery program. If the ERO determines that a significant archaeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor, either: (A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archaeological resource; or (B) A data recovery program shall be implemented, unless the ERO determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible. *Archaeological Monitoring Program (AMP)* If the ERO in consultation with the archaeological consultant determines that an archaeological monitoring program shall be implemented, the archaeological monitoring program shall minimally include the following provisions: • The archaeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils-disturbing activities commencing. The ERO in consultation with the archaeological consultant shall determine what project activities shall be archaeologically	

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		monitored. In most cases, any soils-disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archaeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context; • The archaeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archaeological resource; • The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archaeological consultant and the ERO until the ERO has, in consultation with the project archaeological consultant, determined that project construction activities could have no effects on significant archaeological deposits; • The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; • If an intact archaeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile-driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile-driving activity may affect an archaeological resource, the pile-driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archaeological consultant shall immediately notify the ERO of the encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, and present the findings of this assessment to the ERO. Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the findings of the monitoring program to the ERO. *Archaeological Data Recovery Program* The archaeological data recovery program shall be conducted in accord with an archaeological data recovery plan ("ADRP"). The archaeological consultant, project	

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archaeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if non-destructive methods are practical. The scope of the ADRP shall include the following elements: • Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations. • Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures. • Discard and De-accession Policy. Description of and rationale for field and post-field discard and de-accession policies. • Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archaeological data recovery program. • Security Measures. Recommended security measures to protect the archaeological resource from vandalism, looting, and non-intentionally damaging activities. • Final Report. Description of proposed report format and distribution of results. • Curation. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities. *Human Remains and Associated or Unassociated Funerary Objects* The treatment of human remains and of associated or unassociated funerary objects discovered during any soils-disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State NAHC who shall appoint a MLD (Pub. Res. Code Sec. 5097.98). The archaeological consultant,	

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		project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. *Final Archaeological Resources Report* The archaeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the archaeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive two copies (bound and unbound) of the FARR, and one unlocked, searchable PDF copy on a compact disk. MEA shall receive a copy of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.	
Impact CP-2: Project construction activities could disturb human remains, if such resources are present within the Redevelopment Plan Project Area.	S	See **Mitigation Measure M-CP-1**, above.	LS
Impact CP-3: Project construction activities could disturb paleontological resources.	S	**Mitigation Measure M-CP-3: Paleontological Resources Monitoring and Mitigation Program.** The project sponsor shall retain the services of a qualified paleontological consultant having expertise in California paleontology to design and implement a Paleontological Resources Monitoring and Mitigation Program. The PRMMP shall include a description of when and where construction monitoring would be required; emergency discovery procedures; sampling and data recovery procedures; procedure for the preparation, identification, analysis, and curation of fossil specimens and data recovered; preconstruction coordination procedures; and procedures for reporting the	LS

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		results of the monitoring program. The PRMMP shall be consistent with the Society for Vertebrate Paleontology Standard Guidelines for the mitigation of construction-related adverse impacts to paleontological resources and the requirements of the designated repository for any fossils collected. During construction, earth-moving activities shall be monitored by a qualified paleontological consultant having expertise in California paleontology in the areas where these activities have the potential to disturb previously undisturbed native sediment or sedimentary rocks. Monitoring need not be conducted in areas where the ground has been previously disturbed, in areas of artificial fill, in areas underlain by nonsedimentary rocks, or in areas where exposed sediment would be buried, but otherwise undisturbed. This, by definition, would exclude all of Treasure Island; accordingly, this mitigation measure would apply only to work on Yerba Buena Island. The consultant's work shall be conducted in accordance with this measure and at the direction of the City's ERO. Plans and reports prepared by the consultant shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Paleontological monitoring and/or data recovery programs required by this measure could suspend construction of the Proposed Project for as short a duration as reasonably possible and in no event for more than a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce potential effects on a significant paleontological resource as previously defined to a less-than-significant level.	
Impact CP-4: Disturbance of archaeological and paleontological resources, if encountered during construction of the Proposed Project, could contribute to a cumulative loss of significant historic and scientific information.	S	See **Mitigation Measures CP-1 and CP-3**, above**.**	LS
IV.D.2 Cultural and Paleontological Resources (Historical Resources)			
Impact CP-6: Alterations to the contributing landscape areas of Buildings 1, 2, and 3 could impair the significance of those historical resources.	S	**Mitigation Measure M-CP-6: Review of Alterations to the Contributing Landscape of Building 1.** During the design review process, TIDA is required, according to draft *Design for Development* Standard T5.10.1, to find that Building 1's rehabilitation is consistent with the Secretary's Standards. In making that finding, TIDA shall also consider any proposed alterations to and within the contributing landscape areas identified by the HRE as contributing to the CRHR eligibility of Building 1. TIDA shall not	LS

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		approve the a design proposal for Building 1 unless it makes a finding that any such alterations, when taken together with the alterations and additions to Building 1 itself, comply with the Secretary's Standards.	
Impact CP-7: New construction within the contributing landscapes of Buildings 1, 2, and 3 could impair the significance of those historical resources.	S	**Mitigation Measure M-CP-7: Review of New Construction within the Contributing Landscape West of Building 1**. During the design review process, TIDA is required, according to the draft *Design for Development* (Standard T5.10.1), to find that Building 1's rehabilitation is consistent with the Secretary's Standards. In making that finding, TIDA shall also consider proposed new construction west of Building 1 within its associated contributing landscape areas. TIDA shall not approve the a design proposal for Building 1 unless it makes a finding that any such new construction, when taken together with the alterations and additions to Building 1 itself, comply with the Secretary's Standards.	LS
Impact CP-9: Demolition of the Damage Control Trainer would impair the significance of an historical resource.	S	**Mitigation Measure M-CP-9: Documentation and Interpretation** *Documentation* The project sponsors shall retain a professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to prepare written and photographic documentation of the historical resource. The documentation for the property shall be prepared based on the National Park Service's Historic American Building Survey ("HABS") / Historic American Engineering Record ("HAER") Historical Report Guidelines. This type of documentation is based on a combination of both HABS/HAER standards (Levels II and III) and the National Park Service's policy for photographic documentation as outlined in the National Register of Historic Places and National Historic Landmarks ("NHL") Survey Photo Policy Expansion. The written historical data for this documentation shall follow HABS/HAER Level I standards. The written data shall be accompanied by a sketch plan of the property. Efforts should also be made to locate original construction drawings or plans of the property during the period of significance. If located, these drawings should be photographed, reproduced, and included in the dataset. If construction drawings or plans cannot be located, as-built drawings shall be produced. Either HABS/HAER standard large format or digital photography shall be used. If digital photography is used, the ink and paper combinations for printing photographs must be in compliance with NRHP-NHL Photo Policy Expansion and have a permanency rating of approximately 115 years. Digital photographs will be taken as uncompressed, TIF file format. The size of each image will be 1600x1200 pixels at 330 pixels per inch or larger,	SU

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		color format, and printed in black and white. The file name for each electronic image shall correspond with the index of photographs and photograph label. Photograph views for the dataset shall include (1) contextual views; (2) views of each side of each building and interior views, where possible; (3) oblique views of buildings; and (4) detail views of character-defining features, including features of the interiors of some buildings. All views shall be referenced on a photographic key. This photographic key shall be on a map of the property and shall show the photograph number with an arrow to indicate the direction of the view. Historic photographs shall also be collected, reproduced, and included in the dataset. All written and photographic documentation of the historical resource shall be approved by TIDA prior to any demolition and removal activities. The project sponsors shall transmit such documentation to the San Francisco History Center of the San Francisco Public Library, and to the Northwest Information Center of the California Historical Information Resource System. *Interpretation* The project sponsors shall provide a permanent display of interpretive materials concerning the history and architectural features of the historical resource within public spaces of Treasure Island. The specific location, media, and other characteristics of such interpretive display shall be approved by TIDA prior to any demolition or removal activities.	
IV.E Transportation			
Impact TR-1: Construction of the Proposed Project would occur over a long period of time and would result in significant impacts on the transportation and circulation network.	S	**Mitigation Measure M-TR-1: Construction Traffic Management Program.** The project sponsors shall develop and implement a Construction Traffic Management Plan ("CTMP"), consistent with the standards and objectives stated below and approved by TIDA, designed to anticipate and minimize transportation impacts of various construction activities associated with the Proposed Project. The Plan shall disseminate appropriate information to contractors and affected agencies with respect to coordinating construction activities to minimize overall disruptions and ensure that overall circulation on the Islands is maintained to the extent possible, with particular focus on ensuring pedestrian, transit, and bicycle connectivity. The CTMP shall supplement and expand, rather than modify or supersede, any manual, regulations, or provisions set forth by SFMTA, Department of Public Works ("DPW"), or other City departments and agencies. Specifically, the CTMP shall:	SU

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		• Identify construction traffic management best practices in San Francisco, as well as other jurisdictions that, although not being implemented in the City, could provide valuable information for a project of the size and characteristics of Treasure Island and Yerba Buena Island. • As applicable, describe procedures required by different departments and/or agencies in the City for implementation of a Construction Traffic Management Plan, such as reviewing agencies, approval processes, and estimated timelines. For example: - The construction contractor will need to coordinate temporary and permanent changes to the transportation network on Treasure Island and Yerba Buena Island with TIDA. Once Treasure Island streets are accepted as City streets, temporary traffic and transportation changes must be coordinated through the SFMTA's Interdepartmental Staff Committee on Traffic and Transportation ("ISCOTT") and will require a public meeting. As part of this process, the CTMP may be reviewed by SFMTA's Transportation Advisory Committee ("TASC") to resolve internal differences between different transportation modes. - For construction activities conducted within Caltrans right-of-way, Caltrans Deputy Directive 60 (DD-60) requires a separate Transportation Management Plan and contingency plans. These plans shall be part of the normal project development process and must be considered during the planning stage to allow for the proper cost, scope and scheduling of the TMP activities on Caltrans right-of-way. These plans should adhere to Caltrans standards and guidelines for stage construction, construction signage, traffic handling, lane and ramp closures and TMP documentation for all work within Caltrans right-of-way. • Changes to transit lines would be coordinated and approved, as appropriate, by SFMTA, AC Transit, and TITMA. The CTMP would set forth the process by which transit route changes would be requested and approved. Require consultation with other Island users, including the Job Corps and Coast Guard, to assist coordination of construction traffic management strategies. The project sponsors shall proactively coordinate with these groups prior to developing their CTMP to ensure the needs of the other users on the Islands are addressed within the Construction Traffic Management Plan. • Identify construction traffic management strategies and other elements for the Proposed Project, and present a cohesive program of operational and demand management strategies designed to maintain acceptable levels of traffic flow during	

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		periods of construction activities. These include, but are not limited to, construction strategies, demand management activities, alternative route strategies, and public information strategies. For example, the project sponsors may develop a circulation plan for the Island during construction to ensure that existing users can clearly navigate through the construction zones without substantial disruption.	
Impact TR-2: Implementation of the Proposed Project would contribute to existing LOS E operating conditions during the weekday PM peak hour, and result in significant impacts during the Saturday peak hour at the eastbound off-ramp (west side of Yerba Buena Island).	S	**Mitigation Measure M-TR-2: Expanded Transit Service.** As a means to reduce vehicular travel to and from the Islands, additional transit capacity shall be provided. The project sponsors shall work with WETA and SFMTA to develop and implement the Proposed Project's transit operating plan. Elements of the plan include, but are not limited to: • Additional ferry service to reduce peak period headways from 50-minutes to as much as 15-minute headways during the AM and PM peak periods. • Increased frequency on the Muni line 108-Treasure Island service to reduce peak period headways from 15 minutes to as low as 7-minute headways in the AM peak period and as low as 5 minutes in the PM peak period. • New bus service to another location in San Francisco (e.g., to the San Francisco Civic Center area) with frequencies as low as 12-minutes during the AM and PM peak periods. Service shall be provided between approximately 5 AM and 10 PM.	SU
Impact TR-3: Under conditions without the Ramps Project, implementation of the Proposed Project would result in significant impacts at the two westbound on-ramps.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-4: Under conditions with the Ramps Project, implementation of the Proposed Project would result in a significant impact during the AM and PM peak hours at the ramp meter at the westbound on-ramp (east side of Yerba Buena Island).	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact TR-6: Implementation of the Proposed Project would result in a significant impact on queuing at the Bay Bridge toll plaza during the weekday AM peak hour, with and without the Ramps Project.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-7: Implementation of the Proposed Project would result in a significant impact on queuing on San Francisco streets approaching Bay Bridge during the weekday PM peak hour, under conditions with and without the Ramps Project.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-8: Implementation of the Proposed Project would result in a significant project impacts at the signalized intersection of First/Market.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-9: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of First/Mission.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-10: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of First/Folsom.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-11: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of First/Harrison/I-80 Eastbound On-Ramp.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact TR-12: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of Bryant/Fifth/I-80 Eastbound On-Ramp.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-13: Implementation of the Proposed Project would result in significant project impacts at the signalized intersection of Fifth/Harrison/I-80 Westbound Off-Ramp.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-14: Implementation of the Proposed Project would contribute substantially to existing LOS E conditions at the signalized intersection of Second/Folsom, resulting in a significant project impact.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-17: Implementation of the Proposed Project would result in significant impacts at the uncontrolled study intersection of Folsom/Essex.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-18: Implementation of the Proposed Project would result in a significant impact at the uncontrolled study intersection of Bryant/Sterling.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-19: Implementation of the Proposed Project would exceed the available transit capacity of Muni's 108-Treasure Island bus line serving the Islands.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-24: Implementation of the Proposed Project without the Ramps Project would result in queues extending from the westbound Bay Bridge at Yerba Buena Island on-ramps which would impact Muni Line 108-Treasure Island operations.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above. **Mitigation Measure M-TR-24: Provide Transit Only Lane between First Street on Treasure Island and the transit and emergency vehicle-only westbound Bay Bridge on-ramp.** Implementation of Mitigation Measure M-TR-24 would only be triggered if the extent of actual vehicle queuing impacts the proposed Muni line 108-Treasure Island on Treasure Island Road and creates delays for Muni buses accessing the westbound transit-	LS

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		only on-ramp. As such, throughout the life of the project, the TITMA, in consultation with SFMTA and using SFMTA's methodology, shall monitor the length and duration of potential queues on Treasure Island Road and the associated delays to Muni service. If the queues between First Street and the westbound on-ramp on the west side of Yerba Buena Island result in an operational delay to Muni service equal to or greater than the prevailing headway during the AM, PM or Saturday peak periods, TITMA shall implement a southbound transit-only lane between First Street on Treasure Island and the transit and emergency vehicle-only westbound Bay Bridge on-ramp. The implementation of a transit-only lane would be triggered if impacts are observed over the course of six months at least 50 percent of the time during the AM, PM, or Saturday peak periods. Implementation of Mitigation Measure M-TR-24 to provide a transit and emergency vehicle-only lane between First Street on Treasure Island and the westbound Bay Bridge on-ramp would allow Muni vehicles to bypass vehicle queues that may occur and therefore, the impact to Muni operations would be reduced to a less-than-significant level. Implementation of this mitigation measure would entail the following: • Elimination or reduction of the proposed median on Treasure Island Road between First Street and just south of Macalla Road; and • Elimination of the proposed southbound bicycle lane on Treasure Island Road and a small portion of Hillcrest Road south of the intersection with Macalla Road. Bicyclists would still be able to use Class I bicycle paths and Class II bicycle lanes proposed on Macalla Road to connect between the Islands and the bicycle path on the new east span of the Bay Bridge.	
Impact TR-25: Implementation of the Proposed Project without the Ramps Project would impact AC Transit operations on Hillcrest Road between Treasure Island and the eastbound on-ramp to the Bay Bridge.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)** and **Mitigation Measure M-TR-24 (Transit and Emergency Vehicle-Only Lane from First Street to Westbound Bay Bridge On-Ramp)**, above.	SU
Impact TR-26: Implementation of the Proposed Project with the Ramps Project would result in significant impacts to Muni line 108-Treasure Island operations.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)** and **Mitigation Measure M-TR-24 (Transit and Emergency Vehicle-Only Lane from First Street to Westbound Bay Bridge On-Ramp)**, above.	LS

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact TR-27: Implementation of the Proposed Project with the Ramps Project would impact AC Transit operations on Treasure Island Road and Hillcrest Road between Treasure Island and the eastbound on-ramp to the Bay Bridge.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)** and **Mitigation Measure M-TR-24 (Transit and Emergency Vehicle-Only Lane from First Street to Westbound Bay Bridge On-Ramp)**, above.	SU
Impact TR-29: The Proposed Project would increase congestion in downtown San Francisco, which would increase travel times and would impact operations of the Muni 27-Bryant bus line.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-30: The Proposed Project would increase congestion in downtown San Francisco, which would increase travel times and would impact operations of the Muni 30X-Marina Express bus line.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-31: The Proposed Project would increase congestion in downtown San Francisco, which would increase travel times and would impact operations of the Muni 47-Van Ness bus line.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-39: Construction of the Proposed Project would occur over a long period of time and would contribute to cumulative construction impacts in the Project vicinity.	S	See **Mitigation Measure M-TR-1 (Construction Traffic Management Program)**, above.	SU
Impact TR-40: Implementation of the Proposed Project would contribute to significant cumulative traffic impacts at the eastbound off-ramp (west side of Yerba Buena Island)..	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact TR-41: Under conditions without the Ramps Project, implementation of the Proposed Project would contribute to significant cumulative impacts at the two westbound on-ramps.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-42: Under conditions with the Ramps Project, implementation of the Proposed Project would result in significant cumulative impacts during the AM and PM peak hours at the ramp meter at the westbound on-ramp (east side of Yerba Buena Island).	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-44: Implementation of the Proposed Project would contribute to significant cumulative queuing impacts at the Bay Bridge toll plaza during the AM and PM peak hours, whether or not the Ramps Project is implemented.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-45: Implementation of the Proposed Project would contribute to significant cumulative queuing impacts on San Francisco streets approaching Bay Bridge during the weekday AM and PM and Saturday peak hours, whether or not the Ramps Project was implemented.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-46: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of First/Market.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-47: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of First/Mission.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU

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Impact TR-48: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of First/Folsom.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-49: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of First/Harrison/I-80 Eastbound On-Ramp.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-50: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of Bryant/Fifth/I-80 Eastbound On-Ramp.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-51: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of Harrison/Fifth/I-80 Westbound Off-Ramp.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-52: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of Second/Folsom.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
I**mpact TR-54**: Implementation of the Proposed Project would contribute to significant cumulative impacts at the uncontrolled study intersection of Folsom/Essex.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-55: Implementation of the Proposed Project would contribute to significant cumulative impacts at the uncontrolled study intersection of Bryant/Sterling.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact TR-58: The Proposed Project would contribute to cumulative congestion in downtown San Francisco, which would increase travel time and would impact operations of the Muni 27-Bryant bus line.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-59: The Proposed Project would contribute to cumulative congestion in downtown San Francisco, which would increase travel time and would impact operations of the Muni 30X-Marina Express bus line.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	SU
Impact TR-60: The Proposed Project would contribute to cumulative congestion in downtown San Francisco, which would increase travel time and would impact operations of the Muni 47-Van Ness bus line.	S	**See Mitigation Measure M-TR-2 (Expanded Transit Service)**, above**.**	SU
Impact TR-61: The Proposed Project would contribute to cumulative congestion in downtown San Francisco, which would increase travel time and would impact operations of the Muni 10-Townsend bus line.	S	**See Mitigation Measure M-TR-2 (Expanded Transit Service)**, above**.**	SU
Impact TR-63: Implementation of the Proposed Project parking supply maximums would exacerbate the exceedance of the capacity utilization standard on Muni's 108-Treasure Island bus line serving the Islands.	S	**See Mitigation Measure M-TR-2 (Expanded Transit Service), above.**	SU
IV.F Noise			
Impact NO-1: Project-related construction activities would increase noise levels above existing ambient conditions.	S	Mitigation Measures M-NO-1a and M-NO-1b would decrease construction noise levels by requiring construction contractors to implement noise reduction measures for construction activities, including pile-driving activities.	SU
	S	**Mitigation Measure M-NO-1a: Reduce Noise Levels During Construction**. The following practices shall be incorporated into the construction contract agreement	SU

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		documents to be implemented by the construction contractor: • Provide enclosures and mufflers for stationary equipment, shroud or shield impact tools, and install barriers around particularly noisy activities at the construction sites so that the line of sight between the construction activities and nearby sensitive receptor locations is blocked; • Use construction equipment with lower noise emission ratings whenever possible, particularly for air compressors; • Provide sound-control devices on equipment no less effective than those provided by the manufacturer; • Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from sensitive receptor locations; • Prohibit unnecessary idling of internal combustion engines; • Require applicable construction-related vehicles and equipment to use designated truck routes to access the project sites; • Implement noise attenuation measures to the extent feasible, which may include, but are not limited to, noise barriers or noise blankets. The placement of such attenuation measures shall be reviewed and approved by the Director of Public Works prior to issuance of development permits for construction activities; and • Designate a Noise Disturbance Coordinator who shall be responsible for responding to complaints about noise during construction. The telephone number of the Noise Disturbance Coordinator shall be conspicuously posted at the construction site and shall be provided to the City. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas.	
Impact NO-1	S	**Mitigation Measure M-NO-1b: Pile Driving Noise-Reducing Techniques and Muffling Devices.** The project sponsors and developers of each structure (project applicant) shall require the construction contractor to use noise-reducing pile driving techniques if nearby structures are subject to pile driving noise and vibration. These techniques shall include pre-drilling pile holes (if feasible, based on soils; see Mitigation Measure M-NO-2) to the maximum feasible depth, installing intake and exhaust mufflers on pile driving equipment, vibrating piles into place when feasible, and installing shrouds around the pile driving hammer where feasible. Construction contractors shall be required to use construction equipment with state-of-the-art noise shielding and muffling devices. In addition, at least 48 hours prior to pile-driving activities, the Project Applicant shall notify building owners and occupants within	SU

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		500 feet of the project site of the dates, hours, and expected duration of such activities.	
Impact NO-2: Construction activities could expose persons and structures to excessive ground-borne vibration or ground-borne noise levels.	S	**Mitigation Measure M-NO-2: Pre-Construction Assessment to Minimize Impact Activity and Vibro-compaction Vibration Levels.** The project sponsors shall engage a qualified geotechnical engineer to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of nearby buildings subject to impact or vibrocompaction activity impacts before a building permit is issued. If recommended by the geotechnical engineer, for structures or facilities within 50 feet of impact or vibro-compaction activities, the Project Applicant shall require ground-borne vibration monitoring of nearby structures. Such methods and technologies shall be based on the specific conditions at the construction site such as, but not limited to, the pre-construction surveying of potentially affected structures and underpinning of foundations of potentially affected structures, as necessary. The pre-construction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of impact or vibro-compaction activities. Monitoring results shall be submitted to the Department of Building Inspection. In the event of unacceptable ground movement, as determined by the Department of Building Inspection, all impact and/or vibro-compaction work shall cease and corrective measures shall be implemented. The impact and vibro-compaction program and ground stabilization measures shall be reevaluated and approved by the Department of Building Inspection.	SU
Impact NO-3: Project-related traffic would result in a substantial permanent increase in ambient noise levels in the project vicinity above existing ambient noise levels.	S	No feasible mitigation measures available.	SU
Impact NO-4: Project-related ferry noise levels would result in substantial permanent increase in ambient noise levels in the project vicinity above existing ambient conditions.	S	**Mitigation Measure M-NO-4: Ferry Terminal Noise Reduction Plan.** To ensure that the noise levels from the proposed Ferry Terminal and its operations do not exceed the San Francisco Land Use Compatibility Guidelines for Community Noise standards, the developer of the Ferry Terminal shall be required to engage a qualified acoustical consultant to prepare a Ferry Terminal Noise Reduction Plan to be approved by TIDA. The operator would be required to follow the recommendations of the Plan to ensure compliance with the City's community noise guidelines, including but not limited to requiring ferry operators to reduce propulsion engine power to low when approaching and departing the terminal.	LS (with Mitigation) SU (if mitigation not implemented by Water Emergency Transportation Authority)

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact NO-5: Proposed residences and other sensitive uses would be located in incompatible noise environments.	S	**Mitigation Measure M-NO-5: Residential, School, and Transient Lodging Land Use Plan Review by Qualified Acoustical Consultant.** To ensure that automobile and ferry traffic induced interior L_{max} noise levels at nearby uses do not exceed an interior noise level standard of 45 dBA (L_{dn}), the developer of each new residential, scholastic, or hotel land uses planned for the Development Plan Area shall be required to engage a qualified acoustical consultant to prepare plans for the applicable development project, and to follow their recommendations to provide acoustical insulation or other equivalent measures to ensure that interior peak noise events would not exceed 45 dBA (L_{dn}). Similar to requirements of Title 24, this Plan shall include post-construction monitoring to verify adequacy of noise attenuation measures.	LS
Impact NO-6: Operation of stationary sources at the proposed public utility facilities (e.g., water distribution systems, wastewater collection and treatment facilities, electric substation facilities, etc.) would increase existing noise levels, potentially exceeding noise level standards.	S	**Mitigation Measure M-NO-6: Stationary Operational Noise Sources.** All utility and industrial stationary noise sources (e.g., pump stations, electric substation equipment, etc.) shall be located away from noise sensitive receptors, be enclosed within structures with adequate setback and screening, be installed adjacent to noise reducing shields or constructed with some other adequate noise attenuating features to achieve acceptable regulatory noise standards for industrial uses as well as to achieve acceptable levels at the property lines of nearby residences or other sensitive uses, as determined by the San Francisco Land Use Compatibility Guidelines for Community Noise standards. Once the stationary noise sources have been installed, noise levels shall be monitored to ensure compliance with local noise standards. If project stationary noise sources exceed the applicable noise standards, an acoustical engineer shall by retained by the applicant to install additional noise attenuation measures in order to meet the applicable noise standards.	LS
Impact NO-7: Project-related construction activities in combination with construction activities of other cumulative development would increase noise levels above existing ambient conditions.	S	See **Mitigation Measures M-NO-1a** and **M-NO-1b**, above.	SU
Impact NO-8: Increases in traffic from the project in combination with other development would result in cumulative noise increases.	S	No feasible mitigation measure available.	SU

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
IV.G Air Quality			
Impact AQ-1: Construction of the Proposed Project would result in localized construction dust-related air quality impacts.	S	**Mitigation Measure M-AQ-1: Implementation of BAAQMD-Identified Basic Construction Mitigation Measures.** The following eight BAAQMD-identified construction mitigation measures shall be incorporated into the required Construction Dust Control Plan for the Proposed Project: 1. All exposed surfaces shall be watered two times daily. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet-power vacuum street sweepers at least once per day. 4. All vehicle speeds on unpaved roads shall be limited to 15 mph. 5. All roadways, driveways and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes. Clear signage shall be provided for construction workers at all access points. 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturers specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. 8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.	LS
Impact AQ-2: Construction of the Proposed Project could violate an air quality standard or contribute significantly to an existing or projected air quality violation.	LS under Applicable 1999 Guidelines; S under 2010 Guidelines	**Mitigation Measure M-AQ-2: Construction Exhaust Emissions.** TIDA shall require project sponsors to implement combustion emission reduction measures, during construction activities, including the following measures: • The contractor shall keep all off-road equipment well-tuned and regularly serviced to minimize exhaust emissions, and shall establish a regular and frequent check-up and service/maintenance program for equipment. • Off-road diesel equipment operators shall be required to shut down their engines rather than idle for more than five minutes, unless such idling is necessary for proper operation of the equipment. Clear signage shall be provided for construction workers at all access points. TIDA shall require that, to the extent feasible, project sponsors also engage in early	LS under 1999 Guidelines; SU under 2010 Guidelines

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		implementation of the following combustion emission reduction measures, during construction activities: • To the extent feasible, the project shall utilize EPA Tier 3 engine standards or better at the start of construction for all off-road equipment, or utilize Retrofit Emission Control Devices which consist of diesel oxidation catalysts, diesel particulate filters or similar retrofit equipment control technology verified by the California Air Resources Board ("CARB") (http://www.arb.ca.gov/diesel/verdev/verdev.htm). • To the extent feasible, the project applicant shall utilize EPA Tier 4 engine standards or better for 50 percent of the fleet at construction initiation, increasing to 75 percent by 2015, and 100 percent by 2020. • To the extent feasible, the project applicant shall utilize 2007 or newer model year haul trucks.	
Impact AQ-3: Construction of the Proposed Project could expose sensitive receptors to substantial levels of toxic air contaminants which may lead to adverse health effects	S	**Mitigation Measure M-AQ-3**: At the submission of any Major Phase application, TIDA shall require that an Air Quality consultant review the proposed development in that Major Phase along with existing uses and uses approved in prior Major Phases to determine whether the actual project phasing deviates materially from the representative phasing plan. If the Air Quality consultant determines the possible impact of the actual phasing could result in a significant impact on any group of receptors, then TIDA shall require that the applicant implement in connection with that Major Phase best management practices to the extent that TIDA determines feasible to reduce construction emissions in accordance with Mitigation Measures M-AQ-1, M-AQ-2, and M-AQ-4.	SU
Impact AQ-4: Construction of the Proposed Project would expose sensitive receptors to substantial levels of PM2.5 which may lead to adverse health effects.	S under 2010 BAAQMD thresholds	See **Mitigation Measure M-AQ-1**, above, for fugitive dust control measures. **Mitigation Measure M-AQ-4: Implement Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above Thresholds.** TIDA shall require the project sponsors to implement all of the following mitigation measures identified by BAAQMD, to the extent feasible, for projects that exceed construction thresholds that would be applicable to reducing PM2.5 emissions. Although there may be some overlap, these mitigation measures are identified by BAAQMD as additional to those identified in Mitigation Measure AQ-1 which BAAQMD identifies as recommended for all projects regardless of whether thresholds are exceeded: 1. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.	SU

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		2. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. 3. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity. 4. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. 5. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. 6. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. 7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. 8. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. 9. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent. 10. Minimizing the idling time of diesel-powered construction equipment to two minutes. 11. Same as Mitigation Measure AQ-2. 12. Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM. 13. Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy duty diesel engines.	
Impact AQ-5: The Proposed Project's operations would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	S	**Mitigation Measure M-AQ-5: Ferry Particulate Emissions.** All ferries providing service between Treasure Island and San Francisco shall be equipped with diesel particulate filters or an alternative equivalent technology to reduce diesel particulate emissions.	SU
Impact AQ-6: Operation of the Proposed Project could expose sensitive receptors to substantial pollutant concentrations.	S	See **Mitigation Measure M-AQ-3** and **Mitigation Measure M-AQ-5**, above.	SU

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Impact AQ-8: The Proposed Project could conflict with adopted plans related to air quality.	S	See **Mitigation Measure M-TR-2 (Expanded Transit Service)**, above.	LS
Impact AQ-9: The Proposed Project could result in cumulative air quality impacts.	S	See **Mitigation Measures M-AQ-1; M-AQ-3; M-AQ-4**	SU
IV.I Wind and Shadow			
Impact WS-3: The phased development of the Proposed Project could temporarily result in the creation of a Section 148 wind hazard, an increase in the number of hours that the wind hazard criterion is exceeded or an increase in the area that is subjected to wind hazards.	S	**Mitigation Measure M-WS-3: Identification of Interim Hazardous Wind Impacts** 1. To identify nearby locations where potentially hazardous winds might occur as a result of the new construction during the phased buildout of the Development Program, the project sponsor shall contract with a qualified wind consultant. At least once a year, throughout construction of the Proposed Project, the wind consultant shall visit the project site, shall carefully review and consider the designs of all buildings that are approved or under construction using plans that shall be provided by the project sponsor and TIDA, shall carefully review the status of site development and building construction to date, and shall identify locations where potentially hazardous winds are likely to occur in pedestrian areas (including temporary and permanent sidewalks, streets and construction roads, and public open spaces) as a result of the new construction that would occur as part of the Proposed Project. The qualified wind consultant shall work with the project sponsor to identify structural measures and precautions to be taken to reduce exposure of persons to potentially hazardous winds in publicly accessible areas. The structural measures and precautions identified by the wind consultant could include, but not be limited to, measures such as: warning pedestrians and bicyclists of hazardous winds by placing weighted warning signs; identifying alternative pedestrian and bicycle routes that avoid areas likely to be exposed to hazardous winds; installing semi-permanent windscreens or temporary landscaping features (such as shrubs in large planters) that provide some wind sheltering and also direct pedestrian and bicycle traffic around hazardous areas. 2. For the active construction areas, the wind consultant may identify those construction sites that would be especially exposed to strong winds and may recommend construction site safety precautions for those times when very strong winds occur on-site or when they may be expected, such as when high-wind watches or warnings are announced by the National Weather Service of the National Oceanic and Atmospheric Administration. The objective of construction site safety precautions shall be to minimize risks and prevent injuries to workers and to members of the	SU

