Volume 1
Draft Environmental Impact Report

&

San Francisco Planning Department Case No. 2010.0493E
State Clearinghouse No. 2011022040

Draft EIR Publication Date: July 11, 2011
Draft EIR Public Hearing Date: August 11, 2011
Draft EIR Public Comment Period: July 11, 2011 – August 25, 2011

Written comments should be sent to the
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TO: Distribution List for the 34th America's Cup and James R. Herman Cruise Terminal and Northeast Wharf Project EIR

FROM: Bill Wycko, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the 34th America's Cup and James R. Herman Cruise Terminal and Northeast Wharf Project (Case No. 2010.0493E)

This is the Draft of the Environmental Impact Report (EIR) for the 34th America's Cup and James R. Herman Cruise Terminal and Northeast Wharf Project. 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 entitled "Comments and Responses," which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments, along with copies of the letters received and a transcript of the public hearing. The Comments and Responses document may also specify changes to this Draft EIR. Public agencies and members of the public 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 such copies and notice on 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 then 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 Environmental Impact Report. 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 rather than two documents. 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 document 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 compact disk (CD), 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.

Volume 1
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The 34th America's Cup
&
James R. Herman Cruise Terminal and Northeast Wharf Plaza

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LIST OF ABBREVIATIONS AND ACRONYMS

ABAG	Association of Bay Area Governments
AB32	California Global Warming Solutions Act (California Assembly Bill 32)
AB939	California Integrated Waste Management Act of 1989 (California Assembly Bill 939)
AC34	The 34th America's Cup event
AC45	45-foot long sailing yachts used in America's Cup 2012 events
AC72	72-foot long sailing yachts to be used in America's Cup 2013 events
ACCS	America's Cup Challenger Series
ACDS	America's Cup Defender Series
ACHP	Advisory Council on Historic Preservation
ACWS	America's Cup World Series
ACOC	America's Cup Organizing Committee
ACRM	America's Cup Race Management
ASCE	American Society of Civil Engineers
AC Transit	Alameda-Contra Costa Transit
ADA	Americans with Disabilities Act
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AISC	American Institute of Steel Construction
APE	Area of Potential Effects
APS	alternative planning strategy
asl	above sea level
ASTM	American Society for Testing and Materials
AWL	Audobon Watch List
BASMAA	Bay Area Stormwater Management Agencies Association
BAT	best available technology economically achievable
BCT	best conventional pollutant control technology

BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit District
BCDC	San Francisco Bay Conservation and Development Commission
BMPs	best management practices
BPI	Building Performance Institute
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standard
CAFE	Corporate Average Fuel Economy
C-APE	CEQA Area of Potential Effects
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Clean Air Plan
CARB	California Air Resources Board
CBC	California Building Code
CBNMS	Cordell Bank National Marine Sanctuary
CBP	Customs and Border Protection
CCSF	City and County of San Francisco
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDPR	California Department of Parks and Recreation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CLIA	Cruise Lines International Association
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNR	Club Nautico di Roma

CNG	compressed natural gas
CO	carbon monoxide
CO_2	carbon dioxide
CO2e	carbon dioxide-equivalent
Corps	United States Army Corps of Engineers
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSLC	California State Lands Commission
CSO	combined sewer overflow
CSDR	Cruise Ship Discharge Report
CWA	Federal Clean Water Act
cy	cubic yards
CZMA	Coastal Zone Management Act
dB	decibel
dBA	decibel, A-weighted
DBI	San Francisco Department of Building Inspection
DDA	Disposition and Development Agreement
DEHP	di (2ethylhexyl) phthalate
DMMO	Dredged Material Management Office
DOT	United States Department of Transportation
DPM	diesel particulate matter
DPW	San Francisco Department of Public Works
DTSC	California Department of Toxic Substance Control
DWR	California Department of Water Resources
EDMS	Emissions and Dispersion Modeling System
EIR	Environmental Impact Report
EISA	Energy and Independence Security Act
EPA	United States Environmental Protection Agency
ERO	San Francisco Environmental Review Officer
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration

FICON	Federal Interagency Committee on Noise
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
GGBHTD	Golden Gate Bridge Highway and Transportation District
GGNRA	Golden Gate National Recreation Area
GGT	Golden Gate Transit
GGYC	Golden Gate Yacht Club
GHGs	Greenhouse gases
GIS	geographic information system
GFNMS	Gulf of the Farallones National Marine Sanctuary
gpm	gallons per minute
gsf	gross square feet
GTA	ground transportation area
GVW	gross vehicle weight
GWH	gigawatt hours
HCD	California State Department of Housing and Community Development
HCM	Highway Capacity Manual
HEPA	High Efficiency Particulate Air Filter
HFCs	hydrofluorocarbons
HMBP	hazardous materials business plan
hp	horsepower
HRER	Historical Resources Evaluation Report
HVAC	heating/ventilating/air conditioning
I-280	Interstate 280
I-80	Interstate 80
kWh	kilowatt-hours
LASH	lighter aboard ship
LEED	Leadership in Energy and Environmental Design
Leq	Equivalent Energy Noise Level
LOS	Level of Service
LTMS	Long-Term Management Strategy
LTS	less than significant
LTSM	less than significant with mitigation

LVW	loaded vehicle weight
MARPOL	International Convention for the Prevention of Pollution from Ships
MBNMS	Monterey Bay National Marine Sanctuary
MEI	maximum exposed individual
mgd	million gallons per day
mg/kg	milligram per kilogram
MHE	Maximum Historic Earthquake
MLD	most likely descendant
MLLW	mean lower low water
MMDP	Materials Management Disposal Plan
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Program
$MMTCO_2e$	million gross metric tons equivalents
MMWD	Marin Municipal Water District
MPO	metropolitan planning organization
MS4s	municipal separate storm sewer systems
MSDs	marine sanitation devices
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
MRZs	Mineral Resource Zones
Muni	San Francisco Municipal Railway
MW	megawatt
M_w	maximum earthquake moment magnitude
ng/m^3	nanograms per cubic meter
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NI	no impact
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
N_2O	nitrous oxide

NO_x	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NPS	National Park Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OAHPP	Office of Affordable Housing Production Program
OAPCA	Organotin Antifouling Paint Control Act
OHP	Office of Historic Preservation
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OWB	Open Water Basin
PCBs	polychlorinated byphenyls
PM_{10}	particulate matter (10 microns or less)
$PM_{2.5}$	particulate matter (2.5 microns or less)
PCBs	polychlorinated biphenyls
Port	Port of San Francisco
ppb	parts per billion
PPD	pounds per person per day
PG&E	Pacific Gas & Electric Company
ppm	parts per million
pphm	parts per hundred million
PPV	Peak Particle Velocity
PRC	California Public Resources Code
PWTP	Presidio Water Treatment Plant
RHNP	Regional Housing Needs Plan
RMS	route mean square
ROG	reactive organic gases
RPD	San Francisco Recreation and Park Department
RPP	Residential Parking Permit
RTPs	regional transportation plans
RWQCB	Regional Water Quality Control Board

SAFR	San Francisco Maritime National Historic Park
SamTrans	San Mateo County Transit District
SAP	Special Area Plan
SCS	sustainable communities strategy
SDC	Seismic Design Category
Secretary's Standards	Secretary of the Interior's Standards for the Treatment of Historic Properties
SEWPCP	Southeast Water Pollution Control Plant
SDYC	San Diego Yacht Club
SEL	sound exposure level
sf	square feet
SFAB	San Francisco Air Basin
SFCTA	San Francisco County Transportation Authority
SFDODS	San Francisco Deep Ocean Disposal Site
SFEI	San Francisco Estuary Institute
SFO	San Francisco International Airport
SFPUC	San Francisco Public Utilities Commission
SFFD	San Francisco Fire Department
SFMTA	San Francisco Municipal Transportation Agency
SFPD	San Francisco Police Department
SHPO	State Historic Preservation Officer
SLC	California State Lands Commission
SMARA	Surface Mining and Reclamation Act
SMCSD	Sausalito-Marin City Sanitary District
SO_2	sulfur dioxide
SPCC	Spill Prevention Control and Countermeasure
SWRCB	State Water Resources Control Board
SUD	Special Use District
SU	significant and unavoidable
SUM	significant and unavoidable with mitigation
SWL	Seawall Lot
SWPPP	Stormwater Pollution Prevention Plan
MCSTOPPP	Marin County Stormwater Pollution Prevention Program
TACs	toxic air contaminants

TAZs	Traffic Analysis Zones
TBT	Tributyltin
TIC	tenancies in common
TMDLs	total maximum daily loads
TOG	Total Organic Gases
TSS	total suspended solids
U.S. 101	U.S. Highway 101
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VDEC	Verified Diesel Emissions Control
WDRs	Wastewater Discharge Requirements
WETA	Water Emergency Transportation Authority
WHO	World Health Organization
WLUP	Waterfront Land Use Plan
WPA	Wildlife Protection Area
YAC	Youth America's Cup
$\mu g/m^3$	micrograms per cubic meter
µg/kg	microgram per kilogram

CHAPTER 1
Executive Summary

1.1 Project Description

This environmental impact report (EIR) addresses two related projects: (1) the proposed 34th America's Cup (AC34)) – a series of international sailing events to be hosted by the City and County of San Francisco, and (2) the proposed James R. Herman Cruise Terminal and Northeast Wharf Plaza (Cruise Terminal). Both projects would be located primarily along the northeast waterfront of San Francisco.

The San Francisco Planning Department, pursuant to the San Francisco Administrative Code, Chapter 31, has determined that an EIR is required for both projects based on the requirements of the California Environmental Quality Act (CEQA). This EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of the projects, to recommend mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the projects.

Readers should not rely on this Executive Summary alone for a thorough understanding of the proposed project, impacts, mitigation measures, or alternatives. For a more complete understanding of the contents of this EIR, please refer to the individual sections of this EIR, including Chapter 3, Project Description; Chapter 5, Environmental Setting, Impacts, and Mitigation Measures; and Chapter 7, Alternatives.

1.1.1 AC34 Project Description

The AC34 project sponsors – the City and County of San Francisco (CCSF or City) and the America's Cup Event Authority (Event Authority) – propose to hold the AC34 races in San Francisco Bay in summer-fall 2012 (America's Cup World Series) and in summer-fall 2013 (Louis Vuitton Cup, America's Cup Challenger Series, potential America's Cup Defender Series, and the Match). In addition, a Youth America's Cup series would be held concurrently with other race events in 2012 and 2013. The terms of the AC34 project are based on the 34th America's Cup Host and Venue Agreement (Host Agreement) executed among the project sponsors in December 2010.

Proposed Race Area

The AC34 sailing races would occur on San Francisco Bay within a proposed race area illustrated in **Figure 1-1**. This race area would encompass an area of the Bay roughly bounded by the San Francisco waterfront to the south; the San Francisco-Oakland Bay Bridge, Treasure Island, and Yerba Buena Island to the east; portions of southern Marin County (including Angel Island) to the north; and an area just beyond the Golden Gate Bridge to the west. The actual race courses for the sailing races would be located within a smaller portion of this race area to be determined based on government agency coordination and race conditions in 2012 and 2013.

Proposed Venues

A number of project sites, or venues, would be required to accommodate the AC34 events. Figure 1-1 shows the location of the proposed AC34 venue sites for 2012 and 2013. Several of the venues proposed for AC34 events are areas and facilities managed by the Port of San Francisco (Port), including certain piers (Pier 19, Pier 19½, Pier 23, Piers 27-29½, Pier 26, Pier 28, Piers 30-32, and Pier 80), water basins/water areas (Piers 19-23, Piers 23-27 [Northeast Wharf Open Water Basin], Piers 29-31, Piers 14-22½ [Rincon Point Open Water Basin], Piers 26-28, Piers 28-30, and Piers 32-36 [Brannan Street Wharf Open Water Basin]), and Seawall Lot 330. Other venues proposed for spectator- or sponsor-related activities are under the jurisdiction of other city, state, or federal agencies; these venues include Crissy Field, Marina Green, Fort Mason, Aquatic Park, Alcatraz Island, Fort Baker Pier at Cavallo Point (near Sausalito in Marin County), San Francisco Civic Center, Union Square, and Justin Herman Plaza.

The proposed venues would encompass all aspects of AC34 facilities and services needed to support the events. The venues would include team bases and operations, support space, media operations, hospitality services, sponsored commercial space, and entertainment and spectator areas. The number and/or use of venues proposed for AC34 events in 2012 would be different from that proposed in 2013. In addition, a number of temporary improvements and certain permanent seismic and infrastructure upgrades would be required at the proposed venue sites to accommodate the AC34 events in 2012 and 2013. All activities associated with the AC34 races in 2012 and 2013, including any associated construction activities leading up to or following each of the events, as well as operational-related activities associated with each of the events, are referred to as "AC34 2012" and "AC34 2013," respectively. **Table 1-1** provides a summary overview of some of the key characteristics of, and differences between, AC34 2012 and AC34 2013.

Piers 27-29 is proposed by the AC34 project sponsors as the site of one of the primary AC34 venues in 2013 - the America's Cup Village. Pier 27 is also is the site proposed by the Port for the development of the Cruise Terminal project. The Cruise Terminal project would be coordinated with the AC34 project to allow an initial phase of the cruise terminal building to be used as part of the America's Cup Village during the 2013 America's Cup races. (See Section 1.1.3, James R. Herman Cruise Terminal and Northeast Wharf Plaza Project Description, below.)

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 1-1

AC34 Venue Location Map and Sailing Race Area

TABLE 1-1
AC34 2012 AND AC34 2013 SUMMARY OVERVIEW

Project Characteristic	AC34 2012	AC34 2013
AC34 Race Series Held	America's Cup World Series Youth America's Cup	Louis Vuitton Cup, America's Cup Challenger Series America's Cup Defender Series - potentially The Match (America's Cup Finals) Youth America's Cup
Type of Yachts Raced	AC45s	AC72s
Months AC34 Races Held	Summer-Fall 2012	Summer-Fall 2013
Total Number of Race Days	up to ~17 race days	up to ~50 race days
Estimated Visitation	Peak Weekday 45,000 Peak Weekend Day 197,000 Total Visitation 1,454,000	Average Peak Weekday 50,000 Average Peak Weekend Day 334,000 Super Peak Day 400,000-500,000 Total Visitation 5,490,000
Estimated AC34 Staff, Volunteers, and Vendors (Peak Day)	4,000	9,200
Location of America's Cup Village	Marina Green	Piers 27-29
Location of AC34 Team Bases	Piers 30-32, Piers 32-36 Open Water Basin, Pier 26 and Pier 28 Pier 80	Piers 30-32, Piers 30-32, Piers 32-36 Open Water Basin, Pier 26, and Pier 28 Pier 80
AC34 Proposed Spectator Venues	Crissy Field Aquatic Park Alcatraz (private) Fort Baker Pier at Cavallo Point (private)	Marina Green Crissy Field Aquatic Park Alcatraz (private) Fort Baker Pier at Cavallo Point (private)
Location of Media Operations	Marina Green Fort Mason (optional) Alcatraz Cavallo Point (optional)	Pier 23 Fort Mason (optional) Alcatraz Cavallo Point (optional)
Use of Pier 27 Cruise Terminal Building Core and Shell for Temporary AC34 Use	(not applicable)	Yes
Use of Existing Helipad at Treasure Island, or Helipad on Barge at Pier 80	Yes	Yes
Construction	Temporary Installations and Permanent Improvements	Temporary Installations and Permanent Improvements
Location of Temporary Spectator Seating	Marina Green (America's Cup Village) Crissy Field	Piers 27-29 (America's Cup Village) Marina Green Crissy Field
Location of Temporary Berthing Facilities for AC34 Race/Support Boats or Private Spectator Boats (Floating Docks and/or Anchoring Systems)	Pier 80, Piers 30-32, Piers 32-36 Open Water Basin, Marina Green, Fort Mason, Aquatic Park	Pier 80, Piers 30-32, Brannan Street Wharf Open Water Basin, Pier 28, Pier 26, Rincon Point Open Water Basin; Pier 19, Pier 23, Piers 27-29, Fort Mason, Aquatic Park
Dredging Required	Yes	Yes
Implementation Plans for both AC34 2012 and AC34 2013	People Plan Parks Event Operations Plan Water and Air Traffic Plan Waste Management Plan Sustainability Plan	Team Base Operations Manual Public Safety Plan Workforce Development Plan Youth Involvement Plan

SOURCE: America's Cup Event Authority; AECOM, 2011

It is expected that most existing tenants currently leasing and occupying Port facilities that would be used for AC34 venues (specifically, at Piers 30-32, Seawall Lot 330, Pier 26, Pier 28, Pier 19, Pier 19½, Pier 23, Piers 27-29, and Pier 29½) would be displaced prior to the AC34 2012 event consistent with the terms of their existing leases. The City and Port are working with certain tenants at Piers 27-29 with unique relocation requirements to identify possible relocation sites; these tenants include the Teatro Zinzanni dinner theater, Bauer's California Coach Sales and Service, and San Francisco Soccer's Telegraph Field. Other existing tenants that would be displaced as a result of the AC34 events would need to relocate to other available Port facilities and/or other available locations in San Francisco or the surrounding area.

Implementation Plans

CCSF, in consultation with the Event Authority, would develop a number of event-related implementation plans to support the AC34 2012 and 2013 events, including plans that address transportation management, waste management, parks event operations, sustainability, environmental and safety requirements, water and air traffic management, public safety, youth involvement and workforce development.

Amendment of San Francisco Waterfront Special Area Plan

As part of the proposed AC34 project, the Port or the Event Authority would initiate a request to amend the San Francisco Bay Conservation and Development Commission (BCDC) *San Francisco Waterfront Special Area Plan* to permit temporary berthing at Brannan Street Wharf and Rincon Point Open Water Basins. BCDC may review fill removal at a number of sites (including various dilapidated piers, wharfs, and remnant pilings) in the context of the proposed amendments to the *San Francisco Waterfront Special Area Plan* for the AC34 project.

Long-Term Development Rights

As provided for under the Host Agreement, the AC34 project would also provide the Event Authority with certain conditional long-term development rights at selected Port facilities, including Piers 30-32, Pier 26, Pier 28, Pier 19, Pier 19½, Pier 23, Pier 29, Seawall Lot 330, and the Brannan Street Wharf and Rincon Point Open Water Basins. There are currently no specific development proposals for any of these sites, and any future development plans and uses allowed under the Host Agreement would be required to undergo separate environmental review for CEQA compliance.

Construction

Construction for the AC34 events would occur at varying levels of intensity during 2012 and 2013 and would consist of both permanent improvements and temporary installations. In-water construction activities at AC34 venues, depending on location, would include pile driving and installation of temporary floating docks, gangways and wave attenuators, anchoring systems and dredging. On-land construction activities would occur at most of the proposed event facilities and spectator venue sites. The longest duration of landside construction would be at Piers 30-32 where

seismic upgrades and deck repairs, along with installation of the temporary team base facilities, would occur; and at Piers 27-29, where proposed activities include demolishing the Pier 27 shed, a portion of the Pier 29 shed, and the Pier 27 annex building, retaining and rehabilitating the remainder of the Pier 29 shed, constructing the cruise terminal core building and shell, and installing temporary facilities for the America's Cup Village in 2013.

Most of the temporary installations for the 2012 event would be removed after that event concludes; however, certain temporary team base installations would remain through the conclusion of the 2013 event. Where applicable, temporary installations would be reinstalled for the 2013 event. Following the completion of the AC34 events in 2013, the project venues would be restored as needed to their pre-AC34 event condition.

1.1.2 AC34 Project Objectives

The objectives of AC34 are to:

- Establish San Francisco and San Francisco Bay as a world-class venue for the sport of sailing and generate interest in the sport by hosting America's Cup World Series events in 2012 followed by successful America's Cup events in 2013
- Provide public viewing opportunities of the America's Cup and the America's Cup World Series live racing events at close range from various locations on the waterfront around Central San Francisco Bay to increase the general public's access to the event and expand the appeal of the sport of sailing to the general public
- Create a center of activity for the America's Cup and the America's Cup World Series by improving the existing resources of The Embarcadero and the San Francisco waterfront to establish a cohesive sense of place and identity for the AC34 participants (i.e., teams, event guests and staff, media personnel), visitors, and spectators of the events that enhance the landside viewing opportunities and provide adequate facilities for spectator vessels
- Provide infrastructure upgrades and other installations to improve existing facilities in consolidated areas for team base activities, spectator viewing, and entertainment venues, including the public piers along San Francisco's waterfront, for use during the America's Cup in 2013 and the America's Cup World Series in 2012, consistent with Port of San Francisco building code requirements and the Secretary of the Interior's Standards for the Treatment of Historic Properties (Secretary's Standards)
- Facilitate access to and from desired destinations based on smart transportation strategies presented in the America's Cup People Plan for the racing teams, event personnel, event sponsors, members of the media, and spectators, while satisfying the access needs of residents, workers, and visitors not associated with the races
- Emphasize natural resource stewardship by incorporating sustainability principles in the planning and management of all race events and operations, including zero waste strategies identified in the America's Cup Waste Management Plan
- Implement navigational and operational safety guidelines for race team, support, and spectator boat activities associated with the America's Cup and the America's Cup World Series that meet United States Coast Guard regulations, the America's Cup Protocol, and

the safe limits of event boats and equipment; minimize conflicts with existing commercial maritime activities; and establish sustainable environmental practices and standards to help protect the ecological health of San Francisco Bay

- Encourage investment in infrastructure upgrades on Port property required to stage the America's Cup and the America's Cup World Series, for which the City would provide commensurate future long-term development rights on Port of San Francisco properties as contemplated under the Host Agreement

1.1.3 James R. Herman Cruise Terminal and Northeast Wharf Plaza Project Description

The Port proposes to develop a new passenger cruise terminal at Pier 27 designed to meet modern ship and operational requirements of the cruise industry. Currently, the Port's primary cruise terminal is located at Pier 35, and Pier 27 serves as a secondary terminal when there are multiple cruise calls. Pier 35 has become increasingly constrained for accommodating modern cruise ship operations. Under the Port's proposed plan, Pier 27 would become the primary cruise terminal, and Pier 35 would be retained as a secondary terminal. In concert with the cruise terminal facility, the Port also proposes to construct the Northeast Wharf Plaza, a public open space along the west end of Pier 27, consistent with the policies of BCDC's *San Francisco Waterfront Special Area Plan*.

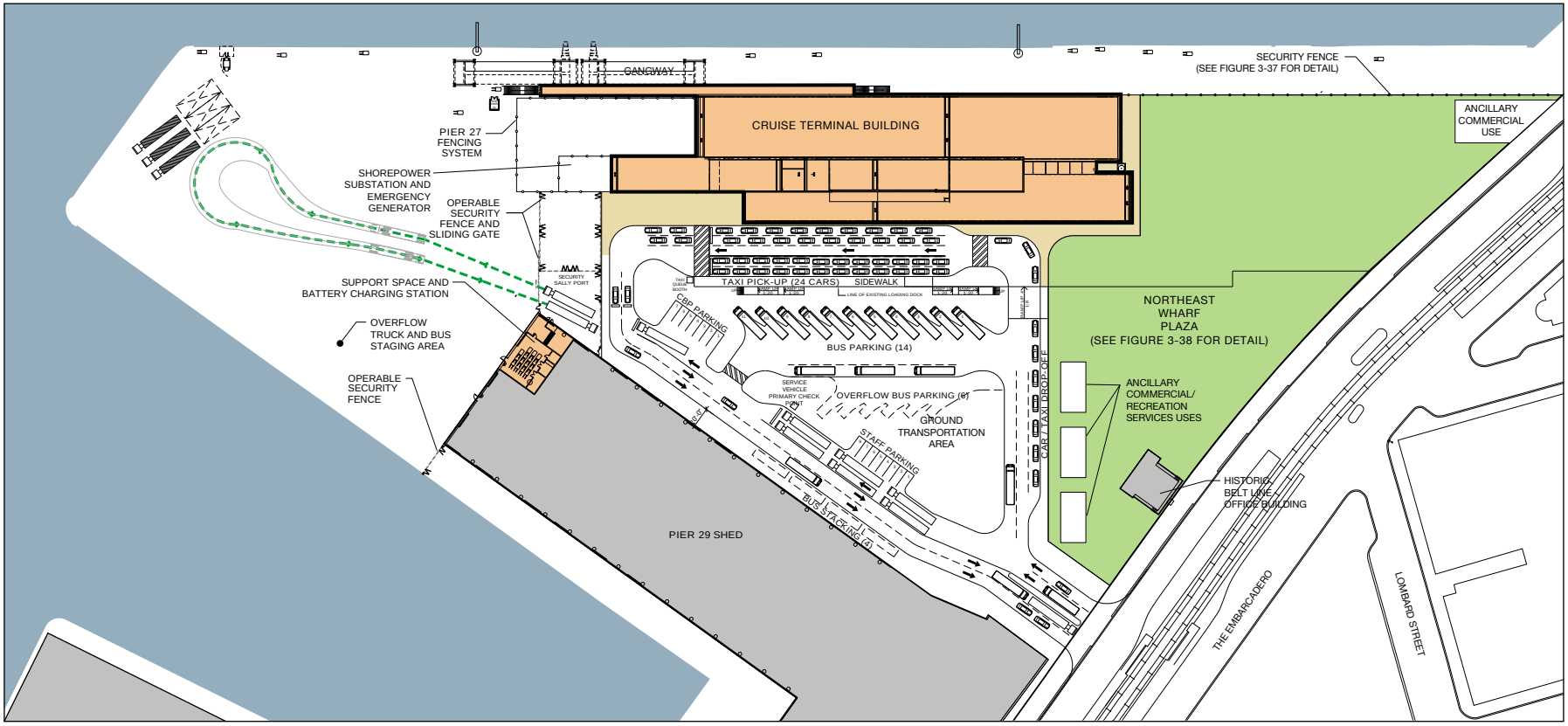
Number of Ship Calls and Passengers

The annual number of ship calls is expected to remain the same in the future, with approximately 40 to 80 calls per year. However, in anticipation of the current trends in the cruise ship industry towards larger cruise ships, the proposed cruise terminal would be designed to better accommodate newer, larger ships holding larger numbers of passengers than are currently served at Pier 35. Optimally, the proposed terminal would handle vessels carrying 2,600 passengers, but it would have additional capacity at key areas to serve vessels carrying up to 4,000 passengers.

Proposed Site Plan

Figure 1-2 presents the proposed site plan for the Cruise Terminal project, and **Table 1-2** presents a summary of the proposed cruise terminal building characteristics. The cruise terminal building would be sited within the larger footprint of the Pier 27 shed (which would be demolished as part of the AC34 project). The cruise terminal building would contain a large baggage claim area; check-in and waiting/seating areas, Customs and Border Protection and other security offices, processing and screening facilities, storage, utilities, and other facilities.

Vehicular access to and from The Embarcadero would be provided at a new driveway located just south of the Pier 29 shed. This access point would provide direct connection to the cruise facility's proposed ground transportation area located within the center of the triangular-shaped pier. The approximately 3-acre ground transportation area would provide space for access, dropoff, and exiting by trucks, taxis, buses, and passenger vehicles. The proposed provisioning facilities, including an off-loading dock, and space for staging and security check, would be located east of the cruise terminal building.



SOURCE: Pfau Long Architecture

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 1-2

Cruise Terminal and Northeast Wharf Plaza Site Plan

TABLE 1-2
CRUISE TERMINAL PROJECT SUMMARY

Project Characteristic	Description
James R. Herman Cruise Terminal	
Cruise Terminal Building Number of Stories	2
Cruise Terminal Building Floor Area	Level 1: 46,061 square feet Level 2: 45,135 square feet Total: 91,196 square feet
Cruise Terminal Building Height (above grade plane)	40 feet to roof 46 feet to core elements
Cruise Terminal Building Length (enclosed space) Roof length (with overhangs)	504 feet 520 feet
Cruise Terminal Building Width (variable)	35-116 feet
Cruise Terminal Building Construction	Steel Frame with Concrete Fill
Cruise Terminal Building Exterior Materials	Glazing / Modular Metal Panels
Cruise Terminal Employment	220 Employees
Northeast Wharf Plaza	
Size	~ 2 ½ acres
Potential Ancillary Structures for Commercial and Recreational Services	Up to 20,000 square feet
Hardscaping Improvements	Pavers, concrete seating/steps, planters
Multi-Use Recreational Space	Natural turf

SOURCE: Pfau Long Architects, KMD Architecture, 2011

The approximately 2½-acre Northeast Wharf Plaza would be located along the west end of Pier 27, fronting The Embarcadero promenade. A preferred improvement plan for the plaza has been developed that will undergo review by the public and BCDC and City waterfront design committees. The plaza design would integrate the historic Pier 29 Belt Line office building and proposed ancillary structures for commercial and recreational services (e.g., snacks, bike rentals).

Infrastructure

The cruise terminal building would be served by new domestic water distribution lines, emergency fire water distribution lines, stormwater collection, wastewater collection lines, electricity and natural gas utilities, and communications, connecting to existing utility infrastructure within The Embarcadero. In addition, the cruise terminal building would incorporate rainwater harvesting and collection infrastructure. The existing shoreside power substation at Pier 27 would be relocated onsite and upgraded from 12 megawatts (MW) to 20 MW to support expected larger cruise ships.

Construction

Construction of the Cruise Terminal project would be carried out in two phases. Phase 1 would occur as part of the AC34 project as discussed above, and would include demolition of the Pier 27, a portion of the Pier 29 shed, and the Pier 27 annex building, and construction of the cruise terminal core building and shell. After the conclusion of the AC34 race events, the Port would implement Phase 2 of the construction, involving further construction and improvements to complete the Cruise Terminal project, including completion of certain interior space and facilities within the cruise terminal building, installation of exterior maritime equipment, finishing of the ground transportation area, and construction of the Northeast Wharf Plaza.

Shared Uses

The proposed cruise terminal would allow for shared uses in down times between cruise ship calls. These shared uses could include events such as conferences, public or private gatherings, and maritime-oriented events. It is estimated that up to 100 shared-use events could occur at the cruise terminal site annually.

Amendment of San Francisco Waterfront Special Area Plan

As part of the proposed Cruise Terminal project, the Port would initiate a request to amend the BCDC's *San Francisco Waterfront Special Area Plan* to resolve conflicts that would arise from the proposed development of the Cruise Terminal project and to provide comparable public benefit consistent with the policies of the plan. As with the AC34 project, BCDC may review fill removal at a number of sites may be reviewed by BCDC in the context of the proposed amendments to the plan for the Cruise Terminal project.

1.1.4 James R. Herman Cruise Terminal and Northeast Wharf Plaza Project Objectives

The objectives of the proposed Cruise Terminal project are to:

- Design a new, modern cruise terminal that optimizes current and future operational needs and retains an important historic maritime use along San Francisco's northeastern waterfront that is compatible with and respects the physical form and characteristics defining the Embarcadero Historic District, which is listed on the National Register of Historic Places

- Provide a highly visible berth for ceremonial and visiting ships and vessels, as well as cruise ships, that preserves and promotes the maritime character of San Francisco's historic waterfront

- Integrate a ground transportation area that serves all cruise ship and passenger access and support needs off-street to avoid traffic impacts on The Embarcadero

- Develop an efficient facility that will lower the Port's operational and maintenance costs by the use of effective space planning and equipment to handle passenger circulation and

provisioning, and will meet the evolved security and passenger handling demands of the cruise ship industry

- Maintain shoreside power in a new, modern cruise terminal facility to promote and expand access and use of San Francisco's electrical grid while ships are in port to avoid cruise ship diesel emissions

- Configure the cruise terminal in a way that will create opportunities for the Port to allow special event uses when the terminal is not occupied for cruise purposes to enable year-round, people-oriented uses at Pier 27, generate revenue to help finance public improvements, and create an inviting amenity that supports and activates use and enjoyment of the Northeast Wharf Plaza

- Develop the Northeast Wharf Plaza, a major public open space integrated with public access on Pier 27; create new views and access to San Francisco Bay; promote recreational enjoyment along San Francisco's public waterfront; and preserve open water areas for passive and active enjoyment of the Bay

- Develop a project that embodies the City's commitment to sustainability principles by following the guidelines from the U.S. Green Building Council to achieve a Leadership in Energy and Environmental Design (LEED) Silver or better rating

- Integrate the design and construction of the Cruise Terminal project with the proposed AC34 race facilities and operations

1.1.5 Project Variant (Pier 27 Shed Variant)

As one of the project sponsors, the Port has requested that this EIR also examine the environmental impacts of a variation to the AC34 and Cruise Terminal projects to address the potential for a delay in the cruise terminal construction. The Pier 27 Shed Variant would occur if the cruise terminal building core and shell and associated improvements (e.g., utility improvements) could not be constructed in time for use for hospitality for the America's Cup Village in 2013. Under this variant, instead of using the core and shell of the cruise terminal building, the AC34 project sponsors would physically modify the existing Pier 27 shed (along with the connected portion of the Pier 29 shed), and the interior space of the remaining center segment of the Pier 27 shed would be used for hospitality for the America's Cup Village in 2013. Alternately under this variant, the existing Pier 27 shed would be demolished in its entirety and temporary structures would be installed in its place to serve the America's Cup Village for the 2013 event. Under this variant, construction and first year of operation of the cruise terminal and wharf plaza would be delayed by approximately 1 year.

1.2 Environmental Impacts and Mitigation Measures

This EIR describes the environmental setting, summarizes applicable environmental policies and regulations, assesses impacts, and identifies mitigation measures for potentially significant and significant impacts. It addresses the full range of environmental topics required under CEQA for both the AC34 and Cruise Terminal projects, and indicates as applicable, any differences in impacts that would occur under the Pier 27 Shed Variant.

1.2.1 Analysis of Project Components

For the AC34 project, there are two main components: the AC34 events and the future long-term development rights provided for under the Host Agreement. The impacts associated with construction and operation of facilities and venues required for the AC34 2012 and AC34 2013 events are analyzed in detail based on the site specific conditions and proposed activities. This detailed impact analysis also includes consideration of "secondary viewing areas," locations not specifically identified as part of the project venues but nonetheless expected to attract numerous visitors and spectators due to their potential viewing opportunities for the AC34 races.

With respect to the analysis of the future long-term development rights, in the absence of specific development proposals for the affected sites, the impact analysis is based on generalized development assumptions available within existing land use policies and guidelines for these sites. Thus, the impacts of potential long-term development are analyzed at a conceptual level, and future, long-term development mitigation measures are provided. When site-specific development or construction proposals are available, those development proposals will be subject to subsequent, project-specific CEQA review.

This EIR also analyzes impacts associated with tenant displacement and relocation, as well as implications of the proposed amendments to the BCDC *San Francisco Waterfront Special Area Plan*, including the potential effects of fill removal that would be reviewed by BCDC in the context of the proposed amendments for both the AC34 and Cruise Terminal projects. In addition, cumulative impacts of both projects are described and analyzed in the context of past, present, and reasonably foreseeable future projects, as required under CEQA.

1.2.2 Summary of Impacts and Mitigation Measures

Table 1-3 summarizes the impacts of the AC34 and Cruise Terminal projects, identifies the significance determination of each impact assuming implementation of mitigation measures, and presents the full text of the identified mitigation measures. Table 1-3 also provides the impacts of the Pier 27 Shed Variant, which in all cases except for Air Quality, would have the same impacts as the proposed projects and require the same mitigation measures. **Table 1-4** presents the full text of mitigation measures applicable to the future, long-term development rights. (These tables are at the end of this summary.)

1.3 Alternatives

The alternatives for the AC34 and Cruise Terminal projects are identified and analyzed separately for the two projects. The discussion of each alternative addresses what would occur both with and without implementation of the other project in order to address all possible outcomes. Alternatives were selected for analysis based on their ability to attain most of the project's objectives and to avoid or substantially lessen significant impacts, and their feasibility. Including the no project alternative, there are four alternatives for the AC34 project and two

alternatives for the Cruise Terminal project that were determined to represent a reasonable range of alternatives for the respective projects.

1.3.1 AC34 Project Alternatives

The AC34 project alternatives analyzed in this EIR are: (1) No Project Alternative, (2) Open Ocean Alternative, (3) Reduced Intensity AC34 and Long-Term Development Alternative; and (4) Reduced Spectator Berthing Alternative. For each of these four alternatives, the scenarios with and without implementation of the Cruise Terminal project are described and analyzed.

No Project Alternative

The AC34 No Project Alternative assumes that San Francisco would not serve as the host city for the AC34 events. There would be no construction of temporary installations or permanent improvements at any of the project sites, no events in 2012 or 2013, no tenant displacement, no amendments to the BCDC *San Francisco Waterfront Special Area Plan*, and no future long-term development and associated landside and waterside improvements on Port properties as provided for under the Host Agreement. Permanent seismic and infrastructure improvements to Port of San Francisco piers and other structures would not occur, and these structures – some in poor structural condition – would continue to remain in their current state. This alternative would meet none of the project objectives and would avoid all environmental impacts associated with construction and operation of the proposed AC34 project, relative to both the AC34 events and the future long-term development rights.

Open Ocean Alternative

The Open Ocean Alternative assumes that San Francisco would host the AC34 events as it would under the proposed project, but with the AC34 race series held in the open waters of the Pacific Ocean instead of within San Francisco Bay. All other aspects of this alternative would be the same as the proposed project. This alternative was selected for analysis because it would reduce environmental impacts identified at land-based spectator venues and secondary viewing areas.

The Open Ocean Alternative would achieve some of the AC34 project objectives. Many impacts of this alternative would be largely identical to those of the proposed project, and all mitigation measures identified for the proposed project would still be required. The Open Ocean Alternative would avoid impacts at the anticipated secondary viewing areas, including impacts on recreational resources, upland biological resources, historic resources, and transportation and circulation. However, this alternative could result in greater impacts on whales.

Currently, the AC34 yachts are not designed for racing in the open water of the Pacific Ocean. To address safety concerns under this alternative, teams would be required to completely redesign the racing yachts that are currently being designed for sailing in San Francisco Bay.

Reduced Intensity AC34 and Long-Term Development Alternative

The Reduced Intensity AC34 and Long-Term Development Alternative would differ from the proposed project in that (1) it would include only the AC34 events in 2013, and (2) the magnitude of development under the long-term development rights would be reduced. This alternative was selected for analysis because it would reduce environmental impacts from AC34 2012 construction and operation as well as impacts associated with the long-term development rights.

This alternative would partially achieve the project objectives and would not achieve any of the objectives related to the AC34 2012 events. The alternative would only partially meet the objective to encourage investment in infrastructure upgrades required as part of the AC34 facilities.

Overall impacts of this alternative would be similar to those of the proposed project, and nearly all the same mitigation measures would be required, although they would apply only to the AC34 2013 events. All of the construction and operational impacts associated with the AC34 2012 events would be completely avoided, but most of these same impacts would occur for the AC34 2013 events. The severity of impacts identified for long-term development options on Port property under the Host Agreement would be avoided or reduced, but the level of reduction and specific nature and magnitude of such impacts would depend on future site-specific development proposal and many of the same mitigation measures could still be required.

Reduced Spectator Berthing Alternative

The Reduced Spectator Berthing Alternative would differ from the proposed project in that Rincon Point Open Water Basin (Piers 14-22½) would not be considered for use as a temporary berthing facility or for long-term development of a permanent marina. Instead, partial replacement berthing capacity for private spectator boats in 2013 would be provided at Pier 9 in the Broadway Open Water Basin (Piers 3 and 9) and at various other existing locations along Port properties. This alternative was selected for analysis because it would reduce environmental impacts identified at the Rincon Point Open Water Basin and because BCDC, a responsible and permitting agency for the AC34 project, requested an alternative that would reduce conflicts with the *San Francisco Waterfront Special Area Plan*.

The Reduced Spectator Berthing Alternative would meet most of the AC34 project objectives but not to the same extent as the proposed project. It would only partially meet the objective of providing adequate facilities for spectator vessels.

This alternative would not conflict with provisions of applicable land use plans and amendments to the Port of San Francisco *Waterfront Land Use Plan* and the BCDC *San Francisco Waterfront Special Area Plan* that apply to the Rincon Point Open Water Basin, and it would avoid the significant and unavoidable land use impact associated with long-term development of a marina at this open water basin. In addition, the Reduced Spectator Berthing Alternative would avoid impacts associated with in-water construction at the Rincon Point Open Water Basin, although those same impacts, including impacts on marine biological resources, would occur at the

Broadway Open Water Basin at a reduced scale. Impacts associated with long-term development rights under the Host Agreement would be the same as for the proposed project, except that impacts associated with construction and operation of a long-term marina at the Rincon Point Open Water Basin would either be avoided or relocated to the vicinity of an alternate marina, such as at South Beach or Mission Bay.

Environmentally Superior Alternative

The Reduced Intensity AC34 and Long-Term Development Alternative would provide the greatest reduction in significant impacts compared to the proposed project and would therefore be considered the environmentally superior alternative for the AC34 project.

1.3.2 Cruise Terminal Project Alternatives

The Cruise Terminal project alternatives analyzed in this EIR are: (1) No Project Alternative, and (2) Renovation of Pier 27 Shed Alternative. For both alternatives, the scenarios with and without implementation of the AC34 project are described and analyzed.

No Project Alternative

Under the No Project Alternative, the James R. Herman Cruise Terminal and Northeast Wharf would not be constructed. The existing Pier 35 facilities would continue to serve as the primary cruise ship terminal, and the existing Pier 27 facilities would continue to serve as the backup cruise terminal, as currently occurs. Under the scenario where the AC34 project would be implemented, it is assumed that Piers 27-29 would still serve as the America's Cup Village in 2013, and the AC34 project sponsors would be responsible for partial to full demolition of the Pier 27 shed and partial demolition of the Pier 29 shed.

