CHAPTER 1  PURPOSE AND NEED

1.1  INTRODUCTION

The San Francisco Bay Area Water Emergency Transportation Authority (WETA) is proposing to expand berthing capacity at the Downtown San Francisco Ferry Terminal (Ferry Terminal), located at the San Francisco Ferry Building (Ferry Building), to support existing and future planned water transit services operated by WETA and WETA’s emergency operations, as detailed in WETA’s Implementation and Operations Plan (IOP) (WETA, 2003b). The Downtown San Francisco Ferry Terminal Expansion Project (or project) would include phased construction of three new gates and overwater berthing facilities, in addition to supportive landside improvements, such as additional passenger waiting and queuing areas, circulation improvements, and other water transit-related amenities. The new gates and other improvements would be designed to accommodate future planned water transit services between Downtown San Francisco and Antioch, Berkeley, Martinez, Hercules, Redwood City, Richmond, and Treasure Island, as well as emergency operation needs.

WETA and the Federal Transit Administration (FTA) have prepared this Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and Record of Decision (ROD) to address the environmental effects of the proposed Ferry Terminal improvements. These agencies have prepared this EIS/EIR and ROD in accordance with the National Environmental Policy Act (NEPA) of 1969, 42 United States Code Section 4321 et seq.; the Council on Environmental Quality (CEQ) regulations for implementing NEPA, 40 Code of Federal Regulations (CFR), Parts 1500-1508; Public Law 112-141, 126 Statute 405, Section 1319(b); the California Environmental Quality Act (CEQA) of 1970, California Public Resources Code, Section 21000 et seq., as amended; the Guidelines for Implementation of CEQA, Title 14, California Code of Regulations, Section 15000 et seq.; and FTA guidelines. The FTA is the NEPA lead agency, and WETA is the CEQA lead agency. The project includes two alternatives: the No Action Alternative and the Action Alternative under NEPA guidelines (No Project and Project under the CEQA guidelines), as described in detail in Chapter 2.0.

1.2  PROJECT LOCATION AND PROJECT AREA MAP

The Ferry Terminal is located in the northeastern section of San Francisco, California situated at the foot of Market Street at The Embarcadero (see Figure 1-1 for project location and project area). The project area, surrounding the Ferry Building, encompasses property managed in the public trust by the Port of San Francisco (Port) from the south side of Pier 1 to the north side of Pier 14 from the Embarcadero Promenade to San Francisco Bay.

The project area serves as an important public space in San Francisco. It contains a mix of commercial, office, and retail uses, including the Ferry Building marketplace, and is also an active hub for water transit. Three water transit services operate from four gates in the project area: Gates B, C, D, and E. Bounded by San Francisco Bay to the east and downtown to the west, the project area is surrounded by a mix of open spaces and passive recreation areas such as waterfront walkways, plazas, and public piers. Although the waterfront has changed substantially over time, the project area and its vicinity are modern and active, as well as reflective of their history. The project area is located within the boundaries of two historic districts (the Central Embarcadero Piers Historic District and Embarcadero Historic District), and individually significant historic structures are located within or adjacent to the project area—the Ferry Building, the Agriculture Building, and Pier 1.

1.3  PURPOSE OF THE PROPOSED PROJECT

The purpose of the project is to support existing and future planned water transit services operated by WETA on San Francisco Bay, as established by WETA (formerly known as the Water Transit Authority [WTA]) in its IOP (WETA, 2003b), and in accordance with City and County of San Francisco and regional policies to encourage transit use. Furthermore, the project would address deficiencies in the transportation network that impede water transit operations, passenger access, and passenger circulation at the Ferry Terminal, as described in this chapter. The project objectives include:
Accommodate WETA’s projected increase in water transit ridership and related vessel arrivals and departures from the Ferry Terminal;

- Provide a viable alternative mode of transportation that accommodates projected increases in transbay trips, and helps alleviate congestion over the San Francisco Bay Bridge and through the San Francisco Bay Area Rapid Transit (BART) Transbay Tube;

Address WETA and the Port’s emergency operation needs;

- Establish a circulation plan and improved signage that provides clear pedestrian routes for vessel to bus and vessel to rail transfers, as well as safe routes for bikes, emergency vehicles, and delivery trucks to enter, park and exit the area;

- Provide necessary landside improvements, such as designated weather-protected areas for waiting and queuing, ticket machines and fare collection equipment, improved lighting, and improved boarding and arrival/departure information to serve water transit passengers and to enhance the Ferry Terminal as the central hub for water transit services on San Francisco Bay; and

Enhance the area’s public access and open space with design features that create attractive, safe daytime and nighttime public spaces for both water transit passengers and other users of the Ferry Building area.

1.4 PROJECT BACKGROUND

1.4.1 San Francisco Bay Area Water Emergency Transportation Authority

WETA (formerly WTA) is a local agency with multi-county jurisdiction which was created through Senate Bill 428, enacted in October 1999, to plan and operate new and expanded water transit service and related ground transportation for the San Francisco Bay Area. In October 2007, Senate Bill 976 replaced WTA with WETA and expanded WETA’s duties to include the coordination of emergency activities of all water transportation and related facilities within the San Francisco Bay Area region, except those provided or owned by the Golden Gate Bridge, Highway, and Transportation District (SB 976, 2007).