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		public from stacked materials, such as shingles and sheets of plywood, that can be picked up and carried by very strong winds, as well as from temporary signage, siding or roofing, or light structures that could be detached and carried by wind. As part of construction site safety planning, the project sponsor shall require, as a condition of the contract, that contractors shall consider all such wind-related risks to the public that could result from their construction activities and shall develop a safety plan to address and control all such risks related to their work. 3. TIDA shall ensure, by conditions of approval for both building permits and site permits, that the project sponsor and the subsequent building developer(s) cooperate to implement and maintain all structural measures and precautions identified by the wind consultant. 4. TIDA shall document undertaking the actions described in this mitigation measure. TIDA shall maintain records that include, among others: the technical memorandum from the EIR; all written recommendations and memoranda, including any reports of wind testing results, prepared by the wind consultant(s) in the conduct of the reviews and evaluations described in this mitigation measure; and memoranda or other written proof that all constructed buildings incorporate the requisite design mitigations that were specified by the wind consultant(s).	
Impact WS-4: Section 148 wind hazards would occur at publicly accessible locations in the Development Plan Area. These wind hazards would represent a general reduction in the number of existing wind hazards and the overall duration of the wind hazards. Changes in building design, height, location, and orientation, as well as changes in the overall configuration of the Project could result in wind hazards that differ from those found for the representative design Project. The wind hazards could occur in different locations, could increase the number of hours that any wind hazard would occur, and/or could increase the area that would be subjected to wind hazards.	S	**Mitigation Measure M-WS-4: Ongoing Review and Mitigation of Hazardous Wind Impacts** 1. Prior to schematic design approval of the building(s) on any parcel within the Project, TIDA shall require that a qualified wind consultant shall review and compare the exposure, massing, and orientation of the proposed building(s) on the subject parcel to the building(s) on the same parcel in the representative massing model of the Proposed Project tested in the wind tunnel as part of this EIR and in any subsequent wind testing. The wind consultant shall identify and compare the potential impacts of the proposed building(s) relative to those described in this EIR. The wind consultant's analysis and evaluation shall consider the proposed building(s) in the context of the "Current Project," which, at any given time during construction of the Project, shall be defined as the building masses used in the representative massing model of the Proposed Project, as described in this EIR, except as modified to replace appropriate building massing models with the corresponding as-built designs of all previously-completed structures and the then-current designs of approved but yet unbuilt structures. Finally, the proposed building(s) shall be compared to its equivalent current setting (the Current Project scenario).	SU

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		a. If the qualified wind consultant concludes that the building design(s) would not create a new wind hazard and would not contribute to a wind hazard identified by prior wind testing, no further review would be required. b. If the qualified wind consultant concludes that the building design(s) could create a new wind hazard or could contribute to a wind hazard identified by prior wind testing, but in the consultant's professional judgment can be modified to prevent it from doing so, the consultant shall propose changes or supplements to the design of the proposed building(s) to achieve this result. The consultant may consider measures that include, but are not limited to, changes in design, building orientation, and/or the addition of street furniture, as well as consideration of the proposed landscaping. The wind consultant shall work with the project sponsor and/or architect to identify specific feasible changes to be incorporated into the Project. To the extent the consultant's findings depend on particular building or landscaping features, the consultant shall specifically identify those essential features. The project sponsor shall incorporate those features into the building's/buildings' design and landscaping plans. If the wind consultant can then conclude that the modified building's/buildings' design and landscaping would not create a new wind hazard or contribute to a wind hazard identified in prior wind testing, no further review would be required. Although a goal of this effort is to limit the wind effects of the building(s) to (1) cause the same or fewer number of hours of wind hazard in the immediate vicinity compared to the building(s) on that parcel as identified by prior wind testing, and (2) subject no more area to hazardous winds than was identified by prior wind testing, it should not be expected that all of the wind hazard(s) identified in prior wind testing would be eliminated by this measure. c. If, at this point in the analysis, the consultant concludes that the building(s) would cause a new wind hazard or increase a wind hazard identified in prior wind testing, and if the consultant concludes that the new or additional wind hazard is not likely to be eliminated by measures such as those described above, the consultant may determine that additional wind tunnel testing would be required. Wind tunnel testing would also be required if the consultant, due to complexity of the design or the building context, is unable to determine whether likely wind hazards would be greater or lesser than those identified in prior wind testing. In the event the building's design would appear to increase the hours of wind	

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		hazard or extent of area subject to hazard winds, the wind consultant shall identify design alterations that could reduce the hours or extent of hazard. The wind consultant shall work with the developer and/or architect to identify specific alterations to be incorporated into the project. It is not expected that in all cases that the wind hazard(s) identified in this EIR would be completely eliminated. To the extent the wind consultant's findings depend on particular building design features or landscaping features in order to meet this standard, the consultant shall identify such features, and such features shall be incorporated into the design and landscaping. 2. If wind testing of an individual or group of buildings is required, the building(s) shall be wind tested in the context of a model (subject to the neighborhood group geographic extent described below) that represents the Current Project, as described in Item 1, above. Wind testing shall be performed for the building's/buildings' "Neighborhood" group, i.e. the surrounding blocks (at least three blocks wide and several blocks deep) within which the wind consultant determines wind hazards caused by or affected by the building(s) could occur. The testing shall include all the test points in the vicinity of a proposed building or group of buildings that were tested in this EIR, as well as all additional points deemed appropriate by the consultant to determine the building's/buildings' wind performance. The wind testing shall test the proposed building design in the Current Project scenario, as well as test the existing Current Project scenario, in order to clearly identify those differences that would be due to the proposed new building. In the event that wind testing shows that the building's design would cause an increase in the hours of or extent of area subject to hazard winds in excess of that identified in prior wind testing, the wind consultant shall work with the project sponsor, architect and/or landscape architect to identify specific feasible alterations to be incorporated into the building(s). To the extent that avoiding an increase in wind hazard relies on particular building design or landscaping features, these building design or landscaping features shall be incorporated into the design by the project sponsor. The ability of the design alterations to reduce the wind hazard shall be demonstrated by wind tunnel testing of the modified design. Although a goal of this effort should be to limit the building's/buildings' wind effect to (1) cause the same or fewer number of hours of wind hazard in the immediate vicinity compared to the building(s) on that parcel as identified by prior wind testing, and (2) subject no more area to hazardous winds than was identified by prior wind testing, it should not be expected that all of the wind hazard(s) identified in the prior	

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		wind testing or in the current wind testing under this mitigation measure would be eliminated. 3. TIDA shall document undertaking the actions described in this mitigation measure. TIDA shall maintain records that include, among others: the technical memorandum from the EIR; all written recommendations and memoranda, including any reports of wind testing results, prepared by the wind consultant(s) in the conduct of the reviews and evaluations described in this mitigation measure; and memoranda or other written proofs that all constructed buildings incorporate the requisite design mitigations that were specified by the wind consultant(s).	
Impact WS-5: The Proposed Project, when combined with other cumulative projects, could result in wind hazards that differ from those found for the representative design Project, either in the location of the hazard, in an increase in the number of hours that Section 148 wind hazards would occur or, in an increase in the area that is subjected to wind hazards.	S	See **Mitigation Measure M-WS-3** (which would require structural and precautionary measures such as placing warning signs around or restricting access to areas with potential wind hazards) and **Mitigation Measure M-WS-4** (which would require wind impact review for buildings prior to design approval and would require that design changes be made to certain buildings on an as-needed basis).	SU
IV.L Public Services			
Impact PS.1: Project construction activities could result in adverse physical impacts or in the need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.	S	See **Mitigation Measure M-TR-1**, above.	LS
Impact PS-4: Project construction activities could result in adverse physical impacts or in the need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.	S	See **Mitigation Measure M-TR-1**, above.	LS
IV.M Biological Resources			
Impact BI-1: The Proposed Project may adversely affect dune gilia and locally	S	**Mitigation Measure M-BI-1a: Surveys for Special-Status Plants.** On Yerba Buena Island, presence/absence surveys for special-status plants shall be conducted by a qualified	LS

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
significant plants, special status animals, and protected or special-status marine species, such as marine mammals, salmon, steelhead, green sturgeon, longfin smelt, harbor seals and California sea lions.		botanist prior to any ground disturbance. In the event that special-status plant populations are found during the surveys, the lead agency will avoid disturbance to the species by establishing a visible avoidance buffer zone of not less than 25 feet. If it is not feasible to avoid disturbance or mortality, then special-status plant populations will be restored on-site at a 1:1 ratio in areas that are to remain as post-development open space.	
	S	**Mitigation Measure M-BI-1b: Pre-project Surveys for Nesting Birds.** Pre-project surveys shall be conducted by a qualified biologist for nesting birds between February 1st and August 15th if ground disturbance or tree removal is scheduled to take place during that period. If bird species protected under the Migratory Bird Treaty Act ("MBTA") or the California Fish and Game Code are found to be nesting in or near any work area, an appropriate no-work buffer zone (e.g., 100 feet for songbirds) shall be designated by the biologist. Depending on the species involved, input from the California Department of Fish and Game ("CDFG") and/or the U.S. Fish and Wildlife Service ("USFWS") Division of Migratory Bird Management may be warranted. As recommended by the biologist, no activities shall be conducted within the no-work buffer zone that could disrupt bird breeding. Outside of the breeding season (August 16 – January 31), or after young birds have fledged, as determined by the biologist, work activities may proceed.	LS
	S	**Mitigation Measure M-BI-1c: Minimizing Disturbance to Bats.** Removal of trees or demolition of buildings showing evidence of bat activity shall occur during the period least likely to impact the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula and between August 15 and April 15 for maternity roosts). If active day or night roosts are found, the bat biologist shall take actions to make such roosts unsuitable habitat prior to tree removal or building demolition. A no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with CDFG. Bat roosts initiated during construction are presumed to be unaffected, and no buffer would necessary.	LS
Impact BI-1	S	**Mitigation Measure M-BI-1d: Control of Domestic and Feral Animals.** To avoid conflicts with wildlife on Yerba Buena Island and the remaining natural habitats on Yerba Buena Island, the Islands' Covenants, Conditions and Restrictions, or other similar enforceable instruments, shall prohibit off-leash dogs outside of designated, enclosed, off-leash dog parks on Yerba Buena Island and the feeding of feral cats on both islands. With these mitigation measures in place, in addition to the implementation of a Habitat Management Plan ("HMP"), the potential impacts would be less than significant. Measures within the Habitat Management Plan include the removal of non-native	LS

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		vegetation (including trees) in addition to hand-seeding and hydroseeding with native species, and/or planting container stock of native species. Although non-native plant species are abundant within the Redevelopment Plan Project Area surrounding landscape, the goal of reducing their numbers would help native plants and wildlife. Non-native species would be removed during habitat enhancement related efforts and monitored to ensure against re-establishment within the Redevelopment Plan Project Area.	
Impact BI-1	S	**Mitigation Measure M-BI-1e: Monitoring During Off-Shore Pile Driving.** Site-specific conditions during all offshore pile driving shall be monitored by a qualified marine biologist to ensure that aquatic species within the project area would not be impacted, that harbor seals at nearby Yerba Buena Island, at occasional Treasure Island haul-outs, and while in transit along the western shoreline of Treasure Island during work on the Ferry Terminal and in Clipper Cove during work on the Sailing Center, are not disturbed, and that sound pressures outside the immediate project area do not exceed 160 dB at 500 meters from the source. If this threshold is exceeded or avoidance behavior by marine mammals or fish is observed by the on-site marine biologist, bubble curtains will be used to reduce sound/vibration to acceptable levels. In addition the following measures shall be employed to further reduce noise from pile-driving activities: • Use as few piles as necessary in the final terminal design; • Use vibratory hammers for all steel piles; • Use cushion blocks between the hammer and the pile; • Restrict pile driving to June 1 to November 30 work window as recommended by NOAA Fisheries to protect herring and salmonids; If marine mammals are observed within 1,000 feet of pile driving activities, allow them to completely exit the vicinity of the pile driving activities before pile driving resumes.	LS
Impact BI-2: The project may adversely affect Central Coast Riparian Scrub (riparian habitat), California Buckeye, or SAV/eelgrass beds (other sensitive natural communities).	S	**Mitigation Measure M-BI-2a: Restriction of Construction Activities.** Geotechnical stabilization, shoreline heightening and repair work, stormwater outfall improvements, and other Project activities conducted in and around the Islands' rocky shoreline shall be generally restricted to the terrestrial and upper intertidal zones. Activities in the lower intertidal and near subtidal zone shall be minimized to the maximum extent practicable, using the smallest area and footprint for disturbance as possible. Outside of planned dredging areas (Ferry Terminal and the Sailing Center) movement and disturbance of existing rocks in the lower intertidal zone shall be prohibited.	LS

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact BI-2	S	**Mitigation Measure M-BI-2b: Seasonal Limitations on Construction Work.** Construction work on the Islands' shoreline shall be conducted between the months of March and November to avoid any disturbance to herring spawning occurring in SAV surrounding Treasure Island.	LS
	S	**Mitigation Measure M-BI-2c*:* Eelgrass Bed Survey and Avoidance.** Prior to initiation of construction activities that might affect SAV beds, all eelgrass beds shall be surveyed or identified so that they may be avoided and protected. Any work barges or vessels engaged in construction activities shall minimize transit through and avoid anchoring in any eelgrass beds located around Treasure Island.	LS
Impact BI-3: The project may adversely affect biological resources regulated by the Clean Water Act or the Rivers and Harbors Act.	S	See **Mitigation Measures M-BI-2a through M-BI-2c**, above.	LS
Impact BI-4: The project may adversely affect the movement of migratory birds, rafting waterfowl, and/or fish passage.	S	**Mitigation Measure M-BI-4a: Minimizing Bird Strikes.** Prior to the issuance of the first building permit for each building in the Proposed Project, TIDA shall have a qualified biologist experienced with bird strikes review and approve the design of the building to ensure that it sufficiently minimizes the potential for bird strikes. TIDA may consult with resource agencies such as the California Department of Fish and Game or others, as it deems appropriate. The building developer shall provide to TIDA a written description of the measures and features of the building design that are intended to address potential impacts on birds. Building developers are encouraged to coordinate with TIDA early in the design process regarding design features intended to minimize bird strikes. The design shall include some of the following measures or measures that are equivalent to, but not necessarily identical to, those listed below, as new, more effective technology for addressing bird strikes may become available in the future: • Employ design techniques that create "visual noise" via cladding or other design features that make it easy for birds to identify buildings as such and not mistake buildings for open sky or trees; • Decrease continuity of reflective surfaces using "visual marker" design techniques, which techniques may include: – Patterned or fritted glass, with patterns at most 28 centimeters apart, – One-way films installed on glass, with any picture or pattern or arrangement that can be seen from the outside by birds but appear transparent from the inside,	LS (with Migitation for migratory birds and fish passage)

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		– Geometric fenestration patterns that effectively divide a window into smaller panes of at most 28 centimeters, and/or – Decals with patterned or abstract designs, with the maximum clear spaces at most 28 centimeters square. • Up to 40 feet high on building facades facing the shoreline, decrease reflectivity of glass, using design techniques such as plastic or metal screens, light-colored blinds or curtains, frosting of glass, angling glass towards the ground, UV-A glass, or awnings and overhangs; • Eliminate the use of clear glass on opposing or immediately adjacent faces of the building without intervening interior obstacles such that a bird could perceive its flight path through the glass to be unobstructed; • Mute reflections in glass using strategies such as angled glass, shades, internal screens, and overhangs; and • Place new landscapes sufficiently away from glazed building facades so that no reflection occurs. Alternatively, if planting of landscapes near a glazed building façade is desirable, situate trees and shrubs immediately adjacent to the exterior glass walls, at a distance of less than 3 feet from the glass. Such close proximity will obscure habitat reflections and will minimize fatal collisions by reducing birds' flight momentum. *Lighting* TIDA shall similarly ensure that the design and specifications for buildings and sports facilities/playing fields implement design elements to reduce lighting usage, change light direction, and contain light. These include, but are not limited to, the following considerations: • Avoid installation of lighting in areas where not required for public safety; • Examine and adopt alternatives to bright, all-night, floor-wide lighting when interior lights would be visible from the exterior or exterior lights must be left on at night, including: – Installing motion-sensitive lighting, – Installing task lighting, – Installing programmable timers, and – Installing fixtures that use lower-wattage, sodium, and blue-green lighting. • Install strobe or flashing lights in place of continuously burning lights for obstruction	

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		lighting. • Use rotating beams instead of continuous light; and • Where exterior lights are to be left on at night, install fully shielded lights to contain and direct light away from the sky, as illustrated in the City of Toronto's Bird Friendly Building Guidelines. *Antennae, Monopole Structures, and Rooftop Elements* TIDA shall ensure, as a condition of approval for every building permit, that buildings minimize the number of and co-locate rooftop-antennas and other rooftop equipment, and that monopole structures or antennas on buildings, in open areas, and at sports and playing fields and facilities do not include guy wires. *Educating Residents and Occupants* TIDA shall ensure, as a condition of approval for every building permit, that the permit applicant agrees to provide educational materials to building tenants and occupants, hotel guests, and residents encouraging them to minimize light transmission from windows, especially during peak spring and fall migratory periods, by turning off unnecessary lighting and/or closing window coverings at night. TIDA shall review and approve the educational materials prior to building occupancy. *Documentation* TIDA shall document undertaking the activities described in this mitigation measure and maintain records that include, among others, the written descriptions provided by the building developer of the measures and features of the design for each building that are intended to address potential impacts on birds, and the recommendations and memoranda prepared by the qualified biologist experienced with bird strikes who reviews and approves the design of the building or sports facilities / playing fields to ensure that it sufficiently minimizes the potential for bird strikes.	
Impact BI-4	S	**Mitigation Measure M-BI-4b: Changes in Ferry Service to Protect Rafting Waterbirds.** Waterfowl numbers generally peak in December, with reduced populations during January, and into the spring months. Ferries between San Francisco and Treasure Island shall operate in reduced numbers and slower speeds during December and January; alternatively, during this period ferries, to the extent practicable, shall maintain a buffer zone of 250 meters from areas of high-use by rafting waterbirds. Reducing speeds or the number of ferry runs would reduce the overall passenger capacity of this transit mode. Because ferries would operate well below capacity (see Table IV.E.16, p. IV.E.94), implementation of this measure would not result in a significant impact on ferry capacity. To the extent that increased headways or slower trips might	LS/SU for rafting waterfowl (if mitigation not implemented by Water Emergency Transportation Authority)

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		discourage ferry use and induce travel by bus or automobiles, this mitigation measure could exacerbate already significant impacts identified in Section IV.E, Transportation. Mitigation Measure M-TR-2, p. IV.E.X, would reduce this impact to less-than-significant levels; however, as stated in Section IV.E, because full funding for the measure is not assured, the impact would remain significant and unavoidable. In addition, because adoption of this measure by the Water Emergency Transit Authority ("WETA") is not assured and is outside the jurisdiction of the City, the impact on rafting waterfowl is determined to be potentially significant and unavoidable.	
Impact BI-6: The Proposed Project may result in adverse effects on intertidal and subtidal marine habitat and biota located along Treasure Island's shoreline and nearshore regions of the Bay as well as Bay waters.	S	See **Mitigation Measures M-BI-2a through 2c,** and **Mitigation Measure M-BI-4a** The potential effect of fuel oil spills from existing and future ferry operations is addressed in the Water Quality Section (Section 3.4.1.7) of the *Final Program Environmental Impact Report for Expansion of Ferry Transit Service in the San Francisco Bay Area*, dated June 2003. This EIR determined that after implementation of mitigation measures W-3.1 through W-3.5 – which include strengthening the San Francisco Harbor Safety Plan, regularly updating oil spill response and contingency plans, providing training for personnel responsible for fueling vessels, and using anti-fuel spill technological improvements in new ferry vessels – that the risk to Bay waters and associated marine biota was less than significant. As was done by WETA for other WETA projects, such as the South San Francisco Ferry Terminal Project, it is expected that WETA would implement these mitigation measures in operating the Treasure Island ferry service, and no further mitigation would be required.	LS
Impact BI-7: The development planned as part of the Proposed Project, when combined with past, present, and other reasonably foreseeable development in the vicinity, could result in significant cumulative impacts to biological resources.	S	See **Mitigation Measures BI-1 through BI-6**.	LS for sensitive plants, animals and habitats/ SU for rafting waterfowl (if mitigation not implemented by Water Emergency Transportation Authority)
Impact BI-8 (Variant B3): For Variant B3, delayed construction of the southern breakwater could result in adverse impacts	S	**Mitigation Measure M-BI-8 (Variant B3): Minimize Disturbance to Newly Established Sensitive Species During Construction of Southern Breakwater.** If Variant B3 is selected as the preferred ferry terminal breakwater approach, prior to	LS

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
on sensitive species, such as protected eelgrass beds, protected marine mammals, or protected fish species that are not currently present in or known to frequent the area, but could establish themselves there by the time the southern breakwater is constructed.		initiation of any construction activities for the southern breakwater, a survey of the construction area shall be conducted by a qualified marine biologist to assess the presence of eelgrass (*Zostera spp*.) beds, green sturgeon or other protected fish species, and utilization by marine mammals, primarily harbor seals (*Phoca* vitulina) and California sea lions (*Zalophus californianus*. Survey results will be submitted to TIDA, and by TIDA to the ACOE, BCDC, NMFS, and CDFG. In the event the survey shows that eelgrass (*Zostera spp*.) has established beds within the proposed construction area of the southern breakwater or within close proximity, such that planned construction activities could have an impact on the beds, then the restoration of offsite eelgrass beds or the transplantation and establishment of offsite or onsite eelgrass beds at a replacement ratio of 3:1 will be made. In the event the survey shows that the planned establishment or construction of the southern breakwater would affect utilization of the area by protected fish species or by marine mammals as a haul-out area, construction and establishment of the southern breakwater will be done, under consultation with National Marine Fisheries, in a manner that does not adversely affect the protected fish species or prevent the continued utilization of the area by harbor seals or sea lions.	
Impact BI-9 (Variant C2): Depending on the intake diameter and amount of water suction occurring with Variant C2, there is the potential for significant fish and invertebrate entrainment and/or impingement as well as disturbance to the Islands' intertidal and near subtidal habitat and associated marine biota.	S	**Mitigation Measure M-BI-9 (Variant C2): Impingement and/or Entrainment of Protected Fish and Invertebrates.** For Variant C2, the Bay water intake pipe for the supplemental fire water supply shall be designed and constructed in a manner that prevents impingement of fish and macroinvertebrates. This could include, but not be limited to, installing the intake pipe inside a screened subsea vault large enough to reduce water suction to acceptable levels wherein impingement of marine fauna would not occur. TIDA will submit the final design of the Bay water intake pipe to the National Marine Fisheries; CDFG; California Water Board, San Francisco Region; and BCDC for approval.	LS
IV.N Geology and Soils			
Impact GE-5: Development of the Proposed Project could result in potential damage or injury as a result of slope failures including the perimeter rock berms.	S	**Mitigation Measure M-GE-5: Slope Stability.** New improvements proposed for Yerba Buena Island shall be located at a minimum of 100 feet from the top of the existing slope along Macalla Road unless a site-specific geotechnical evaluation of slope stability indicates a factor of safety of at least 1.5 is present or established geotechnical stabilization measures are implemented to provide that level of safety. Any geotechnical recommendations regarding slope stability made in site specific geotechnical investigations for the site shall be incorporated into the specifications for building on that site.	LS

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
IV.O Hydrology and Water Quality			
Impact HY-2: The Proposed Project could require disposal of dewatered groundwater during construction.	S	**Mitigation Measure M-HZ-1 (a Soil and Groundwater Management Plan ("SGMP").** As discussed in Section IV.P, p. IV.P.39, prior to initiation of construction activities, implementation of Mitigation Measure M-HZ-1 would be required. Under this mitigation measure, the project sponsors would prepare a Soil and Groundwater Management Plan ("SGMP"). The SGMP would be developed to the satisfaction of the RWQCB and DTSC to sample and analyze water prior to dewatering and would provide options for disposal of this water based on the sampling results. These options could include the following: (1) Re-use and Discharge: If groundwater meets required thresholds under the SGMP, it can be re-used (e.g., for dust control) and discharged under the General Construction Permit; (2) Discharge under NPDES Permit: If the groundwater exceeds thresholds as described in the SGMP, a separate permit could be obtained from the RWQCB and discharged under NPDES requirements; (3) Treatment and Discharge to Sanitary Sewer: If the groundwater exceeds thresholds as described in the SGMP, groundwater could be treated as necessary and discharged to the sanitary sewer system, where it could be further treated by the on-site treatment plant; or (4) Off-site Disposal: If the groundwater exceeds thresholds as described in the SGMP, groundwater could be trucked off site for disposal in an approved facility. Compliance with the SGMP, as discussed in Section IV.P, would ensure that water effluent from dewatering activities would meet applicable RWQCB or SFPUC standards, and would therefore reduce the potential for groundwater dewatering activities to result in water quality pollution.	LS
IV.P Hazards and Hazardous Materials			
Impact HZ-1: Construction of the Proposed Project could expose construction workers to unacceptable levels of known or newly discovered hazardous materials as a result of disturbance of subsurface soils and/or groundwater with contaminants from historic uses.	S	**Mitigation Measure M-HZ-1: Soil and Groundwater Management Plan** Prior to issuance of a building or grading permit for any one or more parcels, there shall be regulatory approval by DTSC or RWQCB for the proposed land use. Construction specifications for each parcel shall include implementation of a Soil and Groundwater Management Plan ("SGMP") prepared by a qualified environmental consulting firm and reviewed and agreed to by DTSC and RWQCB. For parcels transferred from the Navy under Early Transfer (FOSET) or parcels where conditionally recommended by FOST, all additional or remaining remediation on those parcels shall be completed as directed by the responsible agency, DTSC or RWQCB, prior to commencement of construction activities unless otherwise given written approval by either DTSC or RWQCB in cases such as constructing infrastructure improvements. Parcels transferred under a Lease in Furtherance of Conveyance, shall not change site occupancy or usage until all remediation is completed as determined by DTSC or RWQCB. Where necessary, additional	LS

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		remediation shall be accomplished by the project sponsors prior to issuance of any building or grading permits in accordance with any requirements set by the overseeing agency, either DTSC or RWQCB. The SGMP shall be present on site at all times and readily available to site workers. The SGMP shall specify protocols and requirements for excavation, stockpiling, and transport of soil and for disturbance of groundwater as well as a contingency plan to respond to the discovery of previously unknown areas of contamination (e.g., an underground storage tank unearthed during normal construction activities). Specifically, the SGMP shall include at least the following components: 1. Soil management requirements. Protocols for stockpiling, sampling, and transporting soil generated from on-site activities, and requirements for soil imported to the site for placement. The soil management requirements must include: • Soil stockpiling requirements such as placement of cover, application of moisture, erection of containment structures, and implementation of security measures. The soil stockpiling requirements must, at a minimum, meet the requirements of the San Francisco Dust Control Ordinance. • Protocols for assessing suitability of soil for on-site reuse through representative laboratory analysis of soils as approved by DTSC or RWQCB, taking into account the Treasure Island specific health-based remediation goals, other applicable health-based standards, and the proposed location, circumstances, and conditions for the intended soil reuse. • Requirements for offsite transportation and disposal of soil not determined to be suitable for on-site reuse. Any soil identified for off-site disposal must be packaged, handled, and transported in compliance with all applicable state, federal, and the disposal facility's requirements for waste handling, transportation and disposal. • Soil importation requirements for soil brought from offsite locations. 2. Groundwater management requirements. Protocols for conducting dewatering activities and sampling and analysis requirements for groundwater extracted during dewatering activities. The sampling and analysis requirements shall specify which groundwater contaminants must be analyzed or how they will be determined. The results of the groundwater sampling and analysis shall be used to determine which of the following reuse or disposal options is appropriate for such groundwater: • On-site reuse (e.g., as dust control); • Discharge under the general permit for stormwater discharge for construction	

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		sites; • Treatment (as necessary) before discharge to the sanitary sewer system under applicable San Francisco PUC waste discharge criteria; • Treatment (as necessary) before discharge under a site-specific NPDES permit; • Off-site transport to an approved offsite facility. For each of the options listed, the SGMP shall specify the particular criteria or protocol that would be considered appropriate for reuse or disposal option. The thresholds used must, at a minimum, be consistent with the applicable requirements of the RWQCB and the San Francisco Public Utilities Commission. 3. Unknown contaminant/hazard contingency plan. Procedures for implementing a contingency plan, including appropriate notification, site worker protections, and site control procedures, in the event unanticipated subsurface hazards or hazardous material releases are discovered during construction. Control procedures shall include: • Protocols for identifying potential contamination though visual or olfactory observation; • Protocols on what to do in the event an underground storage tank is encountered; • Emergency contact procedures; • Procedures for notifying regulatory agencies and other appropriate parties; • Site control and security procedures; • Sampling and analysis protocols; and • Interim removal work plan preparation and implementation procedures.	
Impact HZ-2: Construction activities associated with the Proposed Project could expose the public, including existing and future residents as well as visitors and employees, to unacceptable levels of known or newly discovered hazardous materials as a result of disturbance of soil and/or groundwater with contaminants from historic uses.	S	See **Mitigation Measure M-HZ-1**, above**.**	LS
Impact HZ-3: Construction of the Proposed	S	See **Mitigation Measure M-HZ-1**, above.	LS

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Project could expose the environment to unacceptable levels of known or newly discovered hazardous materials as a result of disturbance of soil and/or groundwater with contaminants from historic uses.			
Impact HZ-4: Construction of the Proposed Project could expose construction workers, the public or the environment to unacceptable levels of hazardous materials as a result of dewatering activities that extract contaminated groundwater from historic uses.	S	See **Mitigation Measure M-HZ-1**, above.	LS
Impact HZ-5: Construction activities associated with the Proposed Project could expose construction workers, the public or the environment to unacceptable levels of hazardous materials associated with encountering previously unidentified underground storage tanks.	S	See **Mitigation Measure M-HZ-1**, above.	LS
Impact HZ-8: Hazardous materials used on site during construction activities (e.g. solvents) could be released to the environment through improper handling or storage.	S	**Mitigation Measure M-HZ-8: Construction Best Management Practices** The use of construction best management practices (BMPs) shall be incorporated into the construction specifications and implemented as part of project construction. The BMPs would minimize potential negative effects to groundwater and soils and shall include the following: • Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction; • All refueling and maintenance activities shall occur at a dedicated area that is equipped with containment improvements and readily available spill control equipment and products. Overtopping construction equipment fuel gas tanks shall be avoided; • During routine maintenance of construction equipment, properly contain and remove grease and oils; and • Properly dispose of discarded containers of fuels and other chemicals.	LS
Impact HZ-10: Migration of residual	S	**Mitigation Measure M-HZ-10: Soil Vapor Barriers.** Proposed building plans on	LS

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Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
contamination could expose existing and future residents, employees, or the general public to hazardous materials causing acute or chronic health effects.		parcels with residual contamination that have volatile components such as chlorinated solvents (PCE and TCE) or petroleum hydrocarbons shall include vapor barriers beneath the foundation for the prevention of soil vapor intrusion. Specifically, building plans coinciding with IR Sites 21 and 24 shall contain vapor barriers that are reviewed and approved by DTSC prior to issuance of building permit.	
Impact HZ-13: The Proposed Project includes developing the existing school site into a K 8 school. The existing school is located in the vicinity of Site 12 where hazardous materials have been released to the subsurface. If not remediated appropriately, students, workers, or the public could be exposed to adverse conditions related to hazardous materials emissions.	S	**Mitigation Measure M-HZ-13: Human Health Risk Assessment.** Prior to reopening the presently closed elementary school for elementary school use, TIDA or the SFUSD shall enter into a Voluntary Clean-Up Agreement (VCA) with DTSC's School Property Evaluation and Cleanup Division for the school site, regardless of whether any physical construction or expansion activities that trigger the requirement to consult with DTSC under the Education Code are proposed. As part of the VCA, a Preliminary Endangerment Assessment (PEA) shall be prepared under the supervision of DTSC's School Property Evaluation and Cleanup Division. If the Preliminary Endangerment Assessment discloses the presence of a hazardous materials release, or threatened release, or the presence of naturally occurring hazardous materials, at or near the school site at concentrations that could pose a significant risk to children attending the school or adults working at the school, or discloses that ongoing or planned remediation activities to address such a release near the school could pose a significant risk to children attending the school or adults working at the school, then the school shall not reopen until all actions required by DTSC to reduce the increased cancer risk from exposure to such releases to less than one in a million (1x10-6) and reduce the increased risk of noncancerous toxic effects such that the Hazard Index for chronic and acute hazards is less than one. In the event DTSC declines to supervise the process required by this measure in circumstances where it is not required to do so under the California Education Code, the PEA shall be approved by the San Francisco Department of Public Health, applying the risk standards set forth above for cancer and non-cancer risks.	LS

Table S.2: Summary of Improvement Measures

IMPROVEMENT MEASURES	TOPIC
IV.H Greenhouse Gases	
Improvement Measure I-GHG-1 While the Proposed Project would not result in a significant impact with regard to GHG emissions, BAAQMD Guidance encourages Lead Agencies to incorporate best management practices for the purposes of reducing construction-related GHG emissions. The following measures should be considered to be implemented by the project applicant and its contractors: • Use of alternatively fueled (e.g., biodiesel, electric) construction equipment for at least 15 percent of the fleet; • Use local building materials for at least 10 percent of construction materials; and • Recycling or reusing at least 50 percent of construction and demolition wastes.	GHG
IV.J Recreation	
Improvement Measure I-RE-3a The project sponsors are encouraged to work with the City Fields Foundation and City Recreation and Parks Department staff to design and build artificial turf fields using the latest SFRPD criteria at the time of implementation, including the City's purchasing criteria.	Recreation
Improvement Measure I-RE-3b The project sponsors are encouraged to work with the City Fields Foundation and Department of Public Health staff to develop signage that educates athletes and their families about the importance of washing hands before and after use of synthetic turf fields and the importance of proper wound care for turf-related injuries.	Recreation
Improvement Measure I-RE-3c The project sponsors are encouraged to work with the City Fields Foundation and Department of Public Health staff to develop an air quality monitoring program for the proposed synthetic turf fields that would follow a methodology developed by the Office of Environmental Health Hazard Assessment or the U.S. EPA. The methodology would include, but is not limited to, capturing air quality samples at an outdoor field and upwind of the field; identifying the heights above the field where samples are captured; and recording weather data such as ambient and field temperatures, wind speed/direction, and humidity.	Recreation

SUMMARY OF PROJECT VARIANTS

"Variants" are relatively small changes to the Proposed Project that are under consideration. Six sets of project variants are evaluated in this EIR. Table II.2: Project Variants Overview, in Chapter II, Project Description, pp. II.19–II.20, summarizes their attributes. The paragraphs below provide an overview of their environmental impacts compared to the impacts of the Proposed Project.