The No Project Alternative would meet none of the basic project objectives, but would avoid all construction- and operation-related impacts that would occur under the proposed project. However, existing operational inefficiencies at Pier 35 would continue, including existing transportation and circulation issues in the surrounding area when cruise ships are in port. The Port would have limited abilities to accommodate future demands in the cruise ship industry given the current trends in larger cruise ships and demands for more efficient operations. There would be no opportunities for year-round shared uses on an expansive waterfront parcel, and creation of a Northeast Wharf Plaza, as delineated in the BCDC *San Francisco Waterfront Special Area Plan*, would not occur.

Renovation of Pier 27 Shed Alternative

The Renovation of Pier 27 Shed Alternative would consist of renovating the existing facilities at Pier 27 with sufficient improvements to allow it to serve as the city's primary cruise terminal, allow development of the proposed Northeast Wharf Plaza, and accommodate the proposed America's Cup Village at Piers 27-29 in 2013. This alternative was selected for analysis because it would reduce environmental impacts associated with demolition and with bird strikes.

This alternative would meet, or partially meet, all of the project objectives. The facility would not be completely new and modern, which would result in some operational inefficiencies and limited shared uses, as compared to the proposed project. This alternative would have a shorter construction duration than the proposed project, which would reduce construction-related transportation, air quality, noise, and hazardous materials impacts as compared to impacts under the proposed project. During project operations, bird strike impacts would be less than those under the proposed project. However, most of the same mitigation measures would still be required.

Environmentally Superior Alternative

For the Cruise Terminal project, the environmentally superior alternative was determined to be the Renovation of Pier 27 Shed Alternative.

1.4 Areas of Controversy and Issues to Be Resolved

The San Francisco Planning Department published a Notice of Preparation on February 9, 2011 to notify the public of its intent to prepare an EIR on the AC34 and Cruise Terminal projects. During the public scoping process held in February and March 2011, the Planning Department received numerous comments from public agencies, organizations, and individuals regarding the scope and content of the EIR, including comments on environmental effects of the AC34 and Cruise Terminal projects as well as on the details of the projects themselves.

Comments received during the scoping process on the proposed projects and their potential environmental impacts are addressed in this EIR. This section lists the areas of controversy and major concerns raised during the scoping period as well as issues to be resolved. Issues to be resolved include those areas of concern that will be addressed either (1) during the permitting and approval processes for the projects subsequent to the completion of the CEQA process, (2) as part of the environmental review requirements under the National Environmental Policy Act (NEPA) for the applicable aspects of the project, (3) during design and implementation of the projects (assuming the projects are approved), or (4) as part of future proposals for long-term development on Port properties as provided for under the Host Agreement and the associated environmental review process.

Areas of controversy and issues to be resolved include the following:

- Details of the People Plan (including Transportation Management Plan), Waste Management Plan, Sustainability Plan, and other implementation plans proposed as part of the AC34 project
- Coordination of the AC34 project sponsors with federal, state, regional, and other local agencies for the planning and implementation of AC34 events
- Management and coordination of large private spectator yachts expected to view the AC34 events and impacts of increased boat traffic

- Long-term development rights of Port properties provided for under the Host Agreement following completion of the AC34 events, and environmental implications of such development
- Tenant relocation from Port properties that would be necessary for both the AC34 and Cruise Terminal projects
- Impacts of the AC34 events on views, traffic, services, utilities, recreational resources, and public access at proposed venue locations as well as at adjacent and nearby areas
- Potential conflicts of both projects with adopted plans applicable to the project sites, including effects on public access
- Effects of AC34 racing events on existing maritime and commercial uses of San Francisco Bay

TABLE 1-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.2: Land Use		
America's Cup		
Impact LU-1: Construction and operation of the America's Cup facilities and events in 2012 and 2013 would not physically divide an established community.	LTS	No mitigation necessary.
Impact LU-2: Construction and operation of the America's Cup facilities and events would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	No mitigation necessary.
Impact LU-3: Construction and operation of the America's Cup facilities and events would not have a substantial adverse effect on the existing character of the project sites and vicinities.	LTS	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact LU-4: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza at Piers 27–29 would not physically divide an established community.	LTS	No mitigation necessary.
Impact LU-5: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	No mitigation necessary.
Impact LU-6: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not have a substantial adverse impact on the existing character of Piers 27–29.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-LU: Long-term development under the Host Agreement would not physically divide an established community or result in incompatible changes to land use character. However, long-term marina development in the Rincon Point and Brannan Street Wharf Open Water Basins would conflict with BCDC policies adopted for the purpose of mitigating environmental effects.	SU	No mitigation available.

Significance Determinations:
NI = No Impact
LTS = Less-Than-Significant Impact (no mitigation required)
LTSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.2: Land Use (cont.)		
Cumulative Impacts		
Impact C-LU: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts.	LTS	No mitigation necessary.
Section 5.3: Aesthetics		
America's Cup		
Impact AE-1: Construction and operation of the AC34 facilities and events would not have a substantial adverse effect on a scenic vista	LTS	No mitigation necessary.
Impact AE-2: Construction and operation of the America's Cup facilities and events would not affect scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project sites and surroundings	LTS	No mitigation necessary.
Impact AE-3: Construction and operation of the America's Cup facilities and events would not substantially damage scenic resources or other features of the built environment that contribute to a scenic public setting.	LTS	No mitigation necessary.
Impact AE-4: Construction and operation of the America's Cup facilities and events would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.	LTS	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact AE-5: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza would not have a substantial adverse effect on a scenic vista	LTS	No mitigation necessary.
Impact AE-6: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza would not affect scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project sites and surroundings.	LTS	No mitigation necessary.
Impact AE-7: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza at Piers 27–29 would not substantially damage scenic resources or other features of the built environment that contribute to a scenic public setting.	LTS	No mitigation necessary.

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LTSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.3: Aesthetics (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact AE-8: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza at Piers 27–29 would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-AE: Long-term development on Port properties would not result in impacts on visual quality.	LTS	No mitigation necessary, but the following Improvement Measure is identified: **Improvement Measure I-LT-AE: Rooftop Design** Rooftop energy conservation installations on pier sheds, including flat-mounted solar installations shall incorporate darker coloring such as grey, while balancing the need to meet sustainability and energy efficiency standards, and consistency with Secretary Standards
Cumulative Impacts		
Impact C-AE: There would be no cumulative impacts on visual quality.	NI	No mitigation necessary.
Section 5.4: Population and Housing		
America's Cup		
Impact PH-1: Construction and operation of the America's Cup facilities and events would not induce substantial population growth in the area, either directly (for example, by constructing new homes) or indirectly (for example, by establishing substantial new employment opportunities that attract employees to an area or through extension of roads or other infrastructure).	LTS	No mitigation necessary.
Impact PH-2: Construction and operation of the America's Cup facilities and events would not displace existing housing units or create substantial demand for additional housing.	LTS	No mitigation necessary.
Impact PH-3: Construction and operation of the America's Cup facilities and events would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	LTS	No mitigation necessary.

Significance Determinations:
NI = No Impact
LTS = Less-Than-Significant Impact (no mitigation required)
LTSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.4: Population and Housing (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact PH-4: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not induce substantial population growth in the area, either directly (for example, by constructing new homes) or indirectly (for example, by establishing substantial new employment opportunities that attract employees to an area through extension of roads or other infrastructure).	LTS	No mitigation necessary.
Impact PH-5: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not displace existing housing units or create demand for additional housing.	LTS	No mitigation necessary.
Impact PH-6: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-PH: Future long-term development under the Host Agreement would not result in significant adverse population and housing impacts.	LTS	No mitigation necessary.
Cumulative Impacts		
Impact C-PH: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on population and housing.	LTS	No mitigation necessary.
Section 5.5: Cultural and Paleontological Resources		
America's Cup		
Impact CP-1: Construction and operation of the proposed AC34 project could cause a substantial adverse change in the significance of a historic resource.	LTSM	**Mitigation Measure M-CP-1a: Bulkhead Wharf Substructure Review Process** To mitigate potential impacts on Sections 3, 4 and 10 of the Bulkhead Wharf, for proposed work other than ordinary maintenance and repair (as defined in the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*), the project sponsor shall be required to meet the following performance measures intended to maintain important character defining features of the wharf necessary to maintain the

Significance Determinations:
NI = No Impact
LTS = Less-Than-Significant Impact (no mitigation required)
LTSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
America's Cup (cont.)		
Impact CP-1 (cont.)		visual continuity and overall appearance of the Embarcadero Historic District and the public experience of these contributing resources: • Maintain the deck elevation and provide continuous physical connections to the adjoining sections of wharf. • Finish the deck in concrete or asphalt to match the adjoining sections of wharf. • The above-deck wharf shall be maintained as an open wharf free of structures and appurtenances other than those minor improvements allowed as amenities for the use and enjoyment of the Embarcadero Promenade, including such things as signage, kiosks, and other temporary structures. • Under-deck construction should maintain the general pile supported appearance of the bulkhead wharf from the Bay. • Prior to issuance of Port building or encroachment permits for repair or alteration of pier and bulkhead wharf substructures, the project sponsor shall obtain a determination from the Port indicating that the project as proposed is consistent with either the Historic Preservation Review Guidelines or the above performance measures and therefore the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (Secretary's Standards). The Port may require the project sponsor to provide a Historic Resource Evaluation Report prepared by a qualified historic preservation professional, assessing the project's consistency with this mitigation measure and shall consult with the Planning Department and the Environmental Review Officer (ERO) who shall determine whether the project complies with the above performance criteria and this mitigation measure. **Mitigation Measure M-CP-1b: Protection of Historic Resources due to Indirect Damage** As described in the Project Description, the Parks Event Operations Plan will be prepared and implemented in support of the proposed project. This mitigation measure requires that this plan shall incorporate specific elements to protect cultural resources through the use of removable protective fencing, signage, area closures, pre- and post-event conditions assessments, and educational and awareness programs. Federal and state agencies would likely require these or similar measures pursuant to their mission and regulatory obligations under federal and state law. Implementation of this plan would

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
America's Cup (cont.)		
Impact CP-1 (cont.)		protect historic resources due to indirect damage from event activities. The plan shall contain, at a minimum, the following measures to protect historic resources. • ***Fencing and Signage*:** The project sponsor shall protect the integrity of historic earthen fortifications by the installation of fencing. The fencing shall consist of, for example, filter fabric backed with welded mesh set into the ground. These fences should be light enough for removal between 2012 and 2013 race events, but would be obvious deterrents to visitors. The fencing shall also have signs announcing that these are sensitive historic areas and that entry is prohibited. Fencing location/length and signage type shall be determined in consultation with the appropriate land authority where indirect impacts are anticipated (e.g., National Park Service [NPS], the Presidio Trust, or California Department of Parks and Recreation [CDPR]). • ***Area Closures***. Access to certain historic sites that cannot be sufficiently protected through the use of fencing and signage shall be closed to the public during the duration of the AC34 events. The exact locations and timing of the closures are to be determined in consultation with the appropriate land authority where the indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or CDPR). • ***Pre- and Post-Event Conditions Assessment and Repair*:** Prior to the 2012 AC34 events, the project sponsor shall ensure that qualified cultural resources personnel assess the existing condition of the historic earthen fortifications that could be subject to erosion from increased visitation. Standardized site assessment forms, similar to those used by the National Park Service, shall be completed for all such affected historic resources. Forms include thorough photo documentation, description, and GIS location information. The exact number of resources to be recorded, and the exact methods of recordation, shall be determined in consultation with the appropriate land authority where the indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or CDPR). Following the 2013 AC34 event, the project sponsor shall ensure that qualified cultural resources personnel reassess the condition of historic resources identified above. Any unintended damage to historic resources as a result of the AC34 event will be repaired by the project sponsor to its pre-event condition. • ***Educational and Awareness Programs.*** The project sponsor shall create an educational program that increases the public awareness of the sensitivity of historic resources

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
America's Cup (cont.)		
Impact CP-1 (cont.)		during the AC34 events and encourages public participation in the protection of such resources. The exact nature of the program shall be determined in consultation with the appropriate land authority where the indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or CDPR). • ***Crowd Control*:** The project sponsor shall ensure that crowd control personnel and volunteers are posted at or near the historic areas susceptible to erosion in order to direct visitors away from those sensitive locations. The exact number, location, and timing of the crowd control volunteers shall be determined in consultation with the with the appropriate land authority where the indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or CDPR). **Mitigation Measure M-CP-1c: Protection of Historic Resources due to Direct Damage** The project sponsors shall ensure that any plans which call for the attachment, anchoring, or bracing of temporary structural elements to existing historic buildings, structures, or objects (e.g., the stone façade of the historic Marina Seawall), are reviewed for compliance with the Secretary's Standards by a qualified architectural historian, or in the alternative, a qualified architectural historian shall develop a proposed plan for such attachments setting forth appropriate techniques to govern and guide such activities that are consistent with the Secretary's Standards (the "Temporary Structure Approach"), which plan will be reviewed by the Department of City Planning for consistency with the Secretary's Standards before implementation. Removal of any such attachments, anchors, or bracing shall be fully reversible and include post-removal stabilization of historic materials to prevent long-term degradation in condition. Any unintended damage to historic resources as a result of the AC34 event will be repaired by the project sponsors to its pre-event condition. **Mitigation Measure M-CP-1d: Protection of the Northeast Waterfront Historic District from Teatro Zinzanni Relocation** If Teatro Zinzanni opts to relocate to Seawall Lot 324 within the Northeast Waterfront Historic District, prior to the execution of any Port lease Teatro Zinzanni shall secure a Certificate of Appropriateness for the proposed relocation project from the Historic Preservation Commission (HPC), which shall require compliance with Article 10,

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
America's Cup (cont.)		
Impact CP-1 (cont.)		Appendix D of the Planning Code and the Secretary's Standards. Specifically, the HPC shall require compliance with Sections 6 and 7 of Article 10, Appendix D, incorporated here by reference, which provide additional requirements for Certificates of Appropriateness in the Northeast Waterfront Historic District. These additional requirements address the architectural and visual characteristics that define this district, including façade line continuity, fenestration and design elements for new construction, and appropriate roof treatments. If a Certificate of Appropriateness is not granted, the Port shall not approve the proposed lease on Seawall Lot 324. **Mitigation Measure M-NO-3: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring** (see Section 5.7, Noise)
Impact CP-2: Construction and operation of the proposed AC34 project could cause a substantial adverse change in the significance of an archeological resource, including shipwrecks.	LTSM	**Mitigation Measure M-CP-2: Inadvertent Discovery of Archeological Resources or Shipwrecks.** The following measures shall be implemented should construction activities result in the inadvertent discovery of a cultural resource: To avoid any potential adverse effect from the proposed project on inadvertently discovered buried or submerged historic resources, as defined in CEQA Guidelines Section 15065.4(a)(c), the project sponsor will distribute the Planning Department's archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor firms (including demolition, excavation, grading, foundation, pile driving, etc.); and/or to utilities firms involved in soil- or Bay bottom-disturbing activities within the project site. Prior to any soil- or Bay bottom-disturbing activities being undertaken, each contractor is responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. the project sponsor will provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the ALERT sheet. In the event that any indication of a potential cultural resource is encountered during soil- or Bay bottom-disturbing activities (such as in-water pile driving for temporary

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
America's Cup (cont.)		
Impact CP-2 (cont.)		berths and seismic improvements to Piers 30-32), the head foreman and/or project sponsor shall immediately notify the ERO and shall suspend soil- or Bay bottom-disturbing activities within 50 feet of the find until the ERO has determined what additional measures should be undertaken. Abandoned shipwrecks, archeological sites and historic resources in submerged lands of California are under the jurisdiction of the California State Lands Commission (CSLC). In the case of an inadvertent discovery of a submerged archeological site, shipwreck or related artifacts, the ERO shall contact and initiate consultation with the CSLC staff within 2 business days of such discovery. If the ERO (in consultation with the CSLC staff, if applicable) determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of an archeological consultant from the pool of qualified archeological consultants maintained by the Planning Department archaeologist. In the event of a shipwreck a qualified maritime archeological consultant shall be retained. The archeological consultant will advise the ERO as to whether the discovery is an archeological resource that retains sufficient integrity and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant will identify and evaluate the archeological resource. The archeological consultant will make a recommendation as to what action, if any, is warranted. Based on this information, the ERO (in consultation with the CSLC, if applicable) may require, if warranted, specific additional measures to be implemented by the project sponsor no more than forty eight (48) hours from receipt of such recommendation. Measures might include: preservation in situ of the archeological resource; an archeological monitoring program; or an archeological evaluation program. If an archeological monitoring or evaluation program is required, it shall be consistent with the Environmental Planning (EP) division of the Planning Department guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
America's Cup (cont.)		
Impact CP-2 (cont.)		The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO (and the CSLC staff, if applicable). This report shall include an evaluation of the historical significance of any discovered archeological resource, as well as a description of the archeological and historical research methods employed in any archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological 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: the relevant California Historical Resources Information System Information Center shall receive one (1) copy and the ERO shall receive a copy of the transmittal letter of the FARR to the Information Center. The EP and the CSLC staff (if applicable) shall receive one bound, one unbound, and one unlocked, searchable PDF copy on CD of the FARR along with copies 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. The project sponsor shall receive copies of the FARR in the number requested. In instances of high public interest in or the high interpretive value of the resource, the ERO or the CSLC staff may require a different final report content, format, and distribution than that presented above.
Impact CP-3: Construction and operation of the proposed AC34 project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature.	LTS	No mitigation necessary.
Impact CP-4: Construction and operation of the proposed AC34 project could disturb any human remains, including those interred outside of formal cemeteries.	LTSM	**Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains** The following measures shall be implemented should construction activities result in the inadvertent discovery of human remains: The treatment of any human remains and associated or unassociated funerary objects discovered during soil-disturbing activities shall comply with applicable state laws. Such treatment would include immediate notification of the City and County of San Francisco Coroner. In the event of the coroner's determination that the human remains are Native American, the coroner shall notify of the Native American Heritage Commission, which would appoint a Most Likely Descendant (MLD) (PRC

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
America's Cup (cont.)		
Impact CP-4 (cont.)		Section 5097.98). The archeological consultant, the project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. If the MLD and the other parties could not agree on the reburial method, the project sponsor shall follow Section 5097.98(b) of the PRC, which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact CP-5: Construction and operation of the proposed Pier 27 Cruise Ship Terminal would not result in a substantial adverse change in the significance of a historic resource.	LTS	No mitigation necessary.
Impact CP-6: Construction of the proposed Northeast Wharf Plaza could cause a substantial adverse change in the significance of a historic resource.	LTSM	**Mitigation Measure M-CP-6: Northeast Wharf Plaza Performance Criteria** To mitigate the project's potential impacts of the Northeast Wharf Plaza on Pier 29, Belt Railroad Office Building, Pier 23 Restaurant, and the Embarcadero Historic District, the following design criteria have been defined to produce a plaza design that maintains the character and integrity of the District and to achieve consistency with the Secretary's Standards, and the Port shall comply with these criteria: a) ***Plaza Relationship to Embarcadero Historic District.*** Plaza structures and public spaces should be consistent with the Secretary's Standards with respect to the character-defining features and be compatible with the Embarcadero Historic District by recognizing the bulkhead, pier, and apron zones, with improvements within those zones being compatible with the architectural character of the Embarcadero Historic District.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact CP-6 (cont.)		b) ***Structures at Northeast Wharf Plaza.*** Structures near the Northeast Wharf Plaza should be designed to be consistent with the Secretary's Standards and compatible with the historic character of bulkhead buildings through the following: • To feature the Belt Railroad Office Building and recognize its unique waterfront placement as a freestanding structure located on the bulkhead wharf fronting on the Embarcadero Promenade and rehabilitated consistent with the Secretary's Standards, new structures should be set back from the Embarcadero Promenade at least 30 feet and provide visual separation from the Belt Railroad Office Building accomplished by separating the new structures from the Belt Railroad Office Building by at least 40 feet; • As part of the design process the Port shall assess the historic integrity of the rear addition of the Belt Railroad Office Building and determine whether it retains sufficient integrity to be considered an integral part of its contributing resource status. Should the addition be determined integral to the contributing resource its treatment shall be consistent with the Secretary's Standards. • To acknowledge and strengthen the Cruise Terminal as the dominant maritime use of the pier, new structures should be located to respect the sight line from the Embarcadero Promenade to the terminal, and sited to follow the geometry established by the cruise terminal structure (instead of being parallel to the Embarcadero Promenade); • To acknowledge the monumental scale and civic character of the historic bulkhead buildings, new structures should have substantial height, massing and forms which may be accomplished with tall ground floor heights, walls with large sections of solid and void, strong cornice features, and prominent entries. This may be accomplished with a symmetrical façade to the front of the new structures that features a wide central storefront with doors and windows to the base, and flanked with solid sections that have fewer or smaller amounts of glazing; and • New structures within the Plaza shall be designed to support the historic setting of the Embarcadero Historic District including Pier 23, 29 and the Belt Railroad Office Building and shall be compatible but not mimic these historic resources in order to avoid creating a false sense of historical development; and,

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact CP-6 (cont.)		• To architecturally complement the Belt railroad and bulkhead buildings, new structures should be finished in industrial materials characteristic of the Embarcadero Historic District such as concrete, stucco or metal siding and steel sash windows. c) ***Plantings at Northeast Wharf Plaza.*** To recognize the Belt Railroad Office Building's historic placement as a freestanding structure within a working maritime environment and the industrial character of the Embarcadero Historic District, significant plantings should be setback at least 20 feet from the Belt Railroad Office Building. Lawn areas in the Plaza should be in raised planters that appear as an additive feature over the pier deck. Other plantings in the Plaza should serve to delineate space and should be limited to trees or plants in clearly defined planters or within the pier deck in a manner that continues to allow the site to be expressed as a pier deck. d) ***Evaluation for Consistency with Design Criteria.*** Prior to issuance of Port Building or Encroachment Permits, consult with the Planning Department to review and determine consistency of the Northeast Wharf Plaza with the above performance criteria, as determined by the Port of San Francisco preservation staff and the Planning Department preservation staff. This would include preparation of a Historic Resource Evaluation Report by a qualified historic preservation professional to assess the project's consistency with these performance criteria.
Impact CP-7: Proposed fill removal within Port properties associated with amendments to the BCDC Special Area Plan for the AC34 and Cruise Terminal projects would not cause a substantial adverse change in the significance of a historic resource.	NI	No mitigation necessary.
Impact CP-8: Construction and operation of the proposed Pier 27 Cruise Ship Terminal and Northeast Wharf Plaza could cause a substantial adverse change in the significance of an archeological resource, including shipwrecks.	LTSM	**Mitigation Measure M-CP-2: Inadvertent Discovery of Archeological Resources or Shipwrecks**
Impact CP-9: Construction and operation of the proposed Pier 27 Cruise Ship Terminal and Northeast Wharf Plaza would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.5: Cultural and Paleontological Resources (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact CP-10: Construction and operation of the proposed Pier 27 Cruise Ship Terminal and Northeast Wharf Plaza could disturb any human remains, including those interred outside of formal cemeteries.	LTSM	**Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains**
Future Long-Term Development Impacts		
Impact LT-CP-1: Long-term development could result in redevelopment of existing Port properties at Piers 30-32, which could result in a significant impact to cultural resources.	SUM	See **Mitigation Measure M-LT-CP-a** in Table 1-4, below.
Impact LT-CP-2: Long-term development could result in redevelopment of existing Port properties within the Embarcadero Historic District, which could result in a significant impact to cultural resources.	LTSM	See **Mitigation Measure M-LT-CP-b** in Table 1-4, below.
Cumulative Impacts		
Impact C-CP: The combination of AC34 and Cruise Terminal projects, in combination with other past, present and foreseeable future projects, could have a cumulatively considerable effect on cultural resources.	LTSM	**Mitigation Measure M-CP-1a. Bulkhead Wharf Substructure Review Process** **Mitigation Measure M-CP-1b: Protection of Historical Resources due to Indirect Damage** **Mitigation Measure M-CP-1c: Protection of Historical Resources due to Direct Damage** **Mitigation Measure M-CP-1d: Protection of the Northeast Waterfront Historic District from Teatro Zinzanni Relocation** **Mitigation Measure M-NO-3: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring** (see Section 5.7, Noise) **Mitigation Measure M-CP-2: Inadvertent Discovery of Archeological Resources or Shipwrecks** **Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains** **Mitigation Measure M-CP-6. Northeast Wharf Plaza Performance Criteria** See **Mitigation Measures M-LT-CP-a** and **M-LT-CP-b** in Table 1-4, below.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation		
America's Cup		
Impact TR-1 through Impact TR-12: Implementation of the AC34 2012 events would result in significant impacts at 12 signalized and unsignalized intersections that would operate at LOS E or LOS F under Existing plus AC34 2012 conditions. Intersections include: • Embarcadero/Beach • Embarcadero/Howard • King/Third • Lombard/Divisadero • Lombard/Fillmore • Bay/Laguna • Bay/Van Ness • Bush/Van Ness • Pine/Van Ness • Lombard/Van Ness • Lincoln/25th • Lombard/Lyon	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions** As part of the proposed project, the City would develop and implement a People Plan consisting of a variety of interrelated programs to facilitate access by all modes to and from the AC34 event venues, while maintaining acceptable conditions for residents, commuters, businesses and visitors. To address specific impacts identified in this EIR, the programs in the People Plan shall be developed to accommodate weekday and weekend events at various levels of spectator attendance and shall include specific provisions described below. The People Plan shall include, but not be limited to, the following programs: **M-TR-1a: Traffic Monitoring and Management Program** As a means to reduce congestion in the vicinity of the venue sites and on access roadways to and from the sites, the City shall develop and implement a Traffic Monitoring and Management Program that could include the following measures: • Preferred spectator routes; • Bus priority streets; • New bus lanes; • Extension of existing bus-only lanes; • Bicycle priority streets; • On-street parking restrictions; • Traffic control officer deployment; • Coordination with other events (e.g., ballgames; roadway construction projects); • Roadway closures; • Restricted access streets; • Diversion plans related to roadway closures; • Event signage including weekend detour signs; and • Media announcements of roadway closures and detour signs.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-1 through Impact TR-12 (cont.)		**M-TR-1b: Transit Operating Plan** As part of the People Plan, the City shall develop and implement a transit operating plan to provide additional transit service to accommodate peak transit demands during the AC34 project events. Elements of the plan (as developed to date) could include, but are not limited to: • Increased service hours and frequency on 30X-Marina Express, which would run every 8 minutes on all event days, including weekends. • Supplemental 30L-Marina, which would run every 6 minutes in the peak direction of travel (e.g., towards the waterfront through the mid-afternoon, and from the waterfront through the evening). The service would run between the Caltrain terminal and the intersection of Beach/Broderick (via Third/Fourth, Stockton, Broadway, Van Ness, and Lombard). • Supplemental 47L-Van Ness, which would run every 10 minutes in the peak direction of travel throughout the day. Service would be provided between the Civic Center BART/Muni station and North Point Street, via Van Ness Avenue. Providing the supplemental service within a temporary bus lane is currently being considered. • Increased frequencies on the 108-Treasure Island, which would run every 10 minutes on all event days, including weekends. • Increased frequencies on the F-Market & Wharves historic streetcar between the Ferry Building and Fisherman's Wharf (i.e., at Pier 39), which would run every 5 minutes throughout the day. • New E-Embarcadero historic streetcar service between Caltrain and Pier 39. This service would need to use the double-ended historic streetcars, and would run every 20 minutes throughout the day. • Supplemental Muni Metro Shuttle. This light rail vehicle service would run within the Market Street tunnel between the Embarcadero station and the West Portal station. Shuttle service would be provided every 20 minutes on weekends only.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-1 through Impact TR-12 (cont.)		**M-TR-1c: Satellite Parking Facility Program** As a means to reduce the number of vehicles traveling to and from the northern waterfront, the City shall implement satellite parking facilities and frequent transit or shuttle service between the satellite parking facilities and the various venues. Parking facilities could include existing public and private garages and lots, as well as other undeveloped parcels such as Mission Bay Lot A and Candlestick Park. **M-TR-1d: Public Information Program** As a means to facilitate access to and from venues and spectator viewing areas by all modes, while encouraging the use of transit and alternate modes, the City shall develop and implement a Public Information Program. For event days that overlap with other special events, a coordinated public information program shall be developed and provided to the public. The program shall provide: • Access information for all modes before, during and after the events; • Maps and guidelines; • Special signage; • Marketing campaign to encourage transit use and bicycle use to event sites; • Web-based event information; • Media and press releases to update information on a regular basis; and • Public information for commuters, businesses and deliveries.
Impact TR-13: Implementation of the AC34 2012 events would have less than significant impacts at the signalized intersection of King/Fourth that would operate at LOS E under Existing plus AC34 2012 conditions, and unsignalized intersections of Jackson/Arguello and Pacific/Presidio where the worst approach would operate at LOS E or LOS F under Existing plus AC34 2012 conditions.	LTS	No mitigation necessary.
Impact TR-14: Implementation of the AC34 2012 events would have less than significant impacts at 29 study intersections that would operate at LOS D or better under Existing plus AC34 2012 conditions.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-15: Implementation of the AC34 2012 events would result in significant impacts at other signalized and unsignalized intersections in the project area within San Francisco in addition to impacts identified at the study intersections.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**
Impact TR-16: Implementation of the AC34 2012 events would result in significant impacts on traffic operations at secondary viewing areas outside of San Francisco.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**
Impact TR-17: Implementation of the AC34 2012 events would exceed the available transit capacity of Muni lines.	SUM	**Mitigation Measure M-TR-17: Additional Muni Transit Service** As part of the People Plan, the City shall develop and implement a transit operating plan to provide additional transit service to and from the Presidio, Crissy Field, and Marina venues accommodate peak transit demands on weekdays and weekends, and to and from Fisherman's Wharf on weekends. This transit service would need to be in addition to that identified in Mitigation Measure M-TR-1b.
Impact TR-18: Implementation of the AC34 2012 events would exceed the available transit capacity of PresidiGo shuttle service.	SUM	**Mitigation Measure M-TR-18: Additional PresidiGo Shuttle Service** As part of the People Plan, the City shall work with the Presidio Trust, Golden Gate Transit, and SFMTA to develop and implement a transit operating plan to provide additional transit service linking Presidio destinations with Crissy Field and downtown regional service providers. Additional PresidiGo service could be provided by implementing PresidiGo on weekend days, and by providing an additional PresidiGo shuttle service between the Lombard Gate (near the terminus of the 41-Union and 45-Union-Stockton Muni bus lines) and Crissy Field on weekend days.
Impact TR-19: Implementation of the AC34 2012 events would exceed the available transit capacity of AC Transit lines.	SUM	**Mitigation Measure M-TR-19: Additional AC Transit Capacity** As part of the People Plan, the City shall work with AC Transit and other regional transit providers (i.e., BART, WETA) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 project events to and from the East Bay. While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-19 (cont.)		10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The additional AC Transit service could be provided by, but not be limited to, the following supplemental lines. • *The Berkeley (F) Route*: This route provides service generally from UC Berkeley to the Temporary Transbay Terminal through Ashby BART and Emeryville. • *The Oakland (NL) Route*: This route provides service generally from Mills College to the Temporary Transbay Terminal through MacArthur Boulevard and West Grand Avenue. • *Alameda (O) Route*: This route provides service generally from Fruitvale to the Temporary Transbay Terminal through Alameda.[1] • *Treasure Island Route*: This route would provide service generally from one of the BART Stations (MacArthur or West Oakland) to Treasure Island. • *Crissy Field Route*: This route would provide service generally from the East Bay to Crissy Field without requiring East Bay passengers to transfer at the Temporary Transbay Terminal to Muni. The supplemental routes described above are intended to illustrate the type and alignment of additional service that could be provided during the AC34 2012 events. However, the People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (specific routes, span of service, days of service, headways, types of buses, etc.) and could include different routes, service providers, or service schedules than what is described above. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events and ultimately during the AC34 2013 events.
Impact TR-20: Implementation of the AC34 2012 events would exceed the available transit capacity of BART lines.	SUM	**Mitigation Measure M-TR-20: Additional BART Transit Service** As part of the People Plan, the City shall work with BART and other regional transit providers (i.e., AC Transit, WETA) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the East Bay and South Bay.

[1] The examples of the type and alignment of routes were formulated in partnership with AC Transit.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-20 (cont.)		While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The additional East Bay BART service could be provided by, but not limited to, executing weekday service during the weekends or by operating longer trains. The People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (span of service, days of service, headways, etc.) and could include a different arrangement than providing weekday service on weekends.
Impact TR-21: Implementation of the AC34 2012 events would exceed the available transit capacity of WETA ferry lines.	SUM	**Mitigation Measure M-TR-21: Additional WETA Transit Service** As part of the People Plan, the City shall work with WETA and other regional transit providers (i.e., BART, AC Transit) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the East Bay. While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The additional WETA ferry service could be provided by, but not be limited to, the following supplemental lines. • *Vallejo Baylink Service*: This service operates from the terminal at the Vallejo waterfront west of downtown directly to the San Francisco Ferry Building and to Pier 41 in Fisherman's Wharf. One additional vessel with a capacity for 300 passengers could be added to the existing weekend service.[2]

[2] The existing Vallejo Baylink Ferry Service offers nine weekend round trips, including a trip via AT&T Park during weekend games. In addition to the ferry service, the Vallejo Baylink service includes the Route 200 Bus service from the Vallejo terminal to the San Francisco Ferry Building. Route 200 buses have a capacity of 55 passengers and supplement the ferry service with one weekend round trip.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-21 (cont.)		• *Alameda/Oakland Bay Service (AOFS)*: This service operates from Main Street in Alameda and from Clay Street in Oakland to the San Francisco Ferry Building and to Pier 41 in Fisherman's Wharf. One additional vessel with a capacity of approximately 325 to 375 passengers could be added to the existing weekend service.[3] • Additional midday off-peak service could also be provided between the Ferry Building and/or Piers 39-41, if there is sufficient capacity to berth the ferries. The supplemental routes described above are intended to illustrate the type and alignment of additional service that could be provided during the AC34 2012 events.[4] However, the People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (specific routes, span of service, days of service, headways, types of ferries, etc.) and could include different routes or service schedules than what is described above. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events and ultimately during the AC34 2013 events.
Impact TR-22: Implementation of the AC34 2012 events would exceed the available transit capacity of Golden Gate Transit bus and ferry lines.	SUM	**Mitigation Measure M-TR-22: Additional Golden Gate Transit Service** As part of the People Plan, the City shall work with Golden Gate Transit and other regional transit providers (i.e., WETA) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the North Bay. While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The additional Golden Gate Transit bus service may be able to pick up local passengers within San Francisco at existing Golden Gate Transit and Muni bus stops. The bus service could be provided by, but not be limited to, the following supplemental lines.

[3] The existing AOFS service offers six weekend round trips.
[4] The examples of the type and alignment of routes were formulated in partnership with WETA.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-22 (cont.)		• *Route 93*: This route would begin at the Golden Gate Bridge Toll Plaza and continue to the San Francisco Civic Center area via Lombard, Van Ness, Golden Gate, Hyde, Eighth, and Mission Streets to Sixth and Howard Streets in the outbound direction, and via Seventh, McAllister, Van Ness, and Lombard to the Golden Gate Bridge Toll Plaza in the inbound direction.[5] A variation of this route could terminate at the Richardson/Francisco transfer point rather than at the Golden Gate Bridge Toll Plaza, provided sufficient turn-around space is available. • *Route 4*: To supplement Route 93, a "short" Route 4 could operate between the Manzanita Park & Ride in Mill Valley to the Financial District. This route would travel on U.S. 101 through the Golden Gate Bridge Toll Plaza and continue to the San Francisco Financial District via Lombard, Van Ness, North Point, Polk, Beach, Embarcadero, and Battery, across Market Street to Howard, Eight and Harrison Streets in the inbound direction, and via Harrison, Ninth, Folsom, Fremont, Front, Pine, Sansome, The Embarcadero, North Point, Van Ness and Lombard to the Manzanita Park & Ride in the inbound direction. The supplemental routes described above are intended to illustrate the type and alignment of additional service that could be provided during the AC34 2012 events.[6] However, the People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (specific routes, span of service, days of service, headways, types of buses, etc.) and could include different routes than what is described above. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events and ultimately during the AC34 2013 events.
Impact TR-23: Implementation of the AC34 2012 events would exceed the available transit capacity of Blue & Gold ferry lines.	SUM	**Mitigation Measure M-TR-23: Additional Blue & Gold Transit Service** As part of the People Plan, the City shall work with Blue & Gold and other regional transit providers (i.e., Golden Gate Transit) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the North Bay.

[5] In general, routes headed towards downtown San Francisco are considered inbound and routes heading away from downtown San Francisco are considered outbound. However, for Golden Gate Transit the terminology is reversed since the buses are leaving the yard to go to San Francisco (outbound) and returning to where they originated in Marin (inbound).