WETA’s mission is to design, build, and operate a seamless transit system that responds to the region’s congestion management needs, develops innovative environmental solutions for vessels, contributes to economic vitality and improves quality of life.

1.4.2 WETA Planning Efforts

WETA’s IOP presents a strategy to improve San Francisco Bay Area transit service with an environmentally friendly water transit system (WETA, 2003b).

In line with the IOP, WETA is currently undertaking a comprehensive expansion of water transit service in the San Francisco Bay Area, including:

- Improving service on existing water transit routes and adding up to seven future planned routes (Downtown San Francisco to Antioch, Berkeley, Martinez, Hercules, Redwood City, Richmond, and Treasure Island);

- Delivering new vessels that are ten times cleaner than existing vessels and 85 percent better than the U.S. Environmental Protection Agency's emissions standards for 2007 marine engines;

- Providing better, more convenient landside connections to water transit services that will enhance ridership; and

- Expanding facilities at the Ferry Terminal to support WETA’s planned expansion of water transit service on San Francisco Bay.
Note: The America's Cup project has removed all of Pier 1/2 and will remove the building located on Pier 2 prior to project construction.

The planned expansion focuses on delivering new routes and facilities with identifiable funding sources, such as new bridge toll revenues from Regional Measure 2 (RM-2), local sales tax measures (San Francisco, Contra Costa and San Mateo counties), federal grants, and fare box revenues. WETA is expecting to receive RM-2 funds for the proposed improvements at the Ferry Terminal. RM-2 funds are generated from an initiative approved by voters on March 2, 2004. This initiative earmarks a $1.00 increase in tolls on the region’s seven state-owned toll bridges to address congestion in the transbay bridge corridors. In addition to RM-2 funding, WETA is requesting assistance to fund the project from the FTA and from the state of California through Proposition 1B, the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by California voters on November 7, 2006, authorizing over $19.9 billion in bonds to be issued and sold for highway and transit improvements that provide mobility improvements in highly traveled or highly congested corridors in all regions of California.

In 2009, WETA adopted the Emergency Water Transportation System Management Plan, which established how WETA will use regionalized public and private assets to coordinate emergency water transportation services on San Francisco Bay when the need arises, and manage the restoration of normal water transit services. The Plan reflects best emergency management practices drawn from national, state, and local frameworks and is intended to provide WETA with guidance on the concept of emergency operations, incident management, pre-emergency planning, response phase, recovery phase, and non-emergency operations (WETA, 2009). The Emergency Water Transportation System Management Plan and Ferry Terminal emergency staging constraints identified in Section 1.5.4 were considered in developing the project alternatives.

1.4.3 Program EIR for the Implementation and Operations Plan

WETA prepared a Program EIR that addressed the potential environmental impacts and associated mitigation measures resulting from the expansion of the network of water transit service defined in the IOP (WETA, 2003a). The Program EIR analyzed, at a program level, the cumulative impacts of the development of additional routes, and assumed that project-level environmental review would be undertaken for the development of new or expansion of existing Ferry Terminal facilities to adequately address site-specific issues.

The primary purpose of WETA’s IOP is to increase regional mobility and transportation options by providing new and expanded water transit services and ground transportation terminal access in the San Francisco Bay Area. The Program EIR evaluated five alternatives in detail for providing water transit service. The alternatives varied in routes and service frequencies. In addition, the Program EIR describes six other alternatives not involving water transit that were considered but eliminated from further consideration, based on considerations including cost, feasibility, and environmental effects. These other alternatives included expansion of other types of transit, such as bus and rail, and implementation of demand management or smart growth strategies to achieve comparable improvements in regional mobility.

The “Proposed Project” in the Program EIR (Program proposed project) was adopted by WETA as its IOP. The Program proposed project provides expanded ferry service and associated land-side improvements to be implemented in phases over an approximately 10-year period. Although the IOP does not represent a precisely fixed set of routes and terminal sites, the Program proposed project is based on the anticipated routes and terminals that would result from implementation of the IOP, including expansion of existing services and development of seven new routes. The Program proposed project included improvements to the existing services between San Francisco and Oakland, Alameda, Harbor Bay, Vallejo, Larkspur, Sausalito, and Tiburon, as well as development of new routes between San Francisco and Berkeley, Richmond, Treasure Island, Antioch/Pittsburg, Martinez, Hercules/Rodeo, South San Francisco, and Redwood City. Additional details of the Program proposed project—including descriptions of how the new routes would be selected, terminal design considerations, system navigation, and safety—are described in WETA’s IOP (WETA, 2003b).
Both NEPA and CEQA encourage the incorporation of previous analysis by reference in environmental
documents to reduce redundancy and reevaluation of project issues. The NEPA CEQ regulations require
federal agencies “to the fullest extent possible to reduce duplication between NEPA and state and local
requirements” (40 CFR Section 1506.2(b)). CEQ regulations (40 CFR Sections 1500.4 and 1502.21) also
state that agencies shall incorporate material by reference when the effect will be to reduce bulk without
impeding agency and public review of the project alternatives. The incorporated material shall be cited,
and its content summarized. Under CEQA, incorporation by reference is authorized (California Public
Resources Code, Sections 21093 and 21094; State CEQA Guidelines Section 15150).