A. ENERGY VARIANTS

Variant A1, Renewable Electricity Generation – Increased Solar Photovoltaic, would increase the area devoted to solar photovoltaic technology. This variant 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 available for this use.

This variant would reduce the amount of proposed recreational and open space under the Proposed Project by 20 acres, from approximately 300 acres to approximately 280 acres. As with the Proposed Project, recreational and open space impacts would be less than significant. Under this variant, impacts on scenic vistas from the island would be considered less than significant, because scenic Bay vistas would continue to be available to the public from the northern and eastern shorelines as under existing conditions, and about 45.4 new acres of new parkland would be added (as under the Proposed Project). For the rest of the environmental topics identified in Chapter IV, Environmental Setting and Impacts, Energy Variant A1 would have similar impacts to the Proposed Project and no difference in the significance of impacts.

District Energy means using a centralized location to provide heating and cooling for a group of buildings, providing higher efficiencies and better pollution control than boilers and chillers located in each building. Energy Variant A2, District Heating and Cooling, would include a centralized heating and cooling plant. Energy Variant A3, District Energy Heating, Cooling, and Power, would also include electricity generation.

Under Variants A2 and A3, the central plant would be from 30 to 40 feet tall, assuming that cooling towers were on its roof. If wet cooling towers were used, they would create plumes of mist under certain meteorological conditions, which would be visible from a greater distance than the central plant building. Viewed from mainland locations, the impact of these variants on scenic vistas and visual quality would be substantially the same as that described for the Proposed Project.

Regarding operations, Variant A2 would likely have fewer emissions related to natural gas burning than the Proposed Project, because the centralized (or satellite) plants would be more

efficient, and would burn less natural gas than individual heating equipment in each building under the Proposed Project. Variant A3 would burn more natural gas on-site than the Proposed Project, and would have more natural-gas-related emissions. Both Variants A2 and A3 would have operational air quality impacts similar to those described for the Proposed Project.

For Variant A3, installation of a natural-gas-fired combustion turbine could require additional water use, primarily for cooling water make-up. Cooling tower water and other plant process water would likely be discharged to the sanitary sewer system, and then treated and discharged by the wastewater treatment plant. This would not substantially alter water quality. If plant discharge water would be discharged directly into San Francisco Bay, expected permit requirements would specify enforceable limits to pollutant discharge, such that water quality would not be substantially altered.

For the rest of the environmental topics identified in Chapter IV, Environmental Setting and Impacts, Energy Variants A2 and A3 would have substantially similar impacts to the Proposed Project, and no difference in the significance of impacts or mitigation measures identified.

B. FERRY TERMINAL BREAKWATER VARIANTS

Three variants are under consideration for the breakwater, which is part of the Ferry Terminal configuration. Breakwater Variant B1 would provide for symmetrical angled breakwaters, each extending the same distance from the land connection. Breakwater Variant B2 would include two symmetrical angled breakwaters extending from the land connection plus a third, detached breakwater on the north side of the Ferry Terminal extending further into the Bay at an oblique angle. Breakwater Variant B3 would have the 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.

Although Variants B1, B2, and B3 would result in minor differences associated with wave penetration, swell, resonance, and sedimentation, these differences would result in relatively minor effects on hydrologic resources and water quality, and impacts would be similar to those of the Proposed Project. No mitigation measures would be required.

Breakwater Variant B3 would accommodate smaller, side-loading ferry vessels. The capacity available on ferry transit service with this variant would be substantially less than that of the Proposed Project. This could slightly exacerbate the significant bus transit capacity impacts identified for the Proposed Project. The impact of this variant would be less than significant with adoption of Mitigation Measure M-TR-2, presented in Section IV.E, Transportation, p. IV.E.74. However, as with the Proposed Project, because the funding for ferry vessels and expanded bus service cannot be assured and associated impacts on transit could result, the impact would remain significant and unavoidable. Under Variant B3, fuel demand would be 80 percent less than that

assumed for the Proposed Project or other variants. Consequently, Variant B3 would reduce ferry-related nitrogen oxides emissions by about half. The nitrogen oxides air quality impact would remain significant and unavoidable under Variant B3, but the magnitude of this impact would be substantially reduced. With Variant B3, because the southern breakwater would be constructed from 7 to 10 years after the northern breakwater, protected species, such as eelgrass, green sturgeon, or marine mammals, not now present, could be become established or frequent the area. This potentially significant impact could be reduced to a less-than-significant level with mitigation identified for Variant B3.

For the rest of the environmental topics identified in Chapter IV, Environmental Setting and Impacts, Variants B1, B2, and B3 would have substantially similar impacts to the Proposed Project, and no difference in the significance of impacts or mitigation.

C. SUPPLEMENTAL FIREFIGHTING WATER SUPPLY VARIANTS

Variants C1 and C2 would provide a supplemental firefighting water supply that would be comparable to that of the Proposed Project's recycled water system. Supplemental Firefighting Water Supply Variant C1 would use potable water, and additional storage and pumping facilities for this water would be installed on Treasure Island. Supplemental Firefighting Water Supply Variant C2 would use Bay water, and this water would be supplied by a new pump station with a saltwater intake pipe and suction hydrants located around the perimeter of Treasure Island, and a firefighting water distribution system with hydrants on the island. Both variants would reduce the size of the recycled water tank proposed as part of the Proposed Project, from 1.26 million gallons to approximately 420,000 gallons.

The additional water tank and back-up generator for Variant C1 would be approximately 105 feet in diameter and 30 feet tall. It would be near the wastewater treatment plant and therefore similar to surrounding structures. The pump station and back-up generator for Variant C2 would appear as a small industrial building in the commercial area around Buildings 2 and 3. Neither supplemental firefighting water supply variant would result in new significant visual impacts.

The additional back-up diesel generator under Variants C1 and C2 would emit noise and air pollutants during weekly testing and during emergency use, similar to the two existing back-up generators that would continue to be used under the Proposed Project. The additional generator would incrementally add to the emissions of criteria pollutants and diesel particulate matter, which is a toxic air contaminant. The back-up diesel generator would require a permit from the Bay Area Air Quality Management District, which would place conditions on emissions and annual operations. No new, significant noise or air quality impacts would result compared to the Proposed Project.

Depending on the diameter of the saltwater intake pipe and the amount of water suction with Variant C2, there is the potential for significant fish and invertebrate entrainment and/or impingement as well as disturbance to the Islands' intertidal and near subtidal habitat and associated marine biota. The extent of impact would depend on final siting and construction design. This potentially significant impact could be reduced to a less-than-significant level with mitigation identified for Variant C2. Because Variant C2 would require the installation of a saltwater intake, pipeline, and fish screen that would not be installed under the Proposed Project, these facilities would result in additional disturbance to the San Francisco Bay floor during construction, including temporary disturbance to bottom sediments and other potential construction-related water quality impacts. Expected permit requirements, along with mitigation measures discussed in Section IV.M, Biological Resources, for protecting the intertidal and near subtidal habitats, would be expected to reduce potential impacts from Variants C1 and C2 to less-than-significant levels.

For the rest of the environmental topics, Variants C1 and C2 would have substantially similar impacts to the Proposed Project, and no differences in the significance of impacts or mitigation.

D. WASTEWATER WETLANDS VARIANTS

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. Effluent that is not recycled would be disinfected with ultraviolet light after tertiary treatment in the wetland, and then discharged through the existing outfall.

Under Wastewater Wetland Variant D2, effluent would undergo microfiltration and ultraviolet light disinfection. The treated effluent would be diverted from the treatment plant and treated with reverse osmosis; this water would be used for landscape irrigation and commercial toilet flushing. The remainder 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.

Variant D1 would occupy about 5 acres for the wetland, and Variant D2 would occupy about 2 to 4 acres. The wastewater wetlands would be located in the proposed open space areas adjacent to the wastewater treatment plant. No new significant impacts related to land use or recreation would result from implementation of either of these variants. In contrast to the stormwater

wetlands analyzed for the Proposed Project, wetlands receiving wastewater may also be prone to the bioaccumulation of potentially harmful substances. The potential for adverse impacts is somewhat greater under Variant D1, although secondary-treated water in Variant D1 is of higher quality than the proposed stormwater that would be used in the proposed wetlands under the Proposed Project. Determining the potential significance of bioaccumulation under this variant would be speculative, given the highly mobile nature of birds using a wetland, their exposure to harmful substances at other sites, varying time on the wetland, and different rate and "uptake" of these substances by different plants and in different seasons.

For the rest of the environmental topics, Variants D1 and D2 would have substantially similar impacts to the Proposed Project, and no difference in the significance of impacts or mitigation.

E. AUTOMATED WASTE COLLECTION SYSTEM VARIANT

Under the Proposed Project, solid waste would be collected by trucks, as is typical in a city. Under the Automated Waste Collection System Variant, an automated, mechanical system would be installed to collect solid waste from new buildings on Treasure Island. Residents and workers on Treasure Island would deposit solid waste, including recyclables, compostables, and trash, in receptacles both within and outside of buildings. A "vacuum" system would pull the solid waste through subsurface pipes to a central waste handling facility, likely to be located in the vicinity of the new police/fire station or the Urban Agricultural Park on the edge of the Island Center on Treasure Island. Here, solid waste would be loaded into trucks and hauled to a processing facility on the mainland, after materials that could be composted on Treasure Island were separated. The central collection facility would house the suction equipment fans and air compressors, air scrubbers, waste separators, compactors, and containers for temporary storage.

The central collection facility's equipment would generate mechanical noise. The project sponsors would require that the operator of the collection facility reduce fan noise by acoustical treatments on walls and ceilings, and silencers and other methods on the exhaust pipe, to reduce noise levels to 85 dB or less. In addition, the central collection facility would be in an enclosed building. In addition to the project sponsors' noise reduction methods, noise shielding would be installed as necessary to comply with the San Francisco Noise Ordinance. Therefore, there would be no new significant noise impacts on surrounding land uses.

Regarding air quality, at the central collection facility, wet scrubbers would be designed and operated to remove airborne particulates. Particulate emissions from the facility would be less than significant. Any solid waste collection system has the potential for odors from organic decomposition and other odorous waste. However, the collection system pipes would be under negative pressure (i.e., vacuum towards the central collection facility), including frequent "flushes" with jets of air. Organic material in the system would not be expected to linger long enough to produce objectionable odors, and no significant impact would result.

For the rest of the environmental topics, this variant would have substantially similar impacts to the Proposed Project, and no difference in the significance of impacts or mitigation.

F. OFF-SITE ELECTRICAL TRANSMISSION FACILITY IMPROVEMENTS VARIANT

Electricity transmission from the PG&E grid to the Islands starts in Oakland, proceeds to the eastern end of the Bay Bridge, and finishes using a submarine cable that connects to Treasure Island. Although the capacity of these off-site electrical transmission facilities is sufficient, a number of upgrades to the off-site electrical system could be made to improve capacity and reliability. The Off-Site Electrical Transmission Facility Improvements Variant would be constructed on Port of Oakland and City of Oakland property in an industrial area occupied by trucking transport facilities, parking lots, backlands for storing shipping containers, and other support services for the ocean shipping activity that occurs at this Port.

Construction under this variant could result in short-term temporary impacts on traffic and emergency vehicle access. Construction would result in noise and air quality impacts. These impacts would be typical of infrastructure construction and repair that occurs throughout urban areas, and would not be different than those analyzed for the Proposed Project. Soil contaminants are expected to be encountered in the vicinity of off-site electrical transmission facilities, given the industrial nature of existing and former land uses there. The same protocols as those called for in the Soil and Groundwater Management Plan for the Proposed Project in Mitigation Measure M-HZ-1 would also be effective in reducing the potential significant effects of this variant. If some existing overhead wires were undergrounded, visual conditions would improve; however, as the location is on and adjacent to working Port of Oakland property, and therefore industrial in nature, overhead wires do not substantially impair the visual conditions in the area.

For the rest of the environmental topics, this variant would have no substantial difference in the significance of impacts of the Proposed Project or mitigation.

SUMMARY OF PROJECT ALTERNATIVES

Three alternatives are evaluated in this EIR: A. No Project Alternative; B. Reduced Development Alternative, and C. No Ferry Service Alternative. Table S.3, p. S.58, shows a comparison of the potential environmental impacts that may result from the alternatives to those of the Proposed Project.

A. NO PROJECT ALTERNATIVE

Disposal of Treasure Island and Yerba Buena Island are subject to several Federal laws and regulations, including the Defense Base Closure and Realignment Act ("BRAC"), affecting the disposition of surplus real property (collectively the "Reuse Laws"). The Reuse Laws allow for a

wide array of possible reuse and conveyance scenarios which could occur should the Proposed Project not proceed. The No Project Alternative assumes that the likely outcome would be that the *Redevelopment Plan* would not be adopted, and that the Navy would dispose of the property to one or more Federal agencies subject to the Reuse Laws. Thus, the EIR assumes that under the No Project Alternative, existing or similar uses would continue to operate and be maintained under the existing Cooperative Agreement between the Navy and TIDA. It is also assumed that the City and County of San Francisco would continue to provide police and fire services on the Islands.

The analysis of the No Project Alternative assumes that the Redevelopment Plan Project Area would likely remain in its existing condition, and approximately 404 acres of land on Treasure Island and approximately 95 acres of land on Yerba Buena Island, formerly NSTI, would not be conveyed by the Navy to TIDA. With the No Project Alternative, the exchange of land from Treasure Island to Yerba Buena Island authorized by the Conversion Act of 1996 would not occur. No amendments to the *San Francisco General Plan* or San Francisco Planning Code would be required, and the Redevelopment Plan Project Area would remain in the P (Public) District and 40-X Height and Bulk district.

With the No Project Alternative, there would be no new construction within the Development Plan Area of up to 8,000 dwelling units, 140,000 square feet of new commercial and retail space, 100,000 sq. ft. of office space, and 500 hotel rooms. Historic Buildings 1, 2, and 3 on Treasure Island would not receive historic rehabilitation and be adapted to house new commercial and entertainment space, nor would the Torpedo Assembly Building and the buildings in the Senior Officers' Quarters Historic District be rehabilitated for reuse as hotel, community, and public service space. The *U.S.S. Buttercup,* an historical resource under CEQA, would not be demolished. The existing 170 acres of recreation and open space would remain, and approximately 300 acres of new and enhanced local and regional open space and parks would not be created on the Islands.

The No Project Alternative would not include new or upgraded infrastructure; the existing wastewater collection and treatment facilities and stormwater collection facilities would remain in place. No geotechnical stabilization for seismic safety would occur.

No new bicycle or pedestrian facilities would be constructed. The proposed Ferry Terminal and intermodal Transit Hub would not be constructed. There would be no new transit service to the East Bay under the No Project Alternative. Also, there would be no new ferry service introduced between the Islands and the San Francisco mainland.

B. REDUCED DEVELOPMENT ALTERNATIVE

Under the Reduced Development Alternative, the former NSTI lands would be conveyed to TIDA, as they would with the Proposed Project. The primary difference between the Proposed Project and the Reduced Development Alternative is that residential development would be reduced from up to 8,000 dwelling units to 6,000 units, and the 100,000 sq. ft. of office space in the Proposed Project would not be developed. Parking would be reduced by approximately 2,200 spaces, for a total of about 8,955 spaces. The same amount of retail space would be provided as in the Proposed Project; however, there would be approximately 25 percent less "neighborhood-serving" retail space than in the Proposed Project. As a result, the Reduced Development Alternative would likely provide more square footage dedicated to regional-serving retail uses than would the Proposed Project. The Reduced Development Alternative would also include the rehabilitation and adaptive reuse of historic Buildings 1, 2, and 3 with up to 311,000 sq. ft. of commercial space and entertainment uses on Treasure Island, as with the Proposed Project, and the historic Nimitz House, the Senior Officers' Quarters Historic District (the Great Whites), and the historic Torpedo Assembly Building on Yerba Buena Island would also be rehabilitated and adaptively reused for hotel and other visitor-serving uses.

As with the Proposed Project, the Reduced Development Alternative would include a new joint police/fire station, an upgraded or replaced school, and new and/or upgraded public utilities, including a water distribution system, wastewater collection and treatment, and stormwater collection and treatment. Also, geotechnical stabilization would be the same as the Proposed Project.

As with the Proposed Project, there would be approximately 300 acres of parks and public open space on Treasure Island and Yerba Buena Island, and a Habitat Management Plan would be implemented for much of the undeveloped portions of Yerba Buena Island.

Also the same as the Proposed Project, the Reduced Development Alternative would include new bicycle, transit, and pedestrian facilities and a new Ferry Terminal and intermodal Transit Hub on Treasure Island.

The same Tidelands Trust Exchange Agreement as described for the Proposed Project would be necessary to implement the Reduced Development Alternative. As for the Proposed Project, the *San Francisco General Plan* and the San Francisco Planning Code would be amended, and a *Redevelopment Plan* and *Design for Development* would be adopted. All other approvals required for the Proposed Project would be necessary to implement this alternative.

C. NO FERRY SERVICE ALTERNATIVE

Under the No Ferry Service Alternative, there would be no ferry service provided; the Ferry Terminal would not be constructed. This alternative would also include preservation of the *U.S.S.*

Buttercup training facility, an historic structure identified in this EIR. All residents, visitors, and employees would either use private vehicles or bus transit to travel to and from the Islands.

Under the No Ferry Service Alternative, up to 5,100 residential units would be constructed, 2,900 fewer than with the Proposed Project. While the same amount of retail space would be developed, there would also be less neighborhood-serving retail than in the Proposed Project. Residential parking would also be reduced to about 8,255 parking spaces. Most other land uses would be the same as with the Proposed Project: 100,000 sq. ft. of office space; 500 hotel rooms, including 50 on Yerba Buena Island; adaptive reuse of about 311,000 sq. ft. of Buildings 1, 2, and 3 with retail, light industrial/food production, and entertainment uses; landside facilities to support the approved expanded Clipper Cove Marina; new landside and waterside launch facilities at the existing sailing center on Treasure Island Sailing Center; and reuse or reconstruction of the existing Treasure Island elementary school at its current location.

The development footprint would be slightly reduced compared to the Proposed Project, to accommodate preservation of the *U.S.S. Buttercup* training facility. The blocks not developed as a result of this preservation would be added to the overall open space, resulting in 306 acres of open space, slightly more than under the Proposed Project. About 25 to 40 acres of athletic fields in a Sports Park, and a cultural park with a museum would be included in the open space, as with the Proposed Project. A new joint police/fire station would be provided.

Geotechnical stabilization would occur in the same manner and over the same area of Treasure Island as with the Proposed Project. Existing utilities would be replaced, and a Bus Transit Hub would be provided in the Island Center District on Treasure Island. The Ferry Terminal would not be built, and dredging for the ferry basin and breakwaters would not be required.

The No Ferry Service Alternative would provide more frequent bus service to San Francisco during the peak hours, with two bus routes serving the Transbay Terminal area and the Civic Center area. Bus service to downtown Oakland would be the same as described for the Proposed Project. It is assumed that funding to provide the additional buses and operators for increased bus service to San Francisco would be available because there would be no Ferry Terminal construction and no need to purchase or lease ferry boats or provide project-generated funding for ferry operations.

This alternative would require the same Tidelands Trust Exchange Agreement as for the Proposed Project, and the same or similar amendments to the *San Francisco General Plan* and the San Francisco Planning Code would be adopted. Height limits and design guidelines would be modified in the *Redevelopment Plan* and *Design for Development* compared to those included in the Proposed Project, based on constructing substantially fewer residential units; the same approval actions related to adopting a redevelopment plan would be necessary as those needed for the Proposed Project. Approvals necessary to construct and operate the Ferry Terminal, including actions by the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, the Bay

Conservation and Development Commission, and approvals and operation of the ferry service by the Water Emergency Transit Authority would not be required for the No Ferry Service Alternative.

Table S.3: Comparison of Project and Alternative Impacts

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
IV.A. Land Use and Land Use Planning			
Impact LU-1: Construction of the Proposed Project would not physically divide an established community or have a substantial adverse impact on the character of the vicinity. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact LU-2: Operation of the Proposed Project would not physically divide an established community. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact LU-3: Implementation of the Proposed Project would not have a substantial adverse impact on the character of the vicinity. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact LU-4: Operation of the Proposed Project would not have a substantial adverse impact on the character of land uses subject to the Tidelands Trust Doctrine. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact LU-5: The Proposed Project, when combined with other cumulative projects, would not disrupt or divide an existing community or substantially change the land use character in the vicinity. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
IV.B. Aesthetics			
Impact AE-1: Development under the proposed Treasure Island and Yerba Buena Island Redevelopment Plan would adversely alter scenic vistas of San Francisco and San Francisco Bay from public vantage points along the eastern shoreline of San Francisco, Telegraph Hill, the East Bay shoreline, and from the Bay Bridge east span. ***(Significant and Unavoidable)***	No Impact	Significant and Unavoidable	Significant and Unavoidable
Impact AE-2: The Redevelopment Plan would affect existing features that are considered scenic resources on Treasure Island and Yerba Buena Island. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact AE-3: New construction on Treasure Island would alter the existing visual character and visual quality of the Redevelopment Plan Project Area. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact AE-4: Implementation of the Proposed Project would increase the nighttime lighting requirements within the Development Plan Area and would increase potential sources of glare. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact AE-5: The Proposed Project would not contribute cumulatively to impacts related to aesthetics when considered with nearby projects. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
IV.C. Population and Housing			
Impact PH-1: The Proposed Project would induce substantial direct temporary population growth during project construction. **(*Less than Significant*)**	No Impact	Less than Significant	Less than Significant
Impact PH-2: The Proposed Project would not displace substantial numbers of people and/or existing housing units or create demand for additional housing, necessitating the construction of replacement housing. **(*Less than Significant*)**	No Impact	Less than Significant	Less than Significant
Impact PH-3: The Proposed Project would not induce substantial growth in an area either directly or indirectly. **(*Less than Significant*)**	No Impact	Less than Significant	Less than Significant
Impact PH-4: The Proposed Project would not induce substantial cumulative growth in an area either directly or indirectly. **(*Less than Significant*)**	No Impact	Less than Significant	Less than Significant
IV.D. Cultural and Paleontological Resources			
Impact CP-1: Project construction activities could disturb significant archaeological resources, if such resources are present within the Redevelopment Plan Project Area. ***(Less than Significant with Mitigation)***	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact CP-2: Project construction activities could disturb human remains, if such resources are present within the Redevelopment Plan Project Area. ***(Less than Significant with Mitigation)***	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact CP-3: Project construction activities could disturb paleontological resources. ***(Less than Significant with Mitigation)***	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact CP-4: Disturbance of archaeological and paleontological resources, if encountered during construction of the Proposed Project, could contribute to a cumulative loss of significant historic and scientific information. **(*Less than Significant with Mitigation)***	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact CP-5: Reuse and rehabilitation of historical resources under the proposed *Redevelopment Plan* could impair the significance of those historical resources. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact CP-6: Alterations to the contributing landscape areas of Buildings 1, 2, and 3 could impair the significance of those historical resources. ***(Less than Significant with Mitigation)***	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact CP-7: New construction within the contributing landscapes of Buildings 1, 2, and 3 could impair the significance of those historical resources. ***(Less than Significant with Mitigation)***	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact CP-8: Demolition of Building 111, a component of Building 3, would not impair the significance of the Building 3 historical resource. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact CP-9: Demolition of the Damage Control Trainer would impair the significance of an historical resource. ***(Significant and Unavoidable)***	No Impact	Significant and Unavoidable	Less than Significant
Impact CP-10: Demolition of NSTI resources on Treasure Island and Yerba Buena Island could impair the significance of historical resources. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact CP-11: Proposed new construction outside of the contributing sites of Buildings 1, 2, and 3 could impair the significance of those historical resources. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact CP-12: Proposed new construction within and adjacent to the Senior Officers' Quarters Historic District could impair the significance of historical resources. *(Less than Significant)*	No Impact	Less than Significant	Less than Significant
Impact CP-13: The Proposed Project would not contribute cumulatively to impacts on historic architectural resources when considered with nearby projects. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
IV.E. Transportation – Construction			
Impact TR-1: Construction of the Proposed Project would occur over a long period of time, and would result in significant impacts on the transportation and circulation network. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
IV.E. Transportation – Traffic			
Impact TR-2: Implementation of the Proposed Project would contribute to existing LOS E operating conditions during the weekday PM peak hour, and result in significant impacts during the Saturday peak hour at the eastbound off-ramp (west side of Yerba Buena Island). **(*Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-3: Under conditions without the Ramps Project, implementation of the Proposed Project would result in significant impacts at the two westbound on-ramps. **(*Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-4: Under conditions with the Ramps Project, implementation of the Proposed Project would result in a significant impact during the AM and PM peak hours at the ramp meter at the westbound on-ramp (east side of Yerba Buena Island). **(*Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-5: Under conditions without and with the Ramps Project, implementation of the Proposed Project would result in less than significant impacts at three ramp locations. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-6: Implementation of the Proposed Project would result in a significant impact on queuing at the Bay Bridge toll plaza during the weekday AM peak hour, with and without the Ramps Project. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-7: Implementation of the Proposed Project would result in a significant impact on queuing on San Francisco streets approaching Bay Bridge during the weekday PM peak hour, under conditions with and without the Ramps Project. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-8: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of First/Market. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-9: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of First/Mission. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-10: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of First/Folsom. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-11: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of First/Harrison/I-80 Eastbound On-Ramp. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-12: Implementation of the Proposed Project would result in a significant project impact at the signalized intersection of Bryant/Fifth/I-80 Eastbound On-Ramp. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-13: Implementation of the Proposed Project would result in significant project impacts at the signalized intersection of Fifth/Harrison/I-80 Westbound Off-Ramp. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-14: Implementation of the Proposed Project would contribute substantially to existing LOS E conditions at the signalized intersection of Second/Folsom, resulting in a project impact. ***(Significant and Unavoidable with Mitigation)***	No Impact	Less than Significant	Significant and Unavoidable with Mitigation
Impact TR-15: Implementation of the Proposed Project would have less than significant impacts at three signalized study intersections that operate at LOS E or LOS F under Existing Conditions. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact TR-16: Implementation of the Proposed Project would have less than significant impacts at five signalized study intersections that would operate at LOS D or better under Existing plus Project Conditions. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact TR-17: Implementation of the Proposed Project would result in significant impacts at the uncontrolled study intersection of Folsom/Essex. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-18: Implementation of the Proposed Project would result in a significant impact at the uncontrolled study intersection of Bryant/Sterling. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
IV.E. Transportation – Transit			
Impact TR-19: Implementation of the Proposed Project would exceed the available transit capacity of Muni's 108-Treasure Island bus line serving the Islands. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-20: Implementation of the Proposed Project would not exceed the transit capacity of the proposed new AC Transit bus line serving the Islands. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact TR-21: Implementation of the Proposed Project would not exceed the transit capacity of the proposed new ferry line serving Treasure Island. ***(Less than Significant)***	No Impact	Less than Significant	No Impact
Impact TR-22: Implementation of the Proposed Project would add transit trips to the San Francisco downtown screenlines; however, this would not increase demand in excess of available capacity. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact TR-23: Implementation of the Proposed Project would add transit trips to AC Transit, BART, Golden Gate Transit, SamTrans, Caltrain and other ferry lines; however, this would not increase demand in excess of available capacity. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
Impact TR-24: Implementation of the Proposed Project without the Ramps Project would result in queues extending from the westbound Bay Bridge at Yerba Buena Island on-ramps which would impact Muni line 108-Treasure Island operations. ***(Less than Significant with Mitigation)***	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact TR-25: Implementation of the Proposed Project without the Ramps Project would impact AC Transit operations on Hillcrest Road between Treasure Island and the eastbound on-ramp to the Bay Bridge. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-26: Implementation of the Proposed Project with the Ramps Project would result in significant impacts to Muni line 108-Treasure Island operations. ***(Less than Significant with Mitigation)***	No Impact	Less than Significant with Mitigation	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-27: Implementation of the Proposed Project with the Ramps Project would impact AC Transit operations on Treasure Island Road and Hillcrest Road between Treasure Island and the eastbound on-ramp to the Bay Bridge. ***(Significant and Unavoidable with Mitigation)***	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-28: Implementation of the Proposed Project would not impact operations of the existing or proposed ferry services on San Francisco Bay. ***(Less than Significant)***	No Impact	Less than Significant	No Impact
Impact TR-29: The Proposed Project would increase congestion in downtown San Francisco, which would increase travel times and would impact operations of the Muni 27-Bryant bus line. ***(Significant and Unavoidable)***	No Impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-30: The Proposed Project would increase congestion in downtown San Francisco, which would increase travel times and would impact operations of the Muni 30X-Marina Express bus line. ***(Significant and Unavoidable)***	No Impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-31: The Proposed Project would increase congestion in downtown San Francisco, which would increase travel times and would impact operations of the Muni 47-Van Ness bus line. ***(Significant and Unavoidable)***	No Impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-32: The Proposed Project would increase congestion in downtown San Francisco during the PM peak hour; however, it would not impact operations of Golden Gate Transit or SamTrans bus lines. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant
IV.E. Transportation – Bicycles			
Impact TR-33: The Proposed Project would not create potentially hazardous conditions for bicyclists on the Islands and would provide more bicycle accessibility to the site than currently exists. ***(Less than Significant)***	No Impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-34: Implementation of the Proposed Project would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility on mainland San Francisco. **(*Less than Significant*)**	No Impact	Less than Significant	Less than Significant
IV.E. Transportation – Pedestrians			
Impact TR-35: The Proposed Project would not create potentially hazardous conditions for pedestrians and would provide better pedestrian accessibility to the site than currently exists. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact TR-36: Implementation of the Proposed Project would not result in substantial overcrowding of public crosswalks near the Ferry Building, and pedestrian facilities would continue to operate at acceptable levels. ***(Less than Significant)***	No impact	Less than Significant	No Impact
IV.E. Transportation – Loading			
Impact TR-37: The Proposed Project would not result in a loading demand during the peak hour of loading activities that could not be accommodated within the proposed on-site loading supply or within on-street loading zones. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
IV.E. Transportation – Emergency Access			
Impact TR-38: Implementation of the Proposed Project would not result in significant emergency access impacts. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
IV.E. Transportation – Cumulative Impacts			
Impact TR-39: Construction of the Proposed Project would occur over a long period of time, and would contribute to cumulative construction impacts in the Project vicinity. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-40: Implementation of the Proposed Project would contribute to significant cumulative traffic impacts at the eastbound off-ramp (west side of Yerba Buena Island). ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-41: Under conditions without the Ramps Project, implementation of the Proposed Project would contribute to significant cumulative impacts at the two westbound on-ramps. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-42: Under conditions with the Ramps Project, implementation of the Proposed Project would result in a significant cumulative impacts during the AM and PM peak hours at the ramp meter at the westbound on-ramp (east side of Yerba Buena Island). ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-43: Under 2030 Cumulative plus Project conditions without and with the Ramps Project, implementation of the Proposed Project would result in less than significant impacts at three ramp locations. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact TR-44: Implementation of the Proposed Project would contribute to significant cumulative queuing impacts at the Bay Bridge toll plaza during the AM and PM peak hours, whether or not the Ramps Project are implemented. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-45: Implementation of the Proposed Project would contribute to significant cumulative queuing impacts on San Francisco streets approaching the Bay Bridge during the weekday AM and PM and Saturday peak hours, whether or not the Ramps Project was implemented. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-46: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of First/Market. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-47: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of First/Mission. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-48: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of First/Folsom. ***(Significant and Unavoidable)***	No impact	Less than Significant	Significant and Unavoidable
Impact TR-49: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of First/Harrison/I-80 Eastbound On-Ramp. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-50: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of Bryant/Fifth/I-80 Eastbound On-Ramp. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-51: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of Harrison/Fifth/I-80 Westbound Off-Ramp. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-52: Implementation of the Proposed Project would result in significant project and cumulative impacts at the intersection of Second/Folsom. *(Significant and Unavoidable with Mitigation)*	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-53: Implementation of the Project would have less than significant impacts at seven study intersections that would operate at LOS E or LOS F under 2030 Cumulative Plus Project conditions. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-54: Implementation of the Proposed Project would contribute to significant cumulative impacts at the uncontrolled study intersection of Folsom/Essex. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-55: Implementation of the Proposed Project would contribute to significant cumulative impacts at the uncontrolled study intersection of Bryant/Sterling. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact TR-56: The Proposed Project's contribution to cumulative transit trips to the downtown screenlines would not increase demands in excess of available capacity. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact TR-57: The Proposed Project's contributions to cumulative transit trips on AC Transit, BART, Golden Gate Transit, SamTrans, Caltrain and other ferry lines would not increase demands in excess of available capacity. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact TR-58: The Proposed Project would contribute to cumulative congestion in downtown San Francisco, which would increase travel time and would impact operations of the Muni 27-Bryant bus line. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-59: The Proposed Project would contribute to cumulative congestion in downtown San Francisco, which would increase travel time and would impact operations of the Muni 30X-Marina Express bus line. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-60: The Proposed Project would contribute to cumulative congestion in downtown San Francisco, which would increase travel time and would impact operations of the Muni 47-Van Ness bus line. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact TR-61: The Proposed Project would contribute to cumulative congestion in downtown San Francisco, which would increase travel time and would impact operations of the Muni 10-Townsend bus line. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact TR-62: The Proposed Project would contribute to cumulative congestion in downtown San Francisco during the PM peak hour, however would not impact operations of Golden Gate Transit or SamTrans bus lines. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact TR-63: Implementation of the Proposed Project parking supply maximums would exacerbate the exceedance of the capacity utilization standard on Muni's 108-Treasure Island bus line serving the Islands. ***(Significant and Unavoidable with Mitigation)***	No impact	Significant and Unavoidable with Mitigation	Less than Significant
IV.F. Noise			
Impact NO-1: Project-related construction activities would increase noise levels above existing ambient conditions. **(*Significant and Unavoidable with Mitigation*)**	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact NO-2: Construction activities could expose persons and structures to excessive ground-borne vibration or ground-borne noise levels. ***(Significant and Unavoidable with Mitigation*)**	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact NO-3: Project-related traffic would result in a substantial permanent increase in ambient noise levels in the project vicinity above existing ambient noise levels. **(*Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact NO-4: Project-related ferry noise levels would result in a substantial permanent increase in ambient noise levels in the project vicinity above existing ambient conditions. **(*Less than Significant with Mitigation; Significant and Unavoidable if Mitigation Not Implemented by WETA*)**	No impact	Less than Significant with Mitigation; Significant and Unavoidable if Mitigation Not Implemented by WETA	No impact