[6] The examples of the type and alignment of routes were formulated in partnership with Golden Gate Transit.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-23 (cont.)		While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided by Blue & Gold and/or Golden Gate Transit ferry and bus service throughout the day, as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. Blue & Gold currently provides additional ferry service during special events – for example, additional evening service from Tiburon to San Francisco for the Fourth of July fireworks show. Similar additional service could be provided during the AC34 2012 events.
Impact TR-24: Implementation of the AC34 2012 events would exceed the available transit capacity of Caltrain service.	SUM	**Mitigation Measure M-TR-24: Additional Caltrain Transit Service** As part of the People Plan, the City shall work with Caltrain and other regional transit providers (i.e., BART, SamTrans) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the South Bay. While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (span of service, days of service, headways, stop locations, etc.), if any. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events, and ultimately during the AC34 2013 events.
Impact TR-25: Implementation of the AC34 2012 events would exceed the available transit capacity of SamTrans lines.	SUM	**Mitigation Measure M-TR-25: Additional SamTrans Transit Service** As part of the People Plan, the City shall work with SamTrans and other regional transit providers (i.e., BART, Caltrain) to develop an operating plan that would accommodate peak transit demands during the AC34 events to and from the South Bay. While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-25 (cont.)		10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. Whether the additional service could be provided by SamTrans is uncertain. However, additional service from and to the South Bay could be provided by, but not be limited to the following: • *Supplemental BART Service*: BART could increase its service to and from the South Bay by providing service similar to that seen on weekdays or by operating longer trains (10 cars per train) to increase the capacity of the existing weekend service. The People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (span of service, days of service, headways, stop locations, etc.) and could include a different arrangement than providing described above. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events and ultimately during the AC34 2013 events.
Impact TR-26: Implementation of the AC34 2012 events would have a potentially significant impact on transit operations related to additional congestion resulting from the project.	SUM	**Mitigation Measure M-TR-26a: Barricade to Protect Transit Lanes** The AC34 2012 events have the potential to adversely impact the operations of the F-Market & Wharves line in the Fisherman Wharf area, particularly on Jefferson Street. As part of the People Plan, the City shall create a strategy for protecting the F-Market & Wharves right-of-way for safety and operational efficiency (i.e., to ensure delay to streetcar service is minimized. The strategy could include, but not be limited to, erecting removable barricades along the F-Market & Wharves tracks in order to contain pedestrian overflow and direct crossings to existing crosswalks. **Mitigation Measure M-TR-26b: Traffic Control Officers at Key Intersections** The AC34 2012 events have the potential to adversely impact the operations of Muni, Golden Gate Transit, and AC Transit service in downtown San Francisco. As part of the People Plan, the City shall develop a strategy for implementation of traffic control officers at intersections that key transit routes travel through.
Impact TR-27: Implementation of the AC34 2012 events would disrupt regular scheduled ferry operations.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-28: Implementation of the AC34 2012 events would have less than significant impacts on transit operations at secondary viewing areas.	LTS	No mitigation necessary, but the following Improvement Measure is identified: **Improvement Measure I-TR-28: Advance Ferry Ticket Sales** In order to ensure that demand for ferry service to secondary spectator viewing areas on Angel Island do not exceed the capacity of the ferry service, advance ticket sales could be required. As part of the People Plan, the City shall work with California State Parks, Blue & Gold ferry service, and the Angel Island Tiburon Ferry service to develop a strategy for ferry access to Angel Island, including requiring advance ticket sales.
Impact TR-29: Implementation of the AC34 2012 events would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the project sites and adjoining areas.	LTS	No mitigation necessary.
Impact TR-30: Implementation of the AC34 2012 events would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility at secondary viewing areas.	LTS	No mitigation necessary.
Impact TR-31: Implementation of the AC34 2012 events would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the project site or adjoining areas.	LTS	No mitigation necessary.
Impact TR-32: Implementation of the AC34 2012 events would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility at secondary viewing areas and Vicinity.	LTS	No mitigation necessary.
Impact TR-33: Implementation of the AC34 2012 events would not result in a loading demand during the peak hour of loading activities that could not be accommodated within the proposed loading supply or within on-street loading zones.	LTS	No mitigation necessary.
Impact TR-34: Implementation of the AC34 2012 events would not result in a significant emergency vehicle access impact.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-35: Implementation of the AC34 2012 events would not result in construction-related transportation impacts because of their temporary and limited duration.	LTS	No mitigation necessary.
Impact TR-36: The AC34 2012 events would not result in significant transportation impacts in combination with ongoing and upcoming construction projects in the City and its vicinity.	LTS	No mitigation necessary.
Impact TR-37: The AC34 2012 events would result in potentially significant impacts to the transportation network in combination with other special events occurring simultaneously in San Francisco.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**
Impact TR-38 – Impact TR-55: Implementation of the AC34 2013 events would result in significant impacts at 18 individual signalized and unsignalized intersections that would operate at LOS E or LOS F under Existing plus AC34 2013 conditions. Intersections include: • Embarcadero/Beach • Embarcadero/Broadway • Embarcadero/Howard • Embarcadero/Folsom • Embarcadero/Harrison • Embarcadero/ Bryant • Fremont/Folsom • King/Third • King/Fourth • Lombard/Divisadero • Lombard/ Fillmore • Bay/Laguna • Bay/Van Ness • Bush/Van Ness • Pine/Van Ness • Lombard/Van Ness • Lincoln/25th • Lombard/Lyon	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**
Impact TR-56: Implementation of the AC34 2013 events would have less than significant impacts at the two unsignalized intersections of Jackson/Arguello and Pacific/Presidio where the worst approach would operate at LOS E or LOS F under Existing plus AC34 2013 conditions.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-57: Implementation of the AC34 2013 events would have less than significant impacts at 24 study intersections that would operate at LOS D or better under Existing plus AC34 2013 conditions.	LTS	No mitigation necessary.
Impact TR-58: Implementation of the AC34 2013 events would result in significant impacts at other signalized and unsignalized intersections in the project area within San Francisco in addition to impacts identified at the 44 study intersections.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**
Impact TR-59: Implementation of the AC34 2013 events would result in significant impacts on traffic operations at secondary viewing areas outside of San Francisco.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**
Impact TR-60: Implementation of the AC34 2013 events would exceed the available transit capacity of Muni lines.	SUM	**Mitigation Measure M-TR-1b: Transit Operating Plan** **Mitigation Measure M-TR-17: Additional Muni Transit Service**
Impact TR-61: Implementation of the AC34 2013 events would exceed the available transit capacity of PresidiGo.	SUM	**Mitigation Measure M-TR-18: Additional PresidiGo Capacity**
Impact TR-62: Implementation of the AC34 2013 events would exceed the available transit capacity of AC Transit lines.	SUM	**Mitigation Measure M-TR-19: Additional AC Transit Capacity**
Impact TR-63: Implementation of the AC34 2013 events would exceed the available transit capacity of BART lines.	SUM	**Mitigation Measure M-TR-20: Additional BART Transit Service**
Impact TR-64: Implementation of the AC34 2013 events would exceed the available transit capacity of WETA ferry lines.	SUM	**Mitigation Measure M-TR-21: Additional WETA Transit Service**
Impact TR-65: Implementation of the AC34 2013 events would exceed the available transit capacity of Golden Gate Transit bus and ferry lines.	SUM	**Mitigation Measure M-TR-22: Additional Golden Gate Transit Service**
Impact TR-66: Implementation of the AC34 2013 events would exceed the available transit capacity of Blue & Gold ferry lines	SUM	**Mitigation Measure M-TR-23: Additional Blue & Gold Transit Service**
Impact TR-67: Implementation of the AC34 2013 events would exceed the available transit capacity of Caltrain service.	SUM	**Measure M-TR-24: Additional Caltrain Transit Service**

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-68: Implementation of the AC34 2013 events would exceed the available transit capacity of SamTrans lines.	SUM	**Mitigation Measure M-TR-25: Additional SamTrans Transit Service**
Impact TR-69: Implementation of the AC34 2013 events would have a potentially significant impact on transit operations related to additional congestion generated by the project.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**
Impact TR-70: Implementation of the AC34 2013 events would disrupt regular ferry operations.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions** **Mitigation Measure M-TR-1d: Public Information Program**
Impact TR-71: Implementation of the AC34 2013 events would have less than significant impacts on transit operations at secondary viewing areas.	LTS	No mitigation necessary.
Impact TR-72: Implementation of the AC34 2013 events would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the project site and adjoining areas.	LTS	No mitigation necessary.
Impact TR-73: Implementation of the AC34 2013 events would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility at secondary viewing areas.	LTS	No mitigation necessary.
Impact TR-74: Implementation of the AC34 2013 events would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the project site or adjoining areas.	LTS	No mitigation necessary.
Impact TR-75: Implementation of the AC34 2013 events would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility at secondary viewing areas.	LTS	No mitigation necessary.
Impact TR-76: Implementation of the AC34 2013 events would not result in a loading demand during the peak hour of loading activities that could not be accommodated within the proposed loading supply or within on-street loading zones.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
America's Cup (cont.)		
Impact TR-77: Implementation of the AC34 2013 events would not result in a significant emergency vehicle access impact.	LTS	No mitigation necessary.
Impact TR-78: Implementation of the AC34 2013 events would not result in construction-related transportation impacts because of their temporary and limited duration.	LTS	No mitigation necessary.
Impact TR-79: The AC34 2013 events would not result in significant transportation impacts in combination with ongoing and upcoming construction projects in the City and its vicinity	LTS	No mitigation necessary.
Impact TR-80: The AC34 2013 events would result in potentially significant impacts to the transportation network in combination with other special events occurring simultaneously in San Francisco.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions**
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact TR-81: Implementation of the Cruise Terminal project would have a less than significant impacts at two study intersections that would operate at LOS F under Existing plus Cruise Terminal project conditions.	LTS	No mitigation necessary.
Impact TR-82: Implementation of the Cruise Terminal project would have less than significant impacts at 20 study intersections that would operate at LOS D or better under Existing plus Cruise Terminal project conditions.	LTS	No mitigation necessary.
Impact TR-83: Implementation of the Cruise Terminal project could affect traffic operations on The Embarcadero.	LTSM	**Mitigation Measure M-TR-83: Relocate Cruise Terminal Vehicular Access** The Port shall relocate the vehicular access to the cruise terminal about 30 feet to the south to provide for additional distance for vehicles to access the northbound left turn pocket at the approach to Chestnut/Sansome without blocking the adjacent travel lanes. **Improvement Measure I-TR-83: Transportation Management Plan** The Port shall prepare, in consultation with SFMTA, a transportation management plan for the operation of the cruise terminal, including, but not limited to, procedures for vehicular, truck and bus access, protocols for Transportation Monitors, directional

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact TR-83 (cont.)		signage, distribution of information on drop-off and pick-up procedures for cruise terminal passengers as well as information on alternatives to vehicular access. The transportation management plan shall be flexible and differentiate between the size of cruise ship and type of cruise ship call (e.g., home-port, transit call, etc.).
Impact TR-84: Implementation of the Cruise Terminal project would not cause a substantial increase in transit demand at the Muni Downtown and the Regional Transit Screenlines that could not be accommodated by adjacent transit service, or cause a substantial increase in transit delays or operating costs.	LTS	No mitigation necessary.
Impact TR-85: Implementation of the Cruise Terminal project would contribute to existing exceedance of capacity utilization standard on the F-Market & Wharves historic streetcar line.	SUM	**Mitigation Measure M-TR-85: Additional F-Market & Wharves or E-Embarcadero Service** The Port shall, to the extent feasible and consistent with annual budget appropriations, financially compensate the SFMTA for the cost of services designed to address the increased demands on the F-line (and if/when applicable, the E-line) resulting from the project. The amount and schedule for payment and commitment to application of service needs shall be set forth in a Transit Mitigation Agreement between the Port and SFMTA. **Improvement Measure I-TR-85: F-Market & Wharves Stop Ambassador** To ensure that the F-Market & Wharves streetcar operations are not delayed due to cruise terminal passengers asking information from the streetcar operator and paying fares on board, an on-street transit ambassador could be stationed at the F-Market & Wharves streetcar stop on The Embarcadero at Lombard Street (one ambassador for both directions of travel). On days when a transit cruise ship is in port, the ambassador would provide directional guidance to use of the streetcar to cruise ship passengers, support pre-sale of tickets/passes, as well as provide directional guidance to walking, bicycling and transit access to other parts of the City.
Impact TR-86: Implementation of the Cruise Terminal would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the project site and adjoining areas.	LTS	No mitigation necessary, but the following Improvement Measure is identified: **Improvement Measure I-TR-86: Bicycle Lane Improvements** To facilitate efficient and safe intersections between vehicle using cruise terminal driveway when a cruise ship is in port and bicyclists traveling northbound on Bicycle

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact TR-86 (cont.)		Route 5, the project shall add the following design features: (a) stencil a bicycle symbol within the bicycle lane adjacent to Piers 27-29; and (b) install appropriate signage at the curb. The stencil of the bicycle symbol and signage would increase driver awareness of the presence of the bicycle lane.
Impact TR-87: Implementation of the Cruise Terminal would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the project site or adjoining areas.	LTS	No mitigation necessary.
Impact TR-88: Implementation of the Cruise Terminal project would not result in a loading demand during the peak hour of loading activities that could not be accommodated within the proposed loading supply, or within on-street loading zones.	LTS	No mitigation necessary.
Impact TR-89: Implementation of the Cruise Terminal project would not result in a significant emergency vehicle access impact.	LTS	No mitigation necessary.
Impact TR-90: Implementation of the Cruise Terminal project would not result in construction-related transportation impacts because of their temporary and limited duration.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-TR: Long-Term Development under the Host Agreement would result in significant traffic and transit impacts.	SUM	See **Mitigation Measure M-LT-TR** in Table 1-4, below.
Cumulative Impacts		
Impact C-TR-1: Implementation of the Cruise Terminal project would result in significant project and cumulative impacts at the intersection of The Embarcadero/ Broadway.	SU	No feasible mitigation available.
Impact C-TR-2: Implementation of the Cruise Terminal project would result in a significant project and cumulative impacts at the intersection of The Embarcadero/ Washington.	SU	No feasible mitigation available.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.6: Transportation and Circulation (cont.)		
Cumulative Impacts (cont.)		
Impact C-TR-3: Implementation of the Cruise Terminal project would result in a significant project and cumulative impacts at the intersection of The Embarcadero/ Mission.	SU	No feasible mitigation available.
Impact C-TR-4: Implementation of the Cruise Terminal project would result in a significant project and cumulative impacts at the intersection of The Embarcadero/ Howard.	SU	No feasible mitigation available.
Impact C-TR-5: Implementation of the Cruise Terminal project would result in a significant project and cumulative impacts at the intersection of The Embarcadero/Folsom.	SU	No feasible mitigation available.
Impact C-TR-6: Implementation of the Cruise Terminal project would have less than significant impacts at six study intersections that would operate at LOS E or LOS F under 2035 cumulative conditions.	LTS	No mitigation necessary.
Impact C-TR-7: Implementation of the Cruise Terminal project would have less than significant impacts at 11 study intersections that would operate at LOS D or better under 2035 cumulative conditions.	LTS	No mitigation necessary.
Impact C-TR-8: The proposed project's contribution to cumulative transit trips would not contribute considerably to exceeding Muni's capacity utilization standard at the Downtown screenlines during the weekday a.m. and p.m. peak hours.	LTS	No mitigation necessary.
Impact C-TR-9: The proposed project's contribution to cumulative transit conditions on the F-Market & Wharves historic streetcar line would be considerable, and would result in significant project and cumulative impacts on the F-Market & Wharves historic streetcar.	SUM	**Mitigation Measure M-TR-85: Additional F-Market & Wharves or E-Embarcadero Service**
Impact C-TR-10: The proposed project's contribution to cumulative transit trips on AC Transit, BART, Caltrain, Golden Gate Transit, SamTrans, and other ferry lines would not contribute considerably to the capacity utilization at the regional screenlines during the weekday a.m. and p.m. peak hours.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.7: Noise		
America's Cup		
Impact NO-1: Construction of the America's Cup facilities could result in exposure of persons to or generation of noise levels in excess of standards established in the *San Francisco General Plan* or San Francisco Noise Ordinance or result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	LTSM	**Mitigation Measure M-NO-1a: Noise Controls During Construction** The following practices shall be incorporated into the construction contract agreement 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; and • Require applicable construction-related vehicles and equipment to use designated truck routes to travel to and from the project sites. **Mitigation Measure M-NO-1b: Pile Driving Noise-Reducing Techniques and Muffling Devices** The AC34 project sponsors 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 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 sponsors shall notify building owners and occupants within 500 feet of the project site of the dates, hours, and expected duration of such activities.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.7: Noise (cont.)		
America's Cup (cont.)		
Impact NO-1 (cont.)		In addition, implementation of this measure shall be coordinated with Mitigation Measure M-BI-11a (Impact Hammer Pile Driving Noise Reduction for Protection of Fish) (see Section 5.14, Biological Resources), which requires the AC34 project sponsors to develop a sound attenuation monitoring plan to reduce noise impacts to aquatic wildlife. This plan shall incorporate best management practices to reduce noise, such as use of cushion blocks between the hammerhead and concrete piles to reduce vibration, use of vibratory drivers for the installation and removal of all steel pilings, and employment of a "soft start" technique to all pile driving to give fish and marine mammals an opportunity to vacate the area. Vibratory hammers shall be used to the maximum extent practicable. **Mitigation Measure M-BI-11a: Impact Hammer Pile Driving Noise Reduction for Protection of Fish** (see Section 5.14, Biological Resources)
Impact NO-2: Operation of the America's Cup events and facilities would result in exposure of persons to or generation of noise levels in excess of standards established in the *San Francisco General Plan* or San Francisco Noise Ordinance.	SUM	**Mitigation Measure M-NO-2a: Shielding or Acoustical Enclosures for Generators at Piers 27-29 and Marina Green** The AC34 project sponsor shall provide shielding or acoustical enclosures for generators at Piers 27-29 and the Marina Green. Specification sheets for generators indicate that Level 1 sound enclosures will dampen noise levels by 5 dBA for the size of generators proposed for Piers 27-29. **Mitigation Measure M-NO-2b: Noise Control Plan for Entertainment Venues** The AC34 project sponsors shall develop and implement a Noise Control Plan for operations at the proposed entertainment venues to reduce the severity of potential noise impacts from public address and/or amplified music. This Noise Control Plan shall contain the following elements: • The project sponsor shall comply with noise controls and restrictions in applicable entertainment permit requirements for designated AC34 events. • Where not otherwise addressed in City permits, amplification levels generally shall be established commensurate with the City's fixed residential interior noise limits of 50 dBA daytime (7:00 a.m. to 10:00 p.m.) and 45 dBA nighttime (10:00 p.m. to 7:00 a.m.).

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.7: Noise (cont.)		
America's Cup (cont.)		
Impact NO-2 (cont.)		Volume settings at each entertainment venue shall be identified during the first week of events using noise monitoring at the nearest residences of concern, performed by a qualified acoustical technician in association with the project sponsors. No building attenuation shall be assumed for residences that would not be expected to have mechanical ventilation systems. • Speaker systems shall be directed toward the Bay, away from the nearest sensitive receptors to the degree feasible. • A point of contact shall be designated by the project sponsors to respond to noise complaints and to ensure compliance with the first two measures above. This person shall work with the San Francisco Entertainment Commission to establish set-up and operational conditions appropriate to each of the venues with regard to compliance with requirements of Section 47.2 of the San Francisco Police Code.
Impact NO-3: Construction and operation of the America's Cup facilities could result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	LTSM	**Mitigation Measure M-NO-3: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring** 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 historic structures subject to pile-driving activity in the vicinity of Piers 28, Piers 30-32, Red's Java House, and Bulkhead Wharf Section 10 before a Port Building Permit is issued. If recommended by the pre-construction assessment, for structures or facilities within 60 feet of pile-driving activities, the project sponsors shall require groundborne vibration monitoring of nearby historic 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 historic 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 pile-driving activities. Monitoring results shall be submitted to the Port's Chief Harbor Engineer. In the event of unacceptable ground movement with the potential to cause structural damage, as

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.7: Noise (cont.)		
America's Cup (cont.)		
Impact NO-3 (cont.)		determined by the Chief Harbor Engineer, all impact work shall cease and corrective measures shall be implemented to minimize the risk to the subject, or adjacent, historic structure.
Impact NO-4: Operation of the America's Cup facilities would result in a temporary and periodic increase in ambient noise levels in the project vicinity above levels existing without the project associated with increased traffic levels on weekends.	SUM	**Mitigation Measure M-TR-1: People Plan Specific Provisions** (see Section 5.6, Transportation and Circulation)
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact NO-5: Construction of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in exposure of persons to or generation of noise levels in excess of standards established in the *San Francisco General Plan* or San Francisco Noise Ordinance.	LTS	No mitigation necessary.
Impact NO-6: Operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in exposure of persons to or generation of noise levels in excess of standards established in the *San Francisco General Plan* or San Francisco Noise Ordinance.	LTS	No mitigation necessary.
Impact NO-7: Construction of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	LTS	No mitigation necessary.
Impact NO-8: Operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	LTS	No mitigation necessary.
Impact NO-9: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.7: Noise (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact NO-10: Operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-NO: Long-term development on Port properties could result in impacts on noise.	LTSM	**Mitigation Measure M-NO-1a: Noise Controls During Construction** **Mitigation Measure M-NO-1b: Pile Driving Noise-Reducing Techniques and Muffling Devices** **Mitigation Measure M-NO-3: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring** See **Mitigation Measures M-LT-NOa** and **M-LT-NOb** in Table 1-4, below.
Cumulative Impacts		
Impact C-NO: Project-related traffic, in combination with other past, present, and reasonably foreseeable future projects, would result in significant and unavoidable adverse cumulative noise impacts.	SUM	**Mitigation Measure M-NO-1a: Noise Controls During Construction** **Mitigation Measure M-NO-1b: Pile Driving Noise-Reducing Techniques and Muffling Devices** **Mitigation Measure M-NO-3: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring**
Section 5.8: Air Quality		
America's Cup		
Impact AQ-1: Construction of the America's Cup facilities would not result in localized construction dust-related air quality impacts.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.8: Air Quality (cont.)		
America's Cup (cont.)		
Impact AQ-2: Construction of the America's Cup facilities would result in emission of criteria pollutants and precursors that would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	SUM	**Mitigation Measure M-AQ-2a: Construction Vehicle Emissions Minimization** To reduce construction vehicle emissions, the project sponsor shall incorporate the following into construction specifications: • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure, Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • The project sponsor shall ensure that construction contract specifications include a requirement that on-road diesel trucks used to transport spoils consist of 2007 or newer model-year trucks with factory-built engines. All on-road diesel trucks shall be required to have emission control labels as specified in 13 CCR 2183(c). The construction contract specifications shall require that the contractor submit to the Environmental Review Officer (ERO) a comprehensive inventory of all on-road trucks used to haul spoils. The inventory shall include each vehicle's license plate number, the engine production year, and a notation of whether the truck is in possession of an emission control label as defined in 13 CCR. The contractor shall update the inventory and submit it monthly to the ERO throughout the duration of the project. **M-AQ-2b: Off-Road Construction Equipment** The project sponsors shall ensure that construction contract specifications include a requirement that all off-road construction equipment used for AC34 improvements be equipped with Tier 3 (Tier 2 if greater than 750 hp) diesel engines or better to the extent feasible. The following types of equipment [7] were identified as available for rental or are candidates for retrofitting, due to their expected operating modes (i.e., fairly constant use at high revolution per minute):

[7] http://tier3rental.com/

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.8: Air Quality (cont.)		
America's Cup (cont.)		
Impact AQ-2 (cont.)		• Excavators • Backhoes • Rubber-Tired Dozers • Concrete Boom Pumps • Concrete Trailer Pumps • Concrete Placing Booms • Soil Mix Drill Rigs • Soldier Pile Rigs • Shoring Drill Rigs All diesel generators used for project construction shall meet Tier 4 emissions standards to the extent feasible. To the extent that the above listed types of equipment are used for project construction, those equipment types shall be required to meet NOx emission standards equivalent to Tier 3 (Tier 2 if greater than 750 horsepower) engines, if feasible. Should it be determined by the construction contractor or its subcontractors that compliance with the emissions control requirements of this mitigation measure is infeasible for any of the above-listed construction equipment, the construction contractor shall demonstrate an alternative method of compliance that achieves an equivalent reduction in the project's fleetwide NOx emissions. If alternative means of compliance with the emissions exhaust requirements are further determined to be infeasible, the construction contractor shall document, to the satisfaction of the Environmental Review Officer, that the contractor has complied with this mitigation measure to the extent feasible and indicate why full compliance with the mitigation measure is infeasible.
Impact AQ-3: Construction of the America's Cup facilities would expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM2.5).	SUM	**Mitigation Measure M-AQ-2a: Construction Vehicle Emissions Minimization** **Mitigation Measure M-AQ-2b Off-Road Construction Equipment**

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.8: Air Quality (cont.)		
America's Cup (cont.)		
Impact AQ-4: Operations of the America's Cup facilities would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	SUM	**Mitigation Measure M-AQ-4: Emission Controls for Race-Sponsored Spectator Vessels** The project sponsor shall require all contracts for race-sponsored spectator vessels to meet U.S. EPA Tier 3 or better engine standards for marine diesel engines, as feasible. Tier 3 and Tier 4 engines would reduce ROG and NOx emissions by approximately 42 percent over Tier 1 engines and PM emissions by 78 percent over Tier 1 engine emissions.[8] Should it be determined by the project sponsor that availability of vessels with Tier 3 or Tier 4 engines for use as race-sponsored spectator vessels renders this mitigation measure infeasible, this lack of availability must be demonstrated, to the satisfaction of the Environmental Review Officer, indicating that the project sponsor has complied with this mitigation measure to the extent feasible and why full compliance with the mitigation measure is infeasible.
Impact AQ-5: Operation of the America's Cup facilities would expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM2.5).	SUM	**Mitigation Measure M-AQ-4: Emission Controls for Race-Sponsored Spectator Vessels** **Mitigation Measure M-AQ-5: Clean Diesel Engines for Temporary Power** The project sponsor shall ensure that all diesel generators at AC34 event and viewing locations will conform to a level of performance equivalent to a Tier 4 interim, or Tier 2/Tier 3 (as applicable, depending on power rating) engine fitted with a Level 3 Verified Diesel Emissions Control (VDEC), which would reduce diesel particulate emissions by at least 85 percent. Alternatively, natural gas or gasoline-powered generators may be used in lieu of diesel generators, thus eliminating DPM emissions from generators, as feasible. Should it be determined by the project sponsor that "tiered" diesel engine generators or natural gas or gasoline-powered generators would not provide the necessary power demands required, this lack of availability must be demonstrated to the satisfaction of the Environmental Review Officer, indicating that the project sponsor has complied with this mitigation measure to the extent feasible and why full compliance with the mitigation measure is infeasible.

[8] California Air Resources Board, Airborne Toxic Control Measure for Diesel Engines on Commercial Harborcraft Operated within California Waters and 24 Nautical Miles of the California Baseline, http://www.arb.ca.gov/regact/2007/chc07/rev93118.pdf

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.8: Air Quality (cont.)		
America's Cup (cont.)		
Impact AQ-6: Construction and operation of the America's Cup facilities would not conflict with or obstruct implementation of applicable air quality plans.	LTS	No mitigation necessary.
Impact AQ-7: Construction and operation of the America's Cup facilities would not create objectionable odors affecting a substantial number of people.	LTS	No mitigation necessary.
Impact AQ-8: Operation of the America's Cup facilities would not result in an increase in localized carbon monoxide concentrations in excess of state or federal standards.	LTS	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact AQ-9: Construction of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in localized, construction dust-related air quality impacts.	LTS	No mitigation necessary.
Impact AQ-10: Construction of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would result in emission of criteria pollutants and precursors that would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	SUM	**Mitigation Measure M-AQ-2a: Construction Vehicle Emissions Minimization** **Mitigation Measure M-AQ-2b: Off-Road Construction Equipment**
Impact AQ-11: Construction resulting from the amendments to the Bay Conservation and Development Commission (BCDC) Special Area Plan would not result in emission of criteria pollutants and precursors that would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	LTS	No mitigation necessary.
Impact AQ-12: Construction of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM2.5).	LTS	No mitigation necessary.
Impact AQ-13: Construction resulting from amendments to the Bay Conservation and Development Commission (BCDC) Special Area Plan (SAP) would not expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM2.5).	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.8: Air Quality (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact AQ-14: Operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.	LTS	No mitigation necessary.
Impact AQ-15: Operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM2.5).	LTS	No mitigation necessary.
Impact AQ-16: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not conflict with or obstruct implementation of applicable air quality plans.	LTS	No mitigation necessary.
Impact AQ-17: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not create objectionable odors affecting a substantial number of people	LTS	No mitigation necessary.
Impact AQ-18: Operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in carbon monoxide concentrations in excess of state or federal standards.	LTS	No mitigation necessary.
Pier 27 Shed Variant		
Impact AQ-19: Construction of the Pier 27 Shed Variant would result in emission of criteria pollutants and precursors that would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	SUM	**Mitigation Measure M-AQ-2a: Construction Vehicle Emissions Minimization** **Mitigation Measure M-AQ-2b: Off-Road Construction Equipment**
Impact AQ-20: Construction of Pier 27 Shed Variant would expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter ($PM_{2.5}$).	SUM	**Mitigation Measure M-AQ-2a: Construction Vehicle Emissions Minimization** **Mitigation Measure M-AQ-2b: Off-Road Construction Equipment**
Future Long-Term Development Impacts		
Impact LT-AQ: Long term development on Port properties under the Host Agreement could result in construction and operational air pollutant emissions.	SUM	See **Mitigation Measure M-LT-AQ** in Table 1-4, below.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.8: Air Quality (cont.)		
Cumulative Impacts		
Impact C-AQ-1: The proposed AC34 project, in combination with other past, present, and reasonably foreseeable future projects, would result in significant adverse cumulative impacts on air quality.	SUM	**Mitigation Measure M-AQ-2a: Construction Vehicle Emissions Minimization** **Mitigation Measure M-AQ-2b: Off-Road Construction Equipment Mitigation** **Mitigation Measure M-AQ-4: Emission Controls for Race-Sponsored Spectator Vessels** **Mitigation Measure M-AQ-5: Clean Diesel Engines for Temporary Power**
Impact C-AQ-2: The proposed Cruise Terminal project, in combination with other past, present, and reasonably foreseeable future projects, would result in significant adverse cumulative impacts on air quality.	SUM	**Mitigation Measure M-AQ-2a: Construction Vehicle Emissions Minimization** **Mitigation Measure M-AQ-2b: Off-Road Construction Equipment**
Impact C-AQ-3: The proposed Pier 27 Shed Variant, in combination with other past, present, and reasonably foreseeable future projects, would result in significant adverse cumulative impacts on air quality.	SUM	**Mitigation Measure M-AQ-2a: Construction Vehicle Emissions Minimization** **Mitigation Measure M-AQ-2b: Off-Road Construction Equipment**
Section 5.9: Greenhouse Gas Emissions		
America's Cup, James R. Herman Cruise Terminal and Northeast Wharf Plaza, and Cumulative Development		
Impact C-GG: The proposed project would not generate greenhouse gas emissions at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-GG: Long-term development on Port properties under the Host Agreement would not result in greenhouse gas emissions at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.10: Wind and Shadow		
America's Cup -- Wind		
Impact WI-1: Construction and operation of the AC34 facilities and events could alter wind in a manner that substantially affects public areas.	LTSM	**Mitigation Measure M-WI-1: Warning Signs and/or Limiting Access on the Eastern Aprons of Piers 27-29 During Hazardous Wind Events.** The project sponsor shall be required to post warning signs and, if necessary, restrict public access to the eastern aprons of Piers 27-29 during the occurrence of high-speed winds that could result in hazardous wind conditions for spectators, and implement design features that provide wind protection for public access areas. If average wind speed at pedestrian height exceeds 26 mph, or when the National Weather Service issues high wind warnings for the Bay, the project sponsor shall implement this measure. As experience with the local wind conditions is gained, this trigger should be adjusted to suit the wind conditions that are experienced on the pier.
James R. Herman Cruise Terminal and Northeast Wharf Plaza -- Wind		
Impact WI-2: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza could alter wind in a manner that substantially affects public areas.	LTSM	**Mitigation Measure M-WI-2: Warning Signs, Limiting Access and/or Design Features on the Eastern Aprons of Piers 27-29 During Hazardous Wind Events.** The project sponsor shall be required to post warning signs and, if necessary, restrict public access to the eastern aprons of Piers 27-29 during the occurrence of high-speed winds that could result in hazardous wind conditions for visitors, and implement design features that provide wind protection for public access areas, consistent with BCDC and Port design guidelines, as well as *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Examples of design features would include combinations of permanent or movable fences and partitions, kiosks, street furniture, substantial planter boxes with shrubs, hedges and trees (such as professionally designed landscape/ hardscape commonly used to define and protect outdoor dining and seating areas). If average wind speed at pedestrian height exceeds 26 mph, or when the National Weather Service issues high wind warnings for the Bay, the project sponsor shall implement this measure. As experience with the local wind conditions is gained, this trigger should be adjusted to suit the wind conditions that are experienced on the pier.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.10: Wind and Shadow (cont.)		
Future Long-Term Development Impacts -- Wind		
Impact LT-WI: Long-term development under the Host Agreement could alter wind in a manner that substantially affects public areas.	LTS	No mitigation necessary.
Cumulative Impacts – Wind		
Impact C-WI: The projects, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative wind impacts.	LTS	No mitigation necessary.
America's Cup – Shadow		
Impact SH-1: Construction and operation of the AC34 facilities would not create new shadow in a manner that would substantially affect outdoor recreation facilities or other public areas.	LTS	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza -- Shadow		
Impact SH-2: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not create new shadow in a manner that would substantially affect outdoor recreation facilities or other public areas.	LTS	No mitigation necessary.
Future Long-Term Development Impacts -- Shadow		
Impact LT-SH: Long-term development under the Host Agreement would not result in new structures with the potential to cast shadows on existing or proposed parks and open space in a manner that would have an adverse effect on the use of the open space.	LTS	No mitigation necessary.
Cumulative Impacts -- Shadow		
Impact C-SH: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative shadow impacts.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.11: Recreation		
America's Cup		
Impact RE-1: The America's Cup facilities and events could increase the use of parks and recreational facilities such that substantial physical deterioration of the facilities could occur or otherwise result in physical degradation of existing recreational resources.	LTSM	**Mitigation Measure M-RE-1: Protection of Recreational Resources** As described in the Project Description, the *Parks Event Operations Plan* (applicable to National Park Service [NPS], Presidio Trust, California Department of Parks and Recreation [CDPR], and San Francisco Recreation and Parks Department [SFRPD]) will be prepared and implemented in support of the proposed project. Also as described in the Project Description, the City and Event Authority are coordinating with local agencies and jurisdictions (including BCDC, Marin County, Sausalito, Tiburon, and Belvedere). As the plan and agency coordination are still under development, this mitigation measure requires that the plan and ongoing agency coordination to incorporate specific elements to protect recreational resources through protection and restoration requirements. The *Parks Event Operations Plan* and the agency coordination shall each include, for their respective jurisdictions, the following measures to protect and restore recreational resources: • ***Identification of Recreational Resource Areas of Special Concern.*** Agency coordination shall include identification of recreational resource areas of special concern to land management agencies (e.g., Crissy Field picnic area near the Warming Hut) that could provide attractive spectator viewing opportunities, determination of the existing condition of resources, and identify requirements for additional service levels at recreational facility restrooms and trash/recycling needs. • ***Crowd Control*:** The project sponsor shall ensure that crowd control volunteers are posted at or near the recreation resources identified to be of special concern in order to manage crowd levels at those locations. The exact number, location, and timing of the crowd control volunteers shall be determined in consultation with the appropriate land authority where the indirect impacts are anticipated. • ***Post-Event Repair*:** Following each of the 2012 and 2013 AC34 events, the project sponsor shall ensure that recreational resource areas of special concern are returned to their previously identified pre-project condition to the extent damaged by event activities, which could include trash collection, facility repairs, restroom maintenance, pavement washing, trail repair, revegetation, and resodding.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.11: Recreation (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact RE-2: The James R. Herman Cruise Terminal and Northeast Wharf Plaza at Piers 27-29 would not increase the use of parks and recreational facilities such that substantial physical deterioration of the facilities would occur and would not otherwise result in physical degradation of existing recreational resources.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-RE: Future long-term development under the Host Agreement would not result in potential recreation impacts.	LTS	No mitigation necessary.
Cumulative Impacts		
Impact C-RE: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative recreation impacts.	LTS	No mitigation necessary.
Section 5.12: Utilities and Service Systems		
America's Cup		
Impact UT-1: Construction and operation of the America's Cup facilities and events would not increase wastewater generation to the extent that would exceed the treatment requirements of the Regional Water Quality Control Board.	LTS	No mitigation necessary.
Impact UT-2: The America's Cup facilities and events would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.	LTS	No mitigation necessary.
Impact UT-3: The America's Cup facilities and events would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would not cause significant environmental effects.	LTS	No mitigation necessary.
Impact UT-4: The City and County of San Francisco would have sufficient water supply available to serve the America's Cup facilities and events from existing entitlements and resources and would not require new or expanded water supply resources or entitlements.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.12: Utilities and Service Systems (cont.)		
America's Cup (cont.)		
Impact UT-5: The America's Cup facilities and events would not result in a determination by the wastewater treatment providers that would serve the project that they have inadequate capacity to serve the project's projected demand in addition to the providers' existing commitments.	LTS	No mitigation necessary.
Impact UT-6: The America's Cup facilities and events would be served by landfills with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	LTS	No mitigation necessary.
Impact UT-7: The America's Cup facilities and events would comply with federal, state, and local statutes and regulations related to solid waste.	LTS	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact UT-8: Operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board.	LTS	No mitigation necessary.
Impact UT-9: The James R. Herman Cruise Terminal and Northeast Wharf Plaza would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.	LTS	No mitigation necessary.
Impact UT-10: The James R. Herman Cruise Terminal and Northeast Wharf Plaza would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would not cause significant environmental effects.	LTS	No mitigation necessary.
Impact UT-11: The City and County of San Francisco would have sufficient water supply available to serve the James R. Herman Cruise Terminal and Northeast Wharf Plaza from existing entitlements and resources, and would not require new or expanded water supply resources or entitlements.	LTS	No mitigation necessary.
Impact UT-12: Operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.12: Utilities and Service Systems (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact UT-13: The James R. Herman Cruise Terminal and Northeast Wharf Plaza would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	LTS	No mitigation necessary.
Impact UT-14: The James R. Herman Cruise Terminal and Northeast Wharf Plaza would comply with federal, state, and local statutes and regulations related to solid waste.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-UT: Future long-term development under the Host Agreement would not result in substantial increased demand for utility services.	LTS	No mitigation necessary.
Cumulative Impacts		
Impact C-UT: The proposed project, combined with past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on utilities or service systems.	LTS	No mitigation necessary.
Section 5.13: Public Services		
America's Cup		
Impact PS-1: Construction and operation of the America's Cup facilities and events would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for emergency medical services.	LTS	No mitigation necessary.
Impact PS-2: Construction and operation of the America's Cup facilities and events would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.	NI	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.13: Public Services (cont.)		
America's Cup (cont.)		
Impact PS-3: Construction and operation of the America's Cup facilities and events would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for law enforcement services.	NI	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact PS-4: Construction and operation of James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency medical services.	NI	No mitigation necessary.
Impact PS-5: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for law enforcement services.	NI	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-PS: Future long-term development under the Host Agreement would not result in impacts on public services.	LTS	No mitigation necessary.
Cumulative Impacts		
Impact C-PS: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on public services.	NI	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Upland Biological Resources		
America's Cup		
Impact BI-1: The America's Cup facilities and events could have a substantial adverse effect, either directly or through habitat modifications, on upland species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	LTSM	**Mitigation Measure M-BI-1a: Protecting Sensitive Areas for Mission Blue Butterfly** The AC34 project sponsor shall ensure that areas supporting the habitat for Mission blue butterflies (*Lupinus albifrons*) are adequately protected against incidental impacts by spectators for AC34 events. These areas shall be avoided. This shall be accomplished by working with the National Park Service (NPS) to develop a detailed strategy for protecting sensitive butterfly areas, including area closures, fencing, signage, and staffing. Federal and state agencies would likely require these or similar measures pursuant to their mission and obligations under federal and state law. The project sponsor shall work with NPS to implement an appropriate combination of the following conservation measures to ensure that these areas will be avoided: • New fence or fence augmentation. Fencing could consist of, as an example, higher fencing with additional cabling or wire mesh backing. If NPS requires fencing in 2012, these fences will be light enough for removal between 2012 and 2013 race events, and will be obvious deterrents to visitors. Fences, if required, will be in place prior to the start of the AC events. Areas fenced will have signs at frequent intervals announcing that these are sensitive wildlife/ botanical areas. Final fencing type and signage will be coordinated with the NPS. • Trail, area, or roads could be closed during race events. For Mission blue butterfly, this could include closure of roads and trails at Fort Baker and the Marin Headlands, including closure of Conzelman Road in the Marin Headlands during race events. • Resource monitors. Resource monitors will be placed at areas of greatest spectator density or as an augmentation of the signage and fencing protection measures. The monitors shall be trained in both the sensitive species of the area and in the proper manner to interact with and inform spectators. In coordination with NPS, NPS law enforcement personnel would provide additional support as needed. **Mitigation Measure M-BI-1b: Protecting Listed and Other Special Status Plant Areas** The project sponsor shall ensure that areas supporting special-status plants are adequately protected against incidental impacts by spectators for AC34 events or displaced park visitors. These areas shall be avoided. These plants are largely

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Upland Biological Resources (cont.)		
America's Cup (cont.)		
Impact BI-1 (cont.)		concentrated in the dunes and serpentine soils of the Presidio at and above Baker Beach and along Lincoln Boulevard, the serpentine areas on Angel Island and at Crissy Marsh and Beach. Federal and state agencies would likely require these or similar measures pursuant to their mission and obligations under federal and state law. The project sponsor will work closely with the NPS and the California Department of Parks and Recreation (CDPR) to develop a detailed strategy for protecting plant populations by implementing an appropriate combination of the same three measures that are identified in Mitigation Measure M-BI-1a (Protecting Sensitive Areas for Mission Blue Butterfly): (1) fencing as necessary; (2) resource monitors; and/or (3) trail/area closures. **Mitigation Measure M-BI-1c: Protecting the Crissy Beach Wildlife Protection Area (WPA)** The project sponsor shall ensure that areas supporting western snowy plover are adequately protected against incidental impacts by spectators or AC34 events. These areas shall be avoided. The western snowy plovers are concentrated within the Crissy Beach WPA, which is managed by NPS. Similar to the measures identified in Mitigation Measures M-BI-1a (Protecting Sensitive Areas for Mission Blue Butterfly) and M-BI-1b (Protecting Listed and Other Special Status Plant Areas), NPS would likely require these or similar measures pursuant to their mission and obligations under federal law, and the project sponsor will work with NPS to develop a detailed strategy for protecting western snowy plover populations within the project area, which will include an appropriate combination of the following three measures as identified above: (1) signage and fencing as necessary; (2) resource monitors; and/or (3) area closures. In particular, NPS may decide to close temporarily the WPA on race days. **Mitigation Measure M-BI-1d: Protecting Offshore Portion of the Wildlife Protection Area (WPA)** The project sponsor shall work with the necessary governmental authorities to create a 100-yard offshore buffer in the form of a marked, marine-protected zone established offshore of the Crissy Beach WPA to mitigate impacts on western snowy plover. For a detailed map of Crissy Beach, see Appendix PD-3, *NPS Management Zone Planning Maps* for West Crissy Field. The protected zone will exclude all boat traffic throughout the duration of the AC34 events, which could include the use of trained boat-based resource

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Upland Biological Resources (cont.)		
America's Cup (cont.)		
Impact BI-1 (cont.)		monitors. Information regarding protection zones will be included within a detailed 'Notice to Mariners' that will be administered by the United States Coast Guard (see also Mitigation Measure M-BI-12, (Visiting Mariners Information). See also Mitigation Measure M-BI-4b (Offshore Buffers for Breeding Birds and Snowy Plover). A reduced buffer could be provided on a case-by-case basis to the extent approved by necessary governmental authorities based on site-specific conditions. **Mitigation Measure M-BI-1e: Restrictions on Fireworks and Night Lighting** In consultation with the NPS, fireworks or cannon fire will be limited to protect plovers from harassment. Such restrictions are likely to limit where such activities are staged, or stipulate maximum allowable noise (decibels) at the Crissy Field WPA. Where exterior lights are to be left on at night, the AC34 project sponsor shall install fully shielded and downward cast lights to contain and direct light away from habitat, the sky, and Bay waters.[9]
Impact BI-2: The America's Cup facilities and events could have a substantial adverse effect on riparian habitat or other sensitive natural upland community identified in local or regional plans, policies, or regulations.	LTSM	**Mitigation Measure M-BI-2: Signage at Sensitive Natural Community Areas; "No Spectator" Zone on Yerba Buena Island** The project sponsor shall ensure that adequate signage is established in every area that meets the criteria for sensitive natural community.[10] Signage type and placement shall be coordinated with and approved by the appropriate land authority – NPS, Presidio Trust, CDPR, or the Treasure Island Development Authority (for signage on Yerba Buena Island only) – through the preparation and submittal of a formal Fencing and Signage Plan that will exclude visitors from the sensitive natural community areas. No spectators shall be permitted on the western slope of Yerba Buena Island west of Treasure Island Road, to protect sensitive habitats (northern coastal [*Franciscan*] scrub vegetation). **Mitigation Measure M-BI-1b: Protecting Listed and Other Special Status Plant Areas** **Mitigation Measure M-BI-1c: Protecting the Crissy Beach Wildlife Protection Area (WPA)**

[9] According to the International Dark Sky Association's *Outdoor Lighting Code Handbook* (2000), a fully shielded fixture is "A light fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal."