Because the purpose of the Downtown San Francisco Ferry Terminal Expansion Project is to support the
existing and future planned water transit services, as established by WETA in its IOP, portions of the
Program EIR analysis that are relevant to the project are incorporated by reference and summarized in
Appendix E. The relevant portions of the Program EIR incorporated by reference include the summary of
alternatives considered, and a summary of impacts and mitigation identified for the Program. The
relationship of the Program impacts to this project is indicated in Appendix E.

1.4.4 Regional Transportation Plan

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments
(ABAG) adopted Plan Bay Area in July 2013 (ABAG and MTC, 2013). The plan serves as the Regional
Transportation Plan (RTP) and specifies how anticipated federal, state, and local transportation funds will
be spent in the nine-county Bay Area until 2040. The Plan incorporates regional transportation and land
use planning, and supersedes the previous RTP that was adopted in 2009 (MTC, 2009). The expansion of
WETA’s services, and specifically the Downtown San Francisco Ferry Terminal Expansion Project, are
included in the RTP, and were included in the analysis in the EIR for the RTP.1 The EIR for the RTP
analyzed the proposed plan, as well as five other alternatives, including the No Project Alternative. Plan
Bay Area represents a transportation and land use blueprint of how the Bay Area addresses its
transportation mobility and accessibility needs, land development, and greenhouse gas emissions
reduction requirements through the year 2040. It includes a financially constrained transportation
investment plan with projects and programs that would be funded through existing and future revenues
that are projected to be reasonably available to the region until 2040. Plan Bay Area includes investments
in the region’s transportation network that support job growth and new homes in existing communities.

FTA regulations link regional transportation planning efforts and environmental assessment requirements
to ensure consistency and reduce redundancy in the evaluation of regional alternatives in transportation
plans and project-level NEPA documents (23 CFR § 430.318; 23 CFR Part 450, Appendix A). These
regulations authorize the use of regional transportation planning studies as part of the overall project
development process consistent with NEPA. The RTP evaluated transportation alternatives at a regional
level to address the mobility needs of the region, and concluded that the expansion of water transit service
as reflected in WETA’s IOP was necessary to achieve the region’s mobility and land use objectives.

1.4.5 Current Water Transit Service at the Ferry Terminal

Prior to construction of the San Francisco Bay Bridge and Golden Gate Bridge in the 1930s, the San
Francisco Bay Area’s population was about a quarter of what it is at present. During that time, water
transit services on San Francisco Bay carried 15 times the number of passengers carried today, accounting
for up to 50 million passenger trips per year. At the peak of this era, there were more than 320 ferry
arrivals and departures at the Ferry Building per day (carrying more than 250,000 passengers), connecting
with streetcar arrivals and departures at the Ferry Building approximately every 90 seconds. The opening
of the San Francisco Bay Bridge and the Golden Gate Bridge in 1936 and 1937, respectively, along with

1 The Downtown San Francisco Ferry Terminal Expansion Project is project 22006 in the RTP.
mass use of the automobile, eventually rendered the daily commute to San Francisco by water transit obsolete (Ferry Building, 2010).

Water transit today is a small but growing part of the San Francisco Bay Area’s transportation network. Although it carries only a fraction of the total San Francisco Bay Area travelers, approximately 3 to 4 million passenger trips per year, water transit plays a meaningful role in reducing congestion and providing mobility in the key transbay bridge corridors throughout the San Francisco Bay Area. Six water transit routes currently serve the Ferry Terminal, as shown in Table 1-1. Today, the Ferry Terminal accommodates approximately 130 weekday arrivals and departures serving more than 10,000 water transit passengers (MTC, 2007). In addition to supporting water transit services, the Ferry Terminal area also serves as an important public space in San Francisco.