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact NO-5: Proposed residences and other sensitive uses would be located in incompatible noise environments. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact NO-6: Operation of stationary sources at the proposed public utility facilities (e.g., water distribution systems, wastewater collection and treatment facilities, electric substation facilities, etc.) would increase existing noise levels, potentially exceeding noise level standards. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact NO-7: Project-related construction activities in combination with construction activities of other cumulative development would increase noise levels above existing ambient conditions. **(*Significant and Unavoidable with Mitigation*)**	No impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact NO-8: Increases in traffic from the project in combination with other development would result in cumulative noise increases. **(*Significant and Unavoidable*)**	No impact	Significant and Unavoidable	Significant and Unavoidable
IV.G. Air Quality			
Impact AQ-1: Construction of the Proposed Project would result in localized construction dust-related air quality impacts. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact AQ-2: Construction of the Proposed Project could violate an air quality standard or contribute significantly to an existing or projected air quality violation. ***(Less than Significant under Applicable 1999 Guidelines; Significant and Unavoidable with Mitigation under 2010 Guidelines)***	No impact	Less than Significant under Applicable 1999 Guideline; Significant and Unavoidable with Mitigation under 2010 BAAQMD CEQA Guidelines	Less than Significant under Applicable 1999 Guideline; Significant and Unavoidable with Mitigation under 2010 BAAQMD CEQA Guidelines
Impact AQ-3: Construction of the Proposed Project could expose sensitive receptors to substantial levels of toxic air contaminants which may lead to adverse health effects. ***(Potentially Significant and Unavoidable for both 1999 and 2010 BAAQMD thresholds in Phase 2)***	No impact	Potentially Significant and Unavoidable for both 1999 and 2010 BAAQMD thresholds in Phase 2	Potentially Significant and Unavoidable for both 1999 and 2010 BAAQMD thresholds in Phase 2

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact AQ-4: Construction of the Proposed Project would expose sensitive receptors to substantial levels of PM2.5 which may lead to adverse health effects. ***(Not Applicable to 1999 BAAQMD Thresholds, Significant and Unavoidable with Mitigation for 2010 BAAQMD thresholds)***	No impact	(Not Applicable to 1999 BAAQMD Thresholds, Significant and Unavoidable with Mitigation for 2010 BAAQMD Thresholds)	(Not Applicable to 1999 BAAQMD Thresholds, Significant and Unavoidable with Mitigation for 2010 BAAQMD Thresholds)
Impact AQ-5: The Proposed Project's operations would violate an air quality standard or contribute substantially to an existing or projected air quality violation. **(*Significant and Unavoidable with Mitigation for both 1999 and 2010 BAAQMD thresholds*)**	No impact	Significant and Unavoidable with Mitigation for both 1999 and 2010 BAAQMD thresholds	Less than Significant
Impact AQ-6: Operation of the proposed project could expose sensitive receptors to substantial pollutant concentrations. ***(Significant and Unavoidable with Mitigation for both 1999 and 2010 BAAQMD thresholds)***	No impact	Significant and Unavoidable with Mitigation for both 1999 and 2010 BAAQMD thresholds	Significant and Unavoidable with Mitigation for both 1999 and 2010 BAAQMD thresholds
Impact AQ-7: The Proposed Project could generate odors. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact AQ-8: The Proposed Project could conflict with adopted plans related to air quality. **(*Significant for the Proposed Project and Less than Significant for Expanded Transit Service*)**	No impact	Significant for Reduced Development Alternative and for Expanded Transit Service	Significant and Unavoidable
Impact AQ-9: The Proposed Project could result in significant cumulative air quality impacts. **(*Significant and Unavoidable*)**	No impact	Significant and Unavoidable	Significant and Unavoidable
IV.F. Greenhouse Gases			
Impact GHG-1: The Proposed Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact GHG-2: The Proposed Project would not conflict with applicable plans, policies or regulations of an agency with jurisdiction over the Proposed Project adopted for the purpose of reducing the emissions of GHGs. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
IV.I. Wind and Shadow			
Impact WS-1: Shadows from the Proposed Project would reach both existing and proposed parks, open spaces, and recreation areas on the Islands and could substantially affect their usability. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact WS-2: The Proposed Project, when combined with other cumulative projects, would not adversely affect the use of any park or open space under the jurisdiction of the Recreation and Park Commission or substantially affect the usability of other existing publicly accessible open space or outdoor recreation facilities or other public areas. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact WS-3: The phased development of the Proposed Project could temporarily result in the creation of a Section 148 wind hazard, an increase in the number of hours that the wind hazard criterion is exceeded or an increase in the area that is subjected to wind hazards. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
Impact WS-4: Section 148 wind hazards would occur at publicly accessible locations in the Development Plan Area. These wind hazards would represent a general reduction in the number of existing wind hazards and the overall duration of the wind hazards. Changes in building design, height, location, and orientation, as well as changes in the overall configuration of the Project could result in wind hazards that differ from those found for the representative design Project. The wind hazards could occur in different locations, could increase the number of hours that any wind hazard would occur, and/or could increase the area that would be subjected to wind hazards. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact WS-5: The Proposed Project, when combined with other cumulative projects, could result in wind hazards that differ from those found for the representative design Project, either in the location of the hazard, in an increase in the number of hours that Section 148 wind hazards would occur or, in an increase in the area that is subjected to wind hazards. ***(Significant and Unavoidable)***	No impact	Significant and Unavoidable	Significant and Unavoidable
IV.J Recreation			
Impact RE-1: Construction of about 300 acres of parks, recreation facilities, and open space proposed by the Redevelopment Plan would result in temporary physical effects on the environment. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact RE-2: The Proposed Project would result in an increase in on-site population that could result in the deterioration of existing recreational facilities. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact RE-3: The Proposed Project may include synthetic turf fields which could have an adverse physical effect on the environment. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact RE-4: Construction of the Proposed Project would not significantly contribute to cumulative impacts on the recreational use of existing parks, recreation facilities, and open space. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
IV.K. Utilities and Service Systems			
Impact UT-1: Construction activities associated with wastewater infrastructure for the Proposed Project could result in air quality, noise, water quality, transportation, hazardous materials, and biological impacts, as further evaluated under construction subsections in those EIR topics. ***(See significance determinations in other topics.)***	No impact	See significance determinations in other topics	See significance determinations in other topics
Impact UT-2: Wastewater collection system blockages or lift/pump station failures could result in sanitary sewer overflows. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact UT-3: Construction and operation of the Proposed Project would not significantly contribute to cumulative infrastructure deficits or result in the exceedance of wastewater discharge requirements. ***(No Impact)***	Existing infrastructure deficits would remain	No impact	No impact
Impact UT-4: Construction activities associated with the Proposed Project's recycled water infrastructure could result in air quality, noise, water quality, transportation, hazardous materials, and biological impacts, as further evaluated under those EIR topics. ***(See significance determinations in other topics.)***	No impact	See significance determinations in other topics	See significance determinations in other topics
Impact UT-5: New recycled wastewater treatment and collection facilities would provide recycled water to reduce the Proposed Project's water demand in conformance with City policies. ***(No Impact)***	No impact	No impact	No impact
Impact UT-6: Construction and operation of the Proposed Project including the recycled water plant would not significantly contribute to any cumulative impacts. ***(No Impact)***	No impact	No impact	No impact
Impact UT-7: Construction activities associated with the Proposed Project's stormwater infrastructure could result in air quality, noise, water quality, transportation, hazardous materials, and biological impacts, as further evaluated under those EIR topics. ***(See significance determinations in other topics.)***	No impact	See significance determinations in other topics	See significance determinations in other topics
Impact UT-8: Construction and operation of the Proposed Project would not significantly contribute to cumulative infrastructure deficits or result in the exceedance of stormwater discharge requirements. ***(No Impact)***	No impact	No impact	No impact
Impact UT-9: Construction activities associated with water infrastructure of the Proposed Project could result in air quality, noise, water quality, transportation, hazardous materials, and biological impacts, as further evaluated under those EIR topics. ***(See significance determinations in other topics.)***	No impact	See significance determinations in other topics	See significance determinations in other topics

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact UT-10: There would be sufficient water supply available to serve the Proposed Project from existing entitlements and resources, and no new or expanded water supply resources or entitlements would be needed. ***(No Impact)***	No impact	No impact	No impact
Impact UT-11: Implementation of the Proposed Project would not result in a cumulatively considerable impact on existing entitlements and resources, and no new or expanded water supply resources or entitlements would be needed. ***(No Impact)***	No impact	No impact	No impact
Impact UT-12: The Proposed Project would be served by a landfill with sufficient capacity to accommodate the Proposed Project's solid waste disposal needs. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact UT-13: The project would not fail to comply with Federal, State, and local statutes and regulations related to solid waste. *(Less than Significant)*	No impact	Less than Significant	Less than Significant
Impact UT-14: Construction and operation of the Proposed Project would not result in a cumulatively considerable contribution to regional impacts on landfill capacity. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact UT-15: Construction activities associated with energy and telecommunication infrastructure of the Proposed Project could result in air quality, noise, water quality, transportation, hazardous materials, cultural resources, and biological impacts, as further evaluated under those EIR topics. *(See Significance Determinations in other topics.)*	No impact	See significance determinations in other topics	See significance determinations in other topics
Impact UT-16: Construction and operation of the Proposed Project would not result in cumulative impacts on energy and telecommunication infrastructure. ***(No Impact)***	No impact	No impact	No impact
IV.L. Public Services			

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact PS-1: Project construction activities could result in adverse physical impacts or in the need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives for police protection. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact PS-2: Implementation of the Proposed Project would increase demand for police services that would result in the need to construct new police facilities in order to maintain acceptable service ratios, response times, or other performance objectives of the San Francisco Police Department. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact PS-3: The Proposed Project's contribution to cumulative projects would not affect police department response times or performance objectives, nor would it contribute to the need to construct new police facilities. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact PS-4: Project construction activities could result in adverse physical impacts or in the need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact PS-5: Implementation of the Proposed Project would increase demand for fire services, which would result in the need to construct new fire service facilities in order to maintain acceptable service ratios, response times, or other performance objectives of the San Francisco Fire Department. **(*No Impact*)**	No impact	No impact	No impact
Impact PS-6: The Proposed Project's contribution to cumulative impacts would not affect fire department response times or performance objectives, nor would it contribute to the need to construct new fire station facilities. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact PS-7: Project construction activities would not result in adverse physical impacts or in the need to construct new or physically altered facilities in order to maintain acceptable staffing ratios, prevent overcrowding, or to meet other performance objectives for school services. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact PS-8: Implementation of the Proposed Project would increase demand for school services that would result in the need to construct new school facilities in order to maintain acceptable service ratios or other performance objectives of the San Francisco Unified School District. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact PS-9: The Proposed Project cumulative contribution would not result in additional demand for educational facilities. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact PS-10: Project construction would not result in adverse physical impacts or in the need to construct new or physically altered facilities in order to maintain adequate staffing levels, acceptable morbidity and mortality rates, or other performance objectives for hospital services. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact PS-11: Implementation of the Proposed Project would not increase demand for hospital services that would result in the need to construct new hospital facilities in order to maintain adequate staffing levels, acceptable morbidity and mortality rates, or other performance objectives of the San Francisco Public Health Department. ***(No Impact)***	No impact	No impact	No impact
Impact PS-12: The Proposed Project's cumulative contribution would not increase demand for hospital services that would result in the need to construct new hospital facilities in order to maintain adequate staffing levels, acceptable morbidity and mortality rates, or other performance objectives of the San Francisco Public Health Department. **(*No Impact*)**	No impact	No impact	No impact

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact PS-13: Project construction would not result in adverse physical impacts or in the need to construct new or physically altered facilities in order to maintain acceptable service objectives for library services. **(*No Impact*)**	No impact	No impact	No impact
Impact PS-14: Implementation of the Proposed Project would not increase demand for library services to a level that would result in the need to construct new library facilities in order to maintain acceptable levels of service, or other performance objectives of the San Francisco Public Library system. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact PS-15: The Proposed Project's cumulative contribution would not increase demand for library services that would result in the need to construct new library facilities in order to maintain acceptable levels of service, performance objectives, or need to construct new or physically altered facilities in order to maintain acceptable service objectives. **(*No Impact*)**	No impact	No impact	No impact
IV.M. Biological Resources			
Impact BI-1: The Proposed Project may adversely affect dune gilia and locally significant plants, special status animals, and protected or special-status marine species, such as marine mammals, salmon, steelhead, green sturgeon, longfin smelt, harbor seals and California sea lions. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact BI-2: The project may adversely affect Central Coast Riparian Scrub (riparian habitat), California Buckeye, or SAV/eelgrass beds (other sensitive natural communities). **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation for migratory birds; No impact on rafting waterfowl or fish passage
Impact BI-3: The project may adversely affect biological resources regulated by the Clean Water Act or the Rivers and Harbors Act. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact BI-4: The project may adversely affect the movement of migratory birds, rafting waterfowl, and/or fish passage. ***(Less than Significant with Mitigation for migratory birds and fish passage; Significant and Unavoidable for rafting waterfowl*)**	No impact	Less than Significant with Mitigation for migratory birds and fish passage; Significant and Unavoidable for rafting waterfowl	Less than Significant with Mitigation for migratory birds; No impact on rafting waterfowl and fish passage
Impact BI-5: The Proposed Project may conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact BI-6: The Proposed Project may result in adverse effects on intertidal and subtidal marine habitat and biota located along Treasure Island's shoreline and nearshore regions of the Bay as well as Bay waters. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact BI-7: The development planned as part of the Proposed Project, when combined with past, present, and other reasonably foreseeable development in the vicinity, could result in significant cumulative impacts to biological resources. (*Cumulative Impact: Significant and Unavoidable for rafting waterfowl; Less than Significant for other sensitive plants, animals and habitats*)	No impact	Significant and Unavoidable for rafting waterfowl Less than Significant for sensitive plants, animals, and habitats	Less than Significant with Mitigation
IV.N. Geology and Soils			
Impact GE.1: Construction activities within the Development Plan Area could loosen and expose surface soils. If this were to occur over the long term, exposed soils could erode by wind or rain, increasing the sediment load to San Francisco Bay. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact GE-2: In the event of a major earthquake in the region, seismic ground shaking could potentially injure people and cause collapse or structural damage to proposed structures or the perimeter berm. **(*Less than Significant*)**	Less than Significant	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact GE-3: In the event of a major earthquake in the region, seismic ground shaking could potentially expose people and property to liquefaction and earthquake-induced settlement. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact GE.4: Development in the Development Plan Area could be subject to settlement over time from static forces. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact GE.5: Development of the Proposed Project could result in potential damage or injury as a result of slope failures including the perimeter rock berms. **(*Less than Significant with Mitigation)***	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact GE.6: In the event of a major earthquake in the region, structural damage to viaduct structures or the ferry quay could hinder emergency rescue efforts. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact GE.7: The development proposed as part of the Proposed Project, when combined with past, present and other reasonably foreseeable development in the vicinity, would not result in significant cumulative impacts with respect to geology, soils or seismicity. **(*Cumulative Impact: Less than Significant*)**	No impact	Less than Significant	Less than Significant
IV.O. Hydrology and Water Quality			
Impact HY-1: The Proposed Project would not violate a water quality standard or a waste discharge requirement, or otherwise substantially degrade water quality. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HY-2: The Proposed Project could require disposal of dewatered groundwater during construction. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact HY-3: The Proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge during construction. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact HY-4: The Proposed Project would not alter the existing drainage patterns on the Islands, and would not result in substantial erosion or siltation or localized flooding. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HY-5: The Proposed Project would not result in construction of housing within a 100-year flood hazard area if one is designated by FEMA. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HY-6: The Proposed Project would not place structures within a 100-year flood hazard area that would impede or redirect flood flows. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HY-7: The Proposed Project would not result in the exposure of people or structures to loss due to flooding associated with levee or dam failure. ***(No Impact)***	No impact	No impact	No impact
Impact HY-8: Operation of the Proposed Project would not result in degradation of water quality. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HY-9: The Proposed Project would not result in depletion of groundwater or reduction of groundwater levels during operation. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact HY-10: The Proposed Project would not create impervious surfaces that would collect pollutants that could cause water quality impacts from rainwater runoff. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HY-11: The Proposed Project would not be susceptible to inundation by seiche, tsunami, mudflow, or wind waves. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HY-12: The Proposed Project would not expose people or structures to increased risk of flooding due to climate-induced sea level rise. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HY-13: The Project would not result in cumulative impacts related to hydrology and water quality. ***(Not Cumulatively Considerable)***	No impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
IV.P. Hazards and Hazardous Materials			
Impact HZ-1: Construction of the Proposed Project could expose construction workers to unacceptable levels of known or newly discovered hazardous materials as a result of disturbance of subsurface soils and/or groundwater with contaminants from historic uses. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact HZ-2: Construction activities associated with the Proposed Project could expose the public, including existing and future residents as well as visitors and employees, to unacceptable levels of known or newly discovered hazardous materials as a result of disturbance of soil and/or groundwater with contaminants from historic uses. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact HZ-3: Construction of the Proposed Project could expose the environment to unacceptable levels of known or newly discovered hazardous materials as a result of disturbance of soil and/or groundwater with contaminants from historic uses. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact HZ-4: Construction of the Proposed Project could expose construction workers, the public or the environment to unacceptable levels of hazardous materials as a result of dewatering activities that extract contaminated groundwater from historic uses. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact HZ-5: Construction activities associated with the Proposed Project could expose construction workers, the public or the environment to unacceptable levels of hazardous materials associated with encountering previously unidentified underground storage tanks. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact HZ-6: Dredging activities associated with the Proposed Project would not expose construction workers, the public or the environment to unacceptable levels of known or previously unidentified hazardous materials as a result of disturbance of submerged sediments. **(*Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HZ-7: Disturbance and release of hazardous structural and building components (i.e. asbestos, lead, PCBs) during the demolition phase of the Proposed Project, or transportation of these materials could expose construction workers, the public, or the environment to adverse conditions related to hazardous materials handling. **(*Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HZ-8: Hazardous materials used on site during construction activities (e.g. solvents) could be released to the environment through improper handling or storage. **(*Less than Significant with Mitigation)***	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact HZ-9: Temporary dewatering activities during construction would not affect or alter groundwater flow directions that would bring contaminated groundwater toward areas outside of the Development Plan Area including the Job Corps campus. **(*Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HZ-10: Migration of residual contamination could expose existing and future residents, employees, or the general public to hazardous materials causing acute or chronic health effects. **(*Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact HZ-11: Project operations would not result in a significant impact involving the handling of general commercial/retail and household hazardous waste. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant
Impact HZ-12: The Proposed Project would include operation of a new or upgraded wastewater treatment plant. Water treatment chemicals would be necessary for standard operations and if not stored or handled appropriately could be released to the environment. **(*Less than Significant*)**	No impact	Less than Significant	Less than Significant

PROPOSED PROJECT	ALTERNATIVES CONSIDERED		
Topic / Impact	**No Project Alternative**	**Reduced Development Alternative**	**No Ferry Service Alternative**
Impact HZ-13: The Proposed Project includes developing the existing school site into a K-8 school. The existing school is located in the vicinity of Site 12 where hazardous materials have been released to the subsurface. If not remediated appropriately, students, workers, or the public could be exposed to adverse conditions related to hazardous materials emissions. **(*Less than Significant with Mitigation*)**	No impact	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact HZ-14: Development of the Proposed Project, when combined with other past, present, and foreseeable development in the vicinity, would not result in cumulative hazardous materials impacts. **(*Cumulative Impact: Less than Significant*)**	No impact	Less than Significant	Less than Significant
IV.Q. Mineral and Energy Resources			
Impact ME-1: Construction activities associated with the Proposed Project would not result in the use of large amounts of energy, or use energy in a wasteful manner. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
Impact ME-2: During operation, the Proposed Project would not result in the use of large amounts of energy, or use energy in a wasteful manner. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant
IV.R. Agricultural and Forest Land			
Impact AG-1: The Proposed Project would not convert designated farmland under the Farmland Mapping and Monitoring Program, nor would it conflict with any existing agricultural zoning or a Williamson Act contract, nor would it involve any changes to the environment that would result in the conversion of designated farmland. **(*No Impact*)**	No impact	No impact	No impact
Impact AG-2: The Proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberlands, or timberland zoned as Timberland Production, nor would it result in the loss of or conversion of forest land to non-forest uses. ***(Less than Significant)***	No impact	Less than Significant	Less than Significant

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR is required to identify the environmentally superior alternative that has the fewest significant environmental impacts from among the alternatives evaluated. Besides the No Project Alternative, Alternative C, the No Ferry Service Alternative, would be the environmentally superior alternative. The No Ferry Service Alternative would retain the *U.S.S. Buttercup*, and thereby avoid the significant adverse impact on that historical resource which would result from its demolition under the Proposed Project.

The elimination of ferry service under the No Ferry Service Alternative would also avoid some significant adverse noise, air quality, and biological resource impacts related to ferry operations. Due to the substantially smaller number of residential units that would be constructed, the No Ferry Service Alternative also would lessen (but not avoid) other significant adverse impact(s) identified for the Proposed Project related to the topics of Aesthetics, Transportation, Noise, Air Quality, and Biological Resources.

ALTERNATIVES CONSIDERED BUT REJECTED

A number of alternatives to the Proposed Project were considered but were not analyzed further in the EIR because they were rejected as infeasible or did not meet most of the Proposed Project's basic objectives. These include a:

- No Tidelands Trust Exchange Alternative;
- 2800 Housing Unit Alternative with an Amusement Park;
- Reduced Parking Alternative;
- Off-Site Location Alternative; and
- Measures to Reduce Automobile Ownership

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

A Notice of Preparation ("NOP") was distributed on January 26, 2008, announcing the San Francisco Planning Department's intent to prepare and distribute an EIR. The public review period began on January 26, 2008 and ended on February 26, 2009. Two public scoping meetings were held to solicit input regarding project issues of concern to the community and identify potential environmental effects and potential alternatives to be considered in the environmental review process. The first meeting was held on February 11, 2008, and the second meeting was held on February 13, 2008. There were 13 oral comments received during the public scoping meetings, and 13 written comments submitted by interested parties and public agencies during the public review period.

Environmental issues of concern raised in the comments include:

- Alternatives to be studied, including those that could promote maximum sustainability, conserve resources, minimize automobile use, and a no-ferry alternative;

- Analysis of transportation impacts, including the appropriate transportation baseline and study, impact of construction vehicles, the amount of parking that should be provided, promoting use of bicycles and walking, and the need for robust public transit services;
- Global warming and sea level rise;
- Air quality;
- Archaeological resources;
- Seismic safety;
- Future employment;
- Rationale for size of the project;
- Biological resources;
- Impact on Coast Guard facility;
- Maximizing public access to and views of the Bay; and
- Energy consumption, conservation, and generation.

Issues raised by public comments on the NOP have been considered in determining the scope and approaches to analysis in the EIR. Many of the issues raised during public scoping were addressed by elements included in or added to the Proposed Project.

I. INTRODUCTION

This chapter is a general overview of the history of the *Redevelopment Plan for the Treasure Island / Yerba Buena Island Redevelopment Project* ("*Redevelopment Plan*"). It summarizes the planning and legal context for the Proposed Project, including prior environmental review and other actions undertaken by the City and County of San Francisco. Terms used in this Environmental Impact Report ("EIR") to describe the Proposed Project are also defined at the end of this chapter.

PROJECT SUMMARY

The *Redevelopment Plan* addresses development within the "Redevelopment Plan Project Area" ("Project Area") which includes all of Treasure Island and Yerba Buena Island and the immediately surrounding waters, except for land and water occupied by the U.S. Coast Guard. Treasure Island is comprised of the former Naval Station Treasure Island ("NSTI") currently owned in fee by the U.S. Navy ("Navy"); the U.S. Department of Labor Job Corps campus; and the adjacent unfilled tidal and submerged lands. Yerba Buena Island is comprised of former NSTI property currently owned by the Navy; land under the jurisdiction of the Federal Highway Administration ("FHWA") for the San Francisco – Oakland Bay Bridge ("Bay Bridge"); and land and water owned and occupied by the U.S. Coast Guard. The portion of Yerba Buena Island occupied by the U.S. Coast Guard is not part of the Redevelopment Plan Project Area. The Proposed Project analyzed in this EIR includes only the NSTI property that is expected to be transferred by the Navy to the Treasure Island Development Authority ("TIDA"), referred to as the "Development Plan Area." It excludes land within the NSTI currently occupied by the Jobs Corps on Treasure Island, and land occupied by the FHWA on Yerba Buena Island.

The Proposed Project would include development of up to 8,000 residential units; up to 140,000 square feet (sq. ft.) of new commercial and retail space; up to 100,000 sq. ft. of new office space; adaptive reuse of about 311,000 sq. ft. of commercial, retail, and/or flex space in the historic buildings on Treasure Island; about 500 hotel rooms; rehabilitation of the historic buildings on Yerba Buena Island; new and/or upgraded public facilities and public utilities; about 300 acres of parks and public open space, including shoreline access and cultural uses such as a museum; new and upgraded streets and public ways; bicycle, transit, and pedestrian facilities; landside and waterside facilities for the existing sailing center on Treasure Island; landside services for an expanded marina;[1] and a new Ferry Terminal and Transit Hub.

[1] The marina expansion is not part of the Proposed Project; however, landside facilities and improvements that would serve the expanded marina are included in the Proposed Project.

PROJECT BACKGROUND AND PLANNING PROCESS

In 1993, the Defense Base Closure and Realignment Commission, pursuant to the Defense Base Closure and Realignment Act of 1990 (10 United States Code, Section 2687), recommended the closure of NSTI. The Department of Defense subsequently designated the City and County of San Francisco and, later, TIDA as the Local Reuse Authority responsible for the conversion of NSTI under the Federal disposition process. Formal closure of Navy operations at NSTI occurred in September 1997.

CONVEYANCE OF TREASURE ISLAND AND YERBA BUENA ISLAND

Transfer or conveyance of property at NSTI is regulated by the 1990 Defense Base Closure and Realignment Act, as amended; the Federal Property and Administrative Services Act of 1949, as amended, 40 United States Code, Section 471 *et seq*.; the Surplus Property Act of 1944, 50 U.S.C. App. 1622 (g); Federal Property Management Regulations, 41 C.F.R. Chapter 101; and the Base Closure Community Redevelopment and Homeless Assistance Act of 1994. The Navy also must comply with the 1994 Defense Authorization Act and other laws and regulations, including Title 10 of the United States Code, and Navy regulations affecting the disposition of surplus real property. The Navy is responsible for screening and disposing of real and personal property at NSTI to the Department of Defense and other Federal agencies. In compliance with Federal laws, the Navy has transferred portions of NSTI to a number of public agencies, as described below.

The Stewart B. McKinney Homeless Assistance Act of 1986, 42 United States Code Section 11301 *et. seq*., requires the Department of Defense and other Federal agencies to give priority consideration for homeless assistance over other uses for property considered excess, surplus, or underutilized by Federal agencies. In November 1996, the U.S. Department of Housing and Urban Development ("HUD") approved a homeless assistance plan for the NSTI Reuse Plan which was formally adopted as a Homeless Assistance Agreement.[2] Under the agreement, the Treasure Island Homeless Development Initiative ("TIHDI"), a coalition of approximately 10 non-profit social service and homeless service organizations, manages approximately 250 units of the existing housing stock on Treasure Island for formerly homeless (extremely low income) families. TIHDI was also granted approval for additional land, which would be made available to TIHDI for additional housing as part of the Proposed Project.

[2] The Board of Supervisors adopted Resolution No. 672-96 on July 1996, which endorsed the draft Reuse Plan for Treasure Island and Yerba Buena Island, and also authorized submittal of the TIHDI Homeless Assistance Plan to the Department of Defense and HUD. Subsequent to HUD's approval of the Homeless Assistance Plan, the Board of Supervisors adopted Resolution No. 566-97 to allow for the transfer of certain Navy personal property to TIHDI. The Homeless Assistance Agreement, as amended, is referred to as the 1996 TIHDI Agreement.

As provided by Federal law, other Federal agencies were offered an opportunity to occupy parts of NSTI. The U.S. Department of Labor requested facilities on approximately 37 acres of property on Treasure Island for its Job Corps Program and campus. The Navy authorized the requested property transfer to the U.S. Department of Labor effective April 17, 1998. The Job Corps campus is within the Redevelopment Plan Project Area, but is not part of the Development Plan Area analyzed in this EIR.

The U.S. Coast Guard also requested approximately 39 acres plus water area for facilities on Yerba Buena Island, and received authorization from the Navy for property transfer effective March 3, 1998, and November 27, 2002. The Coast Guard property is outside of the boundaries of the Redevelopment Plan Project Area, and is not part of the Development Plan Area analyzed in this EIR.