[10] Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Upland Biological Resources (cont.)		
America's Cup (cont.)		
Impact BI-3: The America's Cup facilities and events could have a substantial adverse effect on federally protected wetlands or navigable waters.	LTSM	**Mitigation Measure M-BI-3: Signage at Wetland Sites** The project sponsor shall ensure that adequate "keep out" signage is established in every area that meets the criteria for federally-protected wetlands (by Clean Water Act or National Park Service authority) in the area of Crissy Field in the Presidio. These include Crissy Marsh itself and those Cowardin wetlands shown in Figure 5.14-2,[11] and the spring on Angel Island shown in Figure 5.14-3. Signage type and placement shall be coordinated with and approved by the appropriate land authority –NPS, CDPR, or Presidio Trust – through the preparation and submittal of a formal Fencing and Signage Plan, designed to exclude visitors from the federally protected wetlands.
Impact BI-4: The America's Cup facilities and events could interfere with the movement of native upland wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.	LTSM	**Mitigation Measure M-BI-4a: Restrictions on Spectator Craft within Race Course Boundaries** As part of the proposed project, the AC34 project sponsor will be working with the United States Coast Guard (USCG) to implement a Water and Air Traffic Plan to provide navigational and operational safety guidelines for race team, support, spectator, and large luxury yacht vessel activities associated with the AC34 events that meet USCG regulations. As part of this effort, the plan shall include provisions and restrictions to minimize the movement of spectator boats and thereby minimize disruption of feeding or resting least terns and other birds. Specifically, this may include requiring spectator vessels to be either anchored or as stationary as possible, maneuvering only to maintain safe distances from other vessels within the boundaries of the race course when races are occurring. **Mitigation Measure M-BI-4b: Offshore Buffers for Breeding Birds and Snowy Plover** The AC34 project sponsor shall work with the necessary governmental authorities to create a 100-yard offshore buffer in the form of a marked, marine-protected zone established offshore of areas with colonial breeding birds and other sensitive biological resources (such as snowy plovers at Crissy Beach) in order to exclude vessels from the area. For detailed maps of Alcatraz Island and Crissy Beach sensitive natural resource areas, see Appendix PD (NPS Management Zone Planning Maps for Alcatraz Island and

[11] Federal Highway Administration, South Access to the Golden Gate Bridge–Doyle Drive FEIS/R (CEQ #20050545), 2008, p. 3-277.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Upland Biological Resources (cont.)		
America's Cup (cont.)		
Impact BI-4 (cont.)		West Crissy Field.) As a practical matter, this will be defined as a 100-yard buffer between any event or motorized spectator vessel and the undeveloped shoreline of the mainland or any island in the Bay. The protected zones at Alcatraz Island and Crissy Beach will exclude all boat traffic throughout the duration of the AC34 race events, which could include the use of trained boat-based resource monitors. Information regarding protection zones will be included within a detailed 'Notice to Mariners' that will be administered by the United States Coast Guard under **Mitigation Measure M-BI-12**, (Visiting Mariners Information). Aircraft overflights shall also be restricted within 1,000 feet of the airspace and marine perimeter of these areas.[12] A reduced buffer could be provided on a case-by-case basis to the extent approved by necessary governmental authorities based on site-specific conditions. See also **Mitigation Measure M-BI-1d** (Protecting Offshore Portion of the Wildlife Protection Area). **Mitigation Measure M-BI-4c: Protection for Breeding Birds on Piers and Associated Structures** The AC34 project sponsor shall avoid demolition of structures on piers between March 1 and August 1. If demolition must occur during the nesting season, these areas shall be "netted" to prevent gulls from nesting there. Netting materials to be used shall be those developed specifically for bird exclusion. For possible cliff swallow nesting under piers, and in addition to netting, work in these areas shall be preceded by a pre-construction survey if work proceeds during the nesting season. The survey shall take place within two weeks of the start of work, and the nests avoided by at least 50 feet, or other actions developed in coordination with the California Department of Fish and Game (CDFG). **Mitigation Measure M-BI-4d: Protection for Bat Roosts on Piers and Associated Structures** Within two weeks before demolition, buildings showing evidence of bat activity shall be surveyed by a qualified bat biologist. If active maternity roosts are found they shall be avoided, unless disturbance is authorized by CDFG. If no maternity roosts are found, the

[12] Subject to the review and approval of the Federal Aviation Administration

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Upland Biological Resources (cont.)		
America's Cup (cont.)		
Impact BI-4 (cont.)		bat biologist shall take actions under CDFG guidance to make such roosts unsuitable habitat prior to building demolition, such as sealing access routes used by bats when the bats are absent. **Mitigation Measure M-BI-4e: Protection for Colonial Breeding Birds on Alcatraz** The AC34 project sponsor shall allow no event-related public visitation, special events, or construction activities to be carried out near the western cliffs used by breeding seabirds. NPS would likely require these or similar measures pursuant to their mission and obligations under federal law. If required by NPS, the project sponsor shall install durable visual barriers, such as shade cloth fastened to 2-by-4-inch welded mesh, prior to arrival of birds for pre-nesting (February 1). All such areas will be considered "closed areas" with signs, similar to those described in **Mitigation Measure M-BI-1a** (Protecting Sensitive Areas for Mission Blue Butterfly), explaining the presence of the seabird colony and why it is important to stay behind barricades and view from a distance.
Impact BI-5: The America's Cup facilities and events would not conflict with any applicable local policies or ordinances protecting upland biological resources.	NI	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact BI-6: The construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza could have a substantial adverse effect, either directly or through habitat modifications, on upland species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations.	LTSM	**Mitigation Measure M-BI-6a: Bird-Sensitive Night Lighting at the Cruise Terminal** Where exterior lights are to be left on at night, the project sponsor shall install fully shielded lights to contain and direct light away from the sky.[13] **Mitigation Measure M-BI-6b: Bird-Building Collision Avoidance** The project sponsor shall ensure that windows at the cruise terminal are treated to minimize bird strikes, through a combination of fritting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing or UV patterns visible to birds. Windows shall consist of no more than 10 percent untreated glazing.

[13] According to the International Dark Sky Association's *Outdoor Lighting Code Handbook* (2000), a fully shielded fixture is "A light fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal."

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Upland Biological Resources (cont.)		
James R. Herman Cruise Terminal and Northeast Wharf Plaza (cont.)		
Impact BI-6 (cont.)		**Mitigation Measure M-BI-4c: Protection for Breeding Birds on Piers and Associated Structures**
Impact BI-7: The James R. Herman Cruise Terminal and Northeast Wharf Plaza would not have a substantial adverse effect on any riparian habitat or other sensitive natural upland community identified in local or regional plans, policies, or regulations.	NI	No mitigation necessary.
Impact BI-8: The James R. Herman Cruise Terminal and Northeast Wharf Plaza would not have a substantial adverse effect on federally protected wetlands.	NI	No mitigation necessary.
Impact BI-9: The James R. Cruise Terminal and Northeast Wharf Plaza could interfere with the movement of any native upland wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.	LTSM	**Mitigation Measure M-BI-4c: Protection for Breeding Birds on Piers and Associated Structures** **Mitigation Measure M-BI-4d: Protection for Bat Roosts on Piers and Associated Structures**
Impact BI-10: The James R. Herman Cruise Terminal and Northeast Wharf Plaza would not conflict with any applicable local policies or ordinances protecting upland biological resources.	NI	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-BIa: Long-term development could result in impacts on upland biological resources.	LTSM	See **Mitigation Measure M-LT-BIa** in Table 1-4, below.
Cumulative Impacts		
Impact C-BIa: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on upland biological resources.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Marine Resources		
America's Cup		
Impact BI-11: The America's Cup facilities and events could have a substantial adverse effect, either directly or through habitat modifications, on marine or estuarine species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game, U.S. Fish and Wildlife Service, or National Marine Fisheries Service.	LTSM	**Mitigation Measure M-BI-11a: Impact Hammer Pile Driving Noise Reduction for Protection of Fish** Prior to the start of construction, the project sponsor shall develop a National Marine Fisheries Service (NMFS)- approved sound attenuation monitoring plan. This plan shall provide detail on the sound attenuation system, detail methods used to monitor and verify sound levels during pile driving activities, and management practices to be taken to reduce impact hammer pile-driving sound in the marine environment to an intensity level of less than 183 dB. The sound monitoring results shall be made available to the NMFS. The plan shall incorporate but not be limited to the following best management practices (BMPs): • All 18 and 24-inch diameter pilings shall be installed and removed with vibratory pile drivers only. Vibratory pile driving will be conducted following the U.S. Army Corps of Engineers "Proposed Procedures for Permitting Projects that will Not Adversely Effect Selected Listed Species in California".[14] • All 72-inch steel pilings shall be installed with a vibratory pile driver to the deepest depth practicable. An impact pile driver may be used only where necessary to complete installation of the 72-inch steel pilings in accordance with seismic safety or other engineering criteria. • All piling installation using impact hammers shall be conducted between June 1 and November 30, when the likelihood of sensitive fish species being present in the work area is minimal. • If pile installation using impact hammers must occur at times other than the approved work window, the AC34 project sponsors shall obtain incidental take authorization from NMFS, and CDFG to address potential impacts on steelhead trout, chinook salmon, and Pacific herring and implement all requested actions to avoid impacts. • The project sponsor shall develop a NMFS-approved sound attenuation monitoring plan prior to the start of construction. This plan shall provide detail on the sound attenuation system and the methods used to monitor and verify sound levels during pile driving activities. The sound monitoring results will be made available to NMFS.

[14] NMFS, 2007a.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Marine Resources (cont.)		
America's Cup (cont.)		
Impact BI-11 (cont.)		• If exceedance of noise thresholds established and approved by NMFS occur, a contingency plan using bubble curtains or air barrier will be implemented to attenuate sound levels to below thresholds. • The hammer will be cushioned using a 12-inch thick wood cushion block during all impact hammer pile driving operations. **Mitigation Measure M-BI-11b: Pile Driving Noise Reduction for Protection of Marine Mammals** As part of the NMFS-approved sound attenuation monitoring plan required in **Mitigation Measure M-BI-11a** (Impact Hammer Pile Driving Noise Reduction for Protection of Fish), the project sponsor shall take actions in addition to those listed in Mitigation Measure M-BI-11a to reduce the effect of underwater noise transmission on marine mammals. These actions shall include at a minimum: • Establishment of a 1,600-feet (500-meter) safety zone that shall be maintained around the sound source, for the protection of marine mammals in the event that sound levels are unknown or cannot be adequately predicted. • Work activities shall be halted when a marine mammal enters the 1,600-feet (500-meter) safety zone and resume only after the animal has been gone from the area for a minimum of 15 minutes. • A "soft start" technique shall be employed in all pile driving to marine mammals an opportunity to vacate the area. • Maintain sound levels below 90 dBA in air when pinnipeds (seals and sea lions) are present.[15] A NMFS-approved biological monitor will conduct daily surveys before and during impact hammer pile driving to inspect the work zone and adjacent Bay waters for marine mammals. The monitor will be present as specified by NMFS during the impact pile-driving phases of construction.

[15] NMFS (National Marine Fisheries Service). 2007. *op cit*.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Marine Resources (cont.)		
America's Cup (cont.)		
Impact BI-11 (cont.)		**Mitigation Measure M-BI-11c: Floating Dock Night Lighting** The project sponsor shall install dock lighting on all temporary floating docks that minimizes artificial lighting of Bay waters by using shielded, low-mounted, and low light-intensity fixtures and bulbs.
Impact BI-12: The America's Cup facilities and events could have a substantial adverse effect on sensitive marine or estuarine natural communities identified in local or regional plans, policies, or regulations.	LTSM	**Mitigation Measure M-BI-12: Visiting Mariners Information** The AC34 project sponsor shall prepare as part of their Water and Air Traffic Plan information for visiting mariners as well as procedures for the dissemination of this information to visiting boaters prior to or upon arrival to San Francisco Bay for the AC34 2012 and 2013 races. This information to be made available to visiting boaters shall include, but not be limited to, information educating boat owner/operators about sensitive habitats and species in the Bay and actions they are required to implement to avoid impacts to marine resources. The plan shall also include information on how to employ environmentally sound boating practices and where to find environmental services to ensure clean boating habits. The plan shall identify marinas that are available for use by visiting mariners (e.g., marinas in San Francisco and Marin County) and provide information about the locations of environmental services that boaters in these marinas are most likely to need. Educational materials shall clearly address, in multiple languages, common sources of pollution from boats and marinas and outline relevant regulations and clean boating policies. The visiting mariners information in the Water and Air Traffic Plan shall include details on how this information will be disseminated to visiting boaters, including but not limited to brochures or pamphlets; AC34 websites; boating, cruising, and newspaper periodicals; social media; and area yacht clubs and marinas. The plan shall be prepared soliciting input from and in cooperation with the National Marine Fisheries Service (NMFS), United States Coast Guard (USCG), California State Lands Commission, National Park Service (NPS), California Department of Parks and Recreation (CDPR), Bay Conservation and Development Commission (BCDC), and local organizations active in protecting Bay marine resources. Visiting Mariners Information contained within the Water and Air Traffic Plan shall include, but not be limited to the following items:

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Marine Resources (cont.)		
America's Cup (cont.)		
Impact BI-12 (cont.)		• Information on the location of eelgrass beds in the Central Bay, especially Richardson Bay and adjacent to Angel, Alcatraz, and Treasure Islands and the importance of protecting and avoiding these sensitive habitats (e.g., by not anchoring in or transiting through them) • Marinas and safe anchoring locations in the Bay where boaters may dock or anchor their vessels • Information on where boaters may safely dock dinghies and vessel tenders when coming on shore • Information on proper and legal waste handling in the Bay and facilities for onshore disposal during the AC34 activities • Information on invasive species and their impact on Bay marine ecosystems and preventative steps that boaters should take to prevent the introduction or spread of invasive species into the Bay • Information on the Vessel Traffic Service for San Francisco Bay and changes that will be in place during AC34 races • Federal and state regulations prohibiting the harassment of marine mammals • Information on any buffer zones established around Central Bay islands and other Bay locations to protect sensitive bird nesting sites • Information about onsite and nearby environmental services that support clean boating practices (such as the locations of sewage pumpouts, oil change facilities, used oil recycling centers, bilge pumpouts, absorbent pad distribution and spent pad collection, and boat-to-boat environmental services) • Information regarding the importance of keeping plastic out of Bay waters • Signage regarding locations of waste collection containers posted at and adjacent to temporary docks, berthing facilities, and areas used by moored spectator vessels (10 vessels or more) developed for the AC34 events

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Marine Resources (cont.)		
America's Cup (cont.)		
Impact BI-12 (cont.)		Due to the extent of berthing, mooring, and marina facilities within the Bay shoreline, the Event Authority shall coordinate with other jurisdictions with respect to waste management at secondary viewing areas, such as (but not limited to) Treasure Island, Angel Island, Sausalito, Belvedere, and Tiburon. Coordination and outreach efforts with those jurisdictions would further minimize the potential for discards and pollution to enter Bay waters from private vessels. Additionally, the Event Authority could develop, as part of official AC34 event literature, maps of the marinas that show the locations of fuel docks, sewage pumpouts, portable toilets, dump stations, used oil collection services, bilge pumpouts, oil absorbent pad distribution and collection services, oil change services, solid waste recycling services, and other environmental services for boaters.
Impact BI-13: The America's Cup facilities and events could have a substantial adverse effect on eelgrass beds, federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	LTSM	**Mitigation Measure M-BI-12: Visiting Mariners Information**
Impact BI-14: The America's Cup facilities and events could interfere with the movement of native marine or estuarine wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.	LTSM	**Mitigation Measure M-BI-14: Restrictions on Low-Flying Aircraft** As part of the Water and Air Traffic Plan, the project sponsor shall include instructions to AC34 contracted and race-affiliated helicopters that they maintain a minimum altitude of 1,000 feet above the water's surface when humpback whales are present within the race course. Upon takeoff at the auxiliary landing pad located, all helicopters shall be required to climb immediately to altitude and not fly low over the water if any seal or sea lions are present within 1,000 feet of the helipad. When landing, the helicopters shall approach the landing pad from as high an altitude as possible and limit their time at low altitudes over the water if seals or sea lions are present within 1,000 feet of the helipad. **Mitigation Measure M-BI-11a: Impact Hammer Pile Driving Noise Reduction for Protection of Fish** **Mitigation Measure M-BI-11b: Pile Driving Noise Reduction for Protection of Marine Mammals**

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Marine Resources (cont.)		
America's Cup (cont.)		
Impact BI-14 (cont.)		**Mitigation Measure M-BI-11c: Floating Dock Night Lighting** **Mitigation Measure M-BI-12: Visiting Mariners Information**
Impact BI-15: The America's Cup facilities and events could conflict with applicable local policies or ordinances protecting marine or estuarine biological resources.	LTSM	**Mitigation Measure M-BI-11a: Floating Dock Night Lighting** **Mitigation Measure M-BI-11b: Impact Hammer Pile Driving Noise Reduction for Protection of Fish** **Mitigation Measure M-BI-11c: Pile Driving Noise Reduction for Protection of Marine Mammals** **Mitigation Measure M-BI-12: Visiting Mariners Information** **Mitigation Measure M-BI-14: Restrictions on Low-Flying Aircraft**
Impact BI-16: The America's Cup facilities and events could conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan for marine or estuarine resources.	LTSM	**Mitigation Measure M-BI-16: Invasive Marine Species Control** The project sponsor shall develop and implement an Invasive Species Control Plan prior to commencement of any in-water work including piers, wharfs, bulkheads, pile driving, and installation of temporary structures. The plan shall be prepared in consultation with the United States Coast Guard (USCG), RWQCB, and other relevant state agencies. Provisions of the plan shall include but not be limited to the following: • Environmental training of construction personnel involved in the removal of pier pilings, temporary floating docks, piling suspended barges, and wave attenuators, to inform them about invasive marine species in San Francisco Bay that might be attached to removed structures • Actions to be taken to prevent the release and spread of marine invasive species, especially algal species such as Undaria and Sargasso • Procedures for the safe removal and disposal of any invasive taxa observed on the removed structures prior to disposal or reuse of pilings, docks, wave attenuators, and other features

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.14: Biological Resources – Marine Resources (cont.)		
America's Cup (cont.)		
Impact BI-16 (cont.)		• The onsite presence of qualified marine biologists to assist the contractor in the identification and proper handling of any invasive species on removed Port equipment or materials • A post-construction report identifying what, if any, invasive species were found attached to removed equipment and materials and the treatment/handling of identified invasive species.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact BI-17: The James R. Herman Cruise Terminal and Northeast Wharf Plaza would not have a substantial adverse effect, either directly or through habitat modifications, on marine or estuarine species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-BIb: Long-term development could result in impacts on marine biological resources.	LTSM	See **Mitigation Measure M-LT-BIb** in Table 1-4, below.
Cumulative Impacts		
Impact C-BIb: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative impacts on marine and estuarine biological resources.	LTSM	**Mitigation Measure M-BI-11a: Impact Hammer Pile Driving Noise Reduction for Protection of Fish** **Mitigation Measure M-BI-11b: Pile Driving Noise Reduction for Protection of Marine Mammals** **Mitigation Measure M-BI-11c: Floating Dock Night Lighting** **Mitigation Measure M-BI-12: Visiting Mariners Information** **Mitigation Measure M-BI-14: Restrictions on Low-Flying Aircraft** **Mitigation Measure M-BI-16: Invasive Marine Species Control**

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.15: Geology and Soils		
America's Cup		
Impact GE-1: Construction and operation of the AC34 facilities and events would not expose people or structures to substantial adverse effects related to fault rupture.	LTS	No mitigation necessary.
Impact GE-2: Construction and operation of the AC34 facilities and events could expose people or structures to substantial adverse effects related to groundshaking.	LTSM	**Mitigation Measure M-GE-2: Site-Specific Geotechnical Investigation** The project sponsor shall conduct a site-specific geotechnical investigation for piers requiring upgrading under the direction of a geotechnical engineer prior to permitting any new construction or reuse that would increase the load of the structure. The investigation shall be performed to evaluate subsurface conditions and existing structural conditions at the site, and shall evaluate the potential for geological and seismic hazards including settlement, ground shaking, ground rupture, liquefaction, subsidence, slope stability, and lateral spreading. Recommendations shall be made regarding the pile and foundation requirements, seawall stability, seismic design, and mitigation of geologic hazards, and these recommendations shall be included in the project design.
Impact GE-3: Construction and operation of the AC34 facilities and events could expose people or structures to substantial adverse effects related to liquefaction, lateral displacement, or earthquake-induced settlement.	LTSM	**Mitigation Measure M-GE-2:Site-Specific Geotechnical Investigation**
Impact GE-4: Construction and operation of the AC34 facilities would not result in substantial slope instability or expose people or structures to substantial adverse effects related to earthquake-induced landslides**.**	LTS	No mitigation necessary.
Impact GE-5: Construction and operation of the AC34 facilities would not result in substantial erosion or loss of topsoil**.**	LTS	No mitigation necessary.
Impact GE-6: The AC34 activities could occur on structures that are unstable, or that could become unstable as a result of the project.	LTSM	**Mitigation Measure M-GE-6: Signage and Restricted Access at Structurally Unsound Viewing Locations** The project sponsor shall ensure that adequate signage at, and shall control or restrict public access to, structurally unsound piers and wharfs including Torpedo Wharf at Crissy Field, the pier at Fort Mason west of the Municipal Pier, Municipal Pier at Aquatic Park, and other piers determined to be structurally unsound after site investigations during the AC34 events. Signage type and placement shall be coordinated with and approved by the

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.15: Geology and Soils (cont.)		
America's Cup (cont.)		
Impact GE-6 (cont.)		appropriate land authority –NPS or San Francisco Recreation and Park Department. To inform the public, a sign shall be posted at each location informing the public of potential risks associated with use of the structures and prohibiting public access during the AC34 events. Gates or other methods of prohibiting access to structurally unsound viewing locations could be installed if existing facilities are not sufficient to block public access to structurally unsound viewing locations. See also Mitigation Measures M-BI-2 and M-BI-3 regarding signage for biological resources.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact GE-7: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not expose people or structures to substantial adverse effects related to fault rupture.	LTS	No mitigation necessary.
Impact GE-8: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza could expose people or structures to substantial adverse effects related to groundshaking.	LTSM	**Mitigation Measure M-GE-2: Site-Specific Geotechnical Investigation**
Impact GE-9: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza could expose people or structures to substantial adverse effects related to liquefaction, lateral displacement, or earthquake-induced settlement.	LTSM	**Mitigation Measure M-GE-2: Site-Specific Geotechnical Investigation**
Impact GE-10: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in substantial slope instability or expose people or structures to substantial adverse effects related to earthquake-induced landslides**.**	LTS	No mitigation necessary.
Impact GE-11: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not result in substantial erosion or loss of topsoil**.**	NI	No mitigation necessary.
Impact GE-12: The James R. Herman Cruise Terminal and Northeast Wharf Plaza could be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project**.**	LTSM	**Mitigation Measure M-GE-2: Site-Specific Geotechnical Investigation**

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.15: Geology and Soils (cont.)		
Future Long-Term Development Impacts		
Impact LT-GE: Future long-term development under the Host Agreement could result in adverse geology and soils impacts.	LTSM	**Mitigation Measure M-GE-2,: Site-Specific Geotechnical Investigation** See **Mitigation Measure M-LT-GE** in Table 1-4, below.
Cumulative Impacts		
Impact C-GE: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts related to geology and soils.	LTS	No mitigation necessary.
Section 5.16: Hydrology and Water Quality		
America's Cup		
Impact HY-1: Construction and operation of the America's Cup (2012 and 2013) facilities and events could violate water quality standards or waste discharge requirements or otherwise substantially degrade water quality.	LTSM	**Mitigation Measure M-HY-1: Water Quality Best Management Practices.** The project sponsor shall implement water quality best management practices (BMPs) to protect water quality as well as protected species and their habitat(s) from pollution due to fuels, oils, lubricants, and other harmful materials. BMPs for this proposed project shall follow those detailed in the San Francisco Department of Public Health Pollution Prevention Toolkit for Maritime Industries.[16] Vehicles and equipment that are used during the course of a proposed project shall be fueled and serviced in a manner that will not affect federally protected species in the project area or their habitats; • A Spill Prevention Control and Countermeasure (SPCC) Plan shall be prepared to address the emergency cleanup of any hazardous material and will be available on site. The SPCC shall include: - Methods to address the emergency cleanup of any hazardous material and what materials will be available on site;

[16] Virginia St. Dean, San Francisco Department of Public Health, *Pollution Prevention Toolkit for Maritime Industries*, prepared for: California Department of Toxic Substances Control Under Contract #08-T3625-A2, January 2011

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.16: Hydrology and Water Quality (cont.)		
America's Cup (cont.)		
Impact HY-1 (cont.)		- SPCC, hazardous waste, stormwater and other emergency planning requirements; - Measures to prevent spills into the Bay associated with in water fueling, if in water fueling is required on some of the construction barges. Such measures shall include; ▪ Secondary booms and/or pads, depending upon where fueling would take place on the vessel; ▪ Secondary containment on the deck of the vessel to contain the petroleum product; ▪ Specifying volume of petroleum products that will be on the vessel and evaluating the potential for spills. Absorbent and cleanup materials (such as oil sorbent boom, heavy oil pads, OilDry Absorbant Floor, etc) of sufficient quantity to clean up potential spill volume shall be provided; and ▪ The locations of properly permitted offsite locations where vessels will be fueled; • In addition, fueling of equipment shall occur using proper fuel transfer procedures as per U.S. Coast Guard regulations (33 CFR 156.120 and 33 CFR 155.320) and spill containment and the fueling location shall be inspected after fueling to document that no spills have occurred. Any spills shall be cleaned up immediately using spill response equipment as identified in the SPCC Plan. • Well-maintained equipment shall be used to perform the construction work, and, except in the case of a failure or breakdown, equipment maintenance shall be performed off site. Equipment shall be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak shall be identified, leaked material will be cleaned up, and the cleaning materials shall be collected and will be properly disposed; • The project sponsor shall exercise every reasonable precaution to protect listed species, their habitats, and Essential Fish Habitat from construction by-products and pollutants such as demolition debris, construction chemicals, fresh cement, saw-water, or other deleterious materials. Construction will be conducted from both land and water, and care shall be used by equipment operators to control debris so that it does not enter the Bay.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.16: Hydrology and Water Quality (cont.)		
America's Cup (cont.)		
Impact HY-1 (cont.)		• A Materials Management Disposal Plan (MMDP) shall be prepared to prevent any debris from falling into the Bay during construction to the maximum extent practicable. The measures identified in the MMDP shall be based on the Best Available Technology, and will include, but not be limited to, the following measures: - During construction, the barges performing the work shall be moored in a position to capture and contain the debris generated during any sub-structure or in-water work. In the event that debris does reach the Bay, personnel in workboats within the work area shall immediately retrieve the debris for proper handling and disposal. All debris shall be disposed of at an authorized upland disposal site; - Measures to ensure that fresh cement or concrete shall not be allowed to enter San Francisco Bay. Construction waste shall be collected and transported to an authorized upland disposal area, and per federal, state, and local laws and regulations; - All hazardous material shall be stored upland in storage trailers and/or shipping containers designed to provide adequate containment. Short-term laydown of hazardous materials for immediate use shall be permitted with the same anti-spill precautions; - All construction material, wastes, debris, sediment, rubbish, trash, fencing, etc., shall be removed from the site once the proposed project is completed and transported to an authorized disposal area, in compliance with applicable federal, state, and local laws and regulations; - Construction material shall be covered every night and during any rainfall event (if there is one); - Construction crews shall reduce the amount of disturbance within the project site to the minimum necessary to accomplish the project; and - Measures to prevent saw water from entering the Bay. **Mitigation Measure M-BI-12: Visiting Mariners Information** (see Section 5.14, Biological Resources) **Mitigation Measure M-BI-16: Invasive Marine Species Control at Port Facilities** (see Section 5.14, Biological Resources)

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.16: Hydrology and Water Quality (cont.)		
America's Cup (cont.)		
Impact HY-2: Operation of the America's Cup facilities would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	LTS	No mitigation necessary.
Impact HY-3: The America's Cup events and facilities would not place structures within a 100-year flood hazard area that would impede or redirect flood flows, and would not expose people to a significant risk involving flooding.	LTS	No mitigation necessary.
Impact HY-4: The America's Cup events and facilities would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche or tsunami.	LTS	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact HY-5: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza could violate water quality or waste discharge requirements or otherwise substantially degrade water quality.	LTSM	**Mitigation Measure M-HY-1: Water Quality Best Management Practices**
Impact HY-6: Operation of the Cruise Terminal and Northeast Wharf Plaza would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	LTS	No mitigation necessary.
Impact HY-7: The Cruise Terminal and Northeast Wharf Plaza would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche or tsunami.	LTS	No mitigation necessary.
Impact HY-8: The Cruise Terminal and Northeast Wharf Plaza would not expose people or structures to a significant risk of loss, injury, or death involving inundation from flooding as a result of climate change-induced sea level rise.	LTS	No mitigation necessary.
Impact HY-9: Proposed fill removal within Port properties associated with amendments to the BCDC Special Area Plan for the cruise terminal and Northeast Wharf Plaza would not violate water quality standards or waste discharge requirements or otherwise substantially degrade water quality.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.16: Hydrology and Water Quality (cont.)		
Future Long-Term Development Impacts		
Impact LT-HY: Future long-term development under the Host Agreement could result in hydrology and water quality impacts.	LTSM	See **Mitigation Measure M-LT-HY** in Table 1-4, below**.**
Cumulative Impacts		
Impact C-HY: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative hydrology or water quality impacts.	LTSM	**Mitigation Measure M-HY-1: Water Quality Best Management Practices**
Section 5.17: Hazards and Hazardous Materials		
America's Cup		
Impact HZ-1: Construction and operation of the America's Cup facilities and events could have a substantial adverse effect related to the routine transport, use, or disposal of hazardous materials.	LTSM	**Mitigation Measure M-BI-12: Visiting Mariners Information** (see Section 5.14, Biological Resources)
Impact HZ-2: Construction and operation of the America's Cup facilities and events would not create a significant hazard to the public or the environment as a result of a release of hazardous materials in soil, or location of project activities on a government list of hazardous materials sites.	LTS	No mitigation necessary.
Impact HZ-3: Construction and operation of the America's Cup facilities and events could create a significant hazard to the public or the environment as a result of a release of hazardous building materials in structures that would be demolished and creosote-treated pilings and structures that would be removed.	LTSM	**Mitigation Measure M-HZ-3: Removal of Hazardous Building Materials** The project sponsor shall ensure that any building planned for demolition or renovation is surveyed for hazardous building materials including PCB-containing electrical equipment, fluorescent light ballasts containing PCBs or DEHP, and fluorescent light tubes containing mercury vapors. These materials shall be removed and properly disposed of prior to the start of demolition or renovation. Old light ballasts that are removed during renovation shall be evaluated for the presence of PCBs. In the case where the presence of PCBs in the light ballast cannot be verified, the light ballast shall be assumed to contain PCBs and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous building materials identified either before or during demolition or renovation shall be abated according to federal, state, and local laws and regulations.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.17: Hazards and Hazardous Materials (cont.)		
America's Cup (cont.)		
Impact HZ-4: The America's Cup events and facilities would not expose people or structures to a significant risk of loss, injury, or death involving fires, nor would it impair implementation of or physically interfere with and adopted emergency response plan or emergency evacuation plan.	LTS	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact HZ-5: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not have a substantial adverse effect related to the routine transport, use, or disposal of hazardous materials.	LTS	No mitigation necessary.
Impact HZ-6: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not create a significant hazard to the public or the environment as a result of a release of hazardous materials in soil or sediment or location of project activities on a government list of hazardous materials sites.	LTS	No mitigation necessary.
Impact HZ-7: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza could create a significant hazard to the public or the environment as a result of a release of hazardous building materials in structures that would be demolished and creosote-treated pilings and structures that would be removed.	LTSM	**Mitigation Measure M-HZ-3: Removal of Hazardous Building Materials**
Impact HZ-8: The Cruise Terminal and Northeast Wharf Plaza would not expose people or structures to a significant risk of loss, injury, or death involving fires nor would it impair implementation of or physically interfere with and adopted emergency response plan or emergency evacuation plan.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-HZ: Future long-term development under the Host Agreement could result in potential hazards and hazardous materials impacts.	LTSM	See **Mitigation Measure M-LT-HZ** in Table 1-4, below.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.17: Hazards and Hazardous Materials (cont.)		
Cumulative Impacts		
Impact C-HZ: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative hazards and hazardous materials impacts.	LTSM	**Mitigation Measure M-HZ-3: Removal of Hazardous Building Materials**
Section 5.18: Minerals and Energy Resources		
America's Cup		
Impact ME-1: The America's Cup facilities and events would not encourage activities that would result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.	LTS	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact ME-2: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not encourage activities that would result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.	LTS	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-ME: Future long-term development under the Host Agreement would not result in adverse impacts on mineral or energy resources.	LTS	No mitigation necessary.
Cumulative Impacts		
Impact C-ME: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on mineral or energy resources.	LTS	No mitigation necessary.

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TABLE 1-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure(s)
Section 5.19: Agriculture and Forest Resources		
America's Cup		
Impact AG-1: Construction and operation of AC34 facilities and events would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use.	NI	No mitigation necessary.
James R. Herman Cruise Terminal and Northeast Wharf Plaza		
Impact AG-2: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use.	NI	No mitigation necessary.
Future Long-Term Development Impacts		
Impact LT-AG: Long-term development would not result in impacts on agricultural or forest resources.	NI	No mitigation necessary.
Cumulative Impacts		
Impact C-AG: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on agricultural or forest resources.	NI	No mitigation necessary.

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TABLE 1-4
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.5: Cultural Resources

Mitigation Measure M-LT-CP: Cultural Resources Mitigation Measures for Long-Term Development

- ***Archeological Testing, Monitoring, Data Recovery and Reporting*** (see San Francisco Planning Department standard mitigation)
- ***Review of New Construction within the Port of San Francisco Embarcadero Historic District for Compliance with the Secretary's Standards*** (see San Francisco Planning Department standard mitigation)
- ***Documentation and Interpretation for Demolition or Alteration of Buildings*** (see San Francisco Planning Department standard mitigation)

a. ***Piers 30-32 Performance Criteria***

The potential new "above deck" development at Piers 30-32, although not within the Embarcadero Historic District, shall be subject to the following:

- Port shall retain the services of qualified historic preservation expert to assist in producing design criteria to guide the form and character of long-term development of Piers 30-32 to be compatible with the character of the Embarcadero Historic District and consistent with the Secretary's Standards;
- For any future Pier 30-32 long-term development proposal, the Port shall hire a qualified historic preservation expert to prepare a Historic Resources Evaluation Report (HRER) that analyzes the design of the proposed development for consistency with the Pier 30-32 design criteria, including consistency with the Secretary's Standards, and compatibility with the historic setting and character of the Embarcadero Historic District. The Report would be subject to review by the Planning Department Preservation Staff.

Prior to issuance of Port Building or Encroachment Permits for optional long-term development of Piers 30-32, the Port shall consult with the Planning Department and the ERO, who shall determine whether this Mitigation Measure has been met.

b. ***Performance Criteria for Long-Term Development on Historic Piers***

The project sponsor has the option to alter and rehabilitate one or more historic piers for future long-term development, which may include (among other things) the following kinds of improvements:

- Construction of new accessible office/mixed use space within pier bulkheads
- Installation of seismic joints between the bulkhead and pier
- Repair or alteration of the bulkhead wharf that connects the pier to the seawall
- Substructure pile repairs
- Fire safety and access improvements

To mitigate potential impacts on historic piers that may result from the future long-term development for which there are no design details available at this time, the Port will develop design and performance criteria to guide the proposed improvements so that the work would be consistent with Port Resolution 04-89, which requires review of proposed projects for consistency with the Secretary's Standards. These design criteria and performance measures will seek to address the character defining features of typical historic pier structures that may be impacted by the proposed work. These character defining features have been described in this EIR and its supporting background reports and include:

- Bulkhead building of Neo-classical or Mission architectural design with maritime Industrial transit shed including three part gable roof with central repeating or one continuous monitor for the entire length
- Pile supported pier deck and aprons with rail tracks either flush with the apron deck or depressed below the level of the deck
- Wood and steel roof trusses and structural system
- Transit shed walls constructed of board formed concrete punctuated at regular intervals with cargo openings with roll-up doors and clerestory industrial sash windows or sidelights

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.5: Cultural Resources

- Mooring bitts and cleats mounted on the aprons wood to tie-up berthed vessels, timber fender piles attached to the side of the apron
- Use of industrial materials especially for the transit sheds including but not limited to concrete, steel glass and wood
- Historic lettering and identification signage

The performance criteria may include items such as the following:

1. All proposed repairs, alterations and improvements would be subject to Port Commission Resolution No. 04-89, which requires all projects on Port property within the Embarcadero Historic District to be reviewed for consistency with the Secretary's Standards.
2. The proposed construction of accessible offices or mixed use in the bulkhead shall attempt to retain the sense of open interior spatial qualities of the bulkhead and pier shed so as to maintain the sense of the historic volume. The build-out of offices should avoid obstructing existing windows and doors and obscuring the interior structural elements such as columns and trusses.
3. The installation of seismic joints between the bulkhead and pier shall be incorporated into the interior and exterior design in a sensitive manner. Mechanical equipment shall be located so as to limit the amount of roof-top equipment that is highly visible.
4. The repair or alteration of the bulkhead wharf and substructure pile repair shall be reviewed for consistency with the Port's Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures (see also Mitigation Measure M-CP-1a, Bulkhead Wharf Substructure Review Process).
5. Fire Safety and Access Improvements shall be sensitive to character defining features of the resource while meeting safety and code requirements.
6. Prior to issuance of Port Building or Encroachment Permits for optional long-term development on piers, the Port shall consult with the Planning Department and the Environmental Review Officer (ERO) who shall determine whether these design criteria and performance measures have been met and the mitigation measure has been satisfied.

Section 5.6: Transportation and Traffic

Mitigation Measure M-LT-TR: Transportation Mitigation Measures for Long-Term Development

Mitigation measures to mitigate significant traffic and transit impacts to less than significant levels could include but not be limited to:

- Roadway widening to provide for additional travel lane capacity;
- Restriping to provide for additional travel lanes;
- Implementation of tow-away restrictions to provide for additional travel lane capacity;
- Signal timing changes to reallocate green time to approaches experiencing high delays;
- Implementation of Transportation Demand Management Programs;
- Financial contributions to SFMTA to cover the cost of providing additional F-Market & Wharves historic streetcar and/or planned E-Embarcadero service; and
- Financial Contributions to SFgo, SFMTA's Integrated Transportation Management System to install changeable message signs, video cameras, and other traffic control devices.

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.7: Noise and Vibration
Mitigation Measure M-LT-NOa: Mitigation of Noise from Long-Term Development on Port Properties ***Noise Controls During Construction.*** The following practices shall be incorporated into the construction contract agreement 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; and • Require applicable construction-related vehicles and equipment to use designated truck routes to travel to and from the project sites. ***Pile Driving Noise-Reducing Techniques and Muffling Devices.*** The project sponsors 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 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 sponsors shall notify building owners and occupants within 500 feet of the project site of the dates, hours, and expected duration of such activities. ***Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring.*** The project sponsors shall consult with the Port's Chief Harbor Engineer and if recommended by the Port engage a qualified geotechnical engineer to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of nearby historic structures subject to pile-driving activity before a Port Building Permit is issued. If recommended by the Port or the geotechnical engineer, for structures or facilities within 60 feet of pile-driving activities, the project applicant shall require groundborne vibration monitoring of nearby historic 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 historic 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 pile-driving activities. Monitoring results shall be submitted to the Port's Chief Harbor Engineer. In the event of unacceptable ground movement, as determined by the Chief Harbor Engineer, all impact work shall cease and corrective measures shall be implemented to minimize the risk to the subject, or adjacent, historic structures. ***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. Once the stationary noise sources have been installed, noise levels shall be monitored to ensure compliance with local noise standards. If stationary noise sources exceed the applicable noise standards, an acoustical engineer shall be retained by the project sponsors to install additional noise attenuation measures in order to meet the applicable noise standards.
Mitigation Measure M-LT-NOb: Mitigation of Interior and Exterior Noise from New Residential Development of Seawall Lot 330 For new residential development located along streets with noise levels above 75 dBA Ldn, the Planning Department shall require the following: 1. The Planning Department shall require the preparation of an analysis that includes, at a minimum, a site survey to identify potential noise-generating uses within two blocks of the project site, and including at least one 24-hour noise measurement (with maximum noise level readings taken at least every 15 minutes), prior to completion of the

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.7: Noise and Vibration
environmental review. The analysis shall demonstrate with reasonable certainty that Title 24 standards, where applicable, can be met, and that there are no particular circumstances about the proposed project site that appear to warrant heightened concern about noise levels in the vicinity. Should such concerns be present, the Department may require the completion of a detailed noise assessment by person(s) qualified in acoustical analysis and/or engineering prior to the first project approval action, in order to demonstrate that acceptable interior noise levels consistent with those in the Title 24 standards can be attained; and 2. To minimize effects on development in noisy areas, for new residential uses, the Planning Department shall, through its building permit review process, in conjunction with noise analysis required above, require that open space required under the Planning Code for such uses be protected, to the maximum feasible extent, from existing ambient noise levels that could prove annoying or disruptive to users of the open space. Implementation of this measure could involve, among other things, site design that uses the building itself to shield on-site open space from the greatest noise sources, construction of noise barriers between noise sources and open space, and appropriate use of both common and private open space in multi-family dwellings, and implementation would also be undertaken consistent with other principles of urban design.
Section 5.8:Air Quality
Mitigation Measure M-LT-AQ: Future Long-Term Development Air Quality Mitigation ***Motor Vehicle Trip Reduction.*** Potential operational criteria pollutant impacts identified for Piers 30-32 are based on default trip generation numbers associated with land uses embedded in emissions models used by the BAAQMD. These trip generation estimates do not reflect the high availability of transit in San Francisco or the City's Transit First Program. This potential impact may be mitigated by existing efforts of the City to reduce vehicle travel and may be further mitigated by implementation of transportation demand measures. Transportation demand management strategies that may be incorporated as mitigation include those identified in Section 5.6, Transportation and Circulation, of this EIR. ***Construction Criteria Pollutant and Health Risk Controls.*** Criteria pollutant emissions from construction activities may include use of Tier 3 and Tier 4 construction equipment, which will be more widely available in future years. Appropriate mitigation measures shall be identified to incorporate into the construction specifications to reduce construction vehicle emissions. Examples of mitigation measures that might be incorporated into construction specifications could include the following: • For projects between 2011 and 2015, use Tier 3 equipment with best available control technology where feasible. For projects conducted after 2015, use Tier 4 equipment or interim Tier 4 equipment equipped with best available control technology where such equipment exists. • Use temporary power provided by the local utility provide instead of diesel generators; where it is not possible to plug into the electric grid, use Tier 3 diesel generators and air compressors. • Use concrete batched from local plants to limit concrete trucks' travel time and the amount of diesel exhaust emitted. • Minimize idling times by either shutting equipment and vehicles off when not in use or limiting the maximum idling time to 5 minutes or less (as required by the California airborne toxics control measure, Title 13, Section 2485 of California Code of Regulations [CCR]). Provide clear signage of idling rules for construction workers at all access points. • Use on-road haul trucks model year 2007 or later. • Maintain and properly tune construction equipment in accordance with manufacturer's specifications. Have all equipment checked by a certified mechanic to determine that equipment is running in proper condition prior to operation. ***Operational Risk and Hazard Reduction For New Stationary Sources.*** Reduction in operational risks and hazards from new stationary sources (namely required emergency/standby generators) may be reduced by implementation of best available control technology for toxic air contaminants (TBACT) on new stationary sources, which is required for all new stationary sources that would exceed the threshold cancer risk increase of 10 in one million. To the extent feasible, generators with Tier 4 compliant engines may be implemented to achieve a reduction in DPM emissions of 80 to 90 percent.