<table>
<thead>
<tr>
<th>Operator</th>
<th>Route</th>
<th>Hours of Service</th>
<th>Peak Period Frequency</th>
<th>Current Daily Ridership</th>
<th>AM Peak Period Ridership</th>
<th>AM Peak Period Arrivals</th>
</tr>
</thead>
<tbody>
<tr>
<td>WETA</td>
<td>Alameda/Oakland-San Francisco</td>
<td>6:30 AM-8:25 PM</td>
<td>65 minutes</td>
<td>1,500</td>
<td>250</td>
<td>3</td>
</tr>
<tr>
<td>WETA</td>
<td>Alameda Harbor Bay-San Francisco</td>
<td>6:55 AM-7:35 PM</td>
<td>60 minutes</td>
<td>660</td>
<td>295</td>
<td>3</td>
</tr>
<tr>
<td>WETA</td>
<td>Vallejo-San Francisco</td>
<td>6:35 AM-7:05 PM</td>
<td>25-60 minutes</td>
<td>2,330</td>
<td>560</td>
<td>4</td>
</tr>
<tr>
<td>Golden Gate Transit</td>
<td>Larkspur-San Francisco</td>
<td>6:20 AM-9:35 PM</td>
<td>30-45 minutes</td>
<td>4,615</td>
<td>1,235</td>
<td>5</td>
</tr>
<tr>
<td>Golden Gate Transit</td>
<td>Sausalito-San Francisco</td>
<td>7:35 AM-7:55 PM</td>
<td>70 minutes</td>
<td>1,442</td>
<td>200</td>
<td>2</td>
</tr>
<tr>
<td>Blue &amp; Gold Fleet</td>
<td>Tiburon-San Francisco</td>
<td>6:20 AM-7:15 PM</td>
<td>50-60 minutes</td>
<td>629</td>
<td>280</td>
<td>4</td>
</tr>
<tr>
<td>Total (all services)</td>
<td></td>
<td></td>
<td></td>
<td>11,176</td>
<td>2,820</td>
<td>21</td>
</tr>
<tr>
<td>Total (WETA berths)</td>
<td></td>
<td></td>
<td></td>
<td>5,119</td>
<td>1,385</td>
<td>14</td>
</tr>
</tbody>
</table>

Notes:
1 Hours of service denotes first arrival to and last departure from the Ferry Terminal.
2 AM peak period reflects Weekday AM peak from approximately 6:30 AM-9 AM.
3 Totals for WETA berths include those services that operate from Gate B and Gate E. This includes the services operated by WETA as well the Blue & Gold Fleet Service to Tiburon.

WETA = Water Emergency Transportation Authority

1.4.6 Project Area History

In 1968, the responsibilities for the San Francisco waterfront, including the project area, were transferred from the state to the City and County of San Francisco through the Burton Act. As a condition of the transfer, the state required the City of San Francisco to create a Port Commission that would have the authority to manage the San Francisco waterfront in the public trust for the citizens of California. The Port is currently responsible for managing the 7.5 miles of San Francisco Bay shoreline, extending from Hyde Street Pier in the north to India Basin in the south. The Port's responsibilities include promoting
Water Emergency Transportation Authority
Downtown San Francisco Ferry Terminal Expansion Project EIS/EIR

1.0 Purpose and Need

The Port is responsible for any and all land-use improvements in the project area, including those improvements proposed as a part of the project. The Port has adopted several plans and policies to guide development along the waterfront, such as the Waterfront Land Use Plan and the Waterfront Land Use Plan Design and Access Element. Compliance with these plans and policies is a part of the Port’s lease approval and design review processes.

In the 1990s, the Port initiated a comprehensive land use planning process that identified near-term and long-term improvements that should be made to the Ferry Terminal. The planning process, summarized in the project’s Concept Design – Stage I Final Report (Port, 1994), addressed deficiencies in the circulation of pedestrians across The Embarcadero and through the Ferry Building, constraints imposed by previous design modifications of the Ferry Building that obscured wayfinding to the gates, limited opportunities for public gathering and access to San Francisco Bay, and restricted commercial development within the building. In response to these deficiencies, the Port embarked on a series of near-term improvements that had available funding. These improvements were implemented through Phase I of the project. During these planning efforts, a variety of design, configuration, and circulation improvements were considered. They are described in more detail in Chapter 2.0 of this EIS/EIR.

The Port conducted an environmental analysis of the Phase I improvements in the San Francisco Downtown Ferry Terminal Environmental Assessment (NEPA) and Negative Declaration/Initial Study (CEQA) (SF Planning et al., 1997), and obtained a permit from the San Francisco Bay Conservation and Development Commission to implement these improvements in 1998 (BCDC, 1998). Construction of Phase I was completed by the Port in 2003, including the construction of new piers to accommodate Alameda Harbor Bay, Alameda/Oakland, Tiburon, and Vallejo operations in 2003 (Gates B and E). Not all of the Phase I improvements identified and analyzed in the environmental document were constructed at that time due to funding availability. In addition, the planning process that resulted in the Phase I improvements identified long-term future improvements that could be made (Phase II).

As part of separate initiatives during the same time period, the Port undertook and completed improvements to the street design and pedestrian crossing of The Embarcadero in front of the Ferry Building (Harry Bridges Plaza) as part of the Mid-Embarcadero Transportation and Open Space Project and undertook the historic restoration and adaptive reuse of the Ferry Building. Restoration involved a public-private collaboration that redeveloped the historic landmark building into a mixed-use property with a public food market on the ground floor and premier quality office space on the upper floors while continuing its historic role as a transportation hub (Ferry Building, 2010).