On October 26, 2000, the FHWA conveyed approximately 94 acres of submerged land and approximately 18 acres of dry land on Yerba Buena Island to Caltrans for right-of-way purposes in connection with construction, operation, and maintenance of the East Span Seismic Safety Project on the Bay Bridge. Land conveyed to Caltrans includes lands permanently conveyed in fee, temporary construction easements, and permanent aerial easements. The Caltrans property is within the boundaries of the Redevelopment Plan Project Area, but is not part of the Development Plan Area analyzed in this EIR. Caltrans activities on this property include the East Span Bay Bridge Project (currently under construction), and the proposed Yerba Buena Island Ramps Improvement Project (currently under study). These projects are not within the scope of the Proposed Project analyzed in this EIR.

TREASURE ISLAND DEVELOPMENT AUTHORITY

In May 1997, the Board of Supervisors adopted Resolution No. 380-97, authorizing the City to establish a non-profit public benefit corporation known as the Treasure Island Development Authority ("TIDA") to act as a single-purpose entity responsible for the planning, redevelopment, reconstruction, rehabilitation, reuse, and conversion of NSTI. Subsequently, the California Legislature signed into law Assembly Bill 699, the Treasure Island Conversion Act of 1997 ("Conversion Act"), which designated TIDA to act in all respects as a redevelopment agency under California Redevelopment Law, with authority over development of NSTI. Under the Conversion Act, TIDA was granted the authority, subject to applicable laws, to sell, lease, exchange, transfer, convey, or otherwise grant interest in or rights to use or occupy all or any portion of NSTI. In the Conversion Act, TIDA also was granted authority over portions of NSTI that would be subject to the public trust for commerce, navigation, and fisheries ("Tidelands Trust") upon transfer from the Navy. The Tidelands Trust is described further in "Existing Zoning and the Tidelands Trust Exchange," in Chapter II, Project Description, p. II.14.

The Board of Supervisors approved the designation of TIDA as a redevelopment agency with development authority for NSTI under the Conversion Act by Resolution No. 43-98, in February 1998.

TIDA submitted an application to the Navy in June 2000, requesting conveyance of NSTI property pursuant to Section 2905 (b)(4) of the Defense Base Closure and Realignment Act of 1990. In December 2009, TIDA and the Navy agreed to the basic financial terms of conveyance of NSTI, and are negotiating the terms of an Economic Development Conveyance Memorandum of Agreement that would provide for the disposal and reuse of the property. The agreement generally assumes that the Navy would complete its environmental remediation responsibilities prior to transfer, but it may also provide for an election to accept an early transfer of portions of the property. The Economic Development Conveyance Memorandum of Agreement would be considered for approval by TIDA and the City after certification of this EIR, and by the Navy after compliance with environmental review as required by the National Environmental Policy Act ("NEPA").

Draft Reuse Plan and Environmental Review

In 1994, a Citizen's Reuse Committee ("CRC") representing a broad base of community interests, was formed to review reuse planning efforts at NSTI conducted by the San Francisco Planning Department and the San Francisco Redevelopment Agency, and to make recommendations to the Planning Commission and Board of Supervisors concerning reuse of NSTI. Between 1994 and 1996, an extensive community planning effort by the City and CRC was undertaken to develop a Draft Reuse Plan for NSTI.

A program-level Environmental Impact Statement ("EIS") prepared by the Navy under NEPA and a separate EIR prepared by the City and County of San Francisco under the California Environmental Quality Act ("CEQA") were prepared for the Draft Reuse Plan developed by the City and its CRC. The Final EIR, certified in May 2005,[3] was intended to serve as a Program EIR for the transfer of portions of NSTI from the Navy to TIDA, as well as a project-level EIR for the expansion of an existing marina at Clipper Cove. The Federal EIS and City EIR documents both include a Maximum Development Alternative that was identified as the preferred project alternative. The Maximum Development Alternative considered phased development of 2,800 housing units on Treasure Island and Yerba Buena Island, a themed attraction, and three hotels with a total of 1,450 rooms. The 2005 Final EIR also included renovation and expansion of the existing marina at Clipper Cove from 100 to 400 slips. The Navy is currently reviewing the adequacy of the Federal EIS in light of the changes to the Maximum Development Alternative

[3] U.S. Department of the Navy, *Disposal and Reuse of Naval Station Treasure Island, Final Environmental Impact Statement*, June 2003; and San Francisco Planning Department, *Transfer and Reuse of Naval Station Treasure Island Final Environmental Impact Repor*t, Case No. 94.448E, (State Clearinghouse No. 1996092073), certified May 5, 2005 (hereinafter "2005 EIR").

that was analyzed in the Final EIS, including the proposal to increase development up to 8,000 housing units.[4] Discretionary actions authorizing the transfer of NSTI to TIDA would not occur until after certification of this EIR and any additional environmental review required under NEPA, if necessary.

As part of its certification of the 2005 EIR, both the TIDA Board of Directors ("TIDA Board") and the City anticipated that future negotiations for long-term reuse of NSTI would result in a long-term development plan that would be reviewed and revised over time with substantial input from the public. Because of the possible changes in the Reuse Plan, the Planning Commission and the TIDA Board decided that a new project-level EIR would be prepared when a more specific development plan was defined, and that future environmental review would not be tiered[5] from the 2005 EIR.[6] Because this is a project-level EIR based on a more specific development plan than that analyzed in the 2005 EIR, all mitigation measures proposed in the 2005 EIR applicable to the Proposed Project that are not expressly restated or restated as being modified in this EIR are no longer applicable. Mitigation measures set forth in the 2005 EIR applicable to the waterside improvements related to the marina expansion (as described in "Clipper Cove Marina Project," in Chapter II, pp. II.9 – II.10) will continue to apply to that separate project.

REDEVELOPMENT PLAN

Following certification of this EIR, TIDA will consider actions to adopt and implement a Redevelopment Plan for Treasure Island and Yerba Buena Island, which would govern development on the property it receives from the Navy following conveyance. The redevelopment plan would establish a Redevelopment Plan Project Area boundary and set forth a program of redevelopment actions for the revitalization of Treasure Island and Yerba Buena Island, as required under California Redevelopment Law.

As part of the redevelopment planning process, TIDA initiated a competitive selection process in early 2000 for a prospective Master Developer, which culminated in the selection of Treasure

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[4] The Navy issued a Record of Decision under NEPA in October 2005, which authorized the Maximum Development Alternative as the alternative that would meet the objectives of the 1990 Defense Base Closure and Realignment Act.

[5] "Tiering" refers to using the analysis of general environmental matters in a broader EIR, in this case a program-level EIR, with subsequent focused environmental documents for individual projects that implement the program. CEQA (Section 21093) and the *CEQA Guidelines* (Section 15152) encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process by eliminating repetitive analyses of issues that were adequately addressed in the Program EIR and by incorporating those analyses by reference. Due to the substantial changes to the long-term reuse plan that were likely to occur, the TIDA Board and the City determined that tiering from the 2005 EIR would not be appropriate for future environmental review.

[6] Treasure Island Development Authority Resolution No. 05-017-5105, May 5, 2005; City Planning Commission Motion No. 17020, May, 2005; and 2005 EIR, p. ES-2. These documents are available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, in Case File 2007.0903E.

Island Community Development, LLC ("TICD") as Master Developer. In June 2003, TIDA entered into an Exclusive Negotiating Agreement with TICD. The Exclusive Negotiating Agreement, as amended in January 2010, sets forth the terms and conditions under which TIDA and TICD would negotiate a Disposition and Development Agreement and related conveyance agreements governing redevelopment of NSTI.

TERM SHEET

Pursuant to the Exclusive Negotiating Agreement, TIDA and TICD negotiated a non-binding term sheet that summarizes the key policy goals, basic development guidelines, financial framework, and other key terms and conditions that would form the basis for preparing the *Redevelopment Plan* and final transaction documents. The resulting *Development Plan and Term Sheet for the Redevelopment of Naval Station Treasure Island* ("Term Sheet") was endorsed by the TIDA Board and the Treasure Island and Yerba Buena Island Citizens Advisory Board ("CAB") in October 2006 and by the San Francisco Board of Supervisors in December 2006. The 2006 Term Sheet presented a proposed plan for development that reflected several years of discussion among various parties, including TICD, the TIDA Board, the CAB, the Land Use Committee of the Board of Supervisors, multiple City agencies, and interested members of the public regarding the future of NSTI.

The 2006 Term Sheet proposed about 6,000 new residential units (30 percent of which would be offered at below-market rates), 3 hotels, a 400-slip marina, restaurants, retail and entertainment venues, and about 300 acres of parks and open space. The Term Sheet also included plans related to land use and open space, affordable housing, sustainability, infrastructure, transportation, community facilities, and phasing.[7]

Based on, and in response to, public comments on the Notice of Preparation ("NOP") of this EIR, subsequent review by TIDA and TICD, and substantial input from the public and City agencies, development that would provide an increased number of housing units was considered to be more appropriate for Treasure Island and Yerba Buena Island. By increasing the total number of housing units, the proposed project would be able to provide a larger population base to maximize transit use and support project feasibility and viable retail, transit, open space, and community services. As a result, TIDA, an *Update to the Development Plan and Term Sheet* ("Development Plan Update") was endorsed by the TIDA Board and CAB in April 2010, and by the Board of Supervisors in May 2010, in which the proposed development was revised to increase housing up to 8,000 units, and an additional 100,000 sq. ft. of office space with planning elements similar to those proposed in the 2006 Term Sheet. This project-level EIR on the proposed *Redevelopment*

[7] The 6,000 housing unit development proposal addressed in the 2006 Development Plan and Term Sheet is included in this EIR and is analyzed in Chapter VII, Alternatives to the Proposed Project, as Alternative B, Reduced Development Alternative.

Plan is being prepared to evaluate the development proposal as defined in the 2010 Development Plan Update.

ORGANIZATION OF THIS EIR

A List of Acronyms and Abbreviations is provided following the EIR Table of Contents. This chapter, Introduction, provides an overview and history of the Proposed Project. It also describes the planning process for transfer of the former NSTI to TIDA that has led up to the current proposal for reuse of NSTI, and environmental review of prior proposals. Chapter II, Project Description, provides details about the Proposed Project and the approvals required to implement the project. Chapter III, Plans and Policies, describes Federal, State, regional, and local plans and policies applicable to the Proposed Project. Chapter IV, Environmental Setting and Impacts, addresses 18 topics: Land Use and Land Use Planning, Aesthetics, Population and Housing, Cultural and Paleontological Resources, Transportation, Noise, Air Quality, Greenhouse Gases, Wind and Shadow, Recreation, Utilities and Service Systems, Public Services, Biological Resources, Geology and Soils, Hydrology and Water Quality, Hazards and Hazardous Materials, Minerals and Energy Resources, and Agricultural Resources and Forest Land. Each topic section includes the environmental setting, project and cumulative impacts, and mitigation and improvement measures, when appropriate. Chapter V, Other CEQA Considerations, addresses potential growth-inducing impacts of the Proposed Project and identifies significant effects that cannot be avoided if the Proposed Project is implemented, as well as irreversible impacts and issues of controversy that have not been resolved. Chapter VI, Project Variants, describes alternative proposals for specific features of the Proposed Project and analyzes the impacts of implementing these variants. Alternatives to the Proposed Project are described in Chapter VII, including the No Project Alternative, as required by *CEQA Guidelines* Section 15126.6 (e).

TERMS USED IN THIS EIR

Several terms are used to describe the areas of Treasure Island and Yerba Buena Island discussed in this EIR. "Redevelopment Plan Project Area," or "Project Area," refers to Yerba Buena Island, except for the U.S. Coast Guard lands, and all of Treasure Island, plus the tidal and submerged lands adjacent to the Islands. "Development Plan Area" refers to the portions of Treasure Island and Yerba Buena Island that would be developed as part of the Proposed Project. The Development Plan Area includes all of Treasure Island except for the Job Corps site, which would continue to be operated by the U.S. Department of Labor, and all of Yerba Buena Island within the Redevelopment Plan Project Area except for the area that would remain under the jurisdiction of FHWA/Caltrans.[8] In other words, "Development Plan Area" refers only to the areas on the Islands that would be conveyed to TIDA by the Navy, and be developed as part of

[8] The U.S. Coast Guard land on Yerba Buena Island is not included in the proposed Redevelopment Plan Project Area, and is not part of the Proposed Project.

the Proposed Project. Although the Job Corps campus and FHWA/Caltrans property are located within the boundaries of the Redevelopment Plan Project Area, the *Redevelopment Plan* would not apply to these properties because they are currently under Federal jurisdiction and ownership. The marina element of the Proposed Project refers to landside and waterside improvements developed as part of the project; the expansion of the marina to 400 slips is a separate project, as described in Chapter II, pp. II.9 – II.10.

The proposed mix, types, square footages and locations of uses, parks and open space, and transportation, public service, and infrastructure improvements are referred to in this EIR as the "Development Program." The Proposed Project also includes a number of proposed plans and programs that would guide implementation of the Development Program, such as a Transportation Plan, Sustainability Plan, and transitional housing program. These project components, in combination with the Development Program, are referred to as the "Development Plan" or Proposed Project that is analyzed in this EIR.

II. PROJECT DESCRIPTION

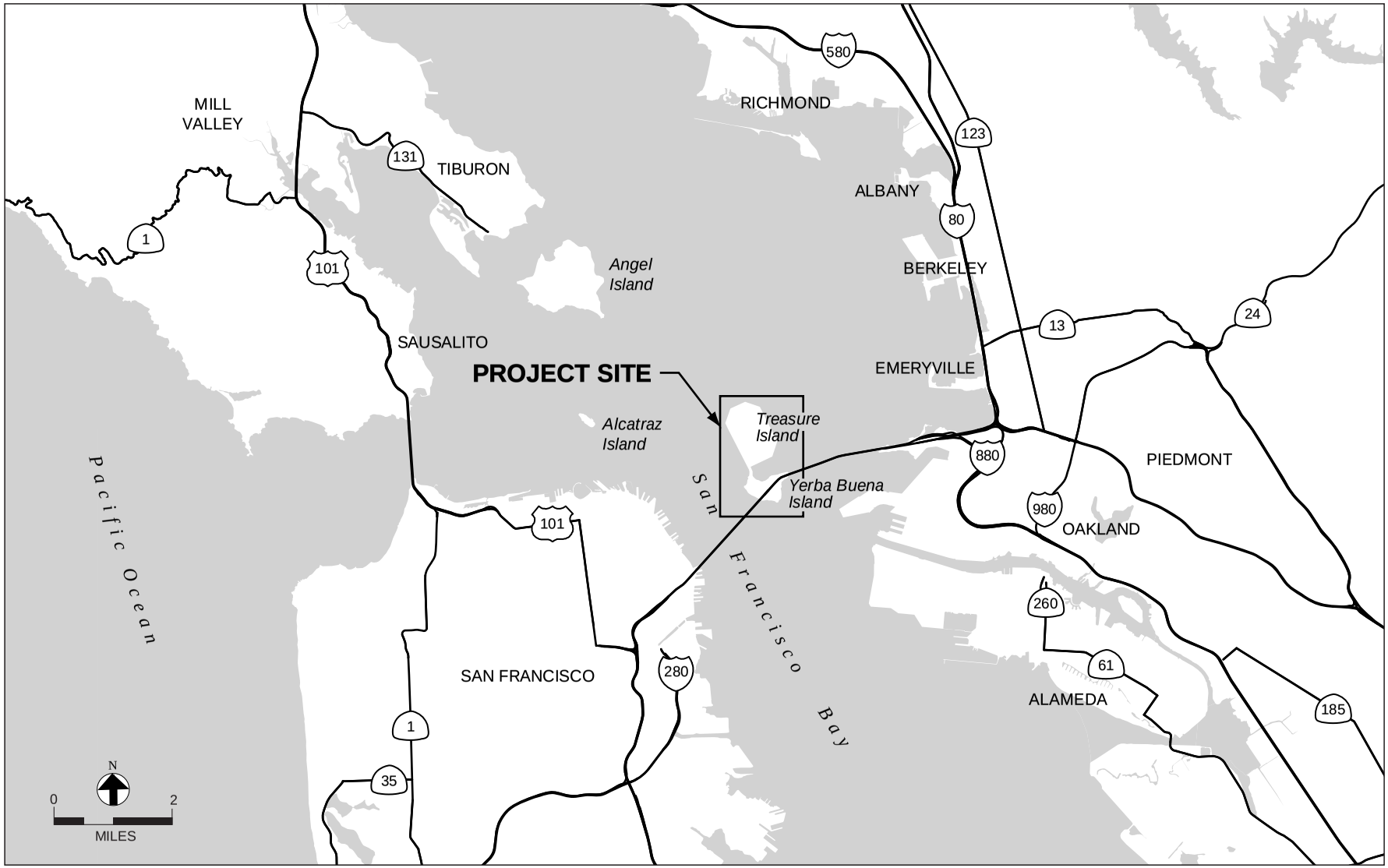
A. OVERVIEW

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, 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"), the redevelopment agency for the project, is proposing a *Redevelopment Plan for the Treasure Island / Yerba Buena Island Project* ("*Redevelopment Plan*") that would provide the basis for redevelopment of the portions of NSTI stilled 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.

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

[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.



SOURCE: Turnstone Consulting

FIGURE II.1: REGIONAL LOCATION

up to 311,000 sq. ft. of commercial space.[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.[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 *Redevelopment Plan,* would be carried out by TIDA as part of the implementation of the *Redevelopment Plan.* 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 *Redevelopment Plan.* The draft *Redevelopment Plan* and an accompanying required report called the Preliminary Report are expected to be available in July 2010.[5] Together, these documents would establish the land use controls and design standards and guidelines for the project site. The *Redevelopment Plan* would be implemented through a Disposition and Development Agreement ("DDA") between TIDA and TICD, and related transactional documents. The *Redevelopment Plan*, the *Design for Development,* the DDA, and related transactional documents and policies that would be adopted to implement the *Redevelopment Plan,* and the development program described in the *Redevelopment Plan* and *Design for Development* collectively form the "Proposed Project"

[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.

[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.

[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").[6] 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 Redevelopment Plan 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

[6] The basis for the proposed *Redevelopment Plan* 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.

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 30 percent of all residential units at below market rates across a wide range of income levels, including units for formerly

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 150 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 39 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

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.

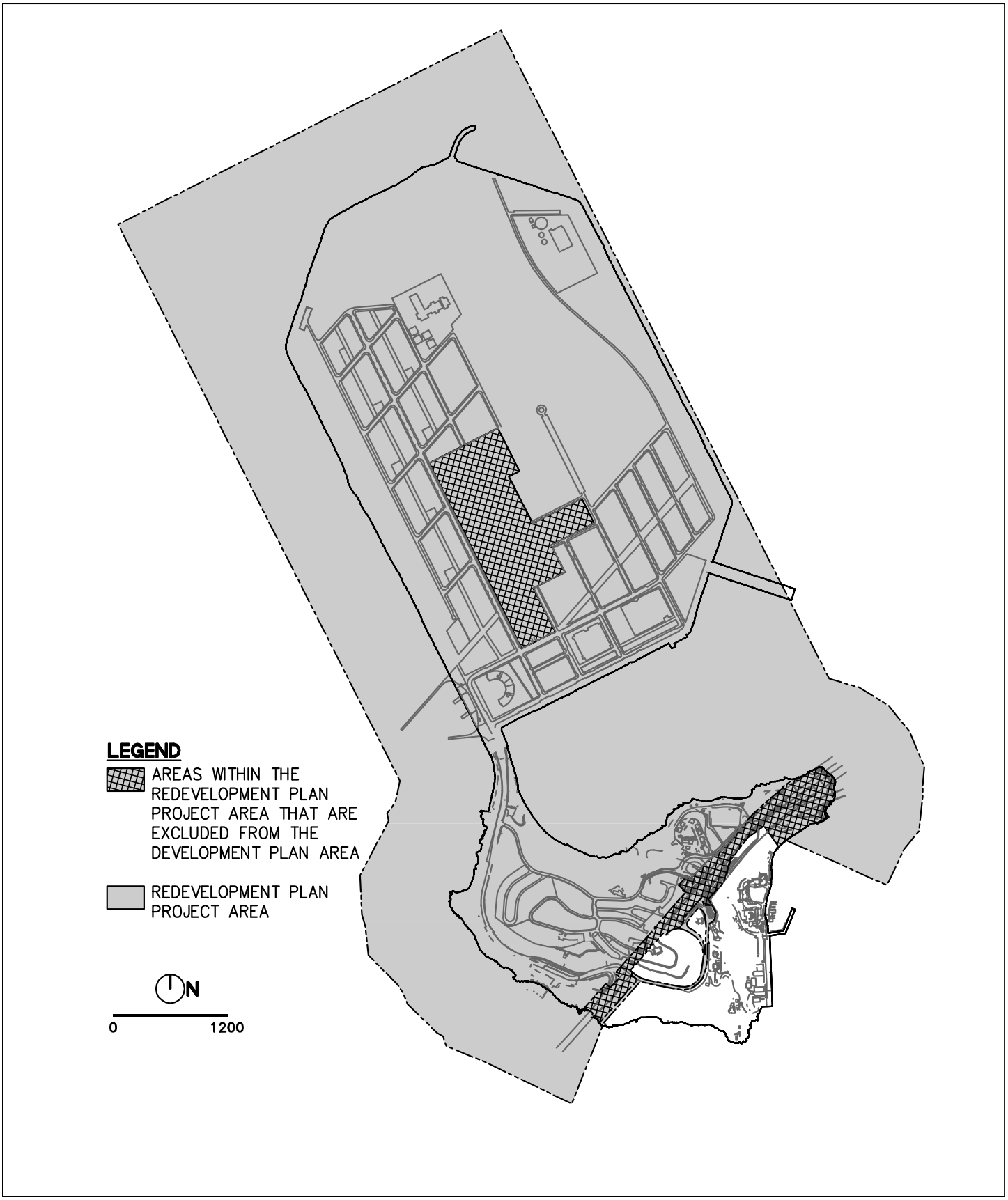
The proposed Redevelopment Plan Project Area includes all of Treasure Island and the portions of Yerba Buena Island not owned by the U.S. Coast Guard, plus the adjacent unfilled tidal and submerged lands mentioned above. (See Figure II.2: Proposed Redevelopment Plan Project Area.) Although the Redevelopment Plan 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 *Redevelopment Plan* 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



SOURCE: BKF

FIGURE II.2: PROPOSED REDEVELOPMENT PLAN PROJECT AREA

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, 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. 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*

[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.

[9] North American Vertical Datum of 1988.

Naval Station Treasure Island Final Environmental Impact Report, which was certified in 2005,[10] but to date has not been approved by TIDA.

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 *Redevelopment Plan* 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 and Navy 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,

[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.

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.[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 39 acres of land on Yerba Buena Island adjacent to the Redevelopment Plan Project Area. The U.S. Coast Guard Station, 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 Utilities 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

[11] The San Francisco-Oakland Bay Bridge Seismic Safety Project website, http://baybridgeinfo.org/faqs, accessed June 3, 2010.

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.

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 overhead line routes 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.[12] A submarine cable from Treasure Island under Clipper Cove provides electricity to Yerba Buena Island. Natural gas, provided by PG&E, is supplied through 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 Redevelopment Plan 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

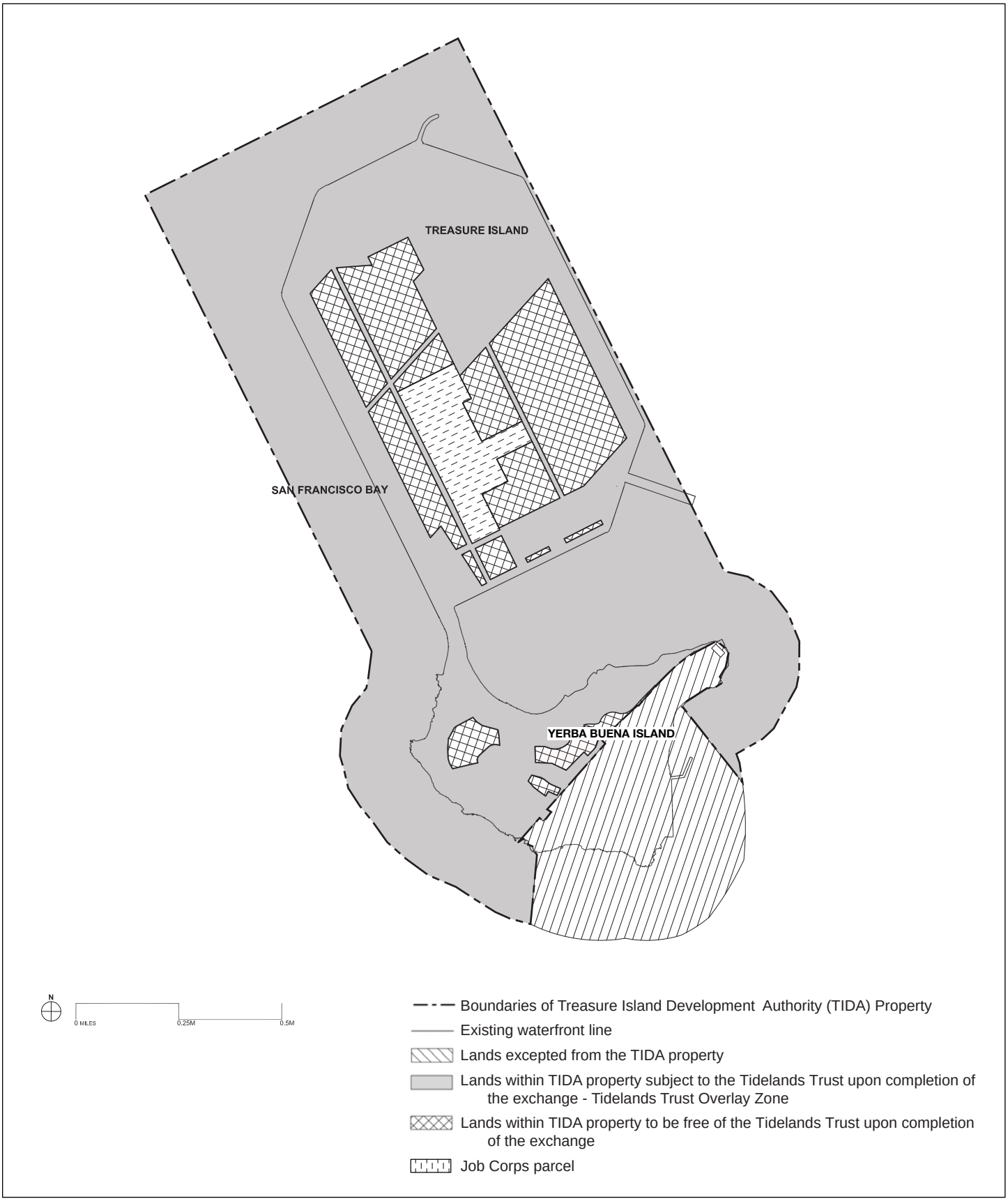
The entire Redevelopment Plan Project Area is within the P (Public) Use District on the San Francisco Planning Code Zoning Map. According to the San Francisco Zoning Map and Section 105(f) of the San Francisco Planning Code, the Redevelopment Plan Project Area is within a 40-X height and bulk district.

In addition, any portion of the Redevelopment 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[13] (collectively, the "Tidelands Trust") upon their conveyance from the Navy to TIDA.[14] These areas include all of Treasure Island, approximately 2 acres of land on Yerba Buena Island, and all of the tidal and submerged lands within the Redevelopment Plan 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,[15] 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.[16] 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.

[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.
[16] Chapter 543, Statutes of 2004, as amended in 2007 and 2009 (SB 1873).



SOURCE: Perkins + Will

FIGURE II.3: TIDELANDS TRUST LAND EXCHANGE

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;
- 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.

SOURCE: Perkins+Will

FIGURE II.4: CONCEPTUAL LAND USE PLAN

Table II.1: Proposed Development Plan

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

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 *Redevelopment Plan* would define the boundaries of the Redevelopment Plan Project Area, set out allowable land uses and land use guidelines, establish maximum development and height limits within the Redevelopment Plan 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

Variant Category/Name	Description
Energy Variants	Variants for renewable energy sources.
Variant A1 Renewable Electricity Generation – Increased Solar Photovoltaic	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.
Variant A2 District Heating and Cooling	Centralized District Energy[1] plant to provide heating and cooling only.
Variant A3 District Energy Heating, Cooling, and Power	Centralized District Energy plant to provide heating, cooling, and electricity.
Subvariants to Variants A2 and A3	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.
Energy Subvariant A	Use of alternative heat rejection (i.e., getting rid of waste heat) involving either dry cooling towers or combination wet-dry cooling towers.
Energy Subvariant B	Use of satellite District Energy plants in proposed Cityside and Eastside residential districts to provide redundancy and/or distribution efficiency.
Energy Subvariant C	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.
Ferry Terminal Breakwater Variants	Variants on the breakwater configurations.
Breakwater Variant B1	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.
Breakwater Variant B2	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.
Breakwater Variant B3	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.

(continued)

Table II.2 (continued)

Variant Category/Name	Description
Supplemental Firefighting Water Supply Variants	Variants to use of recycled water as a supplemental water supply for firefighting.
Supplemental Firefighting Water Supply Variant C1	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.
Supplemental Firefighting Water Variant C2	Use of Bay water instead of recycled water for the supplemental water supply. It would add a pump station and emergency generator with a saltwater intake pipe; a main trunkline distribution piping system to connect to the pump station; up to 29 fire hydrants connected to this separate firefighting water supply; fireboat manifolds and other facilities for connection to the trunkline distribution system and the hydrants; and up to 3 suction hydrants located around the perimeter of Treasure Island.
Wastewater Wetlands Variants	Variants for the wastewater treatment facility, each involving the use of wetlands in the wastewater treatment process.
Wastewater Wetlands Variant D1	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.
Wastewater Wetlands Variant D2	About 2 to 4 acres of wetlands to polish the majority of the treated wastewater effluent to be discharged through the outfall, after microfiltration and UV disinfection. Wetlands would provide wildlife habitat, and public access would not be restricted.
Automated Waste Collection System Variant	Implementation of an automated, mechanical system to collect solid waste from new buildings on Treasure Island.
Off-Site Electrical Transmission Facility Improvements Variant	Upgrades to the off-site electrical system to improve capacity and reliability.

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 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.

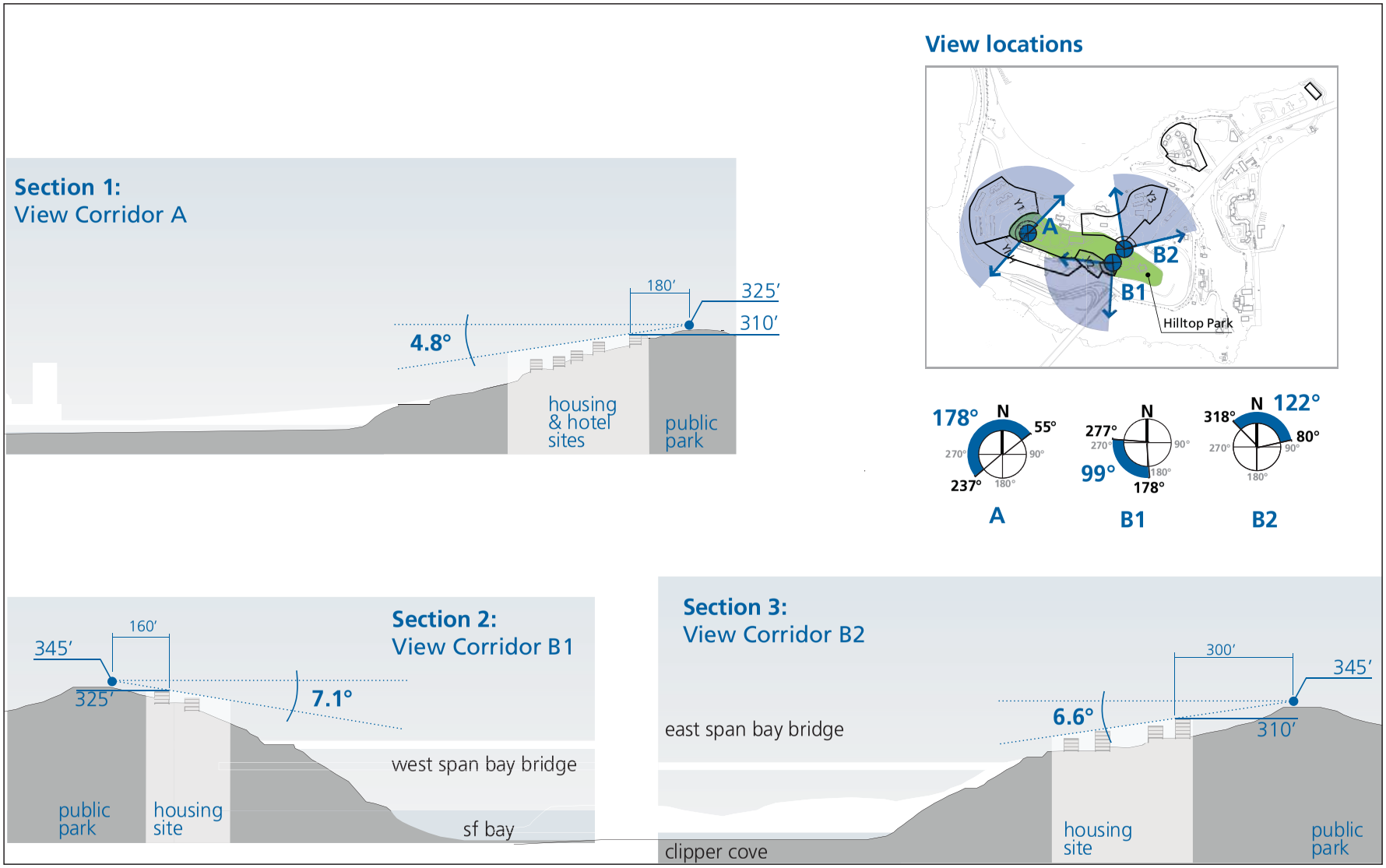
Yerba Buena Island District

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).[17] 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

[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.