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.8:Air Quality
Operational Risk and Hazards for New Sensitive Receptors. For the potential operational impacts on residents of the proposed dwelling units at Seawall Lot 330, available mitigation may include building design and ventilation requirements. Article 38 of the San Francisco Health Code requires that proposed residential projects located near high-volume roadways be subject to air quality modeling conducted to determine if annual average concentrations of $PM_{2.5}$ from roadway sources within 500 feet of a project site would exceed a concentration of 0.2 micrograms per cubic meter (annual average). If this standard is exceeded, Article 38 requires that the project applicant design the project to minimize air pollutants indoors or install a filtered air supply system, with high-efficiency filters. An example of such requirements may include the following: • The project sponsor shall submit a ventilation plan for the proposed buildings. The ventilation plan shall show that the building ventilation systems remove at least 80 percent of the PM2.5 pollutants from habitable areas. The ventilation system shall be designed by an engineer certified by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The engineer shall provide a written report documenting that the system offers the best available technology to minimize outdoor to indoor transmission of air pollution. In addition to installation of an air filtration system, the project sponsor shall present a plan that ensures ongoing maintenance for the ventilation and filtration systems. The project sponsor shall also ensure the disclosure to buyers and renters regarding the findings of the analysis and inform occupant's proper use of any installed air filtration system.
Section 5.14: Biological Resources
Mitigation Measure M-LT-BIa: Long-Term Development Mitigation for Upland Biological Resources ***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. ***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 August 15 and April 15 for winter hibernacula and February 15 and October 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. ***Minimizing Bird Strikes.*** *Windows and Landscaping.* Prior to the issuance of the first building permit for each building in the proposed project, the project sponsor 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. The Port 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 the Port 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 the Port 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:

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.14: Biological Resources

- 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, – 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. The project sponsor shall similarly ensure that the design and specifications for buildings 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 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. The Port 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. The Port 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. The Port shall review and approve the educational materials prior to building occupancy.

Documentation. The project sponsor and/or Port 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 any proposed projects to ensure that they sufficiently minimize the potential for bird strikes.

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.14: Biological Resources
Mitigation Measure M-LT-BIb: Long-Term Development Mitigation for Marine Biological Resources
Dock Night Lighting. Lighting on all temporary and permanent docks shall minimize artificial lighting of Bay waters by using shielded, low-mounted, and low light-intensity fixtures and bulbs.
Pile Driving Noise Reduction for Protection of Fish. If impact pile driving is required for construction, prior to the start of construction, the project sponsors shall develop a NMFS-approved sound attenuation monitoring plan. This plan shall provide detail on the sound attenuation system, detail methods used to monitor and verify sound levels during pile driving activities, and management practices to be taken to reduce impact hammer pile-driving sound in the marine environment to an intensity level of less than 183 dB. The sound monitoring results shall be made available to the NMFS. The plan shall incorporate but not be limited to the following best management practices (BMPs): • Vibratory drivers shall be used for the installation of 72-inch steel pilings to the deepest depth practicable. • All piling installation using impact hammers shall be conducted between approved work windows, when the likelihood of sensitive fish species being present in the work area is minimal. • If pile installation using impact hammers must occur at times other than the approved work window, the AC34 project sponsors shall undertake formal consultation with the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), and California Department of Fish and Game (CDFG) to address potential impacts on sensitive marine resources, especially marine mammals, and implement all requested actions to avoid impacts. • If exceedance of noise thresholds established and approved by NMFS occur, a contingency plan using bubble curtains or air barrier will be implemented to attenuate sound levels to below thresholds. • The hammer will be cushioned using a 12-inch thick wood cushion block during all impact hammer pile driving operations. • A "soft start" technique shall be employed in all pile driving to give fish and marine mammals an opportunity to vacate the area. Vibratory hammers shall be used to the maximum extent practicable to reduce hydroacoustic effects.
Pile Driving Noise Reduction for Protection of Marine Mammals. As part of the NMFS-approved sound attenuation monitoring plan required in Mitigation Measure M-BI-11b, the project sponsor shall take actions in addition to those listed in Mitigation Measure M-BI-11b to reduce the effect of underwater noise transmission on marine mammals; these actions will include at a minimum: • Establishment of a 1,600-feet (500-meter) safety zone that shall be maintained around the sound source, for the protection of marine mammals in the event that sound level are unknown or cannot be adequately predicted. • Work activities shall be halted when a marine mammal enters the 1,600-feet (500-meter) safety zone and resume only after the animal has been gone from the area for a minimum of 15 minutes. • Maintain sound levels below 90 dBA in air when pinnipeds (seals and sea lions) are present.17 • A NMFS-approved biological monitor will be available to conduct surveys before and during impact hammer pile driving to inspect the work zone and adjacent Bay waters for marine mammals. The monitor will be present as specified by NMFS during the impact pile-driving phases of construction.
Invasive Marine Species Control at Port Facilities. The project sponsors shall develop and implement an Invasive Species Control Plan prior to commencement of any in-water work including Port piers, wharfs, bulkheads, pile driving, and installation of temporary structures. The plan shall be prepared in consultation with the United States Coast Guard (USCG) and California State Lands Commission. Provisions of the plan shall include but not be limited to the following: • Environmental training of construction personnel involved in the removal of pier pilings, temporary floating docks, piling suspended barges, and wave attenuators, to inform them about invasive marine species in San Francisco Bay that might be attached to removed structures

17 NMFS (National Marine Fisheries Service). 2007. *op cit*.

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.14: Biological Resources

- Actions to be taken to prevent the release and spread of marine invasive species, especially algal species such as Undaria and Sargasso
- Procedures for the safe removal and disposal of any invasive taxa observed on the removed structures prior to disposal or reuse of pilings, docks, wave attenuators, and other features
- The onsite presence of qualified marine biologists to assist the contractor in the identification and proper handling of any invasive species on removed Port equipment or materials
- A post-construction report identifying what, if any, invasive species were found attached to removed equipment and materials and the treatment/handling of identified invasive species.

***Maintenance Dredging and Turbidity Minimization Measures for the Operation of the Marinas*.** Maintenance dredging for the marinas could remove or generate sediment plumes that could impact special-status species, their habitats, and Essential Fish Habitat (EFH). To minimize this effect, the following measures shall be implemented by the Project Applicant:

Conduct a detailed survey for special-status species, including native oysters in all suitable substrates within the marina, which includes the area between the land and breakwaters, after construction of the new breakwaters. This survey shall be conducted by a qualified biologist during the appropriate seasonal and tidal conditions. This survey shall occur before any construction within the proposed marina location takes place to establish a baseline condition.

If determined necessary, a detailed sediment plume modeling study of the proposed marina operation shall be conducted to determine if the operations and maintenance of the marina would generate a substantial plume of sediment. This model shall include the local bathymetry and sediment information, tidal data, and detailed marina information (number and types of boats, etc). The model shall be prepared by a qualified harbor engineer (as approved by the City/Agency) with direct experience in this type of work within San Francisco Bay, prior to issuance of any permits for the construction of features directly associated with the marina.

BMPs to Reduce Impacts of Dredging To Water Quality. BMPs established in the Long-Term Management Strategy (LTMS) for management of disposal of dredge material in San Francisco Bay are designed specifically to minimize spread of contaminants outside of dredge areas. All of these elements of the LTMS shall be applied to any proposed dredging or construction activities associated with the proposed project unless otherwise modified by the United States Army Corps of Engineers, BCDC, or San Francisco Bay Regional Water Quality Control Board in permit conditions associated with the proposed dredging activities.

***Work Windows to Reduce Maintenance Dredging Impacts to Fish during Operation of the Marina*.** Maintenance dredging for the marinas shall be conducted during designated work windows in accordance with the Long-Term Management Strategy (LTMS) to protect sensitive fish species, such as steelhead and Pacific herring.

Section 5.15: Geology and Soils

Mitigation Measure M-LT-GE: Mitigation of Hazards and Hazardous Materials Impacts from Long-Term Development on Port Properties

The project sponsor shall conduct a site-specific geotechnical investigation for proposed developments under the direction of a geotechnical engineer prior to any new construction or reuse that would increase the load or otherwise induce settlement on long-term development sites. The investigations shall be performed to evaluate subsurface conditions and existing structural conditions at the site, and shall evaluate the potential for geological and seismic hazards including settlement, ground shaking, ground rupture, liquefaction, subsidence, slope stability, and lateral spreading. Recommendations shall be made regarding the pile and foundation requirements, seawall stability, upgrading existing foundations, seismic design, and mitigation of geologic hazards, and these recommendations shall be included in the project design.

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.16: Hydrology and Water Quality
Mitigation Measure M-LT-HY: Water Quality Best Management Practices The project sponsor shall implement water quality best management practices (BMPs) to protect water quality as well as protected species and their habitat(s) from pollution due to fuels, oils, lubricants, and other harmful materials. BMPs for this proposed project shall follow those detailed in the San Francisco Department of Public Health Pollution Prevention Toolkit for Maritime Industries.[18] Vehicles and equipment that are used during the course of a proposed project shall be fueled and serviced in a manner that will not affect federally protected species in the project area or their habitats; • A Spill Prevention Control and Countermeasure (SPCC) Plan shall be prepared to address the emergency cleanup of any hazardous material and will be available on site. The SPCC shall include: - Methods to address the emergency cleanup of any hazardous material and what materials will be available on site; - SPCC, hazardous waste, stormwater and other emergency planning requirements; - Measures to prevent spills into the Bay associated with in water fueling, if in water fueling is required on some of the construction barges. Such measures shall include: ▪ Secondary booms and/or pads, depending upon where fueling would take place on the vessel; ▪ Secondary containment on the deck of the vessel to contain the petroleum product; ▪ Specifying volume of petroleum products that will be on the vessel and evaluating the potential for spills. Absorbent and cleanup materials (such as oil sorbent boom, heavy oil pads, OilDry Absorbant Floor, etc) of sufficient quantity to clean up potential spill volume shall be provided; and ▪ The locations of properly permitted offsite locations where vessels will be fueled. • In addition, fueling of equipment shall occur using proper fuel transfer procedures as per U.S. Coast Guard regulations (33 CFR 156.120 and 33 CFR 155.320) and spill containment and the fueling location shall be inspected after fueling to document that no spills have occurred. Any spills shall be cleaned up immediately using spill response equipment as identified in the SPCC Plan. • Well-maintained equipment shall be used to perform the construction work, and, except in the case of a failure or breakdown, equipment maintenance shall be performed off site. Equipment shall be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak shall be identified, leaked material will be cleaned up, and the cleaning materials shall be collected and will be properly disposed; • The project sponsor shall exercise every reasonable precaution to protect listed species, their habitats, and Essential Fish Habitat from construction by-products and pollutants such as demolition debris, construction chemicals, fresh cement, saw-water, or other deleterious materials. Construction will be conducted from both land and water, and care shall be used by equipment operators to control debris so that it does not enter the Bay. • A Materials Management Disposal Plan (MMDP) shall be prepared to prevent any debris from falling into the Bay during construction to the maximum extent practicable. The measures identified in the MMDP shall be based on the Best Available Technology, and will include, but not be limited to, the following measures: - During construction, the barges performing the work shall be moored in a position to capture and contain the debris generated during any sub-structure or in-water work. In the event that debris does reach the Bay, personnel in workboats within the work area shall immediately retrieve the debris for proper handling and disposal. All debris shall be disposed of at an authorized upland disposal site; - Measures to ensure that fresh cement or concrete shall not be allowed to enter San Francisco Bay. Construction waste shall be collected and transported to an authorized upland disposal area, and per federal, state, and local laws and regulations; - All hazardous material shall be stored upland in storage trailers and/or shipping containers designed to provide adequate containment. Short-term laydown of hazardous materials for immediate use shall be permitted with the same anti-spill precautions;

[18] Virginia St. Dean, San Francisco Department of Public Health, *Pollution Prevention Toolkit for Maritime Industries*, prepared for: California Department of Toxic Substances Control Under Contract #08-T3625-A2, January 2011

TABLE 1-4 (Continued)
SUMMARY OF MITIGATION MEASURES FOR LONG-TERM DEVELOPMENT IMPACTS

Section 5.16: Hydrology and Water Quality
- All construction material, wastes, debris, sediment, rubbish, trash, fencing, etc., shall be removed from the site once the proposed project is completed and transported to an authorized disposal area, in compliance with applicable federal, state, and local laws and regulations; - Construction material shall be covered every night and during any rainfall event (if there is one); - Construction crews shall reduce the amount of disturbance within the project site to the minimum necessary to accomplish the project; and - Measures to prevent saw water from entering the Bay. The MMDP shall be submitted to the RWQCB for review and approval.
Section 5.17: Hazards and Hazardous Materials
Mitigation Measure M-LT-HZ: Mitigation of Hazards and Hazardous Materials Impacts from Long-Term Development on Port Properties The project sponsor shall ensure that any building planned for demolition or renovation is surveyed for hazardous building materials including PCB-containing electrical equipment, fluorescent light ballasts containing PCBs or DEHP, and fluorescent light tubes containing mercury vapors. These materials shall be removed and properly disposed of prior to the start of demolition or renovation. Old light ballasts that are removed during renovation shall be evaluated for the presence of PCBs. In the case where the presence of PCBs in the light ballast cannot be verified, the light ballast shall be assumed to contain PCBs and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous building materials identified either before or during demolition or renovation shall be abated according to federal, state, and local laws and regulations.

CHAPTER 2
Introduction

This environmental impact report (EIR) addresses two related projects: (1) the proposed 34th America's Cup (AC34) – an international sailing event to be hosted by the City and County of San Francisco (CCSF) in summer-fall 2012 and summer-fall 2013, and (2) the proposed James R. Herman Cruise Terminal and Northeast Wharf Plaza (Cruise Terminal). Details regarding the project locations, objectives, and characteristics that form the basis of the EIR analysis are discussed in Chapter 3, Project Description. This chapter provides an introduction to and overview of the EIR.

2.1 Purpose of This EIR

The San Francisco Planning Department, as lead agency responsible for administering the environmental review for projects in the City and County of San Francisco, has determined that an EIR is required based on the criteria of the California Environmental Quality Act (CEQA). CEQA requires the preparation of an EIR when a proposed project could result in significant, adverse effects on the physical environment. This EIR has been prepared in compliance with CEQA (California Public Resources Code, Sections 21000 *et seq.*), the *CEQA Guidelines*, and Chapter 31 of the San Francisco Administrative Code. It is an informational document for use by governmental agencies and the public to aid in the planning and decision-making process by disclosing the physical environmental effects of the project and identifying possible ways of reducing or avoiding its potentially significant impacts.

CEQA requires that before a decision can be made to approve a project that would pose potential adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of a project, to recommend mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project. The information contained in the EIR must be reviewed and considered by the CCSF prior to a decision to approve, disapprove, or modify the proposed project.

The state *CEQA Guidelines* (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 *et seq.*) help define the role and content of this EIR as follows:

- **Informational Document.** An EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (Section 15121[a]).

- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make an informed decision that takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (Section 15151).

The *CEQA Guidelines*, Section 15382, define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…." Therefore, in identifying the significant impacts of the project, this EIR concentrates on its substantial physical effects and upon mitigation measures to avoid, reduce, or otherwise alleviate those effects. See Chapter 5, Section 5.1, Impact Overview, for further description of the approach to analyzing environmental impacts used in this EIR.

2.2 Environmental Review

This document is intended to comply with the requirements of CEQA. As described in Chapter 3, Project Description, the proposed projects would require numerous permits and approvals prior to implementation, including federal agency approvals. Federal agencies may use the contents of this EIR as part of their permitting and approval process. However, environmental review as required by federal agencies under the National Environmental Policy Act (NEPA) is a separate process to be determined by the designated federal lead agency (or agencies) under NEPA, and separate environmental documentation in compliance with NEPA will be prepared as necessary.

One of the primary differences between NEPA and CEQA is the way significance is determined and discussed in environmental documents. Under CEQA, the lead agency is required to identify each significant effect on the environment resulting from the project, and ways to mitigate each significant effect. A significant environmental effect means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including but not limited to land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

Under NEPA, the determination of significance is based on context and intensity, and NEPA does not require that a determination of significant impacts be stated in the environmental documents. Impacts may be both beneficial and adverse, and a significant effect may exist even if the federal agency believes that, on balance, the effect will be beneficial. In addition, the scope of analysis under NEPA includes additional topics not covered under CEQA, such as Environmental Justice and Economic and Social Effects. Such effects are not analyzed in this document.

Further description of involvement by federal agencies in the proposed project is included in Chapter 3, Project Description, and Chapter 4, Plans and Policies.

2.3 CEQA Process

2.3.1 Notice of Preparation and Public Scoping

On February 9, 2011, the San Francisco Planning Department sent a Notice of Preparation (NOP) to governmental agencies and organizations and persons interested in the proposed projects, for a 30-day review period (known as the public scoping period) that ended on March 11, 2011. The NOP is included as Appendix A of this EIR. The NOP asked agencies and interested parties to comment on environmental issues that should be addressed in the EIR. The comment letters received in response to the NOP are available for review at the San Francisco Planning Department as part of Case File No. 2010.0493E.

Two public scoping meetings were held (on February 23, 2011 at the San Francisco Board of Supervisors Chambers at City Hall, and on February 24, 2011 at the Port of San Francisco offices) to receive oral comments on the scope of the EIR. In addition, an interagency scoping meeting was held on March 3, 2011 at the San Francisco Planning Department; this meeting was attended by staff from the United States Army Corps of Engineers, the United States Environmental Protection Agency, the Golden Gate National Recreation Area, the San Francisco Maritime National Historical Park, the Regional Water Quality Control Board – Bay Area Region, the San Francisco Bay Conservation and Development Commission, the State Historic Preservation Office, and California Department of Parks and Recreation. The Planning Department has considered the comments made by the public and agencies in preparing the Draft EIR for the proposed projects.

2.3.2 Draft EIR Public Review

This Draft EIR is being circulated to local, state, and federal agencies and to interested organizations and individuals that may wish to review and comment on the document. *CEQA Guidelines* Sections 15086(c) and 15096(d) call for responsible agencies or other public agencies to provide comment on those project activities within an agency's area of expertise or project activities that are required to be carried out or approved by the agency; the agency should support those comments with either oral or written documentation. Publication of the Draft EIR marks the beginning of a 45-day public review period, during which time the San Francisco Planning Department will accept comments on the Draft EIR. The public review period for the Draft EIR on the AC34 and Cruise Terminal projects is from July 11, 2011 through August 25, 2011.

Copies of the Draft EIR are available for public review at the following locations: (1) San Francisco Planning Department, 1660 Mission Street, 1st Floor, Planning Information Counter, San Francisco, California; (2) San Francisco Main Library, 100 Larkin Street, San Francisco, California; and (3) Port of San Francisco, Pier 1, The Embarcadero (at Washington Street), San Francisco, California. The EIR can also be accessed through the internet at the following address: http://tinyurl.com/sfceqadocs.

All documents referenced in this Draft EIR are available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. The distribution list for the Draft EIR is also available for review at this location.

Comments on the Draft EIR can be sent by mail to: Bill Wycko, Environmental Review Officer, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. Written comments can also be sent by fax to Bill Wycko, Environmental Review Officer, 415-558-6409, or by email to bill.wycko@sfgov.org.

During the 45-day public review period, the San Francisco Planning Department will conduct a public hearing to receive oral comments on the Draft EIR. The public hearing is scheduled to be held before the Planning Commission on August 11, 2011 in Room 400 City Hall, Dr. Carlton B. Goodlett Place, San Francisco, California beginning at 1:30 p.m. or later (call 415-558-6422 the week of the hearing for a recorded message giving a more specific time).

2.3.3 Comments and Responses Document and Final EIR

Following the close of the public review period on the Draft EIR, the Planning Department will prepare a Comments and Responses document. Written and oral comments received on the Draft EIR will be addressed in the Comments and Responses document, which will be released for public review and circulated to all persons, organizations, and agencies submitting comments on the Draft EIR. The Comments and Responses document together with the Draft EIR constitute the Final EIR. The San Francisco Planning Commission will hold a public hearing to consider the adequacy of the Final EIR in complying with the requirements of CEQA. If the Planning Commission finds that the Final EIR complies with CEQA requirements, it will certify the Final EIR.

The CCSF and Port of San Francisco must consider the certified Final EIR before making a decision to approve, disapprove, or modify the project. CEQA requires the adoption of findings prior to approval of a project for which a certified EIR identifies significant environmental effects (*CEQA Guidelines*, Sections 15091 and 15092). If the EIR identifies significant adverse impacts that cannot be mitigated to less-than-significant levels, the findings must include a statement of overriding considerations for those impacts (*CEQA Guidelines*, Section 15093[b]).

2.4 Public Participation

The *CEQA Guidelines* and Chapter 31 of the San Francisco Administrative Code encourage public participation in the planning and environmental review processes. The Planning Department will provide opportunities for the public to present comments and concerns regarding the CEQA and planning process. These opportunities will occur during the public scoping process before publication of the Draft EIR as well as during the public review and comment period on the Draft EIR and at a public hearing before the San Francisco Planning Commission. Written public comments may be submitted to the Planning Department during the specified public review and comment period (indicated on the cover of this EIR), and written and oral comments may be presented at public hearings concerning the projects.

A summary of relevant comments received during the public scoping period is presented in **Table 2-1**. These comments have been addressed within each environmental topic in Section 5, Environmental Setting, Impacts and Mitigation Measures.

TABLE 2-1
SUMMARY OF SCOPING COMMENTS

EIR Section	Comment
Chapter 2, Introduction	The EIR should explain why a joint NEPA/CEQA document was not prepared.
Chapter 3, Project Description	The Project Description should include explanation and/or descriptions of: • Why the Cruise Terminal project and AC34 event are being analyzed in one CEQA document; • Provisions of People Plan, Event Plan, Space Plan, Waste Management Plan, and any other plans associated with the implementation of the event; • All in-water construction and operational activities (dredging, pile driving, helicopter barge, number of event and spectator vessels, etc.), including necessary approvals processes; • Ongoing agency coordination for the AC34 event; • Clear figures as to the extent of the race area and potential viewing locations in Marin County; • Provision of space at Pier 80 in the year 2011 prior to race-related activities; • Site plans for all events/venues in Golden Gate National Recreation Area (GGNRA) lands; • All temporary and permanent improvements; • Restrictions on Piers 27-29 open space when ships are at the terminal; • A Successive Defense Option; • All permanent large spectator yachts berthing locations; • Long-term development rights of the sites associated with AC34 that would be leased to the Event Authority pursuant to the Host Agreement; • Tenant relocations to allow for the implementation of the proposed project; • Peak day analysis, when the most spectators would watch the AC34 events; and • The Pier 36 removal as part of project, as its removal was not approved at time of signing of Host Agreement.
Section 5.1, Impact Overview	The EIR should include an analysis of: • A geographic area including all lands in San Francisco, Marin, and Alameda Counties, as well as GGNRA lands, that could be affected by spectator attendance to primary and secondary viewing areas, including but not limited to Alameda Point, Angel Island, Alcatraz, Battery East, Belvedere, Cavallo Point, Crissy Field, Fort Mason, Fort Point, Fort Baker, Golden Gate Plaza and trails, Horseshoe Bay, Justin Herman-Embarcadero Plaza, Lime Point, Marin City, Marin Headlands, Middle Harbor (Oakland) Shoreline Park, Mission Creek Garden, Muni Pier, Needles Area (a tiny island adjacent to Lime Point), Richardson's Bay, Rincon Park, Point Bonita, the Presidio west of the Golden Gate Bridge and below Lincoln Road, Sausalito, SAFR areas of Hyde Street Pier and Municipal Pier, Sidney Walton Park, South Beach Park, South Beach Park, South Park, Sue Bierman Park, Tiburon, Torpedo Wharf, Treasure Island, Yates Battery, Yerba Buena Island, areas within one-quarter mile of the shoreline during mean low tide; and • Cumulative impacts associated with AC34 events, as well as long-term cumulative development impacts, in combination with past, present, and future projects, including but not limited to Giants games, 49ers games, art fairs, the Conzelman Road project, the Pier 36/ Brannan Street Wharf project, the Exploratorium Relocation Project, 8 Washington Street, Doyle Drive, Bay Bridge Eastern Span, other state highway redevelopment projects, and the Fisherman's Wharf Improvement Project.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS

EIR Section	Comment
Section 5.2, Land Use Chapter 4, Plans and Policies	The EIR should include an analysis of: • Conflict with existing plans and policies; • All dredging and disposal required for all phases of the proposed project, Dredged Material Management Office (DMMO) requirements and process, and the disposal options related to Bay Plan policies; • Changes in use of open spaces at all primary and secondary viewing areas, as required by the Bay Conservation and Development Commission (BCDC) Special Area Plan; • Potential conflicts with long-term waterfront development plans; • Beneficial uses in the regulatory setting and any impacts to those beneficial uses; • Portions of the project site subject to the Public Trust Doctrine, including the proposed location and square footage of each use, and impacts related to Public Trust consistency; • BCDC jurisdiction and regulations, and proposed amendments to existing plans that would be required to implement the project; • Potential conflicts with the Special Area Plan, including public access and view requirements; • Temporary and permanent loss of open water basins, and potential fill removal and construction of new open water basins elsewhere on the waterfront as mitigation for loss of basins associated with the proposed project; • Impacts on public access at Rincon Point (Piers 14-22 ½), Pier 27, Piers 30-32, and other mooring areas; and • How the proposed project will comply with the San Francisco Planning Code.
Section 5.3, Aesthetics	The EIR should include an analysis of : • Impacts on visual character resulting from the team bases, the cruise terminal, and primary spectator venues, including renderings of these locations from both the land and water; • The impacts of light and glare on surrounding areas; • The impacts of billboards and promotional advertising, including guerilla vendors; and • The impacts on existing views resulting from temporary and permanent structures, as well as moored ships.
Section 5.4, Population and Housing	The EIR should include an analysis of: • Increased housing demand caused by the proposed project; and • The impacts of conversion of rental housing stock to tourist hotels for the AC34 event.
Section 5.5, Cultural and Paleontological Resources	The EIR should include an analysis of: • Impacts from gravity screws/anchors on historic piers and resources; • Impacts of moored ships on historic resources; • Impacts on archeological resources; • Impacts on submerged historic resources under the jurisdiction of the State Lands Commission; • Impacts on the Port of San Francisco Embarcadero Historic District and all historic resources under federal jurisdiction; and • Sufficient detail of each proposed improvement or change to a historic resource for all the public and decision-makers to determine whether or not the project is consistent with the Secretary of the Interior's Standards.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS

EIR Section	Comment
Section 5.6, Transportation and Circulation	The EIR should include an analysis of: • Methodology and assumptions for trip generation, distribution, and assignment (including, if a person-trip model is used, reference for this use in other studies, including surveys of vehicle occupancy rates at special events or similar events in comparable cities); • Percentage of trips assigned to state facilities, estimates of travel modes, trip origins and destinations, and trip arrival rates (including differentiation among visitor, worker, and other types of trips); • Impacts on regular ferry schedules, ferry crowding, and bicyclists riding ferries; • The availability of parking spaces at each venue and secondary viewing area; • Impacts on levels of service on all major arteries and impacts on state highway facilities, including Bay Bridge approaches; and • Impacts on transit, cyclists, pedestrians, emergency access, parking, public access, disability access, and emergency access. Mitigation measures for transportation and circulation impacts should fully disclose agency responsibility, scheduling, monitoring fees, and encroachment permit requirements.
Section 5.7, Noise	The EIR should include an analysis of noise impacts on nearby residential neighborhoods from vehicles, air horns, and aviation.
Section 5.8, Air Quality	The EIR should include an analysis of: • Air quality impacts and health risk impacts associated with vehicular congestion, idling vehicles, delayed ship arrivals, and air space travel restrictions; • Impacts of continued berthing of cruise ships at Pier 35, where there is no shoreside power facility, as well as the potential loss of grant funding for shoreside power; • Emissions from vessels, vehicles serving vessels, and vehicles bringing passengers to the cruise ship terminal; and • Air quality impacts from vessels that will be present in the Bay during the events and that do not meet the stringent emissions standards of the Bay Area.
Section 5.9, Greenhouse Gas Emissions	The EIR should include an analysis of calculated total greenhouse gas emissions as a result of construction and operation of the proposed project. The EIR should include a discussion of Marin Countywide Plan provisions that pertain to greenhouse gases, as well as analyze impacts of transportation and greenhouse gases associated with the proposed project.
Section 5.10, Wind and Shadow	The EIR should include an analysis of wind impacts associated with removal of the Piers 27-29 shed, as well as the long-term development of Piers 30–32 and Seawall Lot 330.
Section 5.11, Recreation	The EIR should include an analysis of impacts on all recreational areas that would be affected by the project. The analysis should establish baseline conditions based on carrying capacities of park lands based on study of size, resource constraints, facilities, and limits of acceptable crowding. Baseline conditions should also be determined by noting hourly numbers of visitors; visitor flow rates of pedestrians, bicycles, and vehicles; existing crowding conditions; existing key viewing spots; visitor services; and bicycle and pedestrian flow patterns. The EIR should include an analysis of areas closed when excessive visitation is expected, displaced on-land recreational area users, and displaced in-water/on-water recreational area users.
Section 5.12, Utilities and Service Systems	The EIR should include an analysis of impacts on wastewater, stormwater, and solid waste infrastructure.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS

EIR Section	Comment
Section 5.13, Public Services	The EIR should include an analysis of impacts on park staffing, law enforcement, emergency medical services, fire protection services, facility management, and Coast Guard enforcement.
Section 5.14, Biological Resources	The EIR should include an analysis of impacts on biological resources related to: • Delayed dredging and dredged material disposal caused by the event; • Activities and structures required for the proposed project, including gravity screws/ anchors, fireworks, balloons, fences, solid waste, temporary fill, dredging, pump-out facilities, additional moorings, illegal discharges, marine debris removal, lights, glare, noise, overflights, human activity, and vessel strikes; • Invasive species in the Bay and Delta; • All special-status species, including but not limited to colonial seabirds, seals, benthic organisms, breeding birds, subtidal habitats, Pacific herring winter fisheries, Mission blue butterfly, western snowy plover, fork-tailed damselfly, harbor seal haul-out areas, breeding and roosting areas, and all areas of the GGNRA. The EIR analysis should be informed by the San Francisco Bay Subtidal Habitat Goals Report and initial studies of Bay bottom conditions. It should include analysis of impacts to biological resources in areas that would be closed due to excessive visitation, as well as the wetland mitigation areas of the Doyle Drive project. The EIR should analyze the impact of long-term population increases on biological resources.
Section 5.15, Geology and Soils	The EIR should include an analysis of: • Impacts related to landslide and erosion; and • Structural capacity of existing piers and landfill areas to accommodate increased crowds, especially during a seismic event.
Section 5.16, Hydrology and Water Quality	The EIR should fully describe: • Proposed materials, quantities, depths, locations, vicinities, contamination levels, and method of disposal for all dredging; • Disturbance of in-water areas with known elevated levels of contamination and potential impacts of disturbance of these areas; • All approvals and agency coordination required to allow for the dredging and other in-water activities proposed as part of the project; and • The applicable permit requirements for more than one acre of upland construction. The EIR should include an analysis of: • Activities and structures required for the proposed project, including gravity screws/anchors, fireworks, balloons, fences, solid waste, temporary fill, dredging, bilge water, ballast water, septic pump-out facilities, additional moorings, illegal discharges, marine debris removal, the barge helipad, and water column disturbance associated with propulsion systems; • The potential for increases in pollutants for which the Bay is already impaired, including chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, dioxins, exotic species, furans, mercury, polychlorinated biphenyls (PCBs), and selenium; • Impacts of stormwater runoff controls and pollution in the Bay; • Sea level rise in relation to all project components; and • Water quality impacts of increased boating activity at boatyards, including increased parking lot use and turnover and copper runoff. The EIR analysis should be informed by the San Francisco Bay Subtidal Habitat Goals Report and initial studies of Bay bottom conditions.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS

EIR Section	Comment
Section 5.17, Hazards and Hazardous Materials	The EIR should include an analysis of contaminated soils or groundwater that may be present at project sites due to past commercial and industrial activities.
Section 5.18, Mineral and Energy Resources	The EIR should include an analysis of increased fuel usage due to the AC34 event and the energy usage of proposed cruise terminal.
Section 6.1, Growth-Inducing Impacts	The EIR should include an analysis of long-term population increases.
Chapter 7, Alternatives	The EIR should identify alternatives that reduce or avoid potential impacts on recreation. The EIR should include alternatives that avoid or reduce impacts on cultural, biological, and recreational resources in the Golden Gate National Recreation Area. The EIR should evaluate alternatives that would result in a project that is consistent with the Special Area Plan (SAP). The EIR should consider alternatives that address viewing locations at the Ferry Building and removal of Piers 30-32 after completion of AC34 events

SOURCE: ESA, 2011

2.5 Contents and Organization of the EIR

This is a project-specific EIR, intended to provide review under CEQA for the proposed AC34 and Cruise Terminal projects. In addition to describing the proposed project and required approvals, this EIR analyzes potential environmental impacts of the proposed project, and identifies mitigation measures where those impacts are significant, addresses cumulative adverse impacts to which the proposed projects could make a substantial contribution, and evaluates alternatives to the projects that could avoid or reduce significant impacts while still meeting most of the projects' respective objectives.

The impact analysis contained in this EIR is tailored to level of detail appropriate for the individual project components. For project components with site-specific details, the impact analysis and associated mitigation measures are presented in detail. For other project components for which site-specific details are not available, the impacts are conceptually analyzed in this EIR and more general mitigation measures provided. As specified for the various project components, future project-specific CEQA review may be required for some project components when more specific developments are proposed.

This EIR has been organized as follows:

- **Chapter 1, Summary.** This chapter summarizes the EIR by providing a concise overview of the projects, including the project descriptions, the environmental impacts that would result from the projects, mitigation measures identified to reduce or eliminate these impacts, and alternatives to the proposed projects.

- **Chapter 2, Introduction.** This chapter describes the environmental review process, the comments received on the scope of the EIR, and the organization of the EIR.

- **Chapter 3, Project Descriptions.** This chapter discusses the objectives of each project, provides background data on the project location, describes the operational and physical characteristics of the projects, and identifies required project approvals.

- **Chapter 4, Plans and Policies.** This chapter provides a summary of the applicable plans, policies, and regulations of the City and County of San Francisco and regional, state, and federal agencies that have policy and regulatory control over the project sites and discusses the proposed projects' consistency with those plans, policies, and regulations.

- **Chapter 5, Environmental Setting, Impacts and Mitigation Measures.** This chapter describes the projects' existing setting and environmental impacts with respect to land use, aesthetics, population and housing, cultural and paleontological resources, transportation and circulation, noise, air quality, greenhouse gas emissions, wind and shadow, recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, hazards and hazardous materials, mineral and energy resources, and agriculture and forest resources. Each environmental topic is discussed in a separate section within this chapter. Each section's impact analysis is divided into three sections: project-specific impacts (first of the AC34 project and then of the Cruise Terminal project), impacts of future long-term development pursuant to the AC34 project Host Venue Agreement, and cumulative impacts.

- **Chapter 6, Other CEQA Considerations.** This chapter addresses any growth inducement that would result from the proposed projects, the significant environmental effects of the projects that cannot be mitigated to a less-than-significant level, significant irreversible changes that would result if the projects are implemented, and secondary/indirect effects of the projects.

- **Chapter 7, Alternatives.** This chapter presents and evaluates alternatives to the proposed projects, which could feasibly attain most of the projects' objectives as well as reduce identified significant adverse impacts of the projects.

- **Chapter 8, EIR Authors and Consultants**. This chapter identifies the EIR authors and consultants; project sponsors and consultants; and agencies and persons consulted.

- **Appendices.** The appendices include the Notice of Preparation and supporting information for the EIR.

CHAPTER 3
Project Description

This environmental impact report (EIR) addresses two related projects: (1) the proposed 34th America's Cup (AC34) - a series of international sailing events to be hosted by the City and County of San Francisco in summer-fall 2012 and summer-fall 2013, and (2) the proposed James R. Herman Cruise Terminal and Northeast Wharf Plaza (Cruise Terminal) project. These projects are subject to review under the California Environmental Quality Act (CEQA) and a number of subsequent local, state, and federal approvals. As described in greater detail below, given the relationship in the proposed location and use of certain project facilities, this EIR analyzes the individual impacts and where applicable, the combined impacts, of these projects.

3.1 Background

In 2007, Mayor Gavin Newsom's Blue Ribbon Cruise Terminal Advisory Panel recommended that a new cruise terminal be located at the Port of San Francisco's Pier 27 on the San Francisco Bay waterfront.[1] On December 14, 2010, the San Francisco Port Commission selected a preferred design concept and authorized staff to initiate the schematic design for the James R. Herman Cruise Terminal to be located along The Embarcadero at Pier 27 with the understanding that the design work could be integrated with the planning of AC34 if San Francisco were selected as that event's host city. The preferred option would create a new terminal building at Pier 27 together with a new public plaza. Hereafter, the Port of San Francisco (Port) is referred to as the project sponsor for the James R. Herman Cruise Terminal and Northeast Wharf Plaza project.

On December 14, 2010, the Board of Supervisors for the City and County of San Francisco (City) approved a 34th America's Cup Host and Venue Agreement (Host Agreement)[2] with the America's Cup Event Authority, LLC (Event Authority)[3] and America's Cup Organizing Committee (ACOC),[4] as the City's formal bid to host AC34. On December 31, 2010, the Golden

[1] Previous proposals have been explored over the last two decades to build a cruise terminal along the San Francisco southern waterfront, primarily at Piers 30-32.

[2] 34th America's Cup Host and Venue Agreement among the City and County of San Francisco, the America's Cup Event Authority, LLC, and the San Francisco America's Cup Organizing Committee. For a copy, please go to: http://www.oewd.org/Development_Projects-Americas_Cup.aspx. The Golden Gate Yacht Club, which holds the America's Cup, delegated to the Event Authority the right to select the venue for AC34. Certain capitalized, event-related terms used in this document are defined in the Host Agreement.

[3] The Event Authority is responsible for organizing and managing AC34, as well as marketing AC34 and identifying potential partners.

[4] The ACOC is a nonprofit volunteer group of local civic leaders who are responsible for certain obligations under the Host Agreement, including assisting the Event Authority in selling event sponsorships.

Gate Yacht Club (GGYC) selected San Francisco as the host city for AC34. Hereafter, the City and Event Authority are referred to as the project sponsors for AC34. The project sponsors for AC34 propose improvements and services at several facilities and locations, to support AC34.

Several of the venues proposed for AC34 events consist of areas and facilities managed by the Port, including certain piers (Pier 19, Pier 19½, Pier 23, Piers 27-29½, Pier 26, Pier 28, Piers 30-32, and Pier 80), water basins/water areas [Piers 19-23, Piers 23-27 (Northeast Wharf Open Water Basin), Piers 29-31, Piers 14-22½ (Rincon Point Open Water Basin), Piers 26-28, Piers 28-30, and Piers 32-36 (Brannan Street Wharf Open Water Basin)], and Seawall Lot 330.[5,6] Various other venues are proposed for spectator- and/or sponsor-related activities, some of which are under the jurisdiction of other city, state or federal agencies, including Crissy Field, Marina Green, Fort Mason, Aquatic Park, Alcatraz Island, Fort Baker Pier at Cavallo Point (near Sausalito), San Francisco Civic Center, Union Square, and Justin Herman Plaza.