1.4.7 Ferry Building Area Planning and Development Program

Building on the improvements already completed in and around the Ferry Building, the Port is considering additional improvements to the Ferry Building area as part of a larger planning and development program for the entire area. This program includes elements of the WETA project (as described in Chapter 2.0 of this EIS/EIR), as well as other improvements unrelated to the expansion of water transit service, such as future rehabilitation and reuse of the Agriculture Building, public access and open space enhancements, development of a comprehensive circulation plan, and coordination with BART to implement safety improvements needed in project vicinity.

While the WETA project described in this EIS/EIR would contribute to the Port’s larger planning and development program for the Ferry Building area, WETA and the Port have separate overall responsibilities and goals relating to improvements in the area. WETA and the Port entered into a Memorandum of Understanding that establishes each agency’s roles and responsibilities for
improvements in the Ferry Building area and establishes a coordinated planning process for implementing
design and environmental review for projects in the Ferry Building area. The Memorandum of
Understanding defines which elements of the Ferry Building area improvements would be the
responsibility of each agency. WETA would be responsible for the waterside and landside improvements
related to the expansion of water transit service as described in this EIS/EIR. The Port would be
responsible for other elements not related to the expansion of water transit service, such as rehabilitation
and reuse of the Agriculture Building, which would undergo separate environmental review processes
when the Port proposes to implement those projects (WETA, 2010).

1.5 NEED FOR THE PROPOSED PROJECT

1.5.1 Regional Growth and Transbay Capacity Constraints

Between now and 2040, the Bay Area is expected to gain 2.1 million residents and 1.1 million jobs
(ABAG and MTC, 2013). Downtown San Francisco will remain one of the primary employment centers
of the region. The MTC’s Bay Area Toll Authority estimates that the Bay Bridge corridor will experience
growth in the number of daily person trips, increasing from 486,000 trips in 2010 to 644,000 in 2035
(BATA, 2011); vehicular traffic is projected to increase from 247,500 vehicles per day in 2010 to 309,000
vehicles per day in 2035 (BATA, 2011). MTC estimates transbay transit ridership will also grow.

In 2010, transit carried approximately 175,600 BART passengers, 9,990 Alameda Contra Costa Transit
(AC Transit) bus passengers, and 500 water transit passengers between the East Bay and San Francisco
(BATA, 2011). By 2035, transit trips across the Bay Bridge corridor would be expected to increase
44 percent, to approximately 272,800 total trips per day (BATA, 2011).

The projected increased in transbay trips will result in deficiencies in the transportation network as
described below.

Congestion in the I-80/Bay Bridge Corridor

This increase in transbay trips will aggravate travel delay along Interstate 80 (I-80). The California
Department of Transportation’s 2002 Bay Area Freeway Congestion Data indicates that the Eastshore
Freeway currently has a daily delay of 24,550 vehicle hours and 49.0 directional miles of congestion, which
ranks number one for vehicle delay in the regional roadway network. By 2025, the Bay Bridge is expected
to have 73,400 peak-period vehicle hours of delay, extending morning congestion at the Bay Bridge Toll
Plaza from 4 hours to nearly 5 hours (MTC, 2002). The delays on the Bay Bridge and I-80 affect goods
movement, particularly goods traveling to and from the Port of Oakland, as well as auto travel.

Bay Bridge Congestion and Bus Service

AC Transit and carpools are the major alternative means of travel across the Bay Bridge into San
Francisco, and are subject to the traffic delays discussed in the previous paragraph. Installation of high-
occupancy vehicle or bus lanes on the Bay Bridge is not currently planned; therefore, increased bus and
carpool delays can be expected through 2025.

BART Transbay Tube Capacity Constraints

BART is expected to accommodate future growth, expected to reach more than 556,000 weekday riders
system wide by 2025 (254,000 of whom would ride through the Transbay Tube), by installing train
control improvements to permit operation at closer headways, and by making other capital investments.
Still, the throughput capacity of the Market Street subway may become constrained due to increased
demand for peak period transbay service over the planning horizon. At that point, substantial capital
investments will have to be made to increase capacity in the Transbay Tube (BART, 2010).
Inadequate Transit Service to Meet Treasure Island Demand

Future transbay capacity for transit and automobiles will also be affected by the proposed redevelopment of Treasure Island, which will add an estimated 4,600 daily AM peak hour and 6,800 PM peak hour Treasure Island commuters traveling between Treasure Island and both the East Bay and San Francisco. Of these weekday peak period trips, 13 percent are expected to be water transit based, 12 percent will be bus based, and the remaining 75 percent are expected to be auto and van based (Fehr & Peers, 2010). The Treasure Island peak travel demands coincide with the highest volume of traffic on the Bay Bridge. Based on measures and strategies to handle the travel demand, a significant number of commuters will be reliant on transit. In terms of transit options, the San Francisco Municipal Railway currently operates three buses to Treasure Island on Route 108. With the proposed Treasure Island development, expanded San Francisco Municipal Railway bus service to San Francisco is proposed between the San Francisco Transbay Terminal and the Treasure Island Transit Hub adjacent to the Treasure Island Ferry Terminal (TICD, 2006). In this scenario, water transit would supplement bus service and would provide scheduled and emergency service unimpeded by traffic congestion or disruption on roads and highways or in tunnels.