SOURCE: Perkins+Will

FIGURE II.5: YERBA BUENA VIEW CORRIDORS

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.[18]

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.

[18] Family-sized units are those with two or more bedrooms. While 20 percent of the units is the minimum proposed number of family-sized units, a larger number was used for the purpose of analyzing transportation impacts, since the Proposed Project is likely to include more than the minimum number of family-sized units. As described in more detail in Section IV.E, Transportation, trip generation rates for units of two bedrooms or more are higher than those for one bedroom or less. This EIR assumes that the proposed 8,000 residences would include about 2,005 studio and one-bedroom units, and about 5,995 units with two or more bedrooms, resulting in a larger travel demand than would result with the minimum number of family-sized units.

SOURCE: Perkins+Will

FIGURE II.6a: TREASURE ISLAND MAXIMUM HEIGHT LIMIT PLAN

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.

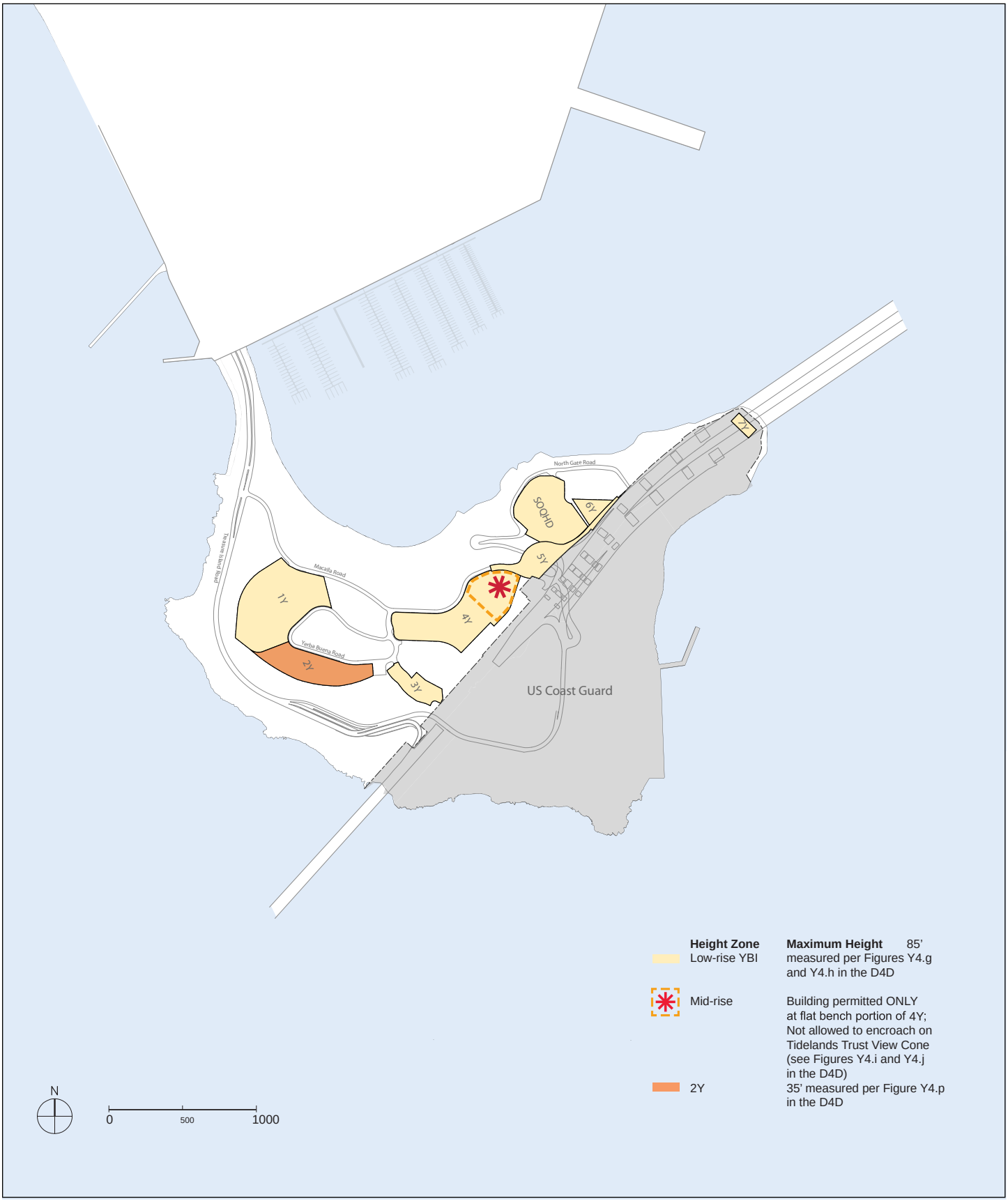
The Cityside District would include a 240-foot height zone in seven of the eight blocks north of Fifth Street, a 450-foot height zone in the block north of the Main Tower, and multiple mid-rise height zones of up to 125 feet. If a tower is not built in one of the 240-foot Neighborhood Tower Zones, buildings 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 30 percent (approximately 2,400) of the new housing units to be priced at a range of below-market rates. The project would exceed the California Community Redevelopment Law requirement that 15 percent of all new housing units be affordable.

- 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 280 units, would be sold or leased



SOURCE: Perkins+Will

FIGURE II.6b: YERBA BUENA ISLAND MAXIMUM HEIGHT LIMIT PLAN

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 1,685 units would be in stand-alone, completely affordable buildings implemented by TIDA or others. 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 Community Redevelopment Law requirement for replacement of affordable housing, the Proposed Project includes a replacement housing plan that would be adopted as part of the redevelopment planning process. Pursuant to the California Redevelopment 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 a redevelopment project where there is a written agreement with the redevelopment agency or the redevelopment agency provides financial assistance for the development, the redevelopment agency must cause replacement of those units with new or newly rehabilitated low- and moderate-income units. 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 territorial jurisdiction of the redevelopment agency. All of the replacement units must be affordable to the same or lower income categories as the person displaced from the destroyed or removed units. The Agency may replace destroyed units with a smaller number of units if the total number of bedrooms in the replacement units equals or exceeds the number of bedrooms in the destroyed units and the units are affordable in the same or lower income categories as the persons displaced from the destroyed or removed units.

At least 30 days prior to executing an agreement that would result in the destruction or removal of low- and moderate-income units, the redevelopment agency must adopt a replacement housing plan. The plan must outline the general location of the replacement units and set forth an adequate means of obtaining development of the replacement housing. Housing units may not be destroyed or removed from the market prior to adoption of the replacement housing plan.

Transitional Housing Program

As noted above, there are approximately 805 households currently residing on the Islands. A transitional 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.

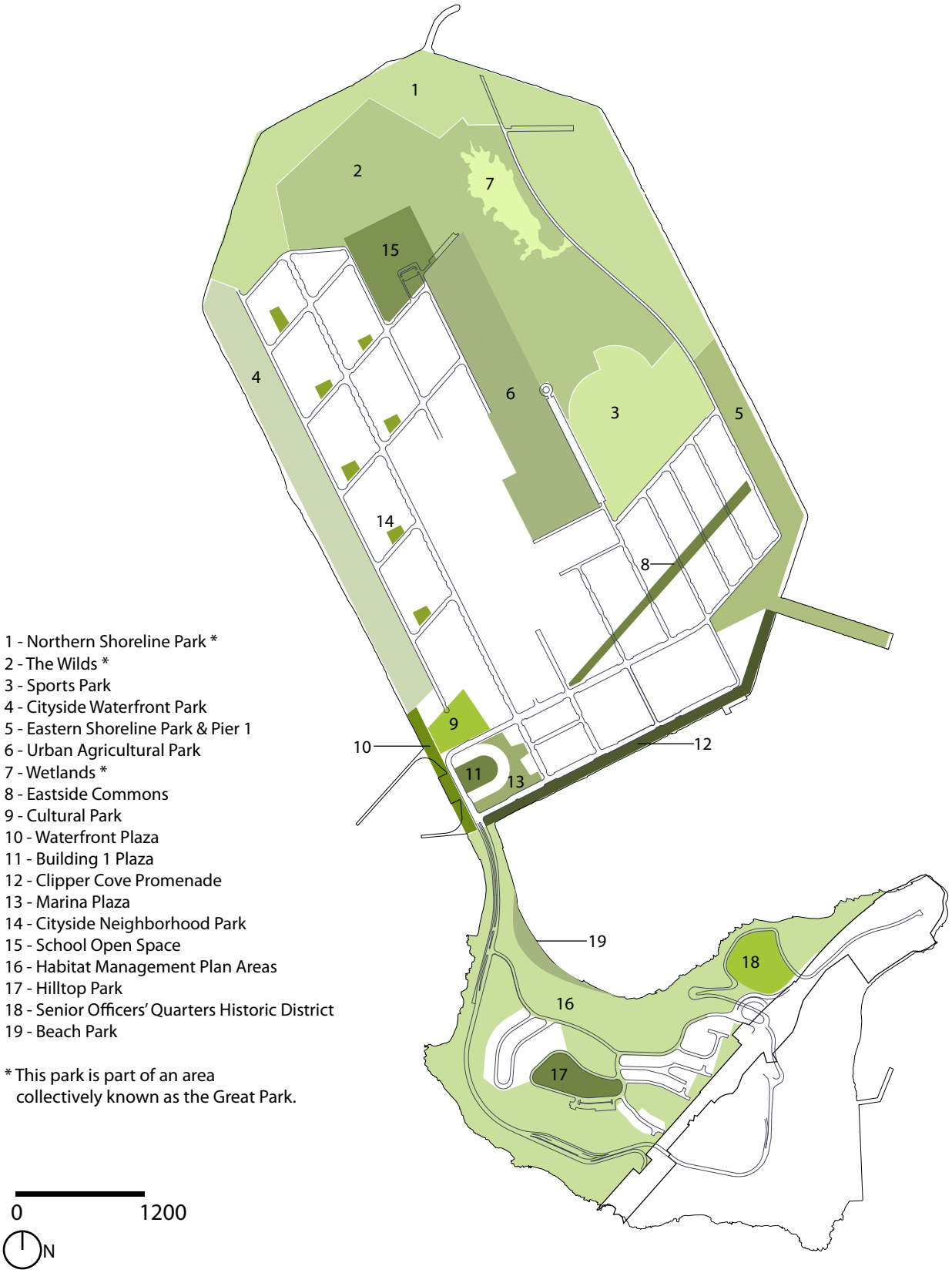
deconstructed, to ensure that existing qualifying households have the opportunity to continue living on the Islands if they choose. The program would be open to all existing qualifying households in good standing at the time the DDA is executed who continuously remain residents of the Islands in good 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.

[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.



SOURCE: CMG, TICD

FIGURE II.7: PROPOSED OPEN SPACE

- 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. 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.

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.[21] 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 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.)

[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.

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.

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 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.

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 Redevelopment Plan 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 reference the land use controls and design standards specified in the *Redevelopment Plan* and *Design for Development*. The *General Plan* would be amended by adding a new Area Plan for the Redevelopment Plan Project Area that would include the new neighborhoods on Treasure Island and Yerba Buena Island and would reference the *Redevelopment Plan*.

In connection with adoption of the proposed *Redevelopment Plan*, the City would consider adopting amendments to the Planning Code consistent with the *Redevelopment Plan*. The Planning Code text amendments would 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. Zoning Map amendments would add new Sheet ZN14 to change the zoning designation within the Development Plan Area from "Public" to a Redevelopment Agency – Treasure Island / Yerba Buena Island District that references the designations contained in the *Redevelopment Plan.* 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 refer to the designations contained in the *Redevelopment Plan*.

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 *Redevelopment Plan* does not include density limits similar to those in the existing Planning Code; these approximate densities are provided for comparison purposes. The *Redevelopment Plan* 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*[22] 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.)

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

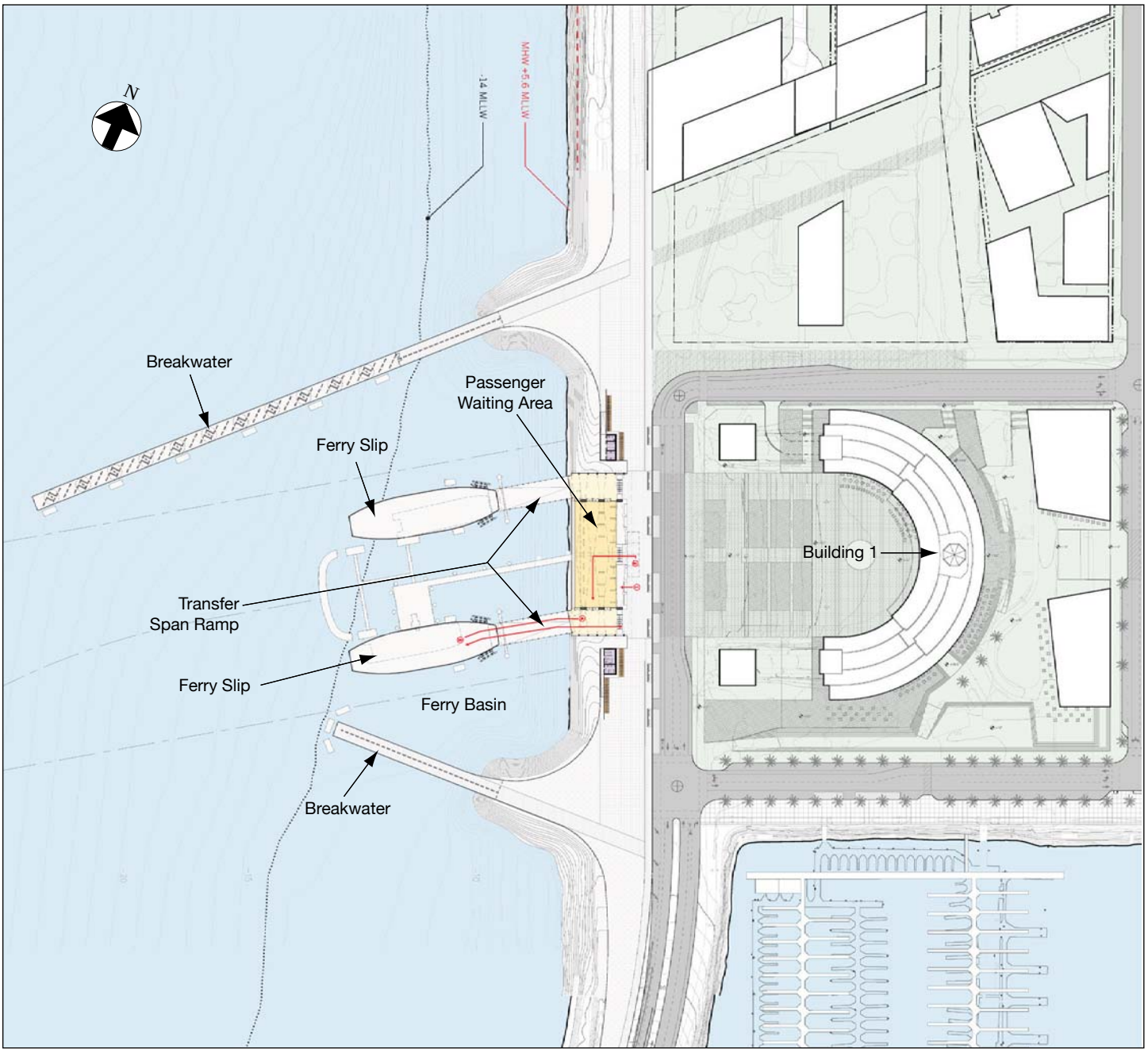
[22] Treasure Island Community Development, *Treasure Island Transportation Plan*, September 2006. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File 2007.0903E.

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



SOURCE: Moffatt & Nichol

FIGURE II.8: PROPOSED FERRY TERMINAL SITE PLAN

0.2 acre of floating fill.[23] 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.[24] 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.[25] 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.

[23] Skidmore. Owings & Merrill, LLP, and Moffatt & Nichol, *Treasure Island Ferry Terminal Project Coastal Engineering Assessment*. September 2009, pp. 4 and 6-8. 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.

[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.X, 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.

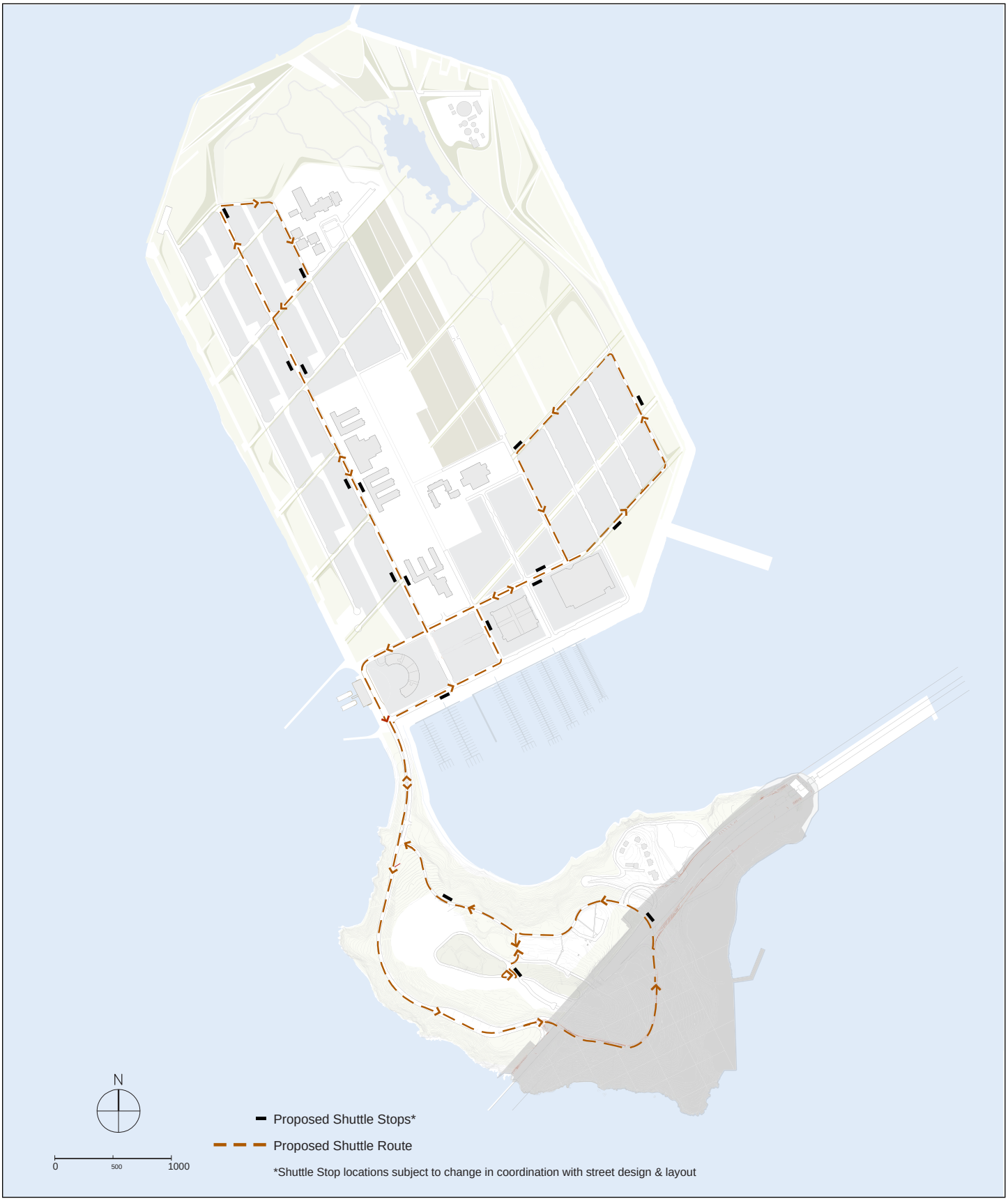
To initiate bus service to the East Bay, the project sponsors would fund the purchase of about 8 to 10 buses as necessary for service to the Islands. Service would be provided by AC Transit or another operator. The initial East Bay route would end on Broadway in downtown Oakland; additional service to 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

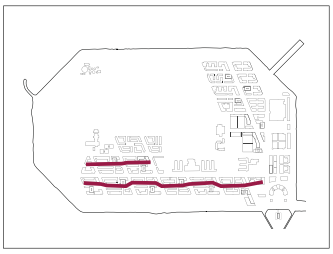


SOURCE: Perkins+Will

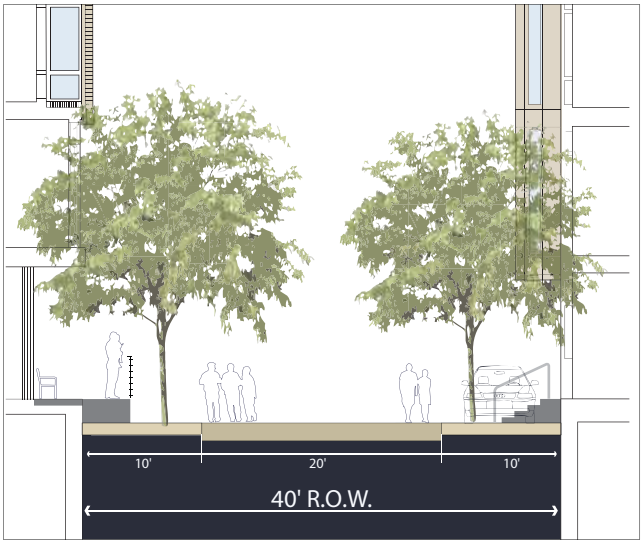
FIGURE II.9: PROPOSED SHUTTLE ROUTES

SOURCE: Perkins + Will, May 4, 2009; Fehr & Peers, 2009

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

FIGURE II.11: REPRESENTATIVE STREET CROSS SECTIONS

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

[26] Treasure Island Development Authority, *Design for Development for Treasure and Yerba Buena Islands,* Public Review Draft, March 5, 2010, Section T4.2, p. 160 and Figure T4.d, p. 161.

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.[27] 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, SFDPW, and the Mayor's Office of Economic and Workforce Development.[28] 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-

[27] *Design for Development*, Section T2.22, pp. 138-141.

[28] Jack Sylvan, Treasure Island Redevelopment Project Director, Letter to Nathanial P. Ford, Sr., Susan Mizner, Ed Reiskin, and Kheay Loke, June 9, 2009. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, in Case File No. 2007.0903E.

wide Class II bicycle lane.[29] 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.

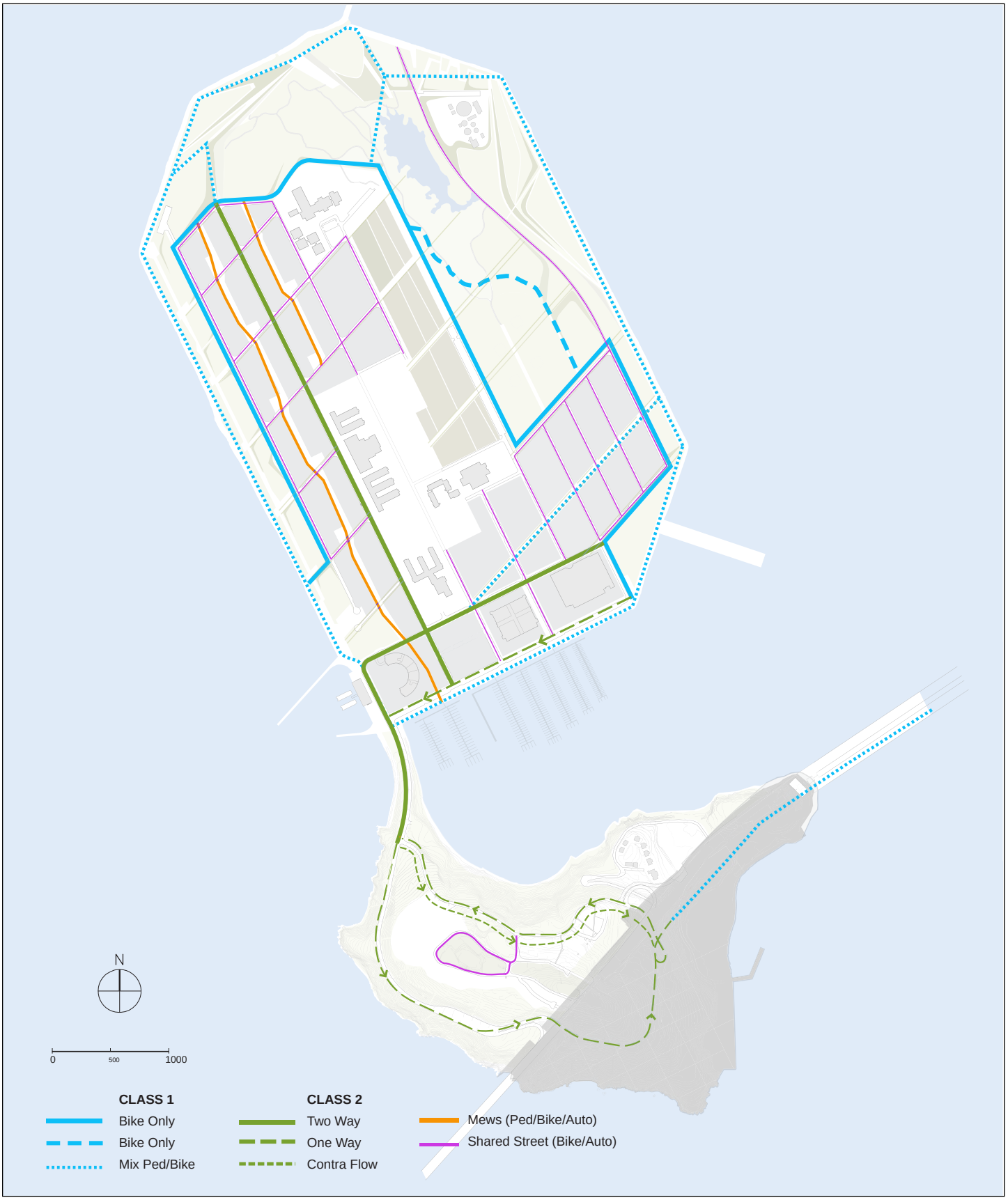
Access to homes on Yerba Buena Island would be from private streets with 11-foot travel lanes in each direction. The private streets would accommodate emergency vehicles and would have wider curb return radii at intersections.

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):

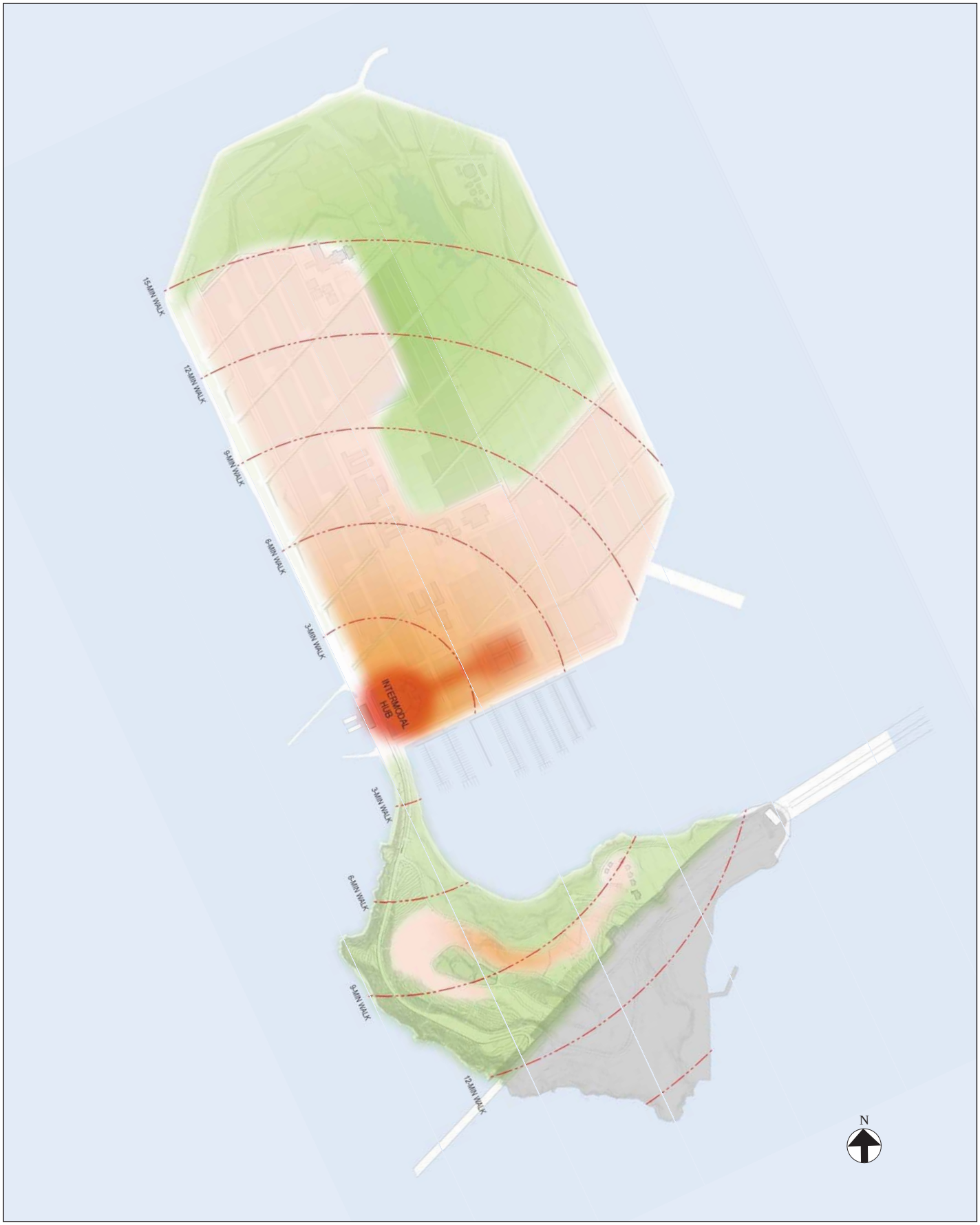
- Approximately 50 percent of the residential units would be within an approximately 10-minute walk or less of the Transit Hub.
- All residential units on Treasure Island would be within an approximately 15-minute walk of the Transit Hub. In addition, all residents of both islands would be within an 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.

[29] Mitigation Measure M-TR-24, identified in Section IV.E, Transportation, p. IV.E.X, 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.



SOURCE: Perkins+Will

FIGURE II.12: PROPOSED BICYCLE ROUTES



SOURCE: Perkins + Will

FIGURE II.13: WALKING TIMES TO TRANSIT HUB

- 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 walk ways and bicycle routes would be designed to allow for possible future connections to other pedestrian and bicycle paths.
- Provisions of the Americans with Disabilities Act ("ADA") and U.S. Access Board's Revised Draft Guidelines for Accessible Public Rights-of-Way would be met, as applicable.

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 bicycle path would also connect to the east span of the Bay Bridge on Yerba Buena Island. 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.

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.

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 11,155 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:

Type of Space	No. of Spaces*
Off-Street Spaces	
Residential	8,000
Hotel	400
Retail	415
Office	200
Open Space	465
Marina	235
Flex	405
Subtotal	10,120
On-Street Spaces	
Subtotal	1,035
Total Parking Supply	**11,155**

***** 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.[31] Car-share parking spaces would not count against the maximum parking allowed.

Off-street parking standards for commercial uses would be similar to those in the San Francisco Planning Code: 2 parking spaces for each 1,000 sq. ft. of gross floor area for office uses, 2 parking spaces for each 1,000 sq. ft. for retail uses, and 0.8 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 2,120 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 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

[31] Thus, a 610-unit building would have 4 car-share parking spaces: 2 + 1 + 1.

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 1.32 million gallons per day ("mgd"), or approximately 920 gallons per minute ("gpm"), and an estimated maximum daily demand of approximately 1,105 gpm.[32] 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 1,800 gpm. The SFPUC chlorinates the water prior to transmission, and the water does not require additional treatment on Treasure Island. A standby chlorine station is available at the water line entry point to Treasure Island for emergencies.