Piers 27-29 is proposed by the AC34 project sponsors as the site of one of the primary AC34 venues in 2013 - the America's Cup Village (AC Village). As described above, Pier 27 also is the site proposed by the Port for the development of the Cruise Terminal project. The Cruise Terminal project would be coordinated with the AC34 project to allow an initial phase of the cruise terminal building to be used as part of the AC Village for the 2013 America's Cup races. The proposed improvements to complete the cruise terminal and wharf plaza would be built out after the AC34 races are concluded. The proposed new cruise terminal would be designed to meet modern ship and operational requirements of the cruise industry, and to meet Leadership in Energy and Environmental Design (LEED®)-equivalent standards for a maritime facility.

In addition to the provisions for AC34, the Host Agreement provides the Event Authority with certain conditional long-term development rights and directs that any such future development would be required to undergo additional environmental review to comply with CEQA, if and when site-specific development is proposed. Thus, with respect to AC34, this EIR focuses on analyzing the AC34 race events and associated race-related waterfront improvements, but also conceptually analyzes long-term development possibilities addressed in the Host Agreement taking into consideration the Port Waterfront Land Use Plan (WLUP), the San Francisco Planning Code and Zoning Map, and other considerations (see Section 3.4.8 for additional detail).

[5] The Bay Conservation and Development Commissions (BCDC)'s San Francisco Waterfront Special Area Plan (Special Area Plan or SAP) designates a number of water areas within its jurisdiction as "Open Water Basins," which have defined permitted uses and are subject to specific requirements for maintaining these areas as focal points along the waterfront.

[6] The "seawall" refers to the foundation upon which the waterfront was constructed and consists of a linear embankment of stone, concrete, and wood. The "bulkhead wharf" consists of the pile-supported platform that runs parallel to the seawall between piers and upon which bulkhead buildings, pier entrances and other supporting structures are constructed. The seawall is integrated with the bulkhead wharf to form a continuous, unifying structure. Seawall lots are parcels that are landward of the city's historic seawall, west of the Embarcadero.

3.2 Project Objectives

3.2.1 34th America's Cup (AC34) Project Objectives

The objectives of AC34 are to:

- Establish San Francisco and San Francisco Bay's identity as a world-class venue for the sport of sailing and generate interest in the sport by hosting America's Cup World Series events in 2012 followed by successful America's Cup events in 2013

- Provide public viewing opportunities of the America's Cup and the America's Cup World Series live racing events at close range from various locations on the waterfront around Central San Francisco Bay to increase the general public's access to the event and expand the appeal of the sport of sailing to the general public

- Create a center of activity for the America's Cup and the America's Cup World Series by improving the existing resources of The Embarcadero and the San Francisco waterfront to establish a cohesive sense of place and identity for the AC34 participants (i.e., teams, event guests and staff, media personnel), visitors, and spectators of the events that enhance the landside viewing opportunities and provide adequate facilities for spectator vessels

- Provide infrastructure upgrades and other installations to improve existing facilities in consolidated areas for team base activities, spectator viewing, and entertainment venues, including the public piers along San Francisco's waterfront, for use during the America's Cup in 2013 and the America's Cup World Series in 2012, consistent with Port of San Francisco building code requirements and the Secretary of the Interior's Standards for the Treatment of Historic Properties (Secretary's Standards)

- Facilitate access to and from desired destinations based on smart transportation strategies presented in the America's Cup People Plan for the racing teams, event personnel, event sponsors, members of the media, and spectators, while satisfying the access needs of residents, workers, and visitors not associated with the races

- Emphasize natural resource stewardship by incorporating sustainability principles in the planning and management of all race events and operations, including zero waste strategies identified in the America's Cup Waste Management Plan

- Implement navigational and operational safety guidelines for race team, support, and spectator boat activities associated with the America's Cup and the America's Cup World Series that meet United States Coast Guard regulations, the America's Cup Protocol, and the safe limits of event boats and equipment; minimize conflicts with existing commercial maritime activities; and establish sustainable environmental practices and standards to help protect the ecological health of San Francisco Bay

- Encourage investment in infrastructure upgrades on Port property required to stage the America's Cup and the America's Cup World Series, for which the City would provide commensurate future long-term development rights on Port of San Francisco properties as contemplated under the Host Agreement

3.2.2 James R. Herman Cruise Terminal and Northeast Wharf Plaza Project Objectives

The Port proposes to develop a world-class home port cruise terminal that reflects the values of San Francisco residents and the City's leadership, meets international cruise terminal standards, provides major public access and open space benefits, complies with regulatory requirements, and maintains the Port's commitment to the stewardship of waterfront historic resources within the Port of San Francisco Embarcadero Historic District. The Port has established a set of goals and objectives to build a modern cruise terminal to meet the evolved security and passenger demands of the cruise industry while also allowing for meeting and special event uses when not occupied for cruise purposes.

The objectives of the proposed Cruise Terminal project are to:

- Design a new, modern cruise terminal that optimizes current and future operational needs and retains an important historic maritime use along San Francisco's northeastern waterfront that is compatible with and respects the physical form and characteristics defining the Embarcadero Historic District, which is listed on the National Register of Historic Places
- Provide a highly visible berth for ceremonial and visiting ships and vessels, as well as cruise ships, that preserves and promotes the maritime character of San Francisco's historic waterfront
- Integrate a ground transportation area that serves all cruise ship and passenger access and support needs off-street to avoid traffic impacts on The Embarcadero
- Develop an efficient facility that will lower the Port's operational and maintenance costs by the use of effective space planning and equipment to handle passenger circulation and provisioning, and will meet the evolved security and passenger handling demands of the cruise ship industry
- Maintain shoreside power in a new, modern cruise terminal facility to promote and expand access and use of San Francisco's electrical grid while ships are in port to avoid cruise ship diesel emissions
- Configure the cruise terminal in a way that will create opportunities for the Port to allow special event uses when the terminal is not occupied for cruise purposes to enable year-round, people-oriented uses at Pier 27, generate revenue to help finance public improvements, and create an inviting amenity that supports and activates use and enjoyment of the Northeast Wharf Plaza
- Develop the Northeast Wharf Plaza, a major public open space integrated with public access on Pier 27; create new views and access to San Francisco Bay; promote recreational enjoyment along San Francisco's public waterfront; and preserve open water areas for passive and active enjoyment of the Bay
- Develop a project that embodies the City's commitment to sustainability principles by following the guidelines from the U.S. Green Building Council to achieve a LEED® Silver or better rating
- Integrate the design and construction of the Cruise Terminal project with the proposed AC34 race facilities and operations

3.3 Site Locations

A number of project sites, or venues, are proposed to accommodate AC34, including several sites along the San Francisco waterfront, one site at the north end of the Golden Gate Bridge near Sausalito (Fort Baker Pier at Cavallo Point), and one site within the San Francisco Bay (Alcatraz Island). In addition, the number and/or use of venues proposed for AC34 events in 2012 would be different from that proposed in 2013.

Figure 3-1 provides an overview of all proposed AC34 venue sites for 2012 and 2013. Many of the venues proposed for AC34 consist of areas and facilities managed by the Port, including certain piers, water basins, and other Port facilities. One of the primary AC34 venues in 2013 proposed within the Port jurisdiction – the AC Village - is also the site proposed by the Port for the proposed Cruise Terminal project. Other key park and recreation areas that would serve as venues for AC34 are under the jurisdiction of other city, state, or federal agencies.

Marina Green is under the jurisdiction of the San Francisco Recreation and Park Department (SFRPD). Fort Mason, Crissy Field, Cavallo Point, and Alcatraz Island are all located within the Golden Gate National Recreation Area (GGNRA), and Aquatic Park is located in the San Francisco Maritime National Historical Park (SAFR); all are under the jurisdiction of the National Park Service (NPS), except for portions of Crissy Field that are under the jurisdiction of the Presidio Trust.

AC34 sailing races and associated activities would occur on San Francisco Bay within a proposed race area as illustrated in **Figure 3-2**. As shown in Figure 3-2, this race area would encompass an area of the Bay roughly bounded by the San Francisco waterfront to the south, the San Francisco-Oakland Bay Bridge, Treasure Island, and Yerba Buena Island to the east; portions of southern Marin County (including Angel Island) to the north; and just beyond the Golden Gate Bridge to the west. It should be noted the actual race course(s) for the sailing races would occur within a portion of this race area, and would be determined based on government agency coordination and optimum race conditions in 2012 and 2013. The actual spectator boat area locations within the race area vicinity would also be influenced by those circumstances.

For purposes of illustration, **Figure 3-3** provides an index map that groups the various project sites that would serve as AC34 venues in 2012 and/or 2013 (and in the case of Pier 27, also serve as the site of the proposed cruise terminal and wharf plaza) within seven geographic subareas (i.e., San Francisco Waterfront Subareas 1 through 5, as well as Alcatraz and Fort Baker Pier at Cavallo Point). **Figure 3-4** through **Figure 3-10** present the seven individual subarea maps.

The various project sites that would serve as AC34 venues in 2012 and/or 2013 (and in the case of Pier 27, also serve as the site of the proposed Cruise Terminal project) described below are grouped into the following two major categories: (1) Port of San Francisco piers, water areas, and other facilities; and (2) spectator venues. The spectator venues are located within several jurisdictions (including the GGNRA and the City) and would be used for viewing of the races and/or other related purposes (e.g., hospitality) for AC34. Correlating subarea maps for specific sites within each of these categories are referenced appropriately.

3.3.1 Port of San Francisco Piers, Water Areas and Other Facilities

The Port of San Francisco manages approximately 7½ miles of the San Francisco Bay shoreline stretching from India Basin in the south to Hyde Street Pier in the north, totaling more than 1,000 acres. Figures 3-4 through 3-7 delineate the Port jurisdictional boundary within the vicinity of the project sites. The primary project sites and related facilities located within the Port jurisdiction consist of numerous piers, water basins, and a seawall lot, as described below. Note that the pier numbering convention used by the Port assigns odd-numbers to facilities north of the Ferry Building and even-numbers to facilities south of the Ferry Building.

Pier 80

The only Port facility proposed for AC34 use within the Port's WLUP Southern Waterfront[7] is Pier 80. As shown in Figure 3-4, Pier 80 is located on the north side of Islais Creek Channel at the terminus of Cesar Chavez Street and adjoin the City's Potrero Hill/Dogpatch and Bayview-Hunters Point neighborhoods. Pier 80 is a 69-acre facility and one of the Port's primary cargo terminals, operated by Metropolitan Stevedore Company (Metro Ports). Pier 80 handles multiple types of breakbulk (i.e., packaged but non-containerized cargo) and project cargoes. It includes outside yard and enclosed warehouse storage, and on-deck freight rail access.

Piers 30-32, Seawall Lot 330, and Brannan Street Wharf Open Water Basin (Piers 32-36)

As shown in Figure 3-5, Piers 30-32, Seawall Lot 330, and the Brannan Street Wharf Open Water Basin (Piers 32-36) are located along The Embarcadero within the City's Rincon Point-South Beach neighborhood, and within the Port's WLUP South Beach/China Basin Waterfront.[8]

Piers 30-32 is formed from two originally separate piers that were altered and merged into one facility prior to 1955. The deck of the newer center section of Piers 30-32 is constructed at a lower elevation than the two former individual pier sections. Piers 30-32 is an approximately 13-acre facility and has no existing on-deck structures, except for Red's Java House located on the west end of the pier along The Embarcadero. Piers 30-32 is currently used for parking (managed by a parking operator); passenger cruise, military, research, and other vessel moorage (on the east berth); and special events. Piers 30-32 is in poor structural condition, and has load restrictions that preclude large truck access to this facility.

As shown in Figure 3-5, Seawall Lot 330 is an approximately 2-acre paved, inland site, located directly across The Embarcadero from Piers 30-32. Seawall Lot 330 is currently operated as a parking lot and is managed by a parking operator.

7 The WLUP Southern Waterfront extends from India Basin to Mariposa Street.
8 The WLUP South Beach/China Basin Waterfront extends from Pier 22½ to Mariposa Street.

America's Cup Project Sites

Live Sites

0 1

Mile

Fort Baker Pier at Cavallo Point

Angel Island

San Francisco Bay

Marin Headlands

Golden Gate Bridge

Alcatraz

Treasure Island

Aquatic Park

Fort Mason

Piers 27, 29 & 29 1/2

Piers 19, 19 1/2 & 23

Crissy Field

Marina Green

Piers 14-22 1/2

San Francisco-Oakland Bay Bridge

Presidio

San Francisco

Justin Herman Plaza

Pier 26

Pier 28

Union Square

SWL 330

Piers 30-32

Civic Center

Pier 80

PROJECT AREA

Pacific Ocean

SANTA ROSA
NAPA
VACAVILLE
FAIRFIELD
NOVATO
VALLEJO
SAN RAFAEL
RICHMOND
CONCORD
BERKELEY
WALNUT CREEK
OAKLAND
ALAMEDA
SAN FRANCISCO
SAN RAMON
DALY CITY
HAYWARD
FREMONT
SAN MATEO
REDWOOD CITY
MOUNTAIN VIEW
SAN JOSE

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-1

AC34 Venue Location Map

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SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-2
AC34 Sailing Race Area

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-3
Index Map for AC34 Venues

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-4
San Francisco Waterfront Map 1

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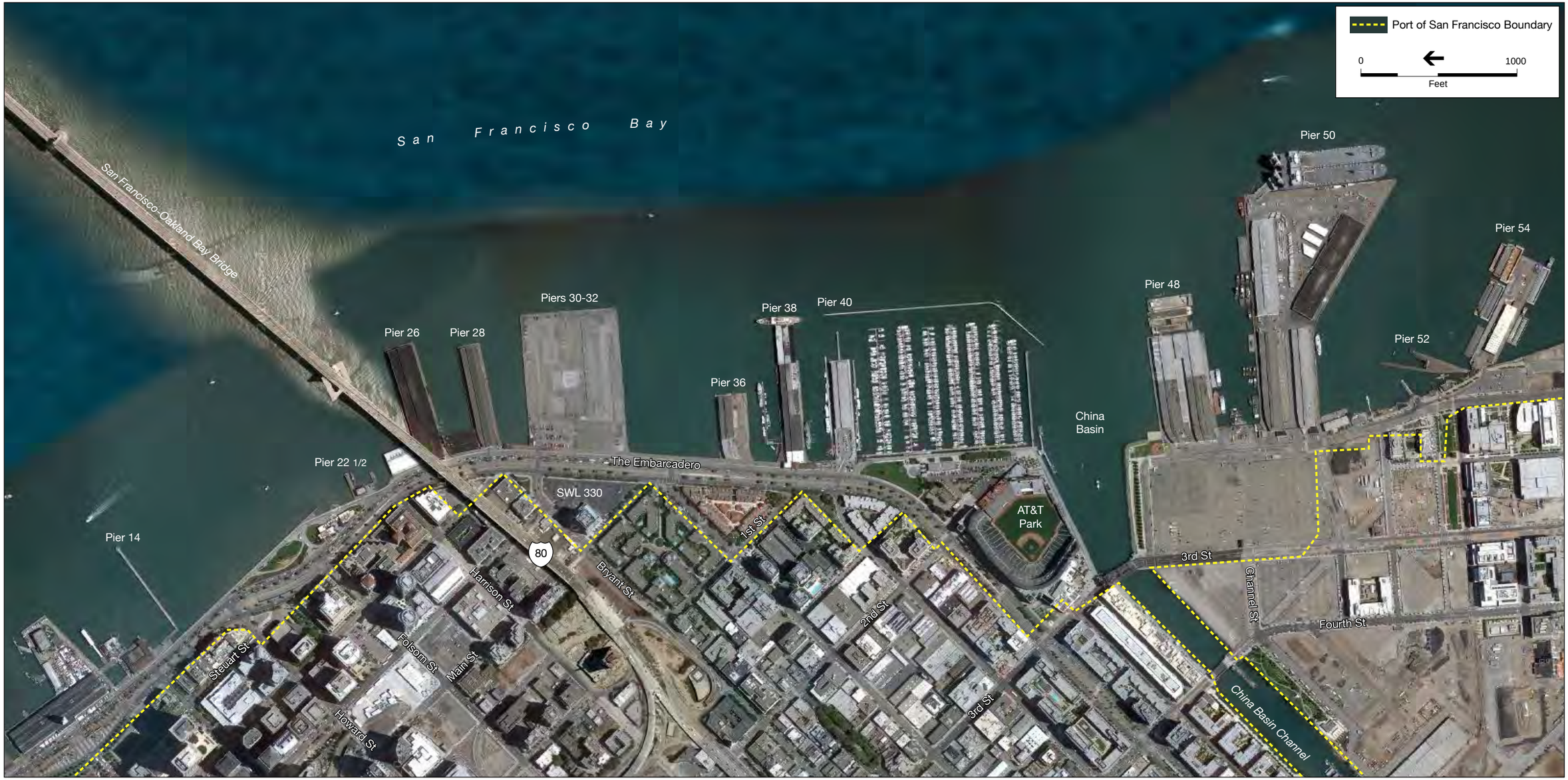
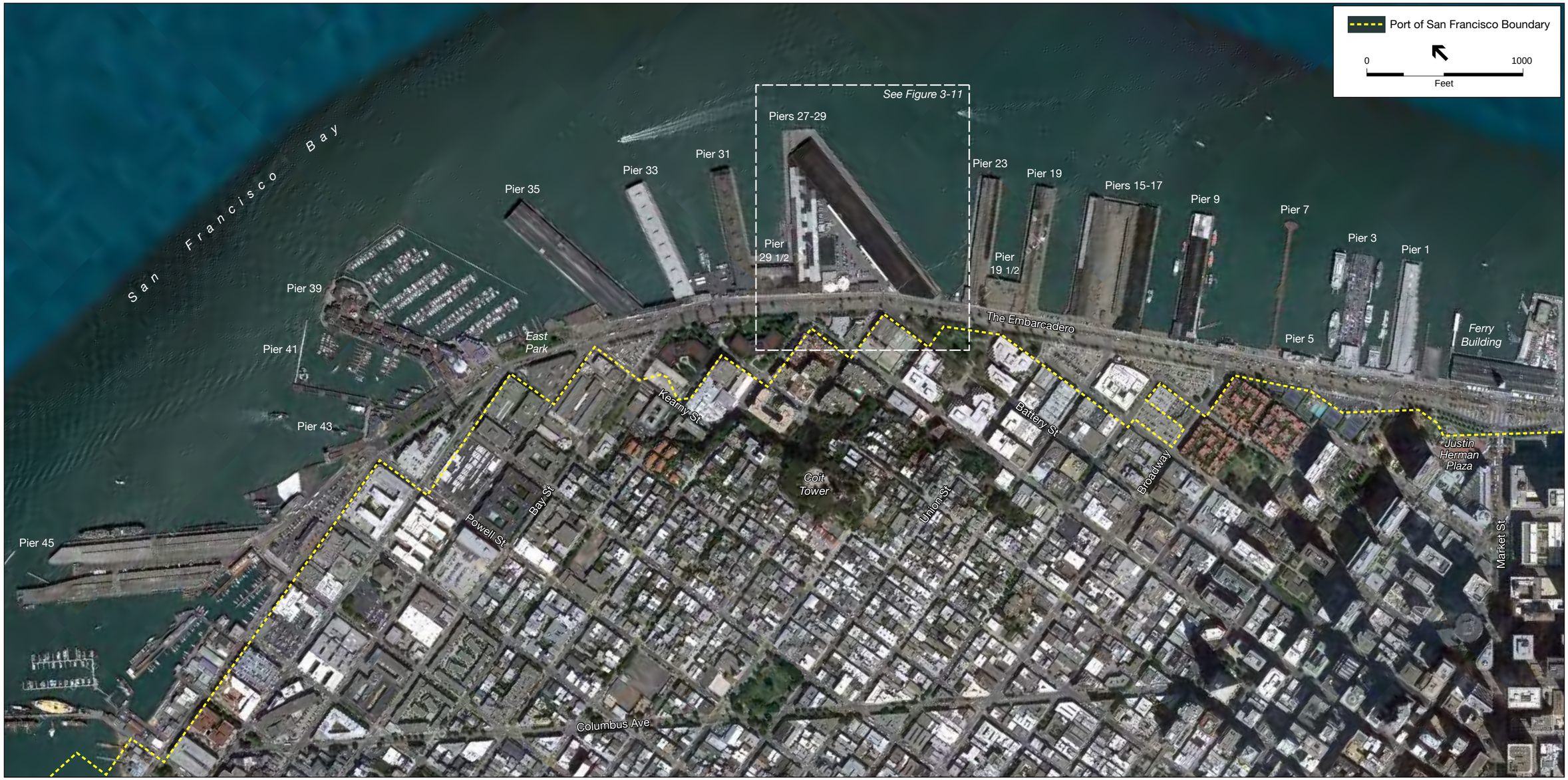


SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-5

San Francisco Waterfront Map 2



SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-6

San Francisco Waterfront Map 3

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-7

San Francisco Waterfront Map 4

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-8

San Francisco Waterfront Map 5

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-9
Alcatraz

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-10
Fort Baker Pier at Cavallo Point

The Brannan Street Wharf Open Water Basin[9] between Piers 32-36 is located immediately south of Piers 30-32, along The Embarcadero between Delancey Street and Beale Street. The approximately 600-foot long area is designated as an Open Water Basin in the Port's WLUP and the San Francisco Bay Conservation and Development Commission (BCDC) the San Francisco Waterfront Special Area Plan (Special Area Plan or SAP). The basin fronts the proposed Brannan Street Wharf public open space.[10]

Pier 26, Pier 28, Piers 26-28 Water Area, and Piers 28-30 Water Area

As shown in Figure 3-5, Piers 26 and 28 are located along The Embarcadero immediately north of Piers 30-32 within the City's Rincon Point-South Beach neighborhood and within the Port's WLUP South Beach/China Basin Waterfront. A portion of Pier 26 is located directly under the San Francisco-Oakland Bay Bridge. Pier 26 is an approximately 151,000-square-foot facility with approximately 122,000 square feet of space within a pier shed. Pier 28 is an approximate 100,000-square-foot facility with approximately 75,000 square feet of space within a pier shed. Both Piers 26 and 28 are contributing resources in the Port of San Francisco Embarcadero Historic District. Fifteen leases for space are currently maintained in Pier 28 for warehouse storage, office, and parking uses. There are 21 leases for space in Pier 26 for warehouse storage (including commercial fishing equipment), office, and parking uses.

The Piers 26-28 and Piers 28-20 water areas each measure over 200 feet in length between the piers. The Piers 26-28 water area fronts Pier 26½.

Rincon Point Open Water Basin (Piers 14-22½)

As shown in Figure 3-5, the Rincon Point Open Water Basin[11] is located between Piers 14 and 22½ along The Embarcadero roughly between Harrison Street and Mission Street, and fronting Rincon Park. The Rincon Point Open Water Basin is located within the City's Financial District neighborhood and within the Port's WLUP Ferry Building Waterfront.[12] Pier 14 is located off of The Embarcadero at Mission Street, south of the Ferry Building, and built upon the breakwater for the Ferry Terminal. Pier 22½ is located in the South Beach Waterfront off The Embarcadero at Harrison Street and is a contributing resource in the Embarcadero Waterfront Historic District. The Rincon Point Open Water Basin measures approximately 1,500 feet in length between Piers 14 and 22½. This basin was formerly occupied by finger piers that either collapsed or have been removed; a number of pile remnants from those former piers still remain and are visible

[9] The Brannan Street Wharf Open Water Basin extends between Piers 32 and 38; the area of the basin addressed in this EIR is between Piers 32-26. The terms "Brannan Street Wharf Open Water Basin" and "Piers 32-36 Open Water Basin" are used interchangeably in this EIR.

[10] The Brannan Street Wharf is designated in Port and BCDC plans as a major, strategic public open space. The Port is working jointly with the United States Army Corps of Engineers to design and construct this project, which is undergoing separate, concurrent environmental review and permitting. The Brannan Street Wharf Final EIR (Case File 2009.0418E) was certified on June 16, 2011.

[11] The terms "Rincon Point Open Water Basin" and "Piers 14-22½ Open Water Basin" are used interchangeably in this EIR.

[12] The WLUP Ferry Building Waterfront extends roughly from the Pier 5 Bulkhead Building to Pier 22½.

during low tide. This area is designated as an Open Water Basin in the Port's WLUP and the BCDC Special Area Plan.

Pier 19, Pier 19½, and Pier 23

As shown in Figure 3-6, Pier 19, Pier 19½ and Pier 23 are located along The Embarcadero near the intersection of Front Street and The Embarcadero within the City's Northeast Waterfront neighborhood and the Port's WLUP Northeast Waterfront.[13] Piers 19 and 23 and their associated sheds are contributing resources in the Embarcadero Historic District. They are joined by a non-historic shed building, Pier 19½, which runs parallel to The Embarcadero. There are 28 leases for space in Piers 19-23, mostly for warehouse purposes with ancillary parking, with parking in Pier 19½ and office in Pier 23. The Pier 23 Café, a free standing building, is located directly adjacent to and north of Pier 23, and is a contributing resource in the Embarcadero Historic District. (This building is not included in the proposed AC34 project, and would remain in place and unaltered.)

Northeast Wharf Open Water Basin (Piers 19-23 and Piers 23-27)

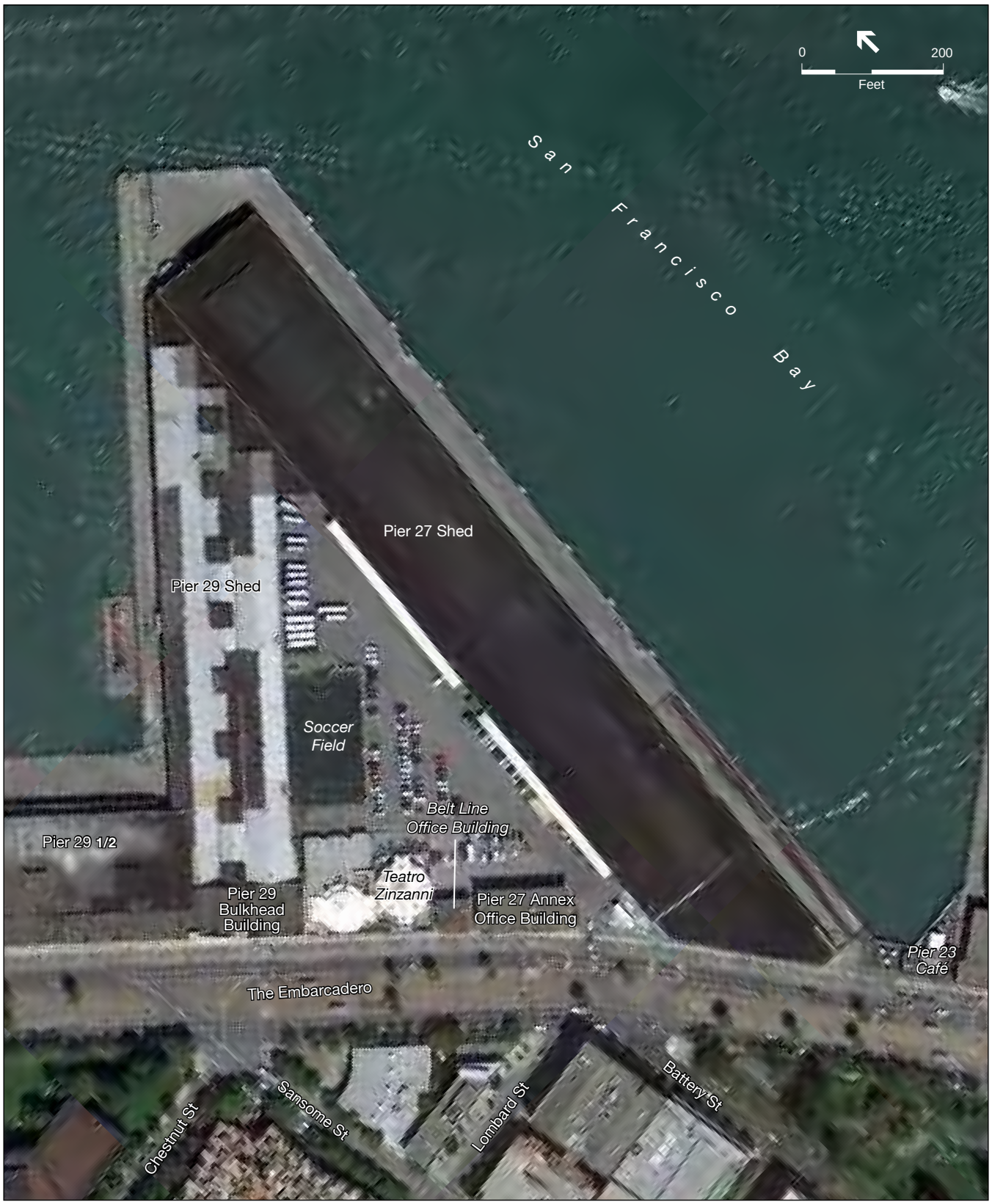
The water basins between Piers 19-23 and Piers 23-27 comprise the Northeast Wharf Open Water Basin. Collectively, these water basins are designated as an Open Water Basin in the Port's WLUP and the BCDC Special Area Plan. The triangular-shaped Pier 23-27 basin fronts the designated Northeast Wharf Plaza in these plans.

Piers 27-29

As shown in Figure 3-6 and **Figure 3-11**, Piers 27-29 is located along The Embarcadero at the intersection of Lombard Street within the City's Northeast Waterfront neighborhood and the Port's WLUP Northeast Waterfront. This 14.8-acre, triangular-shaped facility is the largest pier in the northern half of the Port waterfront (north of the Ferry Building) and includes the longest functional wharf face for vessel berthing (approximately 1,300 feet long, with an apron width of 48 feet).

Pier 27 has long been in continuous maritime use for berthing deep-draft vessels, and it previously supported cargo ship, military, and government research vessel berthing. Currently, Pier 27 is an important secondary berth used for passenger cruise ships when more than one cruise ship is in port, in addition to providing berthing for military, large research vessels, and ceremonial ships. The berth at Pier 27 is maintained at a depth of -35 feet mean lower low water (MLLW) under the Port's existing permitted maintenance dredging program.

[13] The WLUP Northeast Waterfront extends from Pier 7 to Pier 35.



SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-11
Piers 27-29

Piers 27 and 29 were originally constructed as separate piers. In 1967, the Port undertook major construction at Pier 27 to build a pile-supported platform and 220,000-square-foot cargo shed along a remodeled axis that created the piers' current triangular shape, replacing the former Pier 27 deck and cargo shed. This Pier 27 construction terminated at the eastern end by altering the historic Pier 29, built in 1915, to integrate the connection with the new Pier 27 shed. In 1994, following the Loma Prieta earthquake, the Pier 27 substructure was seismically retrofitted and repaired. The work included batter-pile connection repair/retrofit, and installation of shear plates connecting Piers 27 and 29 to enable these two structures to respond as a single unit, thereby eliminating the need for seismic retrofit of the Pier 29 substructure. The Pier 29 shed and associated bulkhead building that fronts on The Embarcadero contain approximately 119,000 square feet of warehouse space. The Pier 29 shed is a contributing historic resource in the Embarcadero Historic District. The Pier 27 shed is a non-contributing resource, but is located within the historic district boundaries.

Together, the Pier 27 and 29 sheds line the entire outboard perimeter of the pier facility. This creates an approximately 170,000-square-foot triangular open central space in the middle of the pier (known as the "valley"). The Pier 29 bulkhead building fronts The Embarcadero and abuts the south side of the Pier 29 shed. Also fronting The Embarcadero are two small ancillary structures: the approximately 12,000-square-foot Pier 27 Annex office building, and the historic Pier 29 Belt Line office building, which is designated as a contributing resource in the Embarcadero Historic District. These two buildings are leased to multiple tenants for office use. Current uses at Piers 27-29 are varied. Approximately 25 percent of the Pier 27 shed is currently leased and supports preparations for San Francisco's Chinese New Year Festival and Parade, and Bauer's California Coach Sales and Service (a transportation services company). The remainder is used for parking operated under a Port parking management agreement. The parking operator vacates the area to allow the Port to accommodate back-up cruise terminal berthing when there are multiple cruise ship calls in San Francisco and the existing Pier 35 cruise terminal is fully used.

In 2010, in partnership with the San Francisco Bay Area Air Quality Management District, the Port completed installation of a shoreside power system (12-megawatt [MW] substation) at Piers 27-29 for cruise ships. The shoreside power system enables cruise ships to plug into the City's electrical grid while in port, instead of relying on the vessel's diesel generators for power, thereby substantially reducing diesel emissions. Pursuant to state regulation, the Port has scheduled all shoreside-power-capable cruise ships to be berthed at Pier 27 beginning in 2011. The Port expects 20 to 22 cruise ships to use Pier 27 in the 2011 cruise season.

There are 12 leases in Pier 29 and Pier 29½ with warehouse and parking tenants. As part of the shoreside power project, the electrical utilities within the Pier 29 shed were improved. The Pier 27-29 valley is leased for parking, an artificial turf soccer field (Telegraph Field), and the Teatro Zinzanni dinner theater, which is housed in a tenant-owned tent structure, plus other ancillary support structures. The Pier 27 Annex office building and the historic Belt Line office building are currently leased to office tenants.

3.3.2 Spectator Venues

Spectator venues are defined as designated locations other than the site of the proposed AC Village where hospitality services and/or spectator seating accommodations are proposed as part of AC34. Please see

Aquatic Park

As shown in Figure 3-7, Aquatic Park is located in the SAFR, managed by the NPS. Aquatic Park is located at the west end of Fisherman's Wharf, starting west of Hyde Street and extending to Fort Mason just west of Van Ness Avenue. The NPS Pacific West Information Center is located in the SAFR visitor center on the corner of Hyde and Jefferson Streets. The Aquatic Park Historic District is a National Historic Landmark and is listed on the National Register of Historic Places. It includes a beach, a semi-circular concrete tiered seating area, grassy lawn areas, and the horseshoe-shaped Municipal Pier extending into the Bay. The NPS leases Hyde Street Pier from the Port; historic ships, vessels, and maritime artifacts are exhibited for the public at this pier. The Aquatic Park Historic District is adjacent to Fort Mason and connected to Fort Mason by a trail.

Fort Mason

Fort Mason is illustrated in Figure 3-7. Fort Mason is a former United States Army post and military port facility and a National Register-listed historic district that includes Lower Fort Mason, also known as the San Francisco Port of Embarkation, another National Historic Landmark. The SAFR headquarters are located at Building E in Fort Mason Center, and GGNRA's headquarters are located in Building 201 in Upper Fort Mason. Fort Mason contains historic buildings, public open spaces, piers, and warehouses. It includes Fort Mason Center, which leases space to a number of environmental, cultural, and arts organizations, and a restaurant. The facilities are used to host a variety of events throughout the year.

Marina Green

Marina Green is illustrated in Figure 3-7. Marina Green is an approximately 7-acre public park under the jurisdiction of the SFRPD. It is located in San Francisco's Marina District, north of Marina Boulevard between Fort Mason on the east and Crissy Field on the west. Marina Green includes an approximately 5.6-acre open grass field, encircled by wide, paved sidewalks on all sides and parking areas to the north, south, and west. Marina Green is used for a variety of passive and active recreational purposes, including sports leagues (e.g., soccer, volleyball, kickball, flag rugby), athletic and community events (e.g., Escape from Alcatraz, Rolex Big Boat Series, fundraisers), walking/running, picnics, and kite-flying.

Crissy Field

Crissy Field is illustrated in Figure 3-8. Crissy Field is a former airfield that was part of the United States Army base at the Presidio and became part of the GGNRA in the 1990s. Crissy Field has undergone a major habitat restoration that included the conversion of approximately 22 acres of

former airstrips into a tidal marsh with interpretive paths. Crissy Field also includes over 1,000 paved and unpaved parking spaces. Uses in Crissy Field include the Crissy Field Center, cafés, gift shops, and related recreational facilities. The beach area at the east end of Crissy Field is popular for walkers, joggers, cyclists, sailboarders and kite surfers. The Presidio Trust manages an inland area of the Presidio that includes a portion of Crissy Field (see Figure 3-8).

Alcatraz

Alcatraz Island (Alcatraz) is illustrated in Figure 3-9. Alcatraz consists of 22 acres and is located approximately 1.5 miles offshore from San Francisco. Alcatraz is a former Civil War outpost that later served as a federal prison until 1963. Alcatraz is part of the GGNRA and operated by the NPS. Currently, Alcatraz is a historic site and tourist attraction accessible only by ferry operators under contract with the NPS.

Fort Baker Pier at Cavallo Point

For Baker Pier at Cavallo Point is illustrated in Figure 3-10. Cavallo Point is located at the base of the north end of the Golden Gate Bridge, in the Marin Headlands of the GGNRA, and occupies a section of the Fort Baker Historic District. Fort Baker Pier at Cavallo Point is a former military wharf originally built in 1937, and modified in the 1940s and in 1985. The pier is approximately 360 feet long and 115 feet wide at its widest point. The pier's hours of operation are 7:00 a.m. to 5:00 p.m. Fort Baker Pier is managed by the United States Army.

Other Sites (San Francisco Civic Center, Union Square, and Justin Herman Plaza)

San Francisco Civic Center is bounded by Market Street on the south, Franklin Street on the west, Turk Street on the north, and Leavenworth and Seventh Streets on the east. Civic Center contains two large plazas, Civic Center Plaza and United Nations Plaza, and many of the City's largest government and cultural institutions, including City Hall. San Francisco Civic Center was designated a National Historic Landmark in 1987 and is also a City-designated historic district under Article 10 of the San Francisco Planning Code.

Union Square is a plaza of 2.6 acres bordered by Geary Street on the south, Powell Street on the west, Post Street on the north, and Stockton Street on the east. It is located within the central shopping, hotel, and theater district of the city.

Justin Herman Plaza (see Figure 3-6) is a public plaza located at the terminus of Market Street, across from the Ferry Building.

3.4 34th America's Cup (AC34) Project Characteristics

3.4.1 Introduction

The America's Cup is an international yachting competition considered to be one of sailing's most iconic and prestigious events. The competition's prize - the Cup - is the oldest active trophy in international sport. Each yacht competing in the America's Cup races represents a yacht club, and each yacht club represents its country of origin. The first competition was won in 1851 by the schooner *America* representing the New York Yacht Club (NYYC), and the yachting event (originally known as the "R.Y.S. £100 Cup"[14]) subsequently became known as the "America's Cup." The America's Cup was held by NYYC for 132 years until 1983, when the NYYC yacht *Liberty* was defeated by the *Australia II* representing the Royal Perth Yacht Club for Australia.

The America's Cup has since changed hands four times among different yacht clubs in subsequent America's Cup competitions. In 1987, the American challenger *Stars & Stripes*, sailing for the San Diego Yacht Club (SDYC), regained the Cup for the United States in races off Perth, Australia. SDYC's *Stars & Stripes* successfully defended the Cup in 1988 against the New Zealand team, Royal New Zealand Yacht Squadron. In 1992, SDYC's *America*[3] retained the Cup for the United States by defeating an Italian competitor, Compagnia Della Vela di Venezia. The New Zealand team won the Cup in 1995 and again in 2000. The Swiss Alinghi team of Sociéte Nautique de Genève won the Cup in 2003 and 2007.

Most recently (February 2010), an American challenger - the Golden Gate Yacht Club (GGYC) – won the 33rd America's Cup in Valencia, Spain, after its racing team, BMW Oracle Racing[15] (racing the trimaran[16] *USA-17*) defeated the Swiss Alinghi team. Accordingly, GGYC, as the current defender of the America's Cup, is entrusted under the Deed of Gift[17] with the organization of AC34. GGYC received and accepted the challenge of the Royal Swedish Yacht Club (Kungliga Svenska Segel Sällskapet, KSSS), and in June 2011, entered into *The Protocol Governing the 34th America's Cup*.[18] GGYC and Club Nautico appointed the America's Cup Event Authority to organize and manage AC34, in association with the America's Cup Race Management (ACRM).[19] GGYC, with assistance from the Event Authority and ACRM, selected the City and County of San Francisco to host AC34, including certain America's Cup World Series pre-regattas and the America's Cup Regatta - consisting of the Louis Vuitton Cup, America's Cup Challenger Series; a potential America's Cup Defender Series; and the Match. A

14 i.e., Royal Yacht Squadron Cup of one hundred British Pounds or "sovereigns" in value.
15 BMW Oracle Racing is presently known as Oracle Racing.
16 A trimaran is a multihulled boat consisting of a main hull and two smaller outrigger hulls, attached to the main hull with lateral struts.
17 The deed dated October 24, 1887 between George L. Schuyler and the New York Yacht Club regarding the cup won by the schooner yacht America at Cowes, England on August 22, 1851.
18 The original Challenger of Record, Club Nautico di Roma of Rome, Italy, withdrew from AC34 in May, 2011, and the Royal Swedish Yacht Club was named as the official successor Challenger of Record in accordance with the Protocol in June 2011.
19 America's Cup Race Management is a perpetual entity established to provide for independent, professional, and neutral race management. ACRM is primarily charged with running the Cup races, the America's Cup World Series, and the shoreside logistics of the event.

Youth America's Cup regatta is also proposed. (Each of these race series is described in Section 3.4.3, AC34 Races, below).

While the America's Cup has been previously held in other U.S. venues, including New York City; Newport, Rhode Island; and most recently in San Diego, California in 1988, 1992, and 1995, AC34 would be the first America's Cup competition to be hosted by the City of San Francisco and held in San Francisco Bay. Furthermore, whereas past America's Cup races have been held in open ocean waters and away from populated areas, San Francisco Bay provides a natural amphitheater that would enable land-based viewing by spectators of AC34 from the surrounding shores around the Bay. This is a substantial difference from previous events because equal access opportunities to engage with the races would be provided to the general public.