1.5.2 Water Transit Operations, Circulation and Access Constraints at the San Francisco Ferry Terminal

In 2035, the Ferry Terminal is projected to serve approximately 32,000 water transit passengers, a 300 percent increase over current ridership levels of approximately 11,200 passengers (CSI, 2011; CSI, 2012) (see Table 1-2). WETA’s 2035 ridership is expected to be approximately 25,000 passengers per weekday. The increase in ridership would be from expansion of existing services, implementation of new routes that have already been approved, and the development of new water transit routes. Approximately 38 percent of future passengers would be using existing services between San Francisco and Alameda, Oakland, and Vallejo. Approximately 20 percent WETA’s future ridership would be from planned new water transit services between San Francisco and Antioch, Berkeley, Martinez, Hercules, Redwood City, and Richmond. Approximately 42 percent of the future ridership would be expected to be from service between San Francisco and Treasure Island, a service that is anticipated to begin operations between 2017 and 2020. The projected ridership increases cannot be adequately accommodated at the Ferry Terminal because of the following current infrastructure, circulation, and operating deficiencies.

Insufficient Number of Gates and Berthing Facilities to Accommodate New Water Transit Service

Currently the Ferry Terminal has four gates (B, C, D, and E), two of which are used exclusively by Golden Gate Ferry (C and D). The remaining gates (B and E) to which WETA has access accommodate 14 vessel arrivals per AM peak period (see Table 1-1). The number of AM peak period arrivals for WETA services is expected to increase to 52 to 57 vessels by 2035 (see Table 1-2). Together, both gates can safely accommodate only about eight vessel arrivals per hour. Therefore, it would not be feasible to

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2 WETA’s ridership model was developed in 2002, and is linked to the regional travel forecasting model maintained by the MTC, and to socioeconomic data forecasts published by ABAG. The WETA model was updated in 2011 to include the most recent data available from the MTC and ABAG for year 2035. In the 2002 ridership model, it was estimated that future (2025) weekday daily ridership at the Ferry Terminal (for all services, including non-WETA–operated services) would be approximately 35,000 passengers. The updated ridership model estimates that in 2035, average weekday daily ridership at the Ferry Terminal would be approximately 32,000 passengers. These estimates are presented in Table 1-2. The future ridership estimates for some services decreased from what was predicted in 2002, and the projected ridership of other services increased from the 2002 estimates. The WETA model is documented in the Draft Final Working Paper Ridership Model Calibration and Validation for the Water Transit Authority, and Draft Final WETA Model Update and Validation Report, both of which are available from WETA (CSI, 2011; CSI, 2012).

3 For the purposes of this Environmental Impact Statement/Environmental Impact Report, the Blue & Gold Fleet service to Tiburon is included in the totals presented for “Water Emergency Transportation Authority services,” because the Blue & Gold Fleet service to Tiburon shares Gate B with the Water Emergency Transportation Authority.
### Table 1-2
Estimated 2035 Water Transit Ridership