The supplemental (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. The new service will be equivalent to the current service in place on the existing

[32] *Treasure Island Infrastructure Update*, Section 7, Water System, Table 7.2, October 8, 2009.

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 supplemental water supply line to the proposed new storage tanks (described below). The system has been designed to deliver approximately 1,800 gpm during emergency situations, with a typical average annual flow of 61 gpm, in keeping with current operations. The water would continue to be chlorinated 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.

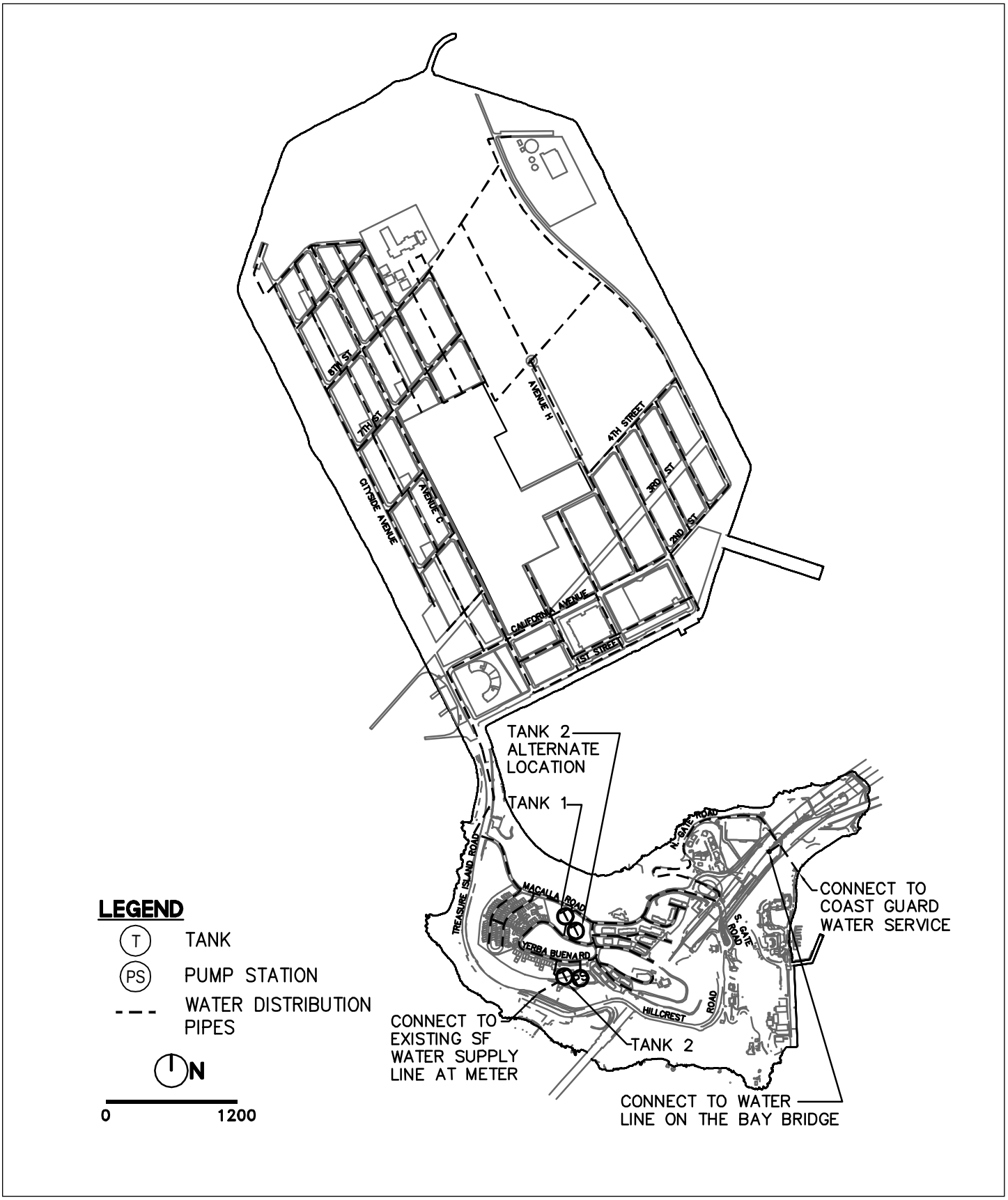
Proposed Water Storage

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 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 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.

[33] This estimate is based on two days of peak maximum daily-water demand plus four hours of fire flow.



SOURCE: BKF

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[34] 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.

[34] "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.

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

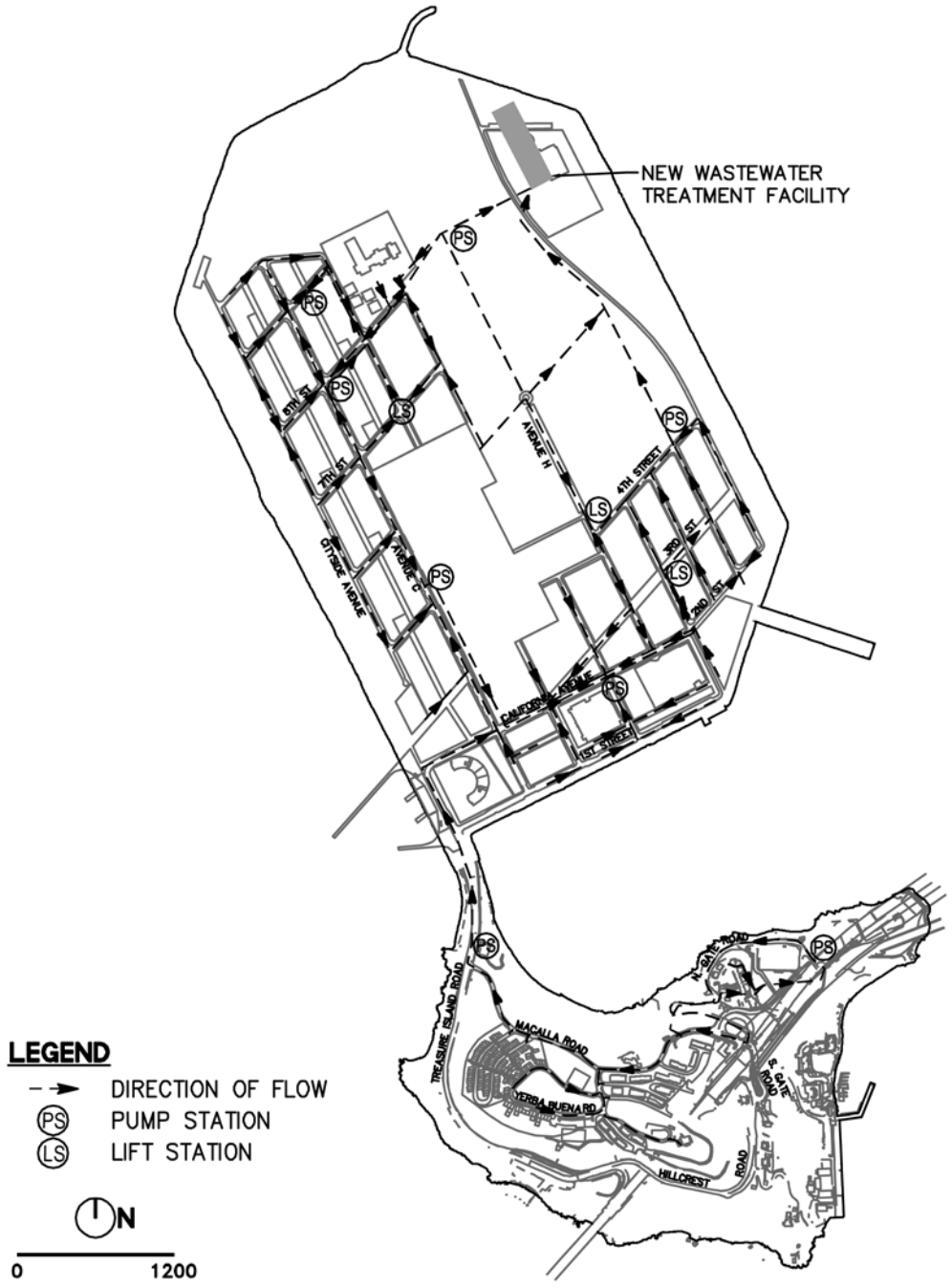
Under the Proposed Project, the existing wastewater collection system would be completely replaced, and the existing wastewater treatment facility would be rebuilt in essentially its current location in the northeastern corner of Treasure Island. (Stormwater flows would continue to be collected in a 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[35] 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.

[35] A force main is a pipe through which liquid is pumped (forced) rather than conducted by gravity flow.



SOURCE: BKF

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.[36] The plant treats wastewater from existing development on the Islands. The treatment plant provides secondary treatment and has a peak treatment capacity of 0.80 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 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 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. Ultraviolet light would be used to disinfect both the treated water to be recycled and the remaining secondary-treated effluent prior to discharge through the existing outfall from the existing treatment plant to the Bay. 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.

[36] Regional Water Quality Control Board San Francisco Bay Region, NPDES Permit No. CA0110116, August 1, 2004, p. 5.

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 with ultraviolet light after tertiary treatment in the wetland, and then discharged through the existing outfall.

Under Wastewater Wetland Variant D2, effluent would undergo microfiltration and ultraviolet light 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 0.25 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 toilet flushing. The remainder of the ultraviolet-light-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 much

or all 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 energy 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.[37] Treatment of secondary wastewater effluent by microfiltration and reverse osmosis to meet California standards for recycled water is described

[37] This tank may be reduced in size if either of the Supplemental Firefighting Water System Variants is implemented, as described on p. II.X, 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.

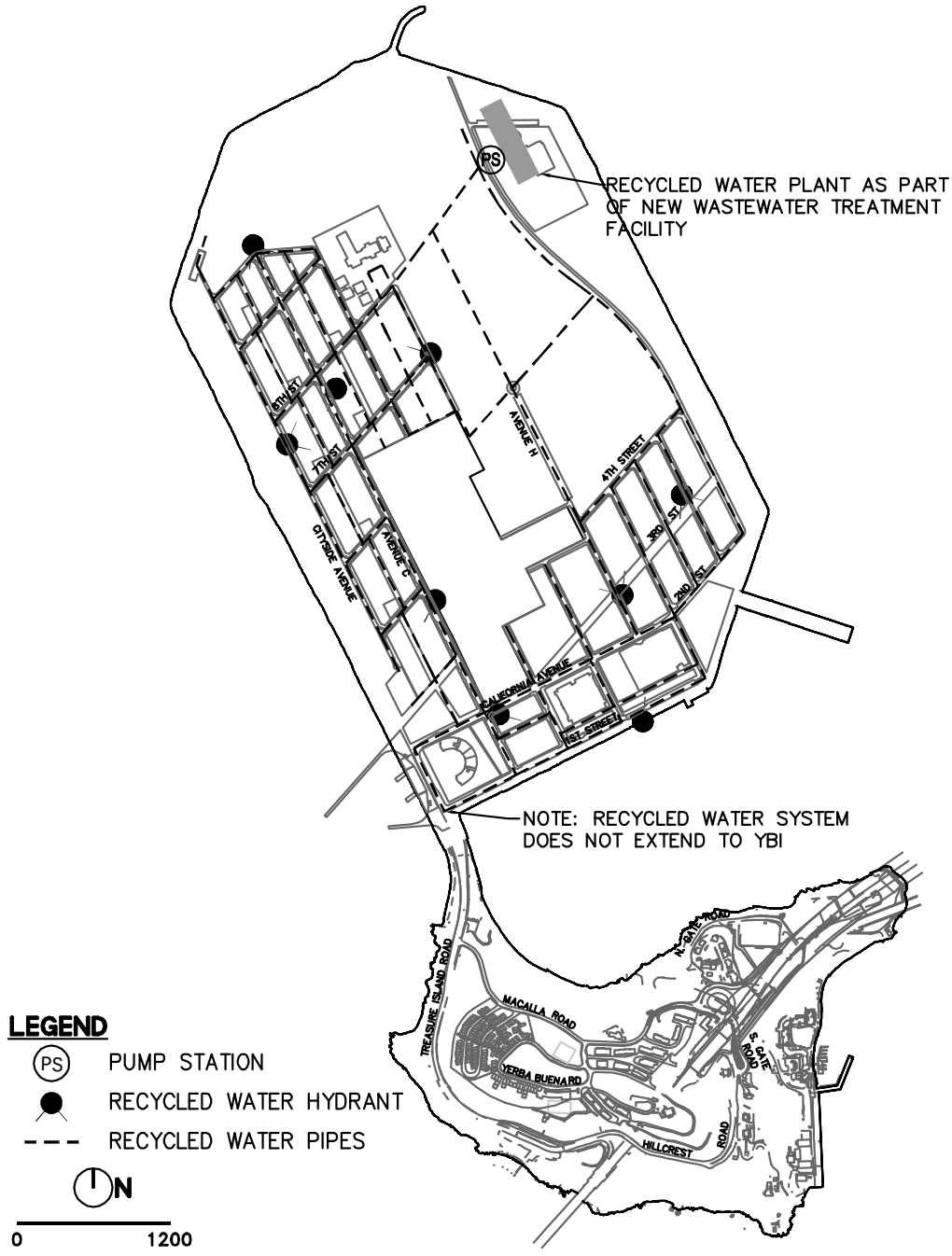
The use of grey water (water from sinks, showers, and similar sources, captured for local reuse) is not currently allowed. If changes are made in applicable State and local laws and regulations, individual residential buildings may be constructed with the necessary capture facilities and piping systems for grey water. Any use of grey water would conform to all applicable State and local requirements. Because it is not known where or whether these grey 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.

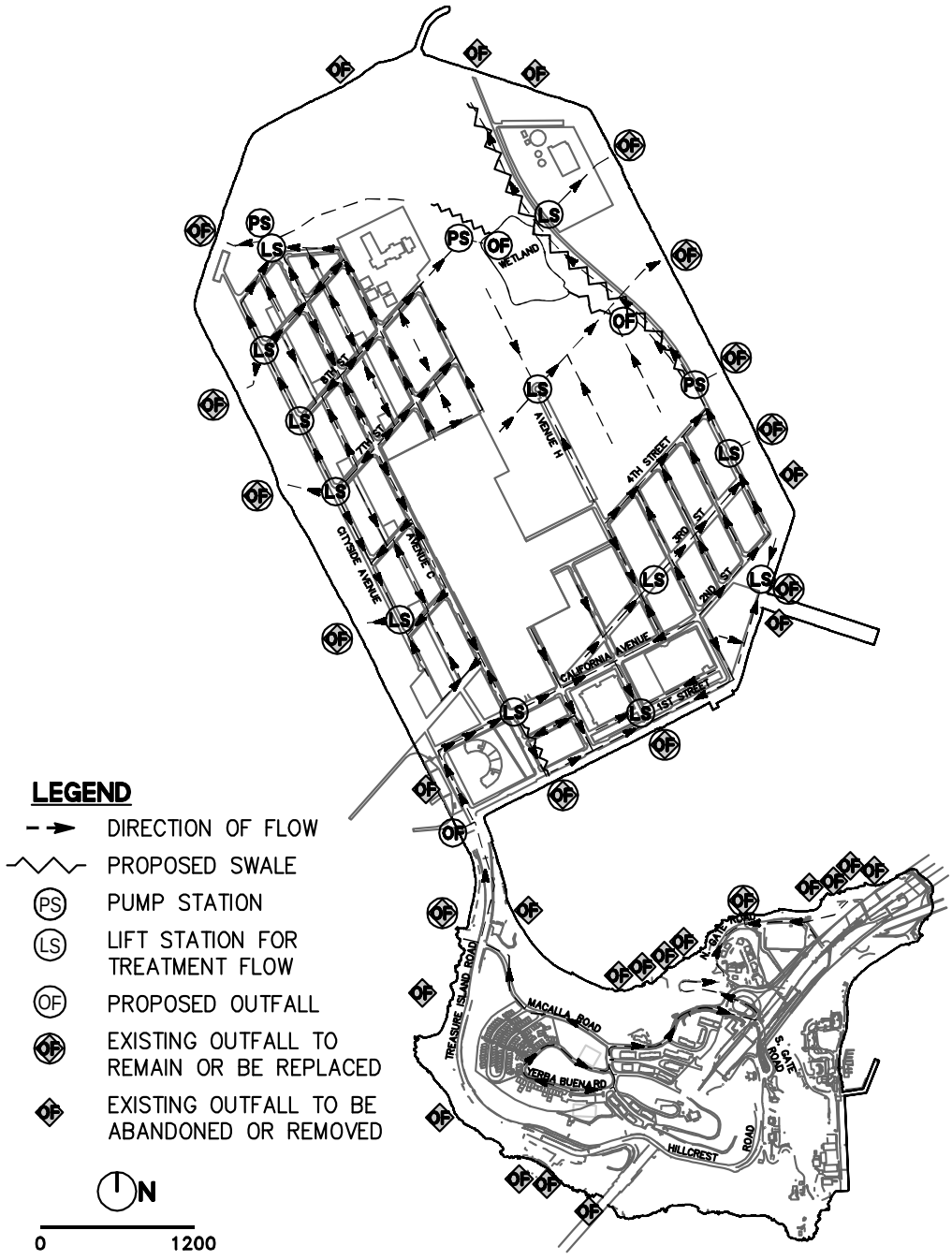
Proposed Stormwater Collection

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



SOURCE: BKF

FIGURE II.16: PROPOSED RECYCLED WATER DISTRIBUTION SYSTEM



SOURCE: BKF

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.[38]

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.[39]

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*

[38] 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.

[39] 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.

Guidelines,[40] 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.

[40] San Francisco Public Utilities Commission and Port of San Francisco, *Stormwater Design Guidelines*, released November 2009. SFPUC Stormwater Design Guidelines web page: http://www.sfwater.org/mto_main.cfm/mc_id/14/msc_id/361/mto_id/543, accessed June 16, 2010.

- 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.

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.

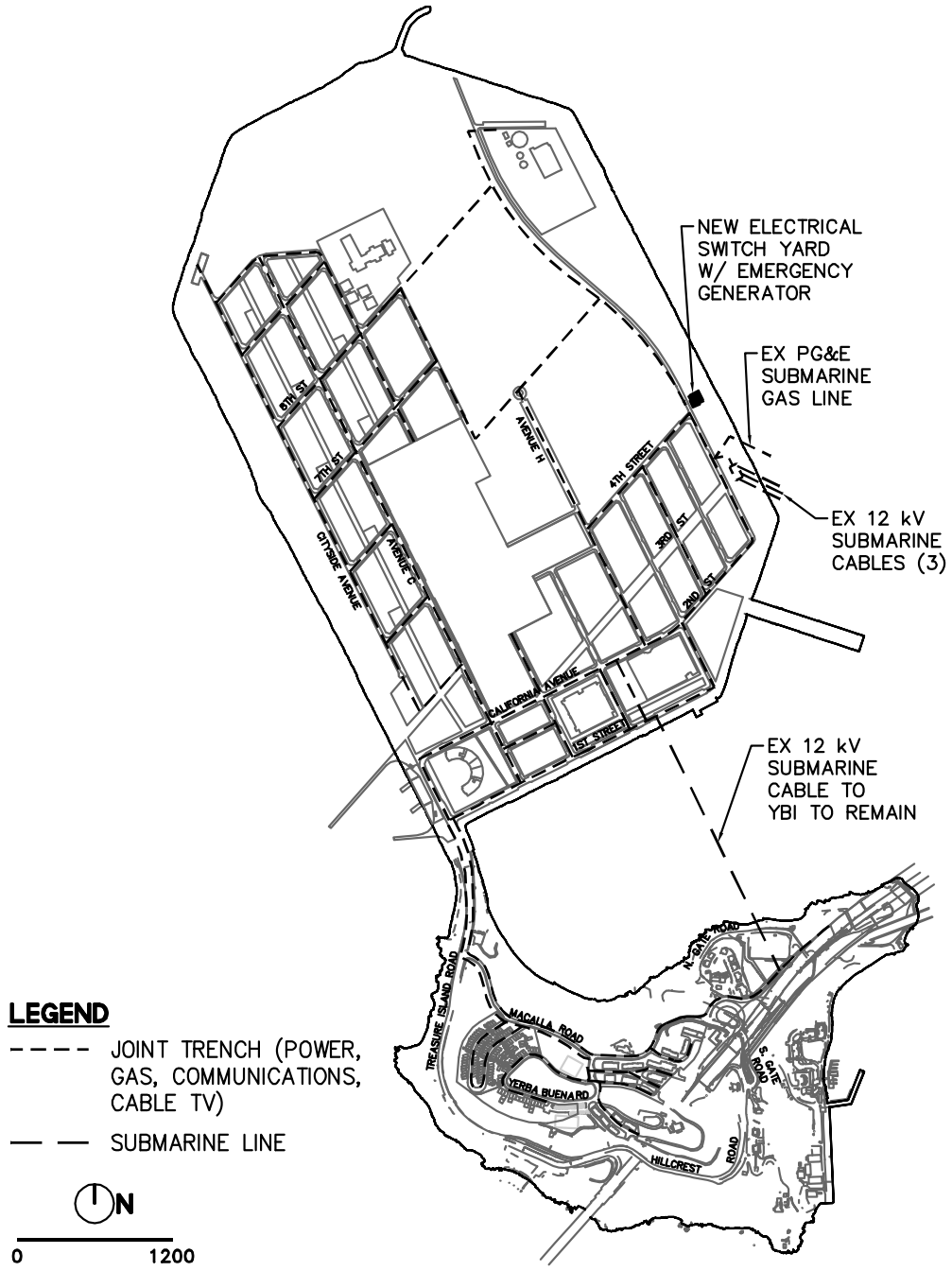
The existing electrical distribution system on Treasure Island and Yerba Buena Island would be replaced in phases during project buildout. The new on-island distribution system would include new switchgear in an outdoor fenced enclosure, connecting to both existing submarine cables, and an underground 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



SOURCE: BKF

FIGURE II.18: PROPOSED DRY UTILITIES SYSTEM

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.[41] 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.

[41] *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

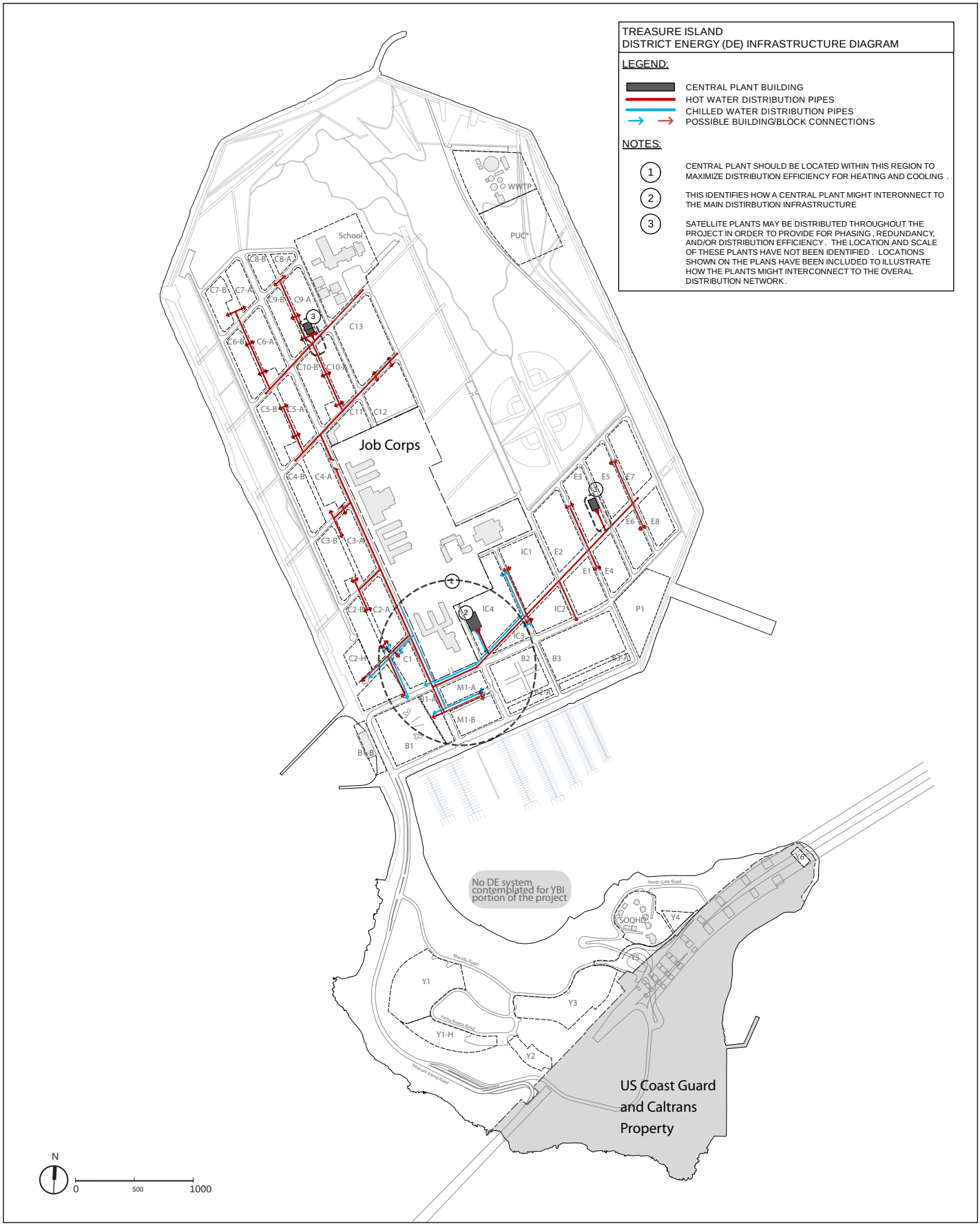
The entire telecommunication system would be replaced as part of the Development Program. Project sponsors will identify, and negotiate with, telecommunication service providers to design and construct a system to serve the Islands. It is anticipated that the telecommunication distribution network would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



SOURCE: Arup, TICD

FIGURE II.19: PROPOSED REPRESENTATIVE DISTRICT HEATING AND COOLING SYSTEM

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

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.[42] 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

[42] *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 transitional 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 18 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 transitional 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

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;

- 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;

- 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 and museum;
- Renovation of Building 3 on Treasure Island;
- Development of the Senior Officers' Quarters 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 *Redevelopment Plan*, and the San Francisco Board of Supervisors would consider approval of the plan. The *Redevelopment Plan* would define the boundaries of the Redevelopment Plan 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 *Redevelopment Plan* would authorize TIDA to adopt 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 *Redevelopment Plan* 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);
- Planning Code Section 101.1 (Priority Policies) and *General Plan* findings for the *Redevelopment Plan for the Treasure Island / Yerba Buena Island Redevelopment Project* (Planning Commission, Board of Supervisors);
- Approval of DDA and related transactional documents (TIDA, Board of Supervisors);

- Recommendation by TIDA to adopt *Redevelopment Plan* (TIDA);
- Filing report and recommendation for approval of *Redevelopment Plan* with the Board of Supervisors by the Planning Commission (waived if no action within 30 days after receipt of *Redevelopment Plan*);
- Adoption of *Redevelopment Plan* (Board of Supervisors);
- Adoption of *Design for Development* and *Design Review and Document Approval Procedure* (TIDA, 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);
- Interagency Cooperation Agreements (San Francisco Planning Commission, San Francisco Board of Supervisors, SFMTA, SFPUC, SFFD, SFPD, SFDPW, San Francisco Department of Building Inspection ["DBI"]);
- Approval of subdivision maps (SFDPW, Board of Supervisors);
- Approval of Tidelands Trust Exchange Agreement (TIDA, Board of Supervisors, State Lands Commission);
- Permit for fill and dredging in San Francisco Bay and improvements within the 100-foot shoreline band (San Francisco Bay Conservation and Development Commission);
- 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 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).

III. PLANS AND POLICIES

For informational purposes, this chapter provides a summary of the relevant plans and policies of the City and County of San Francisco ("City") and the regional, State, and Federal agencies that have policy and regulatory jurisdiction over the Redevelopment Plan Project Area. This chapter also assesses the Proposed Project's potential for conflicts with these plans and policies. Project approvals and regulatory permits required to implement the Proposed Project under City, regional, State, and Federal statutes are discussed in Chapter II, Project Description, pp. II.83-II.84.

A. SAN FRANCISCO PLANS AND POLICIES

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. Treasure Island and Yerba Buena Island are the site of the former Naval Station Treasure Island ("NSTI"), which is still owned and was formerly operated by the U.S. Navy until its closure in 1997. Consequently, land use planning within the Redevelopment Plan Project Area was not directly controlled by the City and was not considered in the *General Plan*. The Planning Code does, however, designate zoning and height and bulk classifications for both Treasure Island and Yerba Buena Island under Sections 105(e) and 105(f) of the Planning Code (refer to Section B. San Francisco Planning Code, p. III.3, for a discussion of existing zoning and height and bulk classifications). These controls do not apply to the Federal land uses on the Islands.

As discussed in Chapter II, Project Description, pp. II.1-II.3, the *Redevelopment Plan* and *Design for Development* would establish the land use controls and design standards for the Proposed Project. California Community Redevelopment Law (Health and Safety Code, Section 33331) requires that the proposed *Redevelopment Plan* and its related documents such as the *Design for Development* be consistent with, and conform to, the adopted *General Plan* and its related adopted policies before the *Redevelopment Plan* is approved and adopted. The Proposed Project includes amendments to the text and maps of the *General Plan* and Planning Code (discussed below) that would identify the geographic and physical boundaries of Treasure Island and Yerba Buena Island, and incorporate by reference the land use controls and design standards specified in the proposed *Redevelopment Plan* and *Design for Development* for the Development Plan Area.

PRIORITY POLICIES

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the Planning Code to establish eight Priority Policies. These policies are: (1) preservation and enhancement of neighborhood-serving retail

uses and future opportunities for resident employment in and ownership of such businesses; (2) conservation and protection of existing housing and neighborhood character to preserve the cultural and economic diversity of neighborhoods; (3) preservation and enhancement of affordable housing; (4) discouragement of commuter automobiles that impede Muni transit service or that overburden streets or neighborhood parking; (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; (6) maximization of earthquake preparedness; (7) preservation of landmark and historic buildings; and (8) protection of parks and open space and their access to sunlight and vistas. The case report and approval motions for the Proposed Project presented to the Treasure Island Development Authority ("TIDA") and the San Francisco Planning Commission for consideration in acting on the proposed *Redevelopment Plan* will contain the Planning Department's comprehensive project analysis and findings regarding consistency of the Proposed Project with the Priority Policies. For purposes of this EIR, the Proposed Project was reviewed against the Priority Policies and no inconsistencies were identified.

SAN FRANCISCO GENERAL PLAN

The *San Francisco General Plan*[1] is the embodiment of the City's vision for the future of San Francisco. It is comprised of a series of ten elements, each of which deals with a particular topic that applies Citywide: Air Quality, Arts, Commerce and Industry, Community Facilities, Community Safety, Environmental Protection, Housing, Recreation and Open Space, Transportation, and Urban Design Elements. Development in the City is subject to the *General Plan*. The *General Plan* provides general policies and objectives to guide land-use decisions and contains some policies that relate to physical environmental issues. TIDA, the Zoning Administrator, the Planning Commission, the Board of Supervisors, and other City decision-makers will evaluate the Proposed Project in accordance with provisions of the *General Plan,* and will consider potential conflicts as part of the decision-making process. This consideration of *General Plan* objectives and policies is carried out independent of the environmental review process, as part of the decision to approve, modify, or disapprove a proposed project. Any potential conflicts with *General Plan* objectives and policies not identified in the EIR would be considered in the project evaluation process and would not alter the physical environmental effects of the Proposed Project.

The Proposed Project will be reviewed by the TIDA Board, the Planning Commission and Board of Supervisors in the context of all applicable objectives and policies of the *San Francisco General Plan*. While the *General Plan* does not explicitly address development within the geographic boundaries of Treasure Island and Yerba Buena Island, certain *General Plan* objectives and policies that address development within the City and County of San Francisco as

[1] *San Francisco General Plan* at http://www.sfgov.org/site/planning_index.asp?id=41423, accessed April 26, 2010.

a whole are applicable to the Proposed Project. Potential conflicts with the relevant provisions of the *General Plan* that could cause physical environmental impacts have been evaluated as part of the impacts analyses carried out for specific topics in Chapter IV, Environmental Setting and Impacts, of this EIR.

To implement the Proposed Project, the *General Plan* would be amended by adding a new Area Plan for the Redevelopment Plan Project Area that would include the new neighborhoods on Treasure Island and Yerba Buena Island and would reference the *Redevelopment Plan*. With these proposed amendments, there would be no conflicts with the *General Plan*.