3.4.2 AC34 Summary

A series of AC34-related yacht races would be held in San Francisco Bay in summer-fall 2012 (America's Cup World Series) and in summer-fall 2013 (Louis Vuitton Cup, America's Cup Challenger Series; potential America's Cup Defender Selection Series; and the Match). In addition, a Youth America's Cup series would be concurrently held in 2012 and 2013. As described in Section 3.3, above, a number of project sites, or venues, would be required to accommodate these events. These venues would encompass all aspects of AC34 facilities and services needed to support the events; the venues would include team bases and operations, support space, media operations, hospitality services, sponsored commercial space, and entertainment and spectator areas. The number and/or use of venues proposed for AC34 events in 2012 would be different from that proposed in 2013. In addition, a number of temporary improvements and certain permanent improvements would be required at the proposed venue sites to accommodate the AC34 events in 2012 and 2013. Hereafter, all activities associated with the AC34 races in 2012 and 2013, including any associated construction activities leading up to or following each of the events, as well as operational-related activities associated with each of the events, will be referred to as "AC34 2012" and "AC34 2013," respectively. Accordingly, this EIR addresses all potential impacts associated with AC34 2012 and AC34 2013 at an equal level of detail, where applicable.

Table 3-1 provides a summary overview of some of the key characteristics of, and differences between, AC34 2012 and AC34 2013. As described in more detail below, the number and level of facilities proposed to accommodate AC34 2012 would be less than that proposed to accommodate AC34 2013. This is in part because the America's Cup World Series races in 2012, while a part of AC34, would be a separate sailing competition and would not affect the outcome of the 2013 races, whereas AC34 races in 2013 (Louis Vuitton Cup, America's Cup Challenger Series; potential America's Cup Defender Series; and the Match) would determine the final competitors and winner of AC34. As a consequence, the estimated level of spectatorship for AC34 2012 would be less than for AC34 2013. Similarly, the estimated AC34-related staff required for AC34 2012 would also be less than for AC34 2013. In addition, time constraints for the more imminent AC34 2012 event would preclude the same level of construction and improvements at certain venues compared to AC34 2013.

TABLE 3-1
AC34 2012 AND AC34 2013 SUMMARY OVERVIEW

Project Characteristic	AC34 2012	AC34 2013
AC34 Race Series Held	America's Cup World Series Youth America's Cup	Louis Vuitton Cup, America's Cup Challenger Series America's Cup Defender Series - potentially the Match (America's Cup Finals) Youth America's Cup
Type of Yachts Raced	AC45s	AC72s
Months AC34 Races Held	Summer-Fall 2012	Summer-Fall 2013
Total Number of Race Days	up to ~17 race days[a]	up to ~50 race days[b]
Estimated Visitation	Peak Week Day 45,000 Peak Weekend Day 197,000 Total Visitation 1,454,000	Average Peak Weekday 50,000 Average Peak Weekend Day 334,000 Super Peak Day 400,000-500,000 Total Visitation 5,490,000
Estimated AC34 Staff, Volunteers, and Vendors (Peak Day)	4,000	9,200
Location of AC Village	Marina Green	Piers 27-29
Location of Team Bases	Piers 30-32, Piers 32-36 Open Water Basin, Pier 26 and Pier 28[c] Pier 80[c]	Piers 30-32, Piers 30-32, Piers 32-36 Open Water Basin, Pier 26, and Pier 28 Pier 80[d]
Location of Media Operations and Broadcasting Equipment	Marina Green Fort Mason (optional) Alcatraz Cavallo Point (optional)	Pier 23 Fort Mason (optional) Alcatraz Cavallo Point (optional)
Use of Pier 27 Cruise Terminal Building Core and Shell for Temporary AC34 use	N/A	Yes
Use of existing helipad at Treasure Island or helipad on barge at Pier 80	Yes	Yes
Construction	Temporary Installations and Permanent Improvements[c]	Temporary Installations and Permanent Improvements
Installation of Temporary Spectator Seating	Marina Green (AC Village) Crissy Field	Piers 27-29 (AC Village) Marina Green Crissy Field
Installation of Temporary Berthing Facilities for AC34 Race/Support Boats and/or Private Spectator Boats	Pier 80, Piers 30-32, Piers 32-36 Open Water Basin, Marina Green, Fort Mason; Aquatic Park	Pier 80, Piers 30-32, Brannan Street Wharf Open Water Basin, Pier 28, Pier 26, Rincon Point Open Water Basin; Pier 19, Pier 23, Piers 27-29, Fort Mason, Aquatic Park
Dredging Required	Piers 32-36 Open Water Basin[c]	Piers 14-22½ Open Water Basin[c] Piers 32-36 Open Water Basin Pier 28 South water area
Implementation Plans for AC34 2012 and AC34 2013	People Plan Parks Event Operations Plan Water and Air Traffic Plan Waste Management Plan Sustainability Plan	Team Base Operations Manual Public Safety Plan Workforce Development Plan Youth Involvement Plan

N/A = not applicable.

[a] One or two America's Cup World Series (ACWS) may be held in San Francisco, each of which would contain 6 race days. For purpose of analysis, the EIR assumes two ACWS events would occur, for a total of 12 race days. In addition, the Youth America's Cup would be held between the two AC34 World Series events and have up to 5 race days. See text for details.

[b] The total number of races for Louis Vuitton Cup, America's Cup Challenger Series (ACCS); potential America's Cup Defender Series (ACDS); and Match is not known, dependent on the number of teams competing and if an ACDS is held, however, it is anticipated there would be a total of approximately 45 race days for these series. In addition, the Youth America's Cup would be held between the ACCS and the Match events and have up to 5 race days. See text for details.

[c] Piers 30-32, Piers 32-36 Open Water Basin, and Pier 26 and Pier 28 sheds would serve as the preferred primary team bases, and Pier 80 would be used as the ancillary team bases, for AC34 2012. This assumes all proposed temporary and/or permanent improvements at these locations would be completed and associated required permits would be secured in time for the 2012 event. Otherwise, Pier 80 would serve as the primary team bases for AC34 2012, and Piers 30-32, Piers 32-36 Open Water Basin, Pier 26 and Pier 28 would not be used for the 2012 event. See text for details.

[d] Pier 80 would be used as an ancillary base for AC34 2013. See text for details.

SOURCE: America's Cup Event Authority; AECOM, 2011

The proposed Youth America's Cup competition to be held in 2012 and 2013, while part of AC34, is also separate from the various race series described above, and would be the smallest of all the competition series in terms of duration, venues affected, and estimated spectatorship.

In addition, as part of the proposed project, the Port would initiate a request to amend the BCDC Special Area Plan by proposing a number of modifications to the plan. (See discussion under Section 3.4.10, Amendments to BCDC Special Area Plan for AC34, below.)

3.4.3 AC34 Races

The America's Cup races begin with a multiyear circuit of "World Series" regattas and sailing competitions starting in 2011 in cities around the world, progressively building up to the America's Cup World Series (ACWS) races proposed to be held in San Francisco Bay in 2012. The ACWS would be followed in 2013 by the Louis Vuitton Cup, America's Cup Challenger Series (ACCS) to determine which of the challenger teams advances to compete with the defender in the final Match. A potential America's Cup Defender Series (ACDS) may also be held in 2013 to determine a defender team and/or vessel to represent the GGYC in the final Match. Following the ACCS and ACDS (if held), the "Match" would occur in 2013, consisting of the final series of races between the defender and challenger to decide the winner of the Cup. Additional detail on the race schedules for the ACWS is discussed under AC34 2012: Race Schedule, and the schedules for the ACCS, ACDS and Match are discussed under AC34 2013: Race Schedule, below.

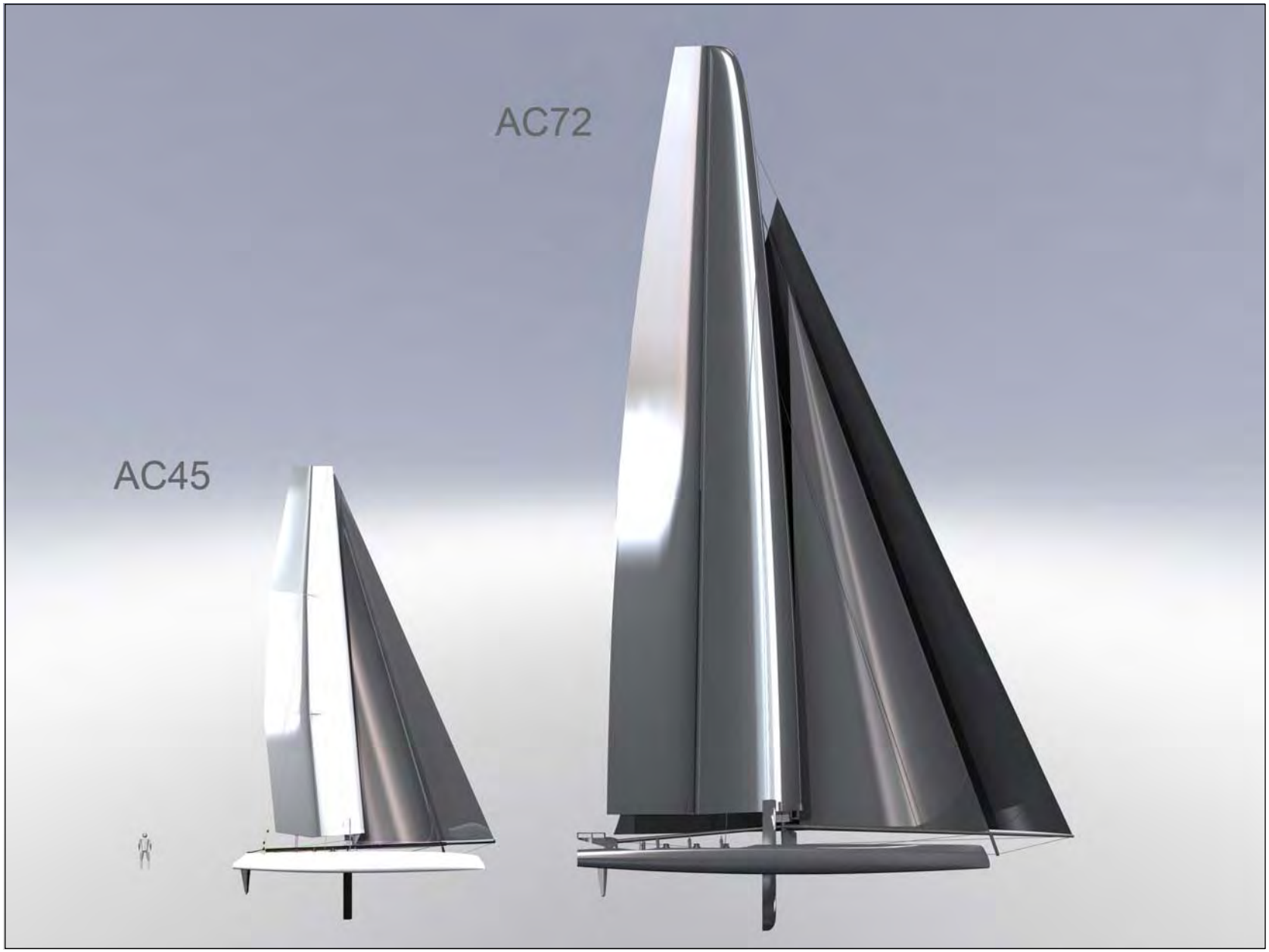
The AC34 race area within which the actual race course(s) would be determined is presented in Figure 3-2. It is expected that individual races would be completed within 45 minutes to 1 hour, although multiple races would occur on given days. During each race, and for a period before and after, restrictions on maritime traffic and airspace would be required. Detailed consultation with the United States Coast Guard and Federal Aviation Administration would be required; consequently, the race area details are subject to change. Additional description of the Water and Air Traffic Plan that would be implemented for AC34 is described in Section 3.4.7, Implementation Plans, below.

Two new classes of yachts are planned for AC34: the "AC45" class which would be raced in the ACWS in 2012; and the "AC72" class which would be raced in the ACCS, ACDS (if held) and the Match in 2013, The AC45 and AC72 are the first "wing-sail" catamaran[20] classes for the America's Cup. **Figure 3-12** and **Figure 3-13** provide conceptual renderings of the AC45 and AC72 yachts that would be raced in AC34.

The *AC45 Class Rule*[21] was published in June 2011 establishing the type, specifications and construction rules for the AC45 class yachts that would be raced in the ACWS, including those ACWS races series in San Francisco Bay in 2012. The yachts would be approximately 45 feet long (hence the name "AC45") and 23 feet wide, contain a mast height of 70 feet, and have a draft of

[20] Catamarans are vessels with two parallel hulls, connected by a cross structure. A wing-sail provides propulsion from the wind and is similar to conventional sails, but is built-up with an airfoil cross-section, like an airplane wing, the shape of which provides a much better lift-to-drag ratio.

[21] *AC45 Class Rule, Version 1.0*, June 15, 2011.



Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: America's Cup Event Authority

Figure 3-12

Conceptual Design of AC45 and AC72 Class Racing Yachts: Side View

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: America's Cup Event Authority

Figure 3-13

Conceptual Design of AC45 and AC72 Class Racing Yachts: Angled View

approximately 9 feet. Each AC45 would be operated by a crew of 5 people. Each team competing in the ACWS is required to purchase and campaign an AC45. The AC45 yachts are designed to give teams competing in AC34 the opportunity to learn wing-sailed catamarans as they design and build their own AC72 that would be raced in 2013 events.

The *AC72 Class Rule*[22] was published in October 2010 establishing the type, specifications and construction rules of the yachts to be raced in San Francisco Bay in AC34 in 2013. The AC72 yacht class would be the fastest yacht class in America's Cup competition yet. The AC72 yachts are expected to sail in excess of 30 knots,[23] sailing upwind at 1.2 times the speed of the true wind and downwind at 1.6 times the speed of the true wind. The yachts would be 72 feet long (hence the name "AC72") and 46 feet wide, contain a mast height of 130 feet, and have a draft of approximately 15 feet. Each AC72 would be operated by a crew of 11 people. Each team is limited to design and construction of a maximum of two AC72 yachts for AC34.

Alongside the series of AC34 races discussed above, a Youth America's Cup (YAC) series would also be held in 2012 and 2013. The YAC is a proposed youth yacht team competition intended to raise youth awareness of, and foster youth involvement in, sailing. In the YAC, youth teams would race AC45 class yachts.[24] Each competing YAC yacht would have at least one expert adult sailor on board. Competition rules for the YAC are still in development. Additional detail on the race schedules for the YAC is discussed under AC34 2012: Race Schedule and AC34 2013: Race Schedule, below.

As described below, AC34 would allow for viewing of the AC34 races from proposed shoreline venues, as well as offer a variety of land-based entertainment activities for visitors to the event. In addition, AC34 would accommodate water-based viewing of the races by spectator boats and provide berthing for certain spectator boats at its venues. The attendance by spectator boats, including large spectator vessels (i.e., over 150 feet in length) is intended to serve as an important element of AC34. One of the unique attractions of the America's Cup events is the gathering of large spectator vessels from all over the world. For the AC34, designated spectator boat areas would be sited along the race course edge, for the purpose of allowing close viewing and creating high interest points in the race course. In addition, large spectator vessels would serve as an attraction for the general public to view from shoreside locations.

While the races would be the focal event of activities, AC34 would include a full program of exhibits, educational programs, entertainment, commercial attractions, and services that would surround the race events and the experience. The hub of these activities would be the proposed America's Cup Village (AC Village). **Table 3-2** outlines a typical day of programs and events envisioned on AC34 race days at the AC Village. These activities and timelines are provided as examples only and would be subject to change as the plans for AC34 develop and evolve. Similar types of activities would occur at specific spectator venues as well.

22 *AC72 Class Rule*, October 15, 2010, as amended.
23 The knot is a unit of speed equal to one nautical mile per hour, or approximately 1.151 miles per hour.
24 The AC45 yachts that would be raced by youth teams in the YAC would be the same yachts that would be first raced by adult teams in the initial America's Cup World Series pre-regattas.

TABLE 3-2
TYPICAL ACTIVITY PROGRAM AT AMERICA'S CUP VILLAGE (AC VILLAGE) ON 34th AMERICA'S CUP (AC34) RACE DAYS

Time	Activity Program
9:30 a.m.	AC Village opens[a]
10:00 a.m. – 11:00 a.m.	Live entertainment on stage; boat activities/animations
11:00 a.m.– 12:00 noon	"The America's Cup Dock-out Show" • Introduction of all teams via presenter and giant screens • Crews getting the catamarans ready • Boat parade to the race course • Interviews, games, interaction (e.g. winners of sweep stakes would board chase boat to go out to race course)
1:00 p.m. – 5:00 p.m.	Racing • Live commentary, interviews and animations to the broadcast of racing on the giant screens in AC Village and at Live Sites • Visitors on grand stands following the racing at AC Village
5:00 p.m.– 8:00 p.m.	After-Race Show • AC72 racing yachts return to AC Village • Press conferences, TV interviews • Music, exhibitions
8:00 p.m. – 11:00 p.m.	Event Action and Entertainment
11:00 p.m.	AC Village closes[a]

[a] Note that proposed AC34 Live Sites would have the same open/close times as the AC Village; see text for details on AC34 Live Sites.

SOURCE: America's Cup Event Authority

AC34 Race Schedule

AC34 2012: Race Schedule

One or two World Series events would occur in San Francisco Bay in summer-fall 2012, currently scheduled for August and September. Each ACWS would run approximately 10 days, with 6 race days in each series, along with other activity days (i.e., test and media days), and rest days. Race days would consist of fleet racing (where every team races) and match racing (which follows an elimination format). There would be multiple races on race days, with fleet racing held on Sundays. For the purposes of environmental review, this EIR assumes that two ACWS events would be held in San Francisco in 2012. The World Series events would have a circuit winner but, as discussed above, the outcomes of the ACWS would not affect the subsequent AC34 races in 2013.

In addition to the ACWS, the YAC would be held in 2012. The potential race schedule for the YAC in 2012 is still in development, but it is expected that the YAC in 2012 would be a 4-to 5-day event, and would be held between the two AC34 World Series events.

AC34 2013: Race Schedule

AC34 2013 would include the Louis Vuitton Cup, America's Cup Challenger Series (ACCS); potential America's Cup Defender Series (ACDS); and the Match. The total number of race days is not known, dependent on the number of teams competing, and if an ACDS is held, it is expected there would be a total of approximately 45 race days and 40 non-racing days.

The ACCS would tentatively be held between early July and early September, 2013, although, as indicated above, races would not occur every day. The ACCS would consist of several rounds of races, starting with a "round robin" competition, advancing through quarter- and semi-finals to the final ACCS races. It is expected that there would be 4 to 5 days of racing per week in the early stages of the ACCS, with latter stages involving fewer racing days per week as competing teams are eliminated.

The Host Agreement provides for possible America's Cup Defender Series (ACDS) races as an option. If such ACDS races occurred, they would be scheduled during non-race days or at different hours between the ACCS races.

Racing would culminate with the Match series between the Defender and the Challenger (winner of the ACCS), a best of nine matches, currently planned from September 7 to September 22, 2013.

In addition to above-described series, the YAC would also be held in 2013. As with the YAC in 2012, the potential race schedule for the YAC in 2013 is still in development, but it is expected that the YAC in 2013 would be a 4- to 5-day event and would be held between the ACCS and the Match events.

AC34 Visitation Estimates

The project sponsors for AC34 prepared a detailed analysis of estimated visitation for the AC34 events in 2012 and 2013; this analysis is included in **Appendix PD-1** of this EIR and summarized below.[25] The methodologies and assumptions used for developing visitation for the AC34 events in 2012 and 2013 were developed separately in consideration of the unique differences in the type and duration of the events.

AC34 2012: Visitation Estimates

As described above, the scale and duration of AC34 2012 event would be less than for AC34 2013. The visitation analysis conducted for AC34 2012 analyzed overall attendance (relative to number of race days) and peaking patterns for a comparable series of races that were held in the year prior to the AC32 event in Valencia, Spain. The visitation analysis then estimated attendance for different categories of expected spectator interest for the AC34 2012 event, and then estimated overall attendance for AC34 2012.

[25] It should be noted the visitation analysis focuses on the major AC34 race series for AC34 2012 (ACWS) and AC34 2013 (ACCS, potential ACDS, and Match), however, visitation estimates are also conservatively high to capture any incidental visitation associated with a YAC in AC34 2012 and AC34 2013.

For purposes of conservatively addressing potential impacts associated with visitorship during AC34 2012, a "peak race weekend day" scenario is analyzed in this EIR. The peak race day represents the average attendance anticipated on a peak day during AC34 2012. **Table 3-3** presents the estimated peak race day and total visitor attendance for AC34 in 2012. As shown in Table 3-3, an average of 197,000 visitors would be expected on a peak race day in 2012, with an estimated 4 peak race days accounting for just over half of the total expected attendance in 2012. In addition, a "peak race weekday" is also analyzed in this EIR, representing a peak race day during the weekdays.

TABLE 3-3
ESTIMATED PEAK AND TOTAL VISITOR ATTENDANCE FOR AC34 2012

Profile	Total Number of Days in 2012[a]	Average Visitors Per Day	Total Number of Visitors
Peak Race Weekend Day	4	197,000	788,000
Peak Race Week Day	2	45,000	90,000
Total (Race + Non Race Days)	**20**		**1,454,000**

[a] Assumes two 10-day America's Cup World Series events.

SOURCE: AECOM, 2011

The visitation analysis also estimated geographic distribution for visitors at all proposed AC34 venues and other public areas[26] where spectators might watch the AC34 races in 2012, based on spectator origin, access, visitor capacity, assumed viewing area appeal, and other factors. **Table 3-4** presents estimated distribution of visitors at all study locations for a peak race weekend day, and during the peak-hour of the peak race weekend day. **Table 3-5** presents estimated distribution of visitors at all study locations for a peak race weekday, and during the peak-hour of the peak race weekday. Peak-hour attendance at is projected to be between 60 and 80 percent of the peak day attendance.

AC34 2013: Visitation Estimates

The estimated level of visitation for AC34 2013 is expected to be markedly higher and would occur over a longer duration than expected for AC34 2012. The visitation analysis used a "penetration rate analysis"[27] to estimate total attendance for the AC34 events in 2013. The visitation analysis then

[26] See discussion of these other public areas under "AC34 2012 and AC 34 2013: Potential Secondary Viewing Areas," below, and in greater detail in Chapter 5.

[27] Penetration rate analysis is the accepted industry standard for estimating attendance at temporary events and entertainment venues, including World Expos, Olympics, and festivals, as well as more permanent attractions. Penetration rate methodology applies percentages (penetration rates) to defined market segments (typically local residents and tourists) in order to determine attendance. The penetration rates are based a number of factors, including: the visitor experience and appeal of the planned program for the event; the site and/or venue characteristics that might affect market potential; market characteristics (e.g., size, demographics, etc.); and the experience of comparable events held both locally and internationally (AECOM, *Analysis of Potential Visitation Patterns for America's Cup 34*, June 2011).

TABLE 3-4
ESTIMATED GEOGRAPHIC DISTRIBUTION OF AC34 VISITORS ON PEAK RACE WEEKEND DAY IN 2012

Location	Peak Race Weekend Day in 2012	
	Number of Visitors Per Day	Number of Visitors in Peak Hour
Landside Spectators		
San Francisco: AC34 Venues		
Marina Green (AC Village)	57,000	34,000-45,000
Crissy Field (Crissy Field Center to Pearce Street/ Mason Street)	75,000	45,000-60,000
Fort Mason to Aquatic Park	3,000	1,800-2,400
Justin Herman Plaza, Union Square, & San Francisco Civic Center (Live Sites)	5,000	3,000-4,000
Subtotal: AC34 Venues in San Francisco	*140,000*	*83,800-111,400*
San Francisco - Secondary Viewing Areas		
Presidio (including Crissy Field picnic area and west to south side of Golden Gate Bridge)	2,000	1,200-1,600
Fisherman's Wharf	15,000	9,000-12,000
Northeast Embarcadero (Pier 42 to Fisherman's Wharf)	10,000	6,000-8,000
Other Areas in San Francisco	3,000	1,800-2,400
Subtotal: Secondary Viewing Areas in San Francisco	*30,000*	*18,000-24,000*
Outside San Francisco - AC34 Venues*[a] / Secondary Viewing Areas		
Treasure Island	5,500	3,300-4,400
Alcatraz Island (private)[a]	500	300-400
Angel Island	1,000	600-800
Fort Baker / Marin Headlands/ north side of Golden Gate Bridge	2,000	1,200-1,600
Cavallo Point (private/public)[a,b]	800	450-650
Sausalito	3,500	2,100-2,800
Tiburon / Belvedere	1,000	600-800
Subtotal: Secondary Viewing Areas / AC34 Venues Outside San Francisco	*14,300*	*8,550-11,450*
Subtotal Landside Spectators	***184,300***	***110,350-146,850***
Spectators on Boats		
Recreational	11,000	6,500-8,800
Commercial Charter	2,000	1,200-1,600
Subtotal Spectators on Boats	***13,000***	***7,500-10,400***
Total Spectators	**197,300**	**118,000-157,300**

[a] Alcatraz and Fort Baker Pier at Cavallo Point would be the only AC34 venues proposed outside of San Francisco; all other venues outside of San Francisco are considered secondary viewing areas (see description of secondary viewing area in the text). The AC34 venues at Alcatraz and Fort Baker Pier would only host corporate and private functions.

[b] Estimated visitation at Cavallo Point includes that associated with the proposed AC34 private venue at Fort Baker Pier, and public spectators that would visit other areas of Cavallo Point for viewing of AC34 races.

SOURCE: AECOM, 2011

TABLE 3-5
ESTIMATED GEOGRAPHIC DISTRIBUTION OF AC34 VISITORS ON PEAK RACE WEEKDAY IN 2012

Location	Peak Race Weekday in 2012	
	Number of Visitors Per Day	Number of Visitors in Peak Hour
Landside Spectators		
San Francisco: AC34 Venues		
Marina Green (AC Village)	18,000	10,000-14,000
Crissy Field (Crissy Field Center to Pearce Street/ Mason Street)	11,000	6,500-8,500
Fort Mason to Aquatic Park	900	550-700
Justin Herman Plaza, Union Square, & San Francisco Civic Center (Live Sites)	0	0
Subtotal: AC34 Venues in San Francisco	*29,900*	*17,050-23,200*
San Francisco - Secondary Viewing Areas		
Presidio (including Crissy Field picnic area and west to south side of Golden Gate Bridge)	450	250-350
Fisherman's Wharf	3,500	2,100-2,800
Northeast Embarcadero (Pier 42 to Fisherman's Wharf)	4,600	2,700-3,700
Other Areas in San Francisco	0	0
Subtotal: Secondary Viewing Areas in San Francisco	*8,550*	*5,050-6,850*
Outside San Francisco - AC34 Venues*[a] / *Secondary Viewing Areas		
Treasure Island	1,300	750-1,000
Alcatraz Island (private)[a]	0	0
Angel Island	50	30-40
Fort Baker / Marin Headlands/ north side of Golden Gate Bridge	250	150-200
Cavallo Point (private/public)[a,b]	125	60-80
Sausalito	200	120-160
Tiburon / Belvedere	25	30-40
Subtotal: Secondary Viewing Areas / AC34 Venues Outside San Francisco	*1,950*	*1,140-1,520*
Subtotal Landside Spectators	***40,400***	***23,240-31570***
Spectators on Boats		
Recreational	3,800	2,200-3,000
Commercial Charter	800	450-650
Subtotal Spectators on Boats	***4,600***	***2,650-3,650***
Total Spectators	**45,000**	**25,900-35,200**

[a] Alcatraz and Fort Baker Pier at Cavallo Point would be the only AC34 venues proposed outside of San Francisco; all other venues outside of San Francisco are considered secondary viewing areas (see description of secondary viewing area in the text). The AC34 venues at Alcatraz and Fort Baker Pier would only host corporate and private functions.

[b] Estimated visitation at Cavallo Point includes that associated with the proposed AC34 private venue at Fort Baker Pier, and public spectators that would visit other areas of Cavallo Point for viewing of AC34 races.

SOURCE: AECOM, 2011

estimated the portions of attendance attributable to race days and non-race days based upon patterns in previous America's Cup events. Ranges of peak day attendance were estimated based in part on visitor attendance data that were available for previous America's Cup events held in Valencia, Spain and Auckland, New Zealand; in addition, Bay Area residents and tourist market patterns, consideration of San Francisco waterfront special events such as Fleet Week and the 4th of July, along with key characteristics of AC34 events were used in the analysis. Using the mid-range peak day visitation number as a baseline, a series of visitor day profiles were developed.

For purposes of conservatively addressing potential impacts associated with visitorship during AC34 2013, an "average peak race weekend day" scenario is analyzed in this EIR. The average peak weekend race day represents weekend race days of high spectator interest, such as opening race days or race finals for the ACCS or Match, competitions featuring high-interest countries, or days near the beginning or end of the competition with exceptionally good weather. In addition, this EIR analyzes an "average peak race weekday," representing a peak race day during the weekdays.

Table 3-6 presents the estimated average peak race weekend day, peak race weekday, and total spectator attendance for AC34 in 2013. As presented in Table 3-6, an average peak race weekend day would attract approximately 334,000 visitors throughout the course of the day, whereas a peak race weekday would attract approximately 50,000 visitors during the day.

TABLE 3-6
ESTIMATED VISITOR ATTENDANCE FOR AC34 2013

Profile	Total Number of Days[a]	Visitors Per Day	Total Number of Visitors
Average Peak Race Weekend Day[b]	5	334,000	1,671,700
Average Peak Race Weekday[c]	11	50,000	550,000
Total All Race Days	***45***	***106,000***	***4,776,000***
Total Non-Race Days	***40***	***18,000***	***714,000***
Total	**85**		**5,490,000**

[a] Includes Louis Vuitton Cup, America's Cup Challenger Series; potential America's Cup Defender Series; and Match.
[b] The average peak weekend race day represents weekend race days of high spectator interest, such as opening race days or race finals for the ACCS or Match, competitions featuring high-interest countries, or days near the beginning or end of the competition with exceptionally good weather.
[c] The average peak race weekday represents a peak race day during the weekdays.

SOURCE: AECOM, 2011

It is possible that an AC34 2013 race day might experience higher visitation than that estimated for the average peak race weekend day discussed above, if a combination of factors such as good weather, race schedule and position, competing teams that generate high interest, and/or a popular entertainment group performing in one of the AC34 venues, coincide on a weekend day. It is estimated that this condition, characterized as a "super peak race day," could generate between 400,000 and 500,000 visitors. While such a potential condition is acknowledged, such a super peak race day would not be expected to occur more than once during the AC34 2013 duration, if at all.

The visitation analysis estimated geographic distribution for visitors in 2013 at proposed AC34 venues and potential secondary viewing areas similar to that discussed above for AC34 2012, but adjusting for the differences in use and location of specific proposed AC34 venues in 2013. **Table 3-7** presents estimated distribution of visitors at all study locations for an average peak race weekend day, and during the peak-hour of the average peak race weekend day. **Table 3-8** presents estimated distribution of visitors at all study locations for an average peak race weekday, and during the peak-hour of the average peak race weekday.

AC34 Venue Plan

Where applicable, temporary installations would be reinstalled in 2013 for AC34 2013 event; see discussion under AC34 2013: Venue Plan, below.

AC34 2012: Venue Plan

Figure 3-14 presents the venue plan for AC34 2012, including locations proposed for operations, hospitality and spectator areas. Some of the improvements proposed for venue facilities for AC34 2012 would involve substantial capital investment and construction. Improvements would include temporary installations, most of which would be removed after the AC34 2012 event concludes; certain temporary team base installations that would remain through the conclusion of the AC34 2013 event; and some permanent improvements that would remain after AC34.[28] Following the removal of temporary installations at AC34 venues in 2012 and 2013, those venues would be restored as needed (e.g., spectator venues resodded and revegetated) to pre-AC34 event condition. **Table 3-9** summarizes the key temporary and permanent project components at AC34 2012 venues.

The following discussion provides additional detail on specific proposed venues and associated facilities. Additional construction details for temporary installations (e.g., temporary floating docks) are described in Section 3.4.5, under AC34 Construction. Information on tenant displacement and relocation is discussed in Section 3.4.6.

Team Base Options

Under the preferred team base option (Team Base Option 1), Piers 30-32 and Piers 32-36 Open Water Basin would serve as the primary team bases, the Pier 26 and Pier 28 sheds would serve as the primary team base support, and Pier 80 would be used as the ancillary team base, for AC34 2012. Option 1 is predicated on all proposed temporary and/or permanent improvements at these locations being completed, and associated required permits being secured, in time for the 2012 event. Otherwise, as described in Option 2, Pier 80 would serve as the primary team bases for AC34 2012, and Piers 30-32 Piers 32-36 Open Water Basin, Pier 26, and Pier 28 would not be used for the 2012 event. Both team base options are described below.

[28] Where applicable, temporary installations would be reinstalled in 2013 for AC34 2013 event; see discussion under AC34 2013: Venue Plan, below.

TABLE 3-7
ESTIMATED GEOGRAPHIC DISTRIBUTION OF AC34 VISITORS ON AVERAGE PEAK RACE WEEKEND DAY IN 2013

Location	Average Peak Race Weekend Day in 2013	
	Number of Visitors Per Day	Number of Visitors in Peak Hour
Landside Spectators		
San Francisco: AC34 Venues		
Piers 27-29 (AC Village)	50,000	30,000-40,000
Marina Green	55,000	33,000-44,000
Crissy Field (Crissy Field Center to Pearce Street/ Mason Street)	77,000	46,000-62,000
Fort Mason to Aquatic Park	7,000	4,000-5,600
Justin Herman Plaza (Live Site)	8,000	5,000-6,400
Union Square (Live Site)	6,000	3,600-4,800
Civic Center (Live Site)	6,000	3,600-4,800
Subtotal: AC34 Venues in San Francisco	*209,000*	*125,000-167,600*
San Francisco - Secondary Viewing Areas		
Presidio (including Crissy Field picnic area and west to south side of Golden Gate Bridge)	5,000	3,000-4,000
Fisherman's Wharf	25,000	15,000-20,000
Northeast Embarcadero (Pier 42 to Fisherman's Wharf)	48,000	29,000-38,000
Other Areas in San Francisco	5,000	3,000-4,000
Subtotal: Secondary Viewing Areas in San Francisco	*83,000*	*50,000-66,000*
Outside San Francisco - AC34 Venues[a] / Secondary Viewing Areas		
Treasure Island	12,000	7,000-9,600
Alcatraz Island (private) [a]	500	300-400
Angel Island	1,000	600-800
Fort Baker / Marin Headlands/ North side of Golden Gate Bridge	3,500	2,100-2,800
Cavallo Point[a,b]	800	500-650
Sausalito	5,000	3,000-4,000
Tiburon / Belvedere	1,200	700-950
Subtotal: Secondary Viewing Areas / AC34 Venues Outside San Francisco	*24,000*	*14,200-19,200*
Subtotal Landside Spectators	***316,000***	***189,200-252,800***
Spectators on Boats		
Recreational	13,200	8,000-10,600
Commercial Charter	3,000	1,500-2,400
Large Private Yachts	1,800	1,100-1,400
Subtotal Spectators on Boats	***18,000***	***10,600-14,400***
Total Spectators	**334,000**	**199,800-267,200**

[a] Alcatraz and Fort Baker Pier at Cavallo Point would be the only AC34 venues proposed outside of San Francisco; all other venues outside of San Francisco are considered secondary viewing areas (see description of secondary viewing area in the text). The AC34 venues at Alcatraz and Fort Baker Pier would only host corporate and private functions.

[b] Estimated visitation at Cavallo Point includes that associated with the proposed AC34 private venue at Fort Baker Pier, and public spectators that would visit other areas of Cavallo Point for viewing of AC34 races.

SOURCE: AECOM, 2011

TABLE 3-8
ESTIMATED GEOGRAPHIC DISTRIBUTION OF AC34 VISITORS ON AVERAGE PEAK RACE WEEKDAY IN 2013

Location	Average Peak Race Weekday in 2013	
	Number of Visitors Per Day	Number of Visitors in Peak Hour
Landside Spectators		
San Francisco: AC34 Venues		
Piers 27-29 (AC Village)	10,350	6,000-8,300
Marina Green	8,200	5,000-6,600
Crissy Field (Crissy Field Center to Pearce Street/ Mason Street)	12,300	7,400-9,800
Fort Mason to Aquatic Park	1,000	600-800
Justin Herman Plaza (Live Site)	0	0
Union Square (Live Site)	0	0
Civic Center (Live Site)	0	0
Subtotal: AC34 Venues in San Francisco	*31,850*	*19,000-25,500*
San Francisco - Secondary Viewing Areas		
Presidio (including Crissy Field picnic area and west to south side of Golden Gate Bridge)	500	300-400
Fisherman's Wharf	3,900	2,300-3,100
Northeast Embarcadero (Pier 42 to Fisherman's Wharf)	5,200	3,100-4,200
Other Areas in San Francisco	0	0
Subtotal: Secondary Viewing Areas in San Francisco	*9,600*	*5,700-7,700*
Outside San Francisco - AC34 Venues [a] ***/ Secondary Viewing Areas***		
Treasure Island	1,500	900-1,200
Alcatraz Island (private) [a]	0	0
Angel Island	50	30-40
Fort Baker / Marin Headlands/ North side of Golden Gate Bridge	300	180-240
Cavallo Point[a,b]	150	90-120
Sausalito	225	135-180
Tiburon / Belvedere	25	15-20
Subtotal: Secondary Viewing Areas / AC34 Venues Outside San Francisco	*2,250*	*1,350-1,800*
Subtotal Landside Spectators	***43,700***	***26,050-35,000***
Spectators on Boats		
Recreational	4,400	2,600-3,500
Commercial Charter	1,000	600-800
Large Private Yachts	900	500-700
Subtotal Spectators on Boats	***6,300***	***3,700-5,000***
Total Spectators	**50,000**	**29,800-40,000**

[a] Alcatraz and Fort Baker Pier at Cavallo Point would be the only AC34 venues proposed outside of San Francisco; all other venues outside of San Francisco are considered secondary viewing areas (see description of secondary viewing area in the text). The AC34 venues at Alcatraz and Fort Baker Pier would only host corporate and private functions.

[b] Estimated visitation at Cavallo Point includes that associated with the proposed AC34 private venue at Fort Baker Pier, and public spectators that would visit other areas of Cavallo Point for viewing of AC34 races.