<table>
<thead>
<tr>
<th>Operator</th>
<th>Route</th>
<th>Maximum Peak Period</th>
<th>Daily Ridership</th>
<th>AM Peak Period Ridership</th>
<th>PM Peak Period Ridership</th>
<th>Peak Arrivals</th>
</tr>
</thead>
<tbody>
<tr>
<td>WETA</td>
<td>Alameda Harbor Bay-San Francisco</td>
<td>30 min</td>
<td>1,815</td>
<td>699</td>
<td>699</td>
<td>5</td>
</tr>
<tr>
<td>WETA</td>
<td>Alameda/Oakland-San Francisco</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alameda-SF Service</td>
<td>15 min</td>
<td>1,741</td>
<td>429</td>
<td>533</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Oakland-SF Service</td>
<td>15 min</td>
<td>3,145</td>
<td>928</td>
<td>1,153</td>
<td></td>
</tr>
<tr>
<td>WETA</td>
<td>Vallejo-San Francisco</td>
<td>30 min</td>
<td>2,289</td>
<td>945</td>
<td>920</td>
<td>5</td>
</tr>
<tr>
<td>Golden Gate Transit</td>
<td>Larkspur-San Francisco</td>
<td>20 min</td>
<td>4,634</td>
<td>1,642</td>
<td>1,642</td>
<td>5-6</td>
</tr>
<tr>
<td>Golden Gate Transit</td>
<td>Sausalito-San Francisco</td>
<td>30 min</td>
<td>1,799</td>
<td>591</td>
<td>591</td>
<td>3-5</td>
</tr>
<tr>
<td>Blue &amp; Gold Fleet</td>
<td>Tiburon-San Francisco</td>
<td>30 min</td>
<td>836</td>
<td>299</td>
<td>299</td>
<td>4-5</td>
</tr>
<tr>
<td>WETA</td>
<td>Berkeley-San Francisco</td>
<td>30 min</td>
<td>1,589</td>
<td>635</td>
<td>635</td>
<td>5</td>
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<tr>
<td>WETA</td>
<td>Hercules-San Francisco</td>
<td>60 min</td>
<td>565</td>
<td>203</td>
<td>203</td>
<td>2-3</td>
</tr>
<tr>
<td>WETA</td>
<td>Treasure Island-San Francisco</td>
<td>15 min</td>
<td>10,746</td>
<td>2,395</td>
<td>3,087</td>
<td>10</td>
</tr>
<tr>
<td>WETA</td>
<td>Richmond-San Francisco</td>
<td>30 min</td>
<td>1,715</td>
<td>647</td>
<td>647</td>
<td>5</td>
</tr>
<tr>
<td>WETA</td>
<td>Martinez-San Francisco</td>
<td>60 min</td>
<td>614</td>
<td>244</td>
<td>244</td>
<td>2-3</td>
</tr>
<tr>
<td>WETA</td>
<td>Antioch-San Francisco</td>
<td>60 min</td>
<td>445</td>
<td>193</td>
<td>193</td>
<td>2-3</td>
</tr>
<tr>
<td>WETA</td>
<td>Redwood City-San Francisco</td>
<td>60 min</td>
<td>214</td>
<td>93</td>
<td>93</td>
<td>2-3</td>
</tr>
<tr>
<td><strong>Total (all services)</strong></td>
<td></td>
<td></td>
<td><strong>32,147</strong></td>
<td><strong>9,943</strong></td>
<td><strong>10,939</strong></td>
<td><strong>60-68</strong></td>
</tr>
<tr>
<td><strong>Total (WETA services)</strong></td>
<td></td>
<td></td>
<td><strong>25,714</strong></td>
<td><strong>7,710</strong></td>
<td><strong>8,706</strong></td>
<td><strong>52-57</strong></td>
</tr>
</tbody>
</table>

Source: CSI, 2011; Fehr & Peers, 2010; Fehr & Peers, 2011

Notes:
1. The AM peak period is from 6:30 AM to 9:00 AM. Ridership reflects passengers arriving as well as departing. During the AM peak period, 96 percent of passengers would be arriving at the Ferry Terminal.
2. The PM peak period is from 4:00 PM to 6:30 PM. The PM peak period ridership estimates are based on actual data for existing routes and are assumed to be the same as the AM peak period for new services.
3. Represents the number of arrivals during each peak period: both the AM and the PM.
4. For the purposes of this Environmental Impact Statement/Environmental Impact Report, the Blue & Gold Fleet service to Tiburon is included in the totals presented for “WETA services,” because the Blue & Gold Fleet service to Tiburon shares Gate B with WETA.

WETA = Water Emergency Transportation Authority
operate all new services from only the existing gates, because the additional vessel traffic would constrain
the movement of vessels operating into and out of the terminal, increase the risk of accident, and result in
arrival and departure scheduling conflicts (see Figure 1-2).

**Inadequate Waiting and Circulation Area for Passengers**

Due to expanded water transit service and increased ridership, through-flow and queuing of passengers
accessing the Ferry Terminal is expected to increase by 2035 (see Table 1-2). Passenger waiting and
queuing areas (the existing areas along the Ferry Building promenade and Gates B and E) are not
designed to effectively or safely accommodate this volume of passengers. As shown on Figure 1-3,
certain portions of the existing vessels boarding areas are structurally deficient, and are not expected to
survive a major earthquake (ROMA, 2012). There is a need to upgrade the deck and pile structures in the
Ferry Terminal area to enhance safety, and to ensure that passenger waiting and circulation areas would
not be further restricted, potentially even preventing access to the vessel boarding areas if these structures
should fail. In addition, weather protection and distinct queuing areas for passengers, an objective of the
Phase 1 of the Ferry Terminal planning effort, are not currently provided (see Figure 1-4).

**Lack of Clearly Designated Pedestrian Connectivity Linkages**

Clearly identifiable pedestrian circulation pathways and accompanying wayfinding signage between the
North Basin and South Basin gates and to bus/rail transfer points west of the Ferry Building are lacking.
Existing passenger circulation bottlenecks are created because of the poorly defined pedestrian pathways
and the constrained space along some of those pathways (see Figure 1-5). In some areas of the Ferry
Building, there are conflicts between pedestrian circulation and movement of service delivery vehicles
attempting to access loading areas for the businesses located in the Ferry Building.

**1.5.3 Air Quality Management Issues**

According to the Bay Area Air Quality Management District, the region is currently in non-compliance
for ozone and particulate matter 2.5 microns in diameter or less (PM$_{2.5}$) under federal air quality standards
and in non-compliance for ozone, PM$_{2.5}$, and particulate matter 10 microns in diameter or less (PM$_{10}$)
under state standards (BAAQMD, 2010). The regional performance objectives for the Bay Area call for
reductions in daily vehicle miles traveled by 10 percent, PM$_{2.5}$ emissions by 10 percent, PM$_{10}$ emissions
by 30 percent, and reductions in per-capita carbon dioxide emissions from cars and light-duty trucks by
15 percent (ABAG and MTC, 2013).