B. SAN FRANCISCO PLANNING CODE

The San Francisco Planning Code, which incorporates the City's Zoning Map by reference, regulates development in the City by prescribing the permitted uses and development standards consistent with land use designations and policies in the *San Francisco General Plan*. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless (1) the Proposed Project conforms to the Planning Code; (2) allowable exceptions are granted pursuant to provisions of the Planning Code; or (3) amendments to the Planning Code are included as part of the project.

The Zoning Map consists of a series of numbered maps that divide the City into geographic sections and show the locations and boundaries of zoning (Maps ZN01 through ZN13) and height and bulk (Maps HT01 through HT13) districts. It has two layers of districts. Use Districts are the base zoning that prescribes which land uses are permitted and most developments standards (except height and bulk). Height and Bulk Districts are mapped separately from the Use Districts and prescribe the maximum height and bulk of buildings. Treasure Island and Yerba Buena Island are not shown or included in the use districts or height and bulk districts of the Zoning Map. As such, the Islands are subject to the provisions of Sections 105(e) and (f) of the Planning Code.

ZONING

Section 105(e) addresses property that is not specifically included in any use district shown on the Zoning Map. This section states that wherever any property is not included in any use district shown on the Zoning Map, it is declared to be in an RH-1 (Residential, One-Family) District. Property that is owned by the United States of America, State of California, City and County of San Francisco, or other governmental agency but is within the City and County of San Francisco (and not within the areas covered by the Zoning Map) is declared to be in a P (Public Use) District unless otherwise reclassified in accordance with the Planning Code. Therefore, under the provisions of Section 105(e) of the Planning Code, the Development Plan Area is currently zoned P (Public Use) District.

The Proposed Project would not be consistent with the existing Planning Code zoning district. Pursuant to Sections 106 and 302(c) of the Planning Code, implementation of the Proposed Project would require amendments to the Zoning Map that would add a new zoning map sheet (Sheet ZN14) to change the existing zoning designation from P (Public Use) District within the Development Plan Area to a Redevelopment Agency - Treasure Island / Yerba Buena Island District that references the zoning designations contained in the proposed *Redevelopment Plan*.

HEIGHT AND BULK DISTRICTS

Section 105(f) addresses property that is not specifically included in any height and bulk district shown on the Zoning Map of the Planning Code. This section states that wherever any property is not included in any height and bulk district shown on the Zoning Map, it is declared to be in a 40-X height and bulk district. Section 105(f) excludes property within the City and County of San Francisco that is not covered by the Zoning Map from the 40-X height and bulk district if it is owned by the United States of America, State of California, City and County of San Francisco, or other governmental agency. Under Section 105(f) such property is declared to be in an OS (Open Space) District, with the exception of Yerba Buena Island and Treasure Island which are declared to be in a 40-X height and bulk district. Therefore, pursuant to Section 105(f) of the Planning Code, the Development Plan Area is in the 40-X height and bulk district. Within this district, the maximum height limit is 40 feet and no bulk limits apply.

The Proposed Project would not be consistent with the existing Planning Code height and bulk district classifications. As allowed for under Sections 106 and 302(c) of the Planning Code, the Proposed Project would require amendments that would modify Section 105(f) by removing the 40-X height and bulk limit on Treasure Island and Yerba Buena Island. Zoning Map amendments would add a new map sheet (Sheet HT14) to change the existing height and bulk limits from 40-X within the Development Plan Area to the height and bulk limits permitted in the proposed *Redevelopment Plan*.

With these amendments, the Proposed Project would be consistent with the Planning Code. Physical impacts of the Proposed Project related to these amendments are addressed by topic under the impact discussions in Chapter IV, Environmental Setting and Impacts.

Proposed Planning Code zoning and height and bulk classification amendments would be applicable only to those portions of Treasure Island and Yerba Buena Island that are included in the Development Plan Area, and would not alter existing zoning or height and bulk classifications on federally owned land; that is, the approximately 37 acres owned by the U.S. Department of Labor and occupied by the Job Corps campus and the 18 acres owned by FHWA/Caltrans would remain in the existing P (Public Use) District, and the 40-X height and bulk district. Refer to Chapter II, Project Description, Figure II.2: Proposed Redevelopment Plan Project Area, p. II.8, for the locations of these excluded uses.

C. OTHER LOCAL PLANS AND POLICIES

Other local plans and policies reviewed for consistency with the Proposed Project were the *San Francisco Sustainability Plan*, San Francisco Transit First Policy, and Transit Effectiveness Program. The San Francisco Transit First Policy and Transit Effectiveness Program are addressed in Section IV.E, Transportation.

The Proposed Project was also evaluated in the context of a number of City programs that have been adopted or implemented to realize meaningful reductions in greenhouse gas (GHG) emissions, including the Green Building Ordinance (also discussed below), a Zero Waste strategy, a Construction and Demolition Debris Recovery Ordinance, and a solar energy generation subsidy program. These programs collectively comprise San Francisco's GHG reduction strategy and are discussed in Section IV.H, Greenhouse Gas Emissions. The Proposed Project was reviewed against these programs and measures and no inconsistencies were found. Potential physical environmental effects related to GHG emissions are addressed in Section IV.H, Greenhouse Gas Emissions.

SAN FRANCISCO SUSTAINABILITY PLAN

In 1993, the San Francisco Board of Supervisors established the Commission on San Francisco's Environment, charged with, among other things, drafting and implementing a plan for San Francisco's long-term environmental sustainability. The goal of the *San Francisco Sustainability Plan* is to enable the City and its people to meet their present needs without sacrificing the ability of future generations to meet their own needs.

The *San Francisco Sustainability Plan* is divided into 15 topic areas, 10 that address specific environmental issues (air quality; biodiversity; energy, climate change and ozone depletion; food and agriculture; hazardous materials; human health; parks, open spaces, and streetscapes; solid waste; transportation; and water and wastewater), and 5 that are broader in scope and cover many issues (economy and economic development; environmental justice; municipal expenditures; public information and education; and risk management).

Although the *San Francisco Sustainability Plan* became official City policy in July 1997, the Board of Supervisors has not committed the City to perform all of the actions addressed in the plan. The *San Francisco Sustainability Plan* serves as a blueprint, with many of its individual proposals requiring further development and public comment.

The Proposed Project, including its components, the Treasure Island *Sustainability Plan*,[2] and the Treasure Island Green Building Specifications, were reviewed against the goals and issues addressed in the *San Francisco Sustainability Plan* and no inconsistencies were found.

SAN FRANCISCO GREEN BUILDING PROGRAM

San Francisco Green Building Ordinance

The San Francisco Building Code was amended in 2008 to add Chapter 13C, Green Building Requirements. The new requirements mandate that newly constructed private residential and commercial buildings include energy- and water-efficiency features during construction and operation. The stated purpose of the chapter is "to promote the health, safety and welfare of San Francisco residents, workers, and visitors by minimizing the use and waste of energy, water and other resources in the construction and operation of the City and County of San Francisco's building stock and by providing a healthy indoor environment." The California Building Standards Commission recently adopted a green building code as part of the California Building Code (Title 24 of the California Code of Regulations, part 6); these provisions of the State code will become effective on January 1, 2011. Local jurisdictions are allowed to adopt or continue to use their own green building ordinances as long as they are as, or more, stringent than those adopted by the State.

The San Francisco Green Building Requirements establish either Leadership in Energy and Environmental Design ("LEED") certification levels or GreenPoint Rated[3] systems points for types of residential and commercial buildings; the requirements are summarized here. High-rise commercial buildings must achieve a LEED Silver rating beginning with building permit applications submitted after January 1, 2009; high-rise residential buildings must achieve LEED Silver after January 1, 2010.[4] Mid-sized office and retail buildings[5] have been required to meet LEED standards for building energy systems and water-efficient landscaping since January 1, 2009, and will be required to show a reduction in the use of potable water by 30 percent as of January 1, 2011. By January 1, 2012, applicants for mid-sized commercial buildings will be required to show the use of renewable on-site energy or to purchase green energy credits.

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[2] A Sustainable Future for Treasure Island, Exhibit K: Sustainability Plan, October 2006, Treasure Island Community Development.

[3] GreenPoint Rated is a program of Build it Green established for evaluating residential building performance in the areas of resource conservation, indoor air quality, water conservation, energy efficiency and livable communities (infill development, density, diversity). From "GreenPoint Rated" at http://www.builditgreen.org/greenpoint-rated/, accessed February 2, 2010.

[4] High-rise buildings are defined in the California and San Francisco Building Codes as buildings with an occupied floor above 75 feet.

[5] For purposes of LEED certification, mid-sized office and retail buildings are defined as those between 5,000 and 25,000 gross square feet that are not high-rise buildings.

Applicants for building permits for mid-sized residential buildings[6] must be GreenPoint Rated and demonstrate that a minimum of 75 GreenPoints will be achieved as of January 1, 2011; for small residential buildings with four or fewer units, this standard applies after January 1, 2012.

The proposed Development Plan would include strategies intended to achieve Gold certification under the 2009 Neighborhood Development program of the U.S. Green Building Council's LEED-ND rating system, and good-faith efforts to achieve Platinum certification. Buildings constructed under the Development Plan would be required to meet the Treasure Island Green Building Specifications standards in the City's Green Building Ordinance. This requirement would be implemented either through project compliance with the Green Building Ordinance itself, or through a set of equivalent or superior requirements adopted by TIDA as part of the Treasure Island Green Building Specifications. Thus, the Proposed Project would meet or exceed the provisions of the City's Green Building Ordinance and no potential conflicts were identified.

San Francisco Municipal Green Building Program

San Francisco's Municipal Green Building Program was founded in 1999 when the City adopted the Resource Efficient Building Ordinance, which established green building standards for municipal buildings to increase energy efficiency, conserve City finances, reduce the environmental impacts of demolition, construction, and operation of buildings, and create safe workplaces for City employees and visitors. The ordinance created the inter-departmental Resource Efficient Building ("REB") Task Force and charged the San Francisco Department of the Environment with implementing the ordinance in partnership with the Department of Public Works and other REB Task Force departments. In 2004, amendments to Chapter 7 of the Environment Code set LEED Silver Certification by the U.S. Green Building Council as the minimum environmental performance requirement for all municipal projects over 5,000 square feet. This performance standard does not apply to private development projects. The REB Task Force assists City departments in compliance with the LEED Silver Certification requirement and helps to determine which projects are applicable for LEED ratings. For all municipal construction projects, including those that do not involve buildings and are not required to obtain LEED Silver Certification, the REB Task Force provides recommended best practices and sample specifications for building materials (e.g., recycled content of steel and concrete).

Implementation of the ordinance is intended to reduce carbon monoxide emissions, save power and drinking water, reduce discharges of wastewater and stormwater, reduce construction and demolition waste, reduce automobile trips, and increase green power generation by City-owned buildings.

[6] Mid-sized residential buildings are defined in Chapter 13C of the San Francisco Building Code as those with five or more units that do not fit the Building Code definition of a high rise.

The proposed improvements or new construction of the existing Treasure Island elementary school building, joint police and fire station, and wastewater treatment plant facility on Treasure Island, which would be operated by the San Francisco Unified School District, Police Department, Fire Department and S.F. Public Utilities Commission, respectively, would be required to comply with the standards in the Municipal Green Building Program.[7]

The Proposed Project was reviewed in the context of the City's Municipal Green Building Program and no potential conflicts were identified.

D. REGIONAL PLANS AND POLICIES

The principal regional planning agencies and their policy plans that guide planning for the Proposed Project and the nine-county Bay Area are (1) the Bay Area Air Quality Management District's ("BAAQMD") *Bay Area 2005 Ozone Strategy*[8]*;* (2) the Metropolitan Transportation Commission's ("MTC") *Transportation 2035 Plan for the San Francisco Bay Area*; (3) the San Francisco Bay Area Water Transit Authority *Final Implementation & Operations Plan;* (4) the San Francisco Regional Water Quality Control Board's ("RWQCB") *San Francisco Basin Plan;* (5) the San Francisco Bay Conservation and Development Commission's ("BCDC") *San Francisco Bay Plan*; and (6) the Association of Bay Area Governments' ("ABAG") regional development and conservation program (FOCUS*)*, biennial *Projections*, and *San Francisco Bay Trail Plan*.

The most recently adopted air quality plan in the San Francisco Bay Area Air Basin is the *Bay Area 2005 Ozone Strategy*. The *Bay Area 2005 Ozone Strategy* represents the Bay Area's most recent triennial assessment of the region's strategy to attain the State one-hour standard for ozone. In this respect, the *2005 Ozone Strategy* replaces the *2000 Clean Air Plan*. The 2010 Clean Air Plan is in draft form and is pending adoption by the BAAQMD. The Proposed Project would be considered inconsistent with the *2005 Ozone Strategy* because it would not meet population and vehicle miles travelled criterion; however, the Proposed Project with mitigation for Expanded Transit Service would meet this criterion and would be consistent with the adopted air quality plan for the region; refer to Section IV.G, Air Quality, p. IV.G.50 for a detailed discussion of this impact. The *2005 Ozone Strategy* and physical impacts of the Proposed Project relating to ozone are addressed in Section IV.G, Air Quality.

The Proposed Project was reviewed in the context of the Metropolitan Transportation Commission's *Transportation 2035 Plan for the San Francisco Bay Area*, and the San Francisco

[7] This requirement would be implemented either through compliance with the Municipal Green Building Program or a set of equivalent or superior requirements adopted by TIDA as part of the Proposed Project's Treasure Island Green Building Specifications.

[8] The *Bay Area 2005 Ozone Strategy* was adopted by BAAQMD in January 2006, in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments.

Bay Area Water Transit Authority *Final Implementation & Operations Plan* (including expansion of ferry service to Treasure Island) and no inconsistencies were found. The physical impacts of implementing transit and ferry service to Treasure Island are discussed in Section IV.E, Transportation.

The stormwater discharge, wastewater management, drainage plan, and water quality control systems incorporated into the Proposed Project were reviewed in the context of the RWQCB's *San Francisco Basin Plan* and no potential conflicts were identified. The physical impacts of implementing these systems and permitting requirements of the RWQCB are discussed in Sections IV.K, Utilities, IV.M, Biological Resources, and IV.O, Hydrology and Water Quality.

BCDC's *San Francisco Bay Plan* and ABAG's FOCUS program, biennial *Projections,* and *San Francisco Bay Trail Plan* are discussed below.

BAY CONSERVATION AND DEVELOPMENT COMMISSION

San Francisco Bay Plan[9]

BCDC, created by the McAteer-Petris Act, functions as the state coastal management agency for San Francisco Bay ("the Bay"). The *San Francisco Bay Plan* ("*Bay Plan"*) was prepared by BCDC from 1965 through 1969 and amended through 2007 in accordance with the *McAteer-Petris Act* (California Government Code Sections 66600-66682). The *Bay Plan* guides the protection and use of the Bay and its shoreline. BCDC has permit jurisdiction over shoreline areas subject to tidal action up to the mean high tide line and including all sloughs, tidelands, submerged lands, and marshlands lying between the mean high tide and 5 feet above mean sea level for the nine Bay Area counties with Bay frontage, and the land lying between the Bay shoreline and a line drawn parallel to, and 100 feet from, the Bay shoreline, known as the 100-foot shoreline band. Under the *McAteer-Petris Act*, BCDC has permit authority for the placement of fill, extraction of materials, or substantial changes in use of land, water, or structures within its jurisdiction, and to enforce policies aimed at protecting the Bay and its shoreline, as well as maximizing public access to the Bay.

For the Proposed Project, BCDC's jurisdiction includes all areas within 100 feet inland of the mean high tide line, as well as all tidal marsh and submerged areas up to an elevation of 5 feet above mean sea level.

[9] San Francisco Bay Conservation and Development Commission, *San Francisco Bay Plan*, 1965 (as amended through November 2007).

The *Bay Plan* includes broad policies to protect the Bay's economic and natural resources including designation of shoreline Priority Use Areas.[10] These policies guide BCDC's permit decisions. *Bay Plan* Map 4 (Central Bay North) includes *Bay Plan* policies for the proposed Redevelopment Plan Project Area. Treasure Island is not identified as priority use area; however, Yerba Buena Island in its entirety is designated as a waterfront park, beach priority use area in the *Bay Plan*.

Bay Plan Map 4 includes a number of specific *Bay Plan* policies pertaining to recreation and public access on Treasure Island and Yerba Buena Island. The *Bay Plan* Map 4, Policy 22 states that when Treasure Island is transferred out of Federal ownership, Treasure Island should be redeveloped for public use with continuous access to San Francisco Bay in a manner protective of sensitive wildlife, as well as with parking and water access for users of small watercraft (non-motorized boats), including at the north end of Treasure Island (the proposed Northern Shoreline Park). This policy further states that Treasure Island should be developed with a system of linked open spaces, including a large open space at the northern end of the island. The *Bay Plan* Map 4, Policy 23 encourages redevelopment of Yerba Buena Island, south of the San Francisco Oakland Bay Bridge (Bay Bridge), into recreational uses when that portion of the island is no longer owned or controlled by the U.S. Coast Guard. Policy 23 also calls for the protection of harbor seals and other sensitive wildlife in this location. In particular, the *Bay Plan* Map 4, Policies 24 and 25 call for a large, public open space at the center of Yerba Buena Island (the proposed Hilltop Park); a large public open space on the plateau on the eastern peninsula (the proposed Habitat Management Plan Area) adjacent to and beneath the east span of the San Francisco Oakland Bay Bridge; and a linked system of trails near the shoreline and at the upper elevations that connect vista points and open spaces; expansion of the Clipper Cove Marina and other water-oriented recreation uses; and the provision of water access for small watercraft, swimming, and preservation of beaches and eelgrass beds. The *Bay Plan* Map 4, Policy 25 states that the remainder of Yerba Buena Island, upland of the shoreline band, may be developed for other uses consistent with *Bay Plan* public access and recreation policy 4-b (pertaining to recreational use of historic buildings in waterfront parks) and applicable provisions and statutes of the Tidelands Trust (described below).

For purposes of this EIR, the proposed recreation and public access features and potential effects on wildlife were reviewed against *Bay Plan* policies related to recreation and public access and no inconsistencies were found. Physical impacts related to implementation of *Bay Plan* policies are addressed in Sections IV.A, Land Use and Land Use Planning, IV.E, Transportation, IV.J, Recreation, and IV.M, Biological Resources.

[10] To minimize future pressures for Bay fill, the Bay Plan Maps designate shoreline "Priority Use Areas" that should be preserved for regionally important, water-oriented uses historically located or needed to be located on shoreline sites, such as ports, water-related industry, water-related recreation, airports, and wildlife refuges.

The *Bay Plan* also contains general policies concerning Appearance, Design and Scenic Views that focus on providing, enhancing, or preserving views of the Bay and shoreline, especially from public areas. The proposed building heights and massing of the Development Program were evaluated in the context of *Bay Plan* policies and no inconsistencies were identified. The visual impacts of the Proposed Project on the Bay and shoreline views are discussed in Section IV.B, Aesthetics.

Additionally, *Bay Plan* policies address the siting and location of ferry terminals and related parking facilities. These policies address protection of tidal habitat such as marshes, and recommend locating ferry terminals near higher density, mixed-use development served by public transit. *Bay Plan* Recreation policies state that wherever possible ferry terminals should be sited at locations that are near navigable channels, would not rapidly fill with sediment and would not significantly impact tidal marshes, tidal flats or other valuable wildlife habitat. Terminal parking facilities should be set back from the shoreline to allow for public access and enjoyment of the Bay. Regarding new marinas, the recreation policies state, in part, that development should include public amenities such as viewing areas, restrooms, public mooring docks or floats and moorages for transient recreational boater, non-motorized small boat launching facilities, public parking, substantial physical and visual access, and maintenance for all facilities. The Proposed Project, including the landside and waterside facilities proposed for the Treasure Island Sailing Center, and proposed landside services to support the expanded 400-slip marina were reviewed against these policies and no inconsistencies were found. The physical impacts of the proposed Ferry Terminal on tidal habitat, transit-oriented development, and transit service are discussed in Sections IV.E, Transportation, and IV.M, Biological Resources. The physical impacts of the proposed sailing center launch facilities on tidal habitat and eelgrass beds are discussed in Section IV.M, Biological Resources.

The *Bay Plan* includes general policies concerning water quality in the Bay. These policies state that Bay water pollution should be prevented to the greatest extent feasible and that water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality. In addition to compliance with the RWQCB *Water Quality Control Plan*, new development should be sited, designed, constructed and maintained to prevent or minimize discharge of pollutants into the Bay by controlling pollutant sources at the development site, using construction materials that contain non-polluting materials, and by applying best management practices, especially in areas where water dispersion may affect significant biotic resources. Water quality effects are discussed in Section IV.O, Hydrology and Water Quality.

Bay Plan policies related to Safety of Fill address preventing damage from flooding for structures on fill or near the shoreline, including consideration of sea level rise. The physical effects of the Proposed Project concerning potential sea level rise are discussed in Section IV.O, Hydrology and Water Quality.

BCDC will make the final determination of consistency with *Bay Plan* policies of the portions of the Proposed Project that are within its jurisdiction.

ASSOCIATION OF BAY AREA GOVERNMENTS

ABAG is the comprehensive planning agency for the San Francisco Bay Region. ABAG's mission is to strengthen cooperation and coordination among local governments. In doing so, ABAG addresses social, environmental, and economic issues that affect the regional as a whole. ABAG administers the *San Francisco Bay Trail Plan* (discussed below) and other regional programs, including FOCUS, a regional development and conservation strategy that promotes more compact land use patterns in the Bay Area by establishing Priority Development Areas ("PDAs") and Priority Conservation Areas. Treasure Island has been designated as a PDA which is discussed further in Section IV.C, Population and Housing, and Chapter VII, Section A, Growth Inducing Impacts.

ABAG is also responsible for preparing and developing biennial population and employment projections. ABAG *Projections 2007* and *Projections 2009* are discussed in Section IV.C, Population and Housing.

Bay Trail Plan

ABAG administers the *San Francisco Bay Trail Plan ("Bay Trail Plan").* The Bay Trail is a multi-purpose recreational trail that, when complete, would encircle San Francisco Bay and San Pablo Bay with a continuous 400-mile network of bicycling and hiking trails; to date, 290 miles of the alignment have been completed. The trail would connect the shoreline of all nine Bay Area counties, link 47 cities, and cross the major bridges in the region.[11] The Proposed Project includes extensions to the Bay Trail and was evaluated against *Bay Trail Plan* policies for protecting existing trail segments and expanding proposed trail links, and no conflicts were identified. The Bay Trail and the *Bay Trail Plan* are discussed in Sections IV.A, Land Use and Land Use Planning, IV.E, Transportation, and IV.J, Recreation.

E. STATE PLANS AND POLICIES

TIDELANDS TRUST AND STATE LANDS COMMISSION

Treasure Island is composed of landfill placed on former tidelands and submerged lands. Upon conveyance to TIDA by the Navy,[12] all 367 acres of conveyed land on Treasure Island (excluding the Job Corps campus), along with approximately 2 acres of tidelands on Yerba Buena Island,

[11] Association of Bay Area Governments, *San Francisco Bay Trail Overview*, 2008.

[12] The 1942 legislation that authorized the State to convey Treasure Island 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 Treasure Island once conveyed out of Federal ownership.

and all of the other tidal and submerged lands within the Redevelopment Plan Project Area will be subject to the Tidelands Trust Doctrine and the statutory trust created by the Treasure Island Conversion Act of 1996 (the "Conversion Act") The statutory trust created by the Conversion Act and Tidelands Trust Doctrine are collectively referred to as the "Tidelands Trust." The approximately 37-acre Job Corps campus would not be subject to the Tidelands Trust so long as it remains in Federal ownership. Except for the approximately 2 acres of existing tidelands on Yerba Buena Island, none of the 150 acres of land on Yerba Buena Island is subject to the Tidelands Trust.

The Tidelands Trust Doctrine is a legal doctrine that governs the use of tidal and submerged lands, including former tidal and submerged lands that have been filled. It is not a codified set of laws, but is a doctrine primarily established on a case-by-case basis in Court decisions and in decisions and interpretations by the State Lands Commission and Attorney General. In addition to the Tidelands Trust Doctrine, use of the Islands is also subject to the statutory trust created by the Conversion Act, which sets forth the terms and conditions pursuant to which TIDA is responsible for administering Tidelands Trust property on the former NSTI owned by the Navy.[13]

The purpose of the Tidelands Trust is to ensure that land which adjoins the State's waterways or is actually covered by those waters remains available for water-oriented uses that benefit and attract the greatest number of people to the waterfront. Because the Tidelands Trust is based on judicial cases, there is no zoning code or general statute setting forth a list of permitted trust uses on the Islands. Instead, in addition to the decided cases, the Conversion Act defines the permitted uses of the granted tidelands. TIDA has some latitude in interpreting the uses permitted under the Conversion Act; however, both the California Attorney General and the California State Lands Commission retain oversight. They will intervene if they believe trust lands or the revenues from trust lands are being used for purposes inconsistent with the trust or a trust grant.

Land subject to the Tidelands Trust must be available for public purposes, which generally include waterborne commerce, navigation, fisheries, water-oriented recreation, or must be preserved in its natural condition for natural resource protection and wildlife habitat and study. The Tidelands Trust generally prohibits residential, general office, non-maritime industrial, and certain recreation uses.[14] Under the Conversion Act, existing uses on Treasure Island that are inconsistent with the Tidelands Trust, such as the existing residential buildings, are permitted to

[13] In 1997, the Treasure Island Conversion Act (Assembly Bill 699, amending California Health and Safety Codes Sections 33492.5 and adding Section 2.1 to Chapter 1333, Statutes of 1968) authorized the City and County of San Francisco to establish TIDA as the redevelopment agency with jurisdiction over the redevelopment of NSTI. Under the Treasure Island Conversion Act, TIDA was also granted the authority to administer and control Tidelands Trust property located on or about NSTI.

[14] California State Lands Commission, Public Trust Policy. Available online at http://www.slc.ca.gov/Policy_Statements/Public_Trust/Public_Trust_Policy.pdf (accessed April 18, 2010).

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.

Under certain circumstances, with the California State Lands Commission's concurrence, the Tidelands Trust designation may be removed from Tidelands Trust property in exchange for imposing the Tidelands Trust on other suitable property that meets certain legal requirements. Under Senate Bill 1873, signed into law on September 15, 2004, and subsequently amended in 2007 (Senate Bill 815) and 2009 (Senate Bill 833), known as the Treasure Island Public Trust Exchange Act and referred to hereinafter as the "Exchange Act," the legislature authorized TIDA and the State Lands Commission to enter into a Tidelands Trust Exchange Agreement for NSTI.

The proposed Public Trust Exchange Agreement ("Exchange Agreement") would lift the Tidelands Trust restrictions from the portions of Treasure Island that are planned for residential and other uses not permitted on Tidelands Trust property. These restrictions would be transferred to and imposed on portions of Yerba Buena Island which currently are not subject to the Tidelands Trust. Figure II.3: Tidelands Trust Land Exchange, in Chapter II, Project Description, p. II.15, shows the lands that would be subject to the Exchange Agreement. The Tidelands Trust lands subject to the Exchange Agreement affect about 367 acres on Treasure Island and about 94 acres on Yerba Buena Island within the Development Plan Area and excludes the Jobs Corps campus on Treasure Island and the Coast Guard Station and Caltrans properties on Yerba Buena Island.

The Exchange Act and the proposed Exchange Agreement contemplate that if the Job Corps property were ever to be transferred to TIDA, then it would become subject to the Tidelands Trust and would also be included as part of the Tidelands Trust Exchange. However, because the Department of Labor has indicated its current intention to retain jurisdiction over the Job Corps property, an exchange involving the Job Corps remains unlikely and is not analyzed in this EIR.

After the exchange contemplated in the Exchange Agreement of the 367 acres included within the Development Plan Area on Treasure Island, approximately 150 acres would be removed from the existing Tidelands Trust for development of residential and local community-serving uses and approximately 217 acres would remain within the Tidelands Trust.[15] Of the 94 acres within the Yerba Buena Island Development Plan Area, approximately 80 acres would be designated as Tidelands Trust lands; the remaining 14 acres would continue to remain free of Tidelands Trust land use restrictions. Tidal and submerged lands surrounding the Islands (approximately 540 acres) are not included in these totals. Refer to Section IV.A, Land Use and Land Use Planning, p. IV.A.11, for further discussion of the Tidelands Trust and the Exchange Agreement.

[15] BKF, Treasure Island Redevelopment - Treasure Island and Yerba Buena Island Land Area Exhibits, January 15, 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.

Generally, with the Exchange Agreement, there would be no inconsistencies between the Proposed Project land uses subject to the Tidelands Trust since the proposed Development Plan would be required to conform with the Tidelands Trust and Public Trust Exchange Agreement. However, TIDA must review all uses on Tidelands Trust lands within its jurisdiction for compliance with the Tidelands Trust and TIDA policies, a requirement which is also reflected in the *Design for Development*. Compliance also will depend on factors specific to the proposed use, such as the mix of uses, project design, fill requirements, or whether the use is within a property or district listed on the National Register of Historic Places. TIDA would make such determinations on a building-by-building basis. BCDC would also be responsible for the portions of the exchange that are within its jurisdiction.

F. FEDERAL PLANS AND POLICIES

COASTAL ZONE MANAGEMENT ACT

The authority to evaluate projects conducted, funded, or permitted by the Federal Government is granted to coastal states through the Federal Coastal Zone Management Act ("CZMA") of 1972, United States Code, Section 3501 *et seq.*, as amended. The CZMA requires that Federal actions be consistent to the maximum extent practicable with federally approved state coastal plans. Federal actions requiring CZMA consistency findings would include any permits issued by the U.S. Army Corps of Engineers where required. The coastal management plans applicable to the Proposed Project are the *San Francisco Bay Plan (*discussed above) and the *Bay Area Seaport Plan*. The *Bay Area Seaport Plan*, adopted in 1982, is a document jointly prepared by BCDC and MTC in response to State law that requires the addition of a maritime element to MTC's adopted regional transportation plan. As Federally owned properties, Treasure Island and Yerba Buena Island are not addressed in the *Bay Area Seaport Plan*.

U.S. ARMY CORPS OF ENGINEERS

Construction of the Ferry Terminal at Treasure Island would require a permit from the U.S. Army Corps of Engineers ("Corps") under the Rivers and Harbors Act or the Clean Water Act. Pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401), the Corps regulates the construction of structures in, over, or under, excavation of material from, or deposition of material into "navigable waters." Section 404 of the Federal Clean Water Act ("CWA") (U.S.C. 1251 *et seq.*) prohibits the discharge of dredged or fill material into waters of the U.S., including wetlands, without a permit from the Corps. The Corps has worked collaboratively with regional and local agencies to implement its policies through the Long-Term Management Strategy Plan for dredged materials in the Bay, which is discussed below. Detailed information regarding permit requirements is discussed in Section IV.M, Biological Resources. As part of permitting, the Corps would be required to consult with other Federal agencies,

including the Federal Emergency Management Agency, U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration Fisheries, as determined necessary.

LONG-TERM MANAGEMENT STRATEGY MANGEMENT PLAN[16]

Historically, dredged material from navigation channels in San Francisco Bay was disposed of throughout the Bay. Beginning in the early 1970s, disposal was limited to a few State and federally designated sites, with most material taken to a site near Alcatraz Island, approximately 2.25 miles west of Treasure Island. Due to increased concerns about the amount of mounding of dredged materials and effects on navigation, fishing, and ecological resources in the Bay, the Corps, San Francisco Bay RWQCB, BCDC, and the State Water Resources Control Board developed a Long-Term Management Strategy ("LTMS") plan to address the need for improved management and alternative disposal options for dredged materials in the San Francisco Bay region. The *LTMS Management Plan* provides specific mechanisms to ensure that existing laws and regulations concerning disposal of dredged materials in the Bay are consistently applied and coordinated. The goals of the *LTMS Management Plan* are to manage dredging and disposal in an economic and sound manner; to maximize beneficial use of dredged material; and to develop a coordinated permit application review process for dredging and disposal projects. The RWQCB *Regional Water Quality Control Plan* and the BCDC *Bay Plan* have been amended to incorporate the strategies and recommendations of the *LTMS Management Plan.*

The *LTMS Management Plan* planning area includes Treasure Island and Yerba Buena Island and encompasses those portions of the nine Bay Area counties that surround San Pablo Bay, San Francisco Bay, the Delta, and their tributary waterways. Disposal of dredged materials for construction of the Proposed Project would be required to comply with the *LTMS Management Plan,* as discussed in Section IV.O, Hydrology and Water Quality. No potential conflicts of the Proposed Project with the *LTMS Management Plan* have been identified.

[16] U.S. Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board, San Francisco Bay Conservation and Development Commission, and State Water Resources Control Board, *Final Long-Term Management Plan*, 2001.