SOURCE: AECOM, 2011

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-14
AC34 2012 Proposed Venue Plan

TABLE 3-9
AC34 2012: PROPOSED VENUES AND KEY FACILITIES

Venue	AC34 2012 COMPONENT										
	Temporary Component										Permanent Component
	Team Bases and Team Base Support	AC Village	Spectator Venue[a]	Hospitality Services (Food and Beverage, Merchandising, etc.)	Installation of Spectator Seating	Installation of Berthing Facilities for AC34 Race/ Support Boats and/or Private Spectator Boats	AC34 Operations, storage and/or ancillary	Dedicated AC34 Parking[b]	Media Operations / Broadcasting Equipment	Corporate and Private Functions	
Pier 80[c]	✓			✓[e]		✓	✓	✓			
Piers 30-32[c]	✓			✓[e]		✓					• Seismic upgrades and repair, including: - Repair and strengthen marginal wharf, install a seismic joint, strengthen the existing pier deck from the marginal wharf to the valley between Piers 30-32 to support heavy truck loads, install piles/caps to increase lateral capacity - Remove/replace portions of deck, reinforcing steel, soffit and piles - Install structure to raise depressed area between Piers 30 and 32 - Install stormwater management features
Piers 32-36 Open Water Basin[c]	✓					✓					• Dredging of portion of water basin to approximately -17 feet mean lower low water (MLLW)
Pier 26 and Pier 28[c] ***Piers 28-30 Water Area***	✓						✓	✓			• Fire, safety, and access improvements • Roof and exterior wall repairs and replacement, lead paint and asbestos abatement, waterproofing, mechanical system upgrades, deck resurfacing, new utility services • Dredging between Pier 28 and Pier 30 to approximately -12 feet MLLW • Possible apron and fender repairs
Pier 19 and Pier 19½[d]							✓	✓			• Repair of the deck and piling for the north and south aprons, if needed • Fire, safety, and access improvements, if needed
Marina Green		✓		✓	✓	✓[f]		✓	✓	✓	
Aquatic Park			✓	✓						✓	
Crissy Field			✓	✓	✓			✓		✓	
Fort Mason			✓ (private)	✓ (private)		✓		✓	✓	✓	
Alcatraz			✓ (private)	✓ (private)					✓[g]	✓	
Fort Baker Pier at Cavallo Point			✓ (private)	✓ (private)				✓	✓[g]	✓	
Live Sites (Justin Herman Plaza, Union Square and San Francisco Civic Center)			✓	✓							

[a] Spectator venues are designated locations besides the AC Village where public and/or private hospitality services and/or spectator seating accommodations are proposed as part of AC34. See text for details.
[b] Certain existing parking/paved areas dedicated to serve AC34 staff, guests and/or public for event.
[c] Under Team Base Option 1, Piers 30-32, Piers 32-36 Open Water Basin, and Pier 26 and Pier 28 sheds would serve as the preferred primary team bases, and Pier 80 would be used as the ancillary team bases, for AC34 2012. This assumes all proposed temporary and/or permanent improvements at these locations would be completed, and associated required permits would be secured, in time for the 2012 event. Otherwise, Team Base Option 2 would occur, in which case Pier 80 would serve as the primary team bases for AC34 2012, and Piers 30-32, Piers 32-36 Open Water Basin, Pier 26 and Pier 28 would not be used for the 2012 event. See text for details.
[d] Permanent Improvements at Piers 19 and 19 ½ may occur as part of AC34 2012 or AC34 2013.
[e] Hospitality services (e.g., catering facilities) at Pier 80 and/or Piers 30-32 for team bases only.
[f] There is no proposed installation of temporary berthing facilities dedicated for private spectator boats, although there is the potential that AC34 sponsor-related berths may be used by private spectator boats at this location for pickup and dropoff.
[g] Location for minimal equipment (e.g., satellite dishes)

SOURCE: America's Cup Event Authority; AECOM, 2011

Option 1 (Preferred Team Base Option)

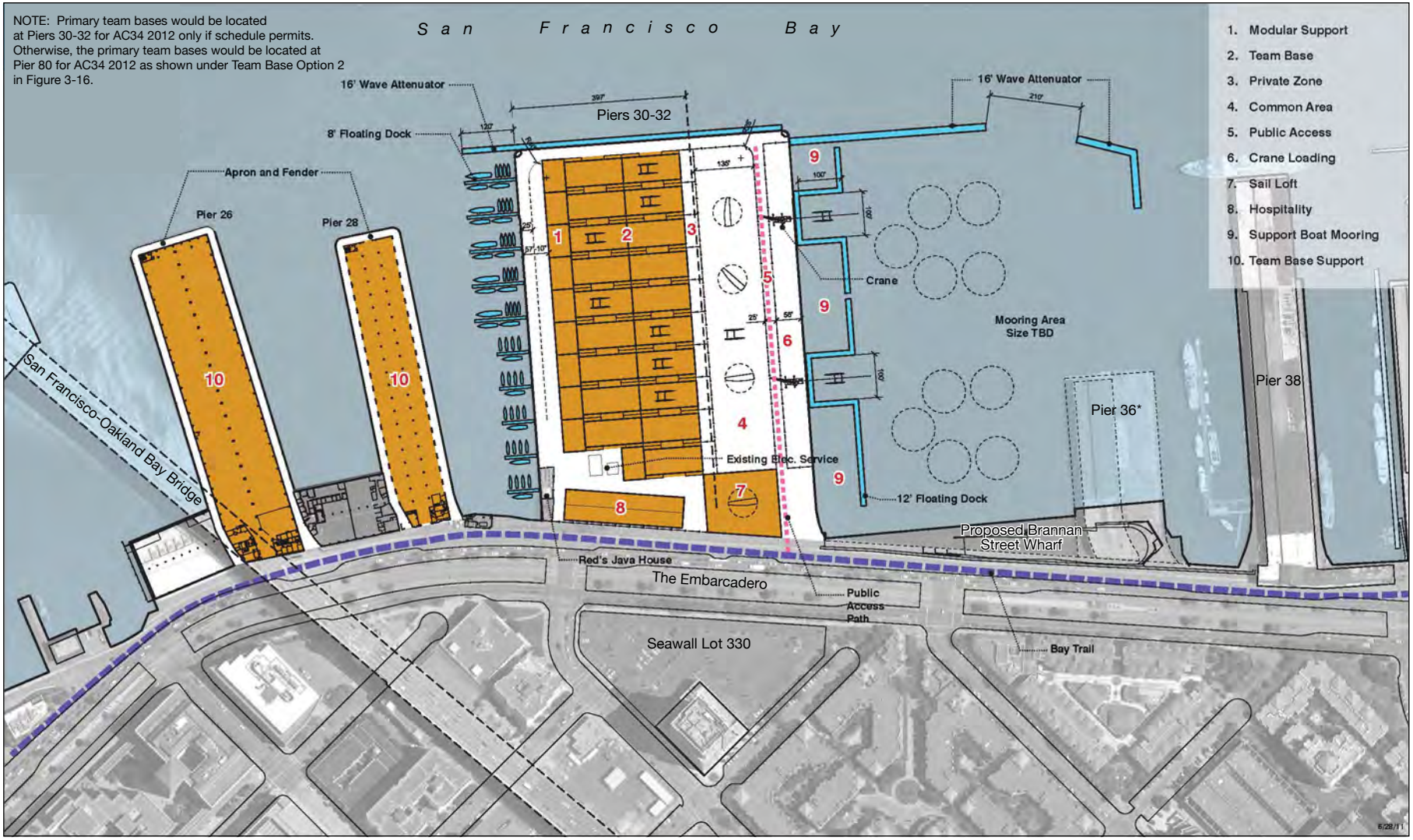
Primary Team Bases at Piers 30-32, and Piers 32-36 Open Water Basin. A preliminary site plan for the proposed primary team bases and associated facilities at Piers 30-32 and the adjacent Piers 32-36 Open Water Basin for AC34 2012 under the preferred team base option is presented in **Figure 3-15**. Under this team base option, up to 10 team bases would be provided at Piers 30-32, including space for boat work, sail loft, storage, and maintenance facilities. Since up to 15 teams may be competing in AC34, up to 5 overflow teams would be accommodated at the Pier 80 ancillary team base (see discussion for Pier 80, below).

Temporary tents (up to 40 feet in height) and support modules would be installed to house team base operations and store equipment. The west portion of Piers 30-32 would be used for team hospitality uses, including team catering facilities. As shown in Figure 3-15, there would be a controlled public access corridor created on Piers 30-32 for viewing a portion of the team base operations at designated times. Up to two cranes (either mobile or tower cranes) would be located along the south side of Piers 30-32 to lift the racing yachts into and out of the adjacent water basin. These cranes would extend a height of approximately 100 feet above the pier deck to provide adequate clearance while moving the yachts.

Piers 30-32 would undergo a number of permanent upgrades and repairs to support full AC34 event access and team base operations. To increase lateral capacity and meet applicable seismic codes, large diameter steel piles and concrete pile caps would be installed in three locations to tie into the existing structure. Portions of the deck, soffit, piles, and rusted or broken reinforcing steel would be replaced as needed. A structure would be installed to raise the existing depressed area between Piers 30 and 32 to the same deck elevation. The proposed improvements at Piers 30-32 would not include any alterations to Red's Java House, which would remain in place.

A number of utility improvements at Piers 30-32 would also occur as part of the project. A new 4-inch water line is proposed at Piers 30-32, which would connect to an existing 8-inch water main in The Embarcadero. In addition, a proposed package lift station would be installed in the center recessed area of Piers 30-32, connecting to a new short force main, and hence to an existing 4-inch sewer force main on the pier that discharges to the City's existing gravity sewer system at Brannan/Bryant Streets. Permanent stormwater management features, including storm drains, collection conveyance systems, consistent with the San Francisco Stormwater Management Guidelines, would also be installed. An existing pad-mounted transformer at Piers 30-32 would be upgraded to a new 1,200 Amp 480/277 Volt switchboard to provide temporary power to support team bases. There is currently no gas supply to Piers 30-32; the main gas supply line and gas meter would be brought to the landside of the sea-wall by PG&E and then extended to a suitable termination point on Piers 30-32 by the project construction contractor.

A number of temporary features would be installed at Piers 30-32 and the Piers 32-36 Open Water Basin to provide protection from waves and increase berthing capacity at this location. Approximately 1,550 linear feet of floating wave attenuators would be installed to create a temporary breakwater and reduce wave energy within this water basin, to be located along the east face of, and extending south from, Piers 30-32 and extending north from Pier 36. Wave



NOTE: Pier 36 to be removed as part of proposed Brannan Street Wharf project.

0 400
Feet

SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-15

Preferred Team Base (Option 1) for AC34 2012: Primary Team Bases at Piers 30-32, and Piers 32-36 Open Water Basin, and Team Base Support at Pier 26 and Pier 28

attenuators would be equipped with lights and reflectors for navigational safety purposes. Anchored moorings would be installed within the Piers 32-36 Open Water Basin to create an anchorage field for the AC45 yachts. (As shown in Figure 3-15, separate from the proposed project, the proposed Brannan Street Wharf project includes demolition and removal of Pier 36 and a portion of the adjacent bulkhead wharf, development of a new wedge-shaped wharf containing 57,000 square feet of open space, and repair of the adjacent seawall to which the new wharf would connect.)

In order to provide sufficient water depth for boat clearance, dredging would be conducted within the Piers 32-36 Open Water Basin. Dredging would occur to a depth of approximately -17 feet MLLW (15 feet plus 2 feet overdepth), amounting to approximately 130,000 cubic yards (cy) of dredged materials that would require disposal (see **Appendix PD-2, Figure PD-2.1**, for an illustration of approximate dredging boundary).

Floating docks would be installed at Piers 30-32 to increase the available area for boat berthing at Piers 30-32. A floating dock (measuring approximately 1,230 linear feet long by 12 feet wide) and gangways would be installed alongside the pier's south apron to provide an additional temporary berthing area for the AC45 race yachts. A system of floating docks and gangways would also be installed on the north side of Piers 30-32, creating a marina for berthing of team operations and sponsor boats. This would include approximately 1,100 linear feet of floating docks (16 feet in width). This area has a controlling depth of -9 feet MLLW, limiting the vessel moorage to shallow draft vessels. The Host Agreement also provides for possible cruise ship berthing at the Piers 30-32 east berth during non-race periods. Many of the AC34 2012 team base temporary facilities at Piers 30-32, and adjacent Piers 32-36 Open Water Basin, including team base tents and modules, and in-water facilities, including wave attenuators, floating docks, anchorage field, boat wash areas and related components, would remain in place following the AC34 2012 event through the AC34 2013 event. The AC45 yachts would be stored and secured as appropriate within the individual team bases at Piers 30-32 between the AC34 2012 and AC34 2013 events.

Please also see discussion of proposed team base boat assembly facilities, boat washdown system, and related activities for AC34 2012, below.

Primary Team Bases Support Facilities at Pier 26 and Pier 28; and Piers 28-30 Water Area. A preliminary site plan for the proposed team bases support facilities at Pier 26 and Pier 28 for AC34 2012 under the preferred team base option is presented in Figure 3-15. The Pier 26 and Pier 28 sheds would provide support space for office, storage, logistics, and parking for the team bases. Either the Pier 26 or Pier 28 sheds could be dedicated exclusively for parking use for workers of team support staff working at Piers 30-32, other team-related needs such as sail lofts, and temporary storage of signage and traffic management improvements that may be used along The Embarcadero.

Permanent improvements at these piers (i.e., fire, safety and access improvements; roof and exterior wall repairs and replacement, lead paint and asbestos abatement, waterproofing, mechanical system upgrades, deck resurfacing, new utility services, potential apron and fender repairs may occur as part of AC34 2012. Any permanent improvements at Pier 26 and Pier 28

would be constructed to meet fire safety and other existing code requirements and would be subject to Port Commission Resolution No. 04-89 which requires all Port projects to conform to the Secretary's Standards.

It is anticipated that a small amount of dredging may be required between Pier 28 and Pier 30. Dredging would occur to a depth of approximately -12 feet MLLW (10 feet plus 2 feet overdepth), amounting to approximately 6,000 cy of dredged materials that would require disposal (see **Appendix PD-2, Figure PD-2.2**, for an illustration of approximate dredging boundary).

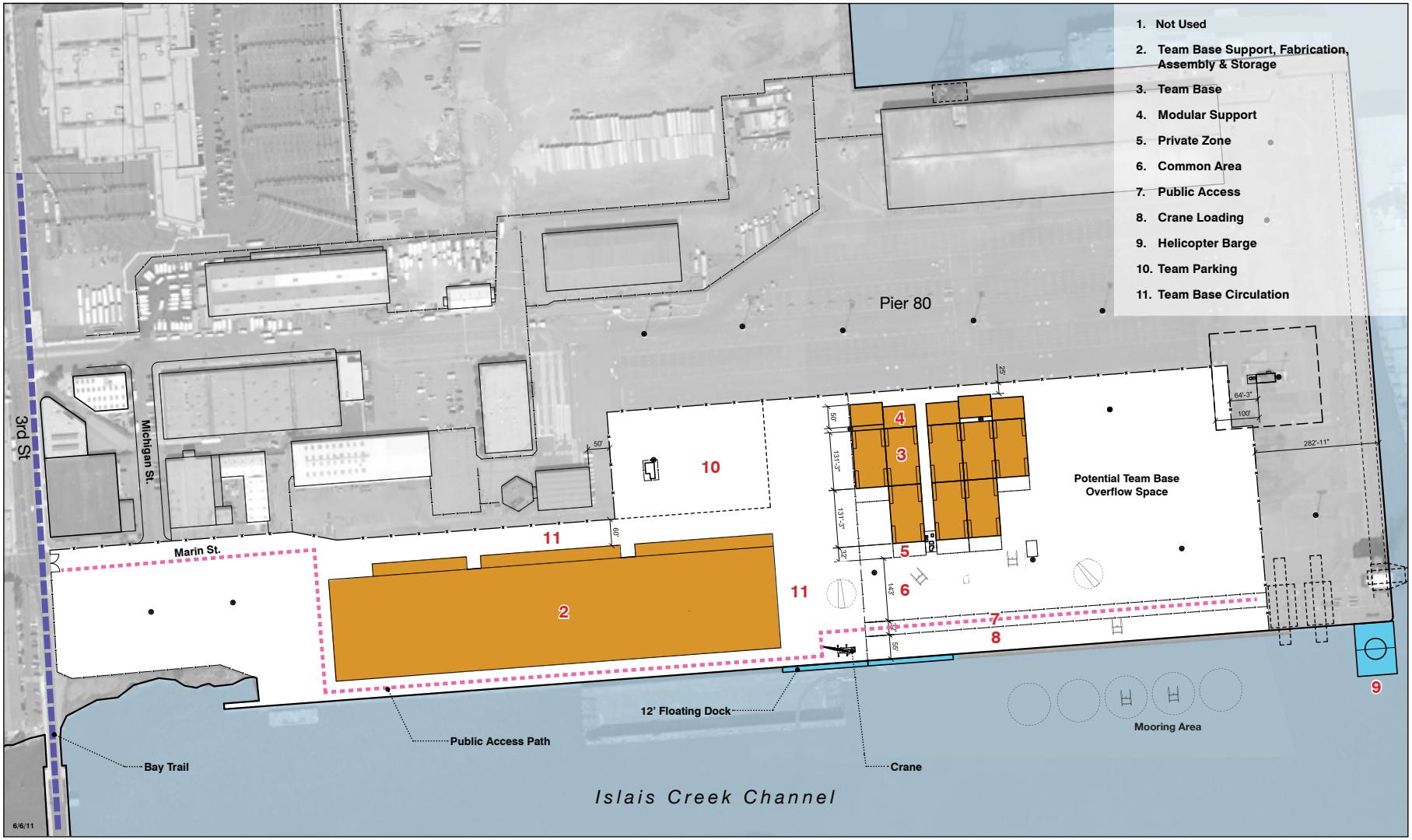
Ancillary Team Base at Pier 80. A preliminary site plan for the proposed ancillary team base facilities at Pier 80 for AC34 2012 under Option 1 is presented in **Figure 3-16**. Pier 80 would serve as a team base for the Oracle Racing team and any overflow teams that would not be able to be accommodated at the primary team bases at Piers 30-32. Similar to the primary team bases, the Pier 80 ancillary team base would include space for boat work, sail loft, storage, and maintenance facilities, as well as office space, team catering facilities, and ancillary team and public parking. Temporary tents similar in size to that discussed for Piers 30-32 and support modules would be installed to house team base operations and store equipment. As at the primary team bases at Piers 30-32, a controlled public access corridor would be created on Pier 80 adjacent to the team bases for viewing of a portion of the team base operations at designated times.

Two mobile cranes (either mobile or tower cranes) would be used along the south side of Pier 80 to lift the racing yachts in and out of the water in Islais Creek Channel; these cranes would extend a height of approximately 100 vertical feet above the pier deck to provide adequate clearance while moving the yachts. A temporary floating dock (400 feet in length) and anchored moorings would also be installed in Islais Creek Channel alongside the south pier apron adjacent to the team bases to provide temporary berthing for team boats. A helicopter barge may be stationed at the southeast corner of Pier 80 (see additional discussion under Helipad / Helicopter Operations, below).

Figure 3-16 also shows Shed A at Pier 80 where USA-17 is currently stored. (As discussed above, USA-17 is the trimaran that won the 33rd America's Cup in 2010 for the GGYC. USA-17 was transported to Pier 80 in February 2011.) Oracle Racing team would set up its AC34 operations in Shed A.

Shed A is also where all teams (including those teams stationed at Piers 30-32) would conduct any proposed specialized boat fabrication and/or assembly activities. Please see discussion of proposed team base boat fabrication and assembly facilities, as well as boat washdown facilities, and related activities for AC34 2012, below.

Many of the AC34 2012 team base temporary facilities at Pier 80, including team base tents and modules, floating docks, boat wash areas and related components, would remain in place following the AC34 2012 event through the AC34 2013 event. As at Piers 30-32, any racing yachts at Pier 80 would be stored and secured as appropriate within the individual team bases between the AC34 2012 and AC34 2013 events.



SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-16
Option 1 for AC34 2012:
Ancillary Team Base at Pier 80

Option 2 (Pier 80 Primary Team Bases)

Under Option 2, Pier 80 would serve as the proposed primary team bases for AC34 2012. The preliminary site plan for primary team bases at Pier 80 under Option 2 is presented in **Figure 3-17**. As shown in Figure 3-17, bases for up to 15 teams would be provided at Pier 80 under Option 2 (i.e., up to 10 more team bases at Pier 80 than under Option 1); otherwise, the types of activities and uses that would occur at Pier 80 under this team base option would be similar to those discussed under Option 1, above, for Pier 80, Piers 30-32, Pier 26 and Pier 28. As under Option 1, a controlled public access corridor would be created on Pier 80 adjacent to the team bases under Option 2 for viewing of a portion of the team base operations at designated times.

Similar to Pier 80 under Option 1, two mobile cranes would be used at Pier 80 under Option 2. However, under Option 2, a longer temporary floating dock (approximately 1,000 feet in length, or 600 feet longer than under Option 1) and additional anchored moorings would be installed in Islais Creek Channel along the south pier apron adjacent to the team bases to accommodate the greater number of teams. As under Option 1, a helicopter barge may be stationed at the southeast corner of Pier 80 (see additional discussion under Helipad / Helicopter Operations, below).

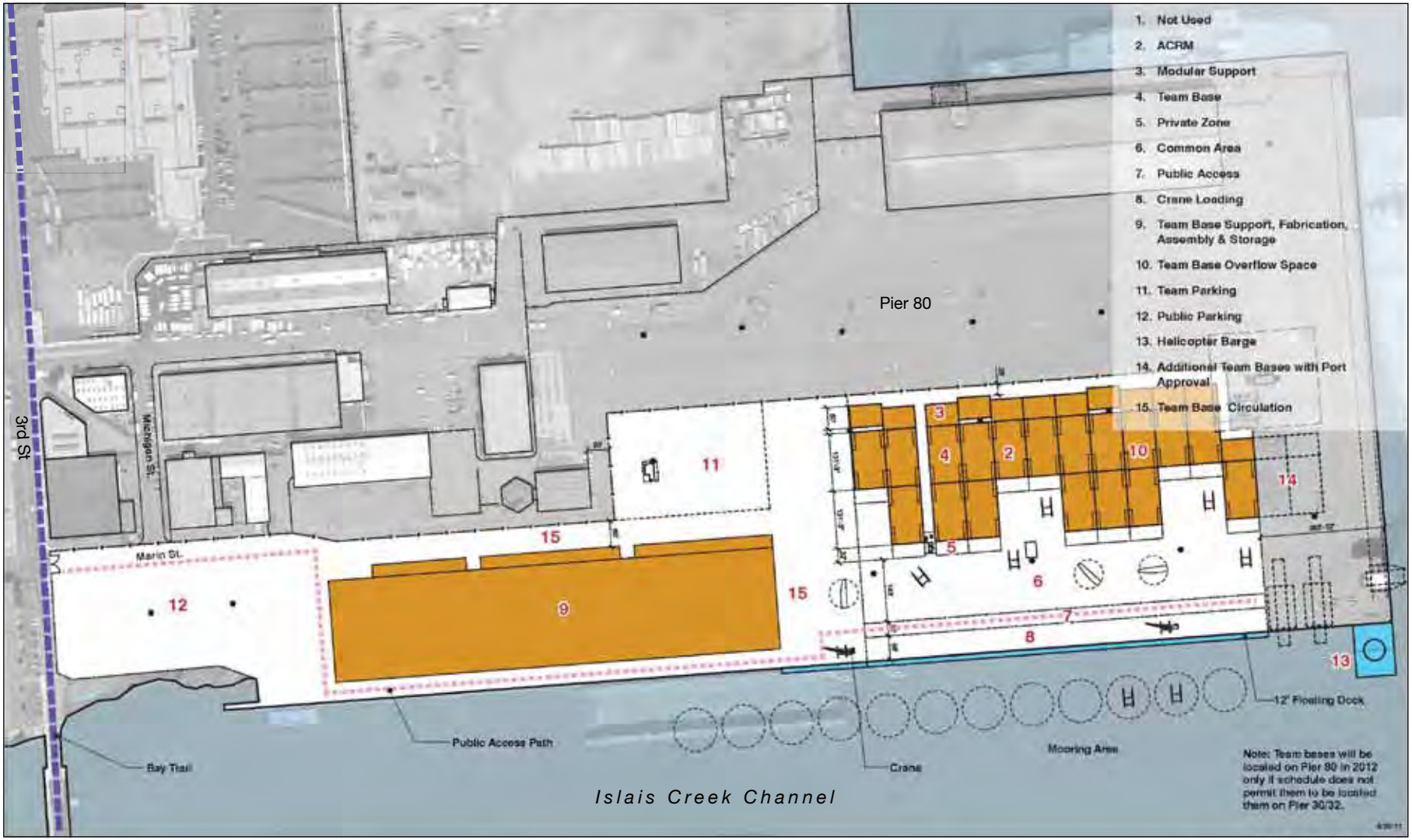
As under Option 1, Shed A would be used as the team base for the Oracle Racing team and would also serve as the location where all teams would conduct any proposed specialized boat fabrication and/or assembly activities. Please also see discussion of proposed team base boat fabrication and assembly facilities, boat washdown facilities, and related activities, below.

As under Option 1, many of the AC34 2012 team base temporary facilities at Pier 80 under Option 2, including team base tents and modules, floating docks, boat wash areas and related components, would remain in place following the AC34 2012 event through the AC34 2013 event; and all race yachts at Pier 80 would be stored and secured as appropriate within the individual team bases between the AC34 2012 and AC34 2013 events.

Team Base Boat Fabrication, Assembly, Maintenance and Repair

For AC34 2012, all AC45 racing yachts would be fabricated in New Zealand, and shipped in parts to the team bases; consequently, only limited boat fabrication would be expected occur at the team bases for AC34 2012. Under Team Base Option 1 or Team Base Option 2, the team bases would accommodate some limited fabrication for and/or assembly of the AC45 racing yachts and wing masts for all competing teams. Shed A at Pier 80 would be used as a workshop for any specialized fabrication and/or assembly steps requiring a controlled, enclosed environment. All adhesives and other materials required for assembly would be used under strict standards of quality and safety in accordance with supplier specifications and standard industry practices, and in compliance with applicable regulatory requirements. All hazardous materials would be stored in purpose-built cabinets.

A variety of maintenance and repair activities would also occur on a regular basis in designated work areas. The mechanic shop work area would be used to service onboard systems such as winches and deck hardware, the sail loft work area would contain sewing machines used to



SOURCE: AECOM

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Figure 3-17
Team Base Option 2 for AC34 2012:
Primary Team at Pier 80

fabricate sails and the metal work area would include lathes and mill equipment for metal projects. Another work area would be used for woodworking and would be kept clean using an extraction venting systems to collect debris. All abrasive surface preparations would be done in a purpose-built space in a work area in conformance with applicable air quality regulatory standards. Another work area would include a purpose-designed paint booth for touching up parts of the yacht, and which would include an extraction fan in compliance with applicable regulations.

The manufacturing, processing and maintenance practices conducted by AC34 race teams would be subject to all applicable environmental and safety requirements, standards and best management practices that would be contained in an AC34 Race Team Operations Manual. (Additional description of the Team Base Operations Manual that would be implemented for AC34 is described in Section 3.4.7, Implementation Plans, below.

Team Base Boat Washdown Systems

Under Team Base Option 1 or Team Base Option 2, Piers 30-32 and Pier 80 would have up to two boat washdown areas where the racing yachts would be washed/rinsed (e.g., after the boats are repaired at the bases; after boats are removed from the Bay after practices, races, etc.). Each washdown area would measure approximately 80 feet by 80 feet, and would have a rubber or plastic perimeter dike/curb to contain the water/sediment and other materials and to direct drainage to a low point or sump. It is anticipated up to 200 gallons of water would be used per wash. Two washdown system options are currently being contemplated. Under the first system option, a truck-mounted package treatment unit would be installed at Piers 30-32 and Pier 80 and used to treat the washdown water so that it may be recycled. Under the second system option, the washdown water would be regularly removed by a truck equipped with suction vacuum and transported off-site to an appropriate off-site wastewater treatment plant for disposal.

Helipad / Helicopter Operations

Helicopters would be used for AC34 2012 races to serve broadcasting and media operations. The America's Cup Event Authority Television (ACEA TV) would use three helicopters for the match racing days in the World Series. The helicopters would follow the race route; two are proposed to fly at between 100 and 400 feet above sea level (asl) and one at approximately 1,000 feet asl in the vicinity of the race area, except where flight restrictions are specified.[29]

A helicopter landing pad (helipad) would be used to serve as a temporary staging location for these helicopters, such as between individual races on a race day. Two potential helipad location options are being considered for temporary staging for these helicopters, of which one option would be selected for use during the event. The first potential option is an existing helipad site located in the southeast corner of Treasure Island (at California Avenue and Avenue N), as

[29] To protect sensitive species at Alcatraz, flight restrictions surrounding the island would be enforced in the air space, and helicopters would not be permitted within 1,000 feet (laterally and/or horizontally) of the island. This air space restriction distance of 1,000 feet would also be applied for flight patterns above Crissy Field.

shown in **Figure 3-18**.[30] The second potential helicopter helipad location would be a barge equipped with a helipad stationed at the southeast corner of Pier 80 (see location in Figure 3-15 under Team Base Option 1 and Figure 3-16 under Team Base Option 2).

Under either helipad option, helicopter fueling and overnight landing and storage would occur at one or more existing regional airports.[31] (A Water and Air Traffic Plan would be implemented for AC34; please see description in Section 3.4.7, Implementation Plans, below.)

Marina Green (Proposed AC Village)

The AC Village at Marina Green would serve as the focal point for AC34 in 2012 and a hub of hospitality, media operations, entertainment and spectator viewing of the sailing races. The majority of areas within the AC Village would be open to the general public, although certain areas and functions within the venue would be limited to, and security controlled for, private guests and/or sponsors and staff.

The preliminary site plan for the AC Village at Marina Green is presented in **Figure 3-19**. The AC Village at Marina Green would contain a range of facilities and services, including the AC34 Operations Office, a media center, the potential to house an international broadcast center, hospitality areas for the public and for corporate and private functions, outdoor amphitheater event seating, and areas of sponsor displays, exhibitions, general merchandise, food and beverage sales, and restrooms. Up to three large tents[32] would house the operations office and hospitality functions, along with various smaller tents[33] and other temporary structures for other uses. Ancillary off-street parking (e.g., the existing parking lot east of Marina Green) would be dedicated to serve the AC Village.

The proposed outdoor seating would accommodate approximately 2,000 spectators for public viewing of the races. This would consist of bleacher-style seating.[34]

As described in the typical activity program for the AC Village (Table 3-2), a variety of events would take place at the AC Village, particularly on race days, including the potential for live entertainment and other events to occur between the hours of 10:00 a.m. and 11:00 p.m. on key race days. The AC Village would contain a large event stage,[35] a small celebration stage, and

[30] This existing helipad is currently used infrequently for a number of purposes, including by the U.S. Fish and Wildlife Service (for airlifting supplies to the Farallon Island research center); CHP, California National Guard, and U.S. Coast Guard (e.g., for emergencies, transporting dignitaries); and for helicopters used in filming (e.g., the television show "Trauma."). Helicopters using this helipad are prohibiting from having a low flightpath over the island, and must approach the helipad from the waterside.

[31] Such as San Francisco International Airport, Oakland International Airport, Hayward Executive Airport, or San Carlos Airport.

[32] Two of the tents would be one level, measure up to 300 feet long by 100 feet wide by 42 feet tall, and one two-level tent would measure approximately 160 feet by 130 feet wide by 40 feet tall.

[33] The smaller tents would measures to 40 feet long by 20 feet wide by 15 feet tall.

[34] The bleacher structure would contain approximately 15 rows of seating and measure approximately 240 feet long by 45 feet wide and up to 15 feet in height.

[35] The large event stage would measure approximately 110 feet long by 100 feet wide and the overall maximum height of accompanying stage set (i.e., top of scaffolding) would be approximately 70 feet.

SOURCE: Google Maps; ESA

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Figure 3-18

Helipad Location at Treasure Island

SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-19

AC34 2012: Proposed AC Village at Marina Green

large video screens. It is anticipated that sound amplification systems would be used at the AC Village for entertainment and general public announcement purposes; similarly, nightlighting would be used for live entertainment, general utility, and for safety purposes.

Temporary floating docks would be installed at Marina Green for mooring of AC34 tender boats and race official boats (and could be temporarily used by private spectator boats for pickup and drop off of passengers). The floating docks would measure in total approximately 500 feet in length and would be 16 feet in width. No modifications to the historic seawall at Marina Green are proposed; temporary gangways would be installed between the proposed floating docks and the top of the seawall for access to and from the floating docks. A number of anchored moorings would also be temporarily installed at Marina Green for AC34-related race boats. A mobile crane would be used at Marina Green to lift AC45 yachts in and out of the water. This crane would extend to a height of approximately 100 feet above ground to provide adequate clearance while moving the yachts in and out of the water.

Pier 19 and Pier 19½

Pier 19 would be used for ancillary office space and storage for AC34 operations, and Pier 19½ would be used for parking for AC34 2012. Repairs to the pier apron deck and support pile structures would occur, along with fire safety and access improvements, if needed. All proposed permanent improvements, would be subject to Port Commission Resolution No. 04-89 which requires all Port projects to conform to the Secretary's Standards.

Spectator Venues

Spectator venues are defined as designated locations other than the AC Village where hospitality services and/or spectator seating accommodations are proposed as part of AC34. Except where noted, all spectator venues described below would be public venues. The majority of areas within each spectator venue would be open to the general public, although certain areas and functions within the venue could be limited to, and security controlled for, private guests and/or sponsors and staff.

Crissy Field

The proposed spectator area at Crissy Field would be the largest of the proposed spectator venues in 2012 in terms of geographic area and seating accommodations. The preliminary site plans for the Crissy Field West venue and Crissy Field East venue are presented in **Figure 3-20** and **Figure 3-21**, respectively. Crissy Field would contain a range of facilities and services, including up to two large tents (similar in size to those described for Marina Green, above) and a variety of smaller temporary structures housing hospitality services, general merchandise sales, food and beverage concessions, sponsor displays, a first aid station and restrooms. The venue would also include education programs that offer partnership opportunities with the NPS to increase understanding of the history, setting, and environment of Crissy Field and the GGNRA as well as the sport of sailing.

SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-20
Proposed Crissy Field West Venue Plan

SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-21
Proposed Crissy Field East Venue Plan

The proposed outdoor seating at Crissy Field would accommodate approximately 6,200 spectators in multiple bleacher-style seating[36] for public viewing of the races.

Crissy Field would also contain a large event stage (similar in dimensions to that described for Marina Green, above) for live entertainment. It is expected that sound amplification systems would be used at Crissy Field for entertainment, event interpretation and general public announcement purposes; similarly, nightlighting would be used for live entertainment, general utility, and safety purposes.

Fort Mason

The preliminary site plan for the Fort Mason venue is presented in **Figure 3-22**. The proposed venue at Fort Mason may serve as a site for media operations for AC34 2012 and include a temporary international broadcast center and television studios, satellite communications, and provide hospitality. Up to 10 satellite dishes may be installed on the pier apron of Pier 3 at Fort Mason. A floating barge (measuring 60 feet by 80 feet) may be used at Pier 3 to serve as floating dock for media boats to tie to. In addition, the Fort Mason venue may serve as a berthing location for spectator vessels.

Existing uses within Piers 2 and 3 at Fort Mason (including Herbst Pavilion, Festival Pavilion, and Cowell Theater), and public fishing at these two piers, may not be available during certain periods for the AC34 2012 event.

Aquatic Park

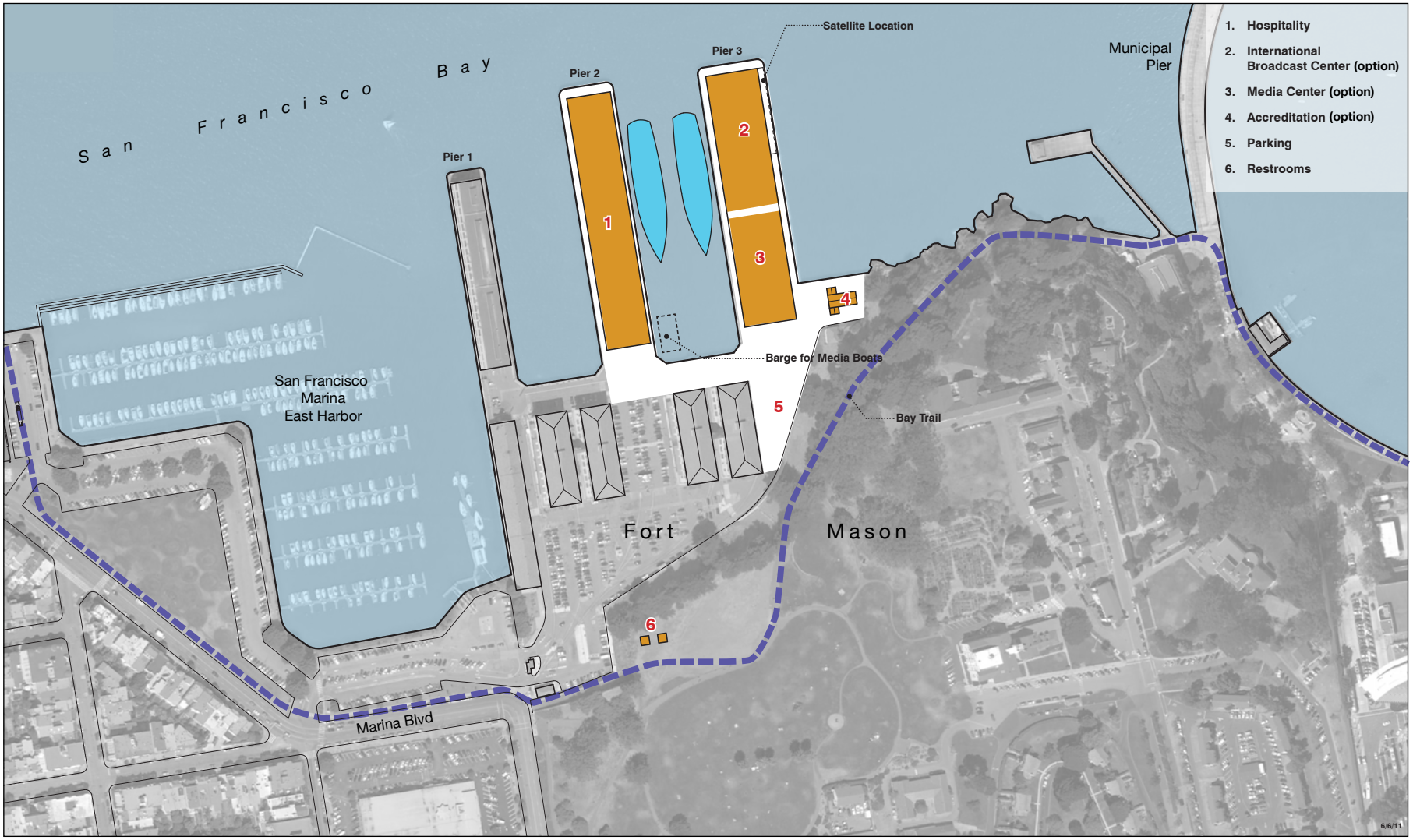
The preliminary site plan for the Aquatic Park venue is presented in **Figure 3-23**. The proposed spectator venue at Aquatic Park would provide general merchandise sales and exhibitions, including boat displays, and a large video screen set on a floating platform for viewing of AC34 races.[37] Access to Hyde Street Pier would be controlled during AC34 races. In addition, Municipal Pier would be closed on race days during the periods that AC34 races occur.

Alcatraz

The preliminary site plan for the Alcatraz venue is presented in **Figure 3-24**. The proposed hospitality venue at Alcatraz would be used exclusively for hosting corporate and private functions and are anticipated to be held indoors within the main cellhouse building. Weather monitoring and communication broadcasting equipment (satellite dishes) would be installed within the grounds for signal transmission during AC34 2012 at an agreed upon location with NPS.

[36] A series of 5 bleacher structures would be installed at the Crissy Field West venue that would seat a total of 4,800 spectators, each bleacher structure would contain approximately 16 rows of seating and measure approximately 104 feet long by 40 feet wide and up to 15 feet tall. 2 additional bleacher structures would be installed at the Crissy Field East venue, accommodating at total of 1,400 spectators; each structure would measure approximately 140 feet long by 28 feet wide and up to 8 feet tall.

[37] A LED (light-emitting diode) video screen measuring approximately 44 feet wide by 22 feet in high would be installed on an approximately 140-foot long barge.



SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-22
Proposed Fort Mason Venue Plan

SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-23
Proposed Aquatic Park Venue Plan

SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-24
Proposed Alcatraz Venue Plan

Fort Baker Pier at Cavallo Point

The preliminary site plan for the Fort Baker Pier at Cavallo Point venue is presented in **Figure 3-25**. Similar to the Alcatraz venue, the proposed hospitality venue at Fort Baker Pier at Cavallo Point would be used exclusively for hosting corporate and private functions. Broadcasting equipment associated with event communications for following the AC34 races may also be installed either at Cavallo Point, or nearby Battery Cavallo or Battery Wagner; the final location would be agreed upon with NPS.

Live Sites

The Live Sites would consist of viewing locations at Justin Herman Plaza, Union Square and San Francisco Civic Center where the AC34 2012 races could be viewed remotely on large outdoor television screens. These Live Sites would provide a range of hospitality services, including general merchandise sales, food and beverage concessions, and entertainment.

Distributed Retail Vendors along The Embarcadero

The project sponsor proposes to allow authorized food cart vendors to provide food, beverage, information and ancillary merchandising services to race spectators and visitors to the waterfront. The vendor program would follow composting, recycling and sustainable debris handling practices recommended in the AC34 Waste Management Plan (see discussion in Section 3.4.7, Implementation Plans, below) and enable the project sponsor to manage The Embarcadero more effectively against unauthorized retail and commercial enterprise.

Weather Stations

Weather equipment would be temporarily installed at a number of strategic locations in the race course vicinity to monitor relevant meteorological conditions for the AC34 2012 races. This would include the use of wind sensors (for winds speeds and direction), temperature gauges, humidity sensors and/or LIDAR (light detection and ranging) sensors. Potential sites for this weather equipment include Piers 27-29, Municipal Pier at Aquatic Park, Alcatraz, Treasure Island, Angel Island, and the Golden Gate Bridge. Such equipment would be small in scale and installed on the ground or existing structures without requiring new construction. This temporary weather equipment would remain in place through the AC34 2013 event, after which it would be removed.

AC34 2013: Venue Plan

Figure 3-26 presents the venue plan for AC34 2013. As with AC34 2012, the improvements proposed for venue facilities for AC34 2013 would involve substantial capital investment and construction. This would include temporary installations that would be removed after the AC34 2013 concludes, and some permanent improvements that would remain after AC34. Following the removal of temporary installations at AC34 venues in 2013, those venues would be restored as needed (e.g., spectator venues resodded and revegetated) to pre-AC34 event condition. **Table 3-10** summarizes key temporary and permanent project components at AC34 2013 venues.

SOURCE: AECOM

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Figure 3-25

Proposed Fort Baker Pier at Cavallo Point Venue Plan

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-26
AC34 2013 Proposed Venue Plan

TABLE 3-10
AC34 2013: PROPOSED VENUES AND KEY FACILITIES AND IMPROVEMENTS

Venue	AC34 2013 COMPONENT										
	Temporary Project Component										Permanent Project Component
	Team Bases and Team Base Support	AC Village	Spectator Venue[a]	Hospitality Services (food and Beverage, Merchandising, etc.)	Installation of Spectator Seating	Installation of Berthing Facilities for AC34 Race/ Support Boats and/or Private Spectator Boats	AC34 Operations, storage and/or ancillary	Dedicated AC34 Parking[b]	Media Operations / Broadcasting Equipment	Corporate and Private Functions	Proposed
Pier 80	✓[c]			✓[d]		✓	✓	✓			
Piers 30-32[e]	✓			✓[d]		✓					• Seismic upgrades and repair, including: - Repair and strengthen marginal wharf, install a seismic joint, strengthen the existing pier deck from the marginal wharf to the valley between Piers 30-32 to support heavy truck loads, install piles/caps to increase lateral capacity - Remove/replace portions of deck, reinforcing steel, soffit, and piles - Install structure to raise depressed area between Piers 30 and 32 - Install stormwater management features
Piers 32-36 Open Water Basin[e]	✓					✓					• Dredging of portion of water basin to approximately -17 feet mean lower low water (MLLW)
Pier