Cross-bay water transit service can support San Francisco Bay Area air quality goals by encouraging a
shift from vehicle to water transit usage. The WETA IOP Program EIR, which analyzed increased
regional water transit service, found that an expanded water transit system would result in a net decrease
in nitrous oxide (an ozone precursor), carbon monoxide, and PM$_{10}$ (WETA, 2003a).

**1.5.4 Disaster Response and Recovery**

Water transit provides a viable alternative for transporting people around the region when unexpected
and long-term disruption renders other components of the regional transportation system inoperable.
Disastrous events that have disrupted the transportation system have occurred several times during the
past 25 years. For instance, after the Loma Prieta earthquake damaged the San Francisco Bay Bridge,
water transit service using excursion vessels was established to supplement BART service between the
East Bay and San Francisco.

In the event of a disaster, WETA will provide emergency water transportation services during the
response phase, and then restore basic water transit services during the recovery phase of a disaster as
Note: The America's Cup project has removed all of Pier 1/2 and will remove the building located on Pier 2 prior to project construction.

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described in the WETA Transition Plan (WETA, 2009). During the response phase, WETA will work to effectively communicate, coordinate with other agencies, set and meet objectives and timeframes, and plan its activities by abiding by procedural best practices recognized by local, state, and federal emergency response organizations.

According to the San Francisco Bay Area Regional Emergency Coordination Plan, in the event of a major catastrophe, such as a 7.9 magnitude earthquake on the San Andreas Fault, it is estimated that approximately 296,200 people from San Francisco County will require mass transportation assistance within the first three days of the event (Cal EMA et al., 2010). In its Preliminary Design Concept Plan, WETA estimates that additional gates will be needed to accommodate the substantial number of evacuees in the event of a major catastrophe (ROMA, 2012). In addition to the Golden Gate Ferry gates, five WETA-operated gates could board 9,000 evacuees per hour. Currently, the two existing WETA gates have the capacity to board less than half that number of evacuees per hour.

The limited availability of berthing facilities will be further constrained by the lack of available staging areas to assemble, queue, and board crowds of evacuees. Evacuees would be directed into boarding queues, and as vessels are boarded and depart, subsequent evacuees from The Embarcadero, the adjacent promenades, or the Ferry Building and other nearby areas would queue to board vessels (ROMA, 2012). This movement of people attempting to access South Basin gates would be constrained by the open water (lagoon) south of the Ferry Building. Similarly, the limited circulation area north of the Ferry Building will impede staging and access to North Basin gates (see Figure 1-6). To accommodate the volume of people accessing gates during emergencies, the circulation area surrounding the Ferry Building will need to be expanded with new decking built over open water to Essential Facilities’ standards.

For the recovery phase, WETA will work towards restoration of normal, pre-emergency water transit services within three days after the disaster. In the event that bridges, highways, and other transportation facilities become inoperable, WETA may provide additional or expanded service (WETA, 2009).

1.6 PURPOSE OF THE EIS/EIR DOCUMENT

The purpose of the EIS (as required by NEPA) and EIR (as required by CEQA) is to describe, analyze, and compare the potential environmental impacts of the project alternatives and their implementation. FTA is the federal lead agency under NEPA, and WETA is the local lead agency under CEQA for the joint NEPA (EIS)/CEQA (EIR) document. The EIS/EIR analysis is considered as part of the decision-making process.

The EIS/EIR also provides information on the methodologies and assumptions used for the analyses. It proposes mitigation measures that can minimize the effect of adverse impacts, and may also include consideration of other decision factors such as costs, technical feasibility, agency statutory mission, project purpose and need, and study goals and objectives.

When the Draft EIS/EIR is published, agencies and the general public have the opportunity to review and comment on the Draft EIS/EIR during a formal comment period, which is required for a minimum of 45 days. Public hearings may be held during the comment period. The public comment period begins upon publication of a Notice of Availability for the Draft EIS/EIR.

During the review period, public comments are recorded, and FTA and WETA prepares responses to the comments, which are then incorporated into the Final EIS/EIR. Refer to Chapter 5.0 for details of public and agency involvement for this project. Appendix F contains the comments received on the Draft EIS/EIR, as well as responses to those comments.

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4 As defined by the California Building Code 2010 and International Building Code 2009, Essential Facilities are buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind, snow, or earthquakes.
In addition to revisions in the text that correspond to the comments received, the Final EIS/EIR identifies the lead agency’s preferred alternative and the reasons for selecting this alternative. This document also serves as FTA’s ROD, which notifies the public of the alternative that the agency has selected to be carried forward for more detailed engineering and design and the rationale for that decision. WETA, the local lead agency under CEQA, can certify the EIR after the Final EIS/EIR is published.
Note: The America's Cup project has removed all of Pier 1/2 and will remove the building located on Pier 2 prior to project construction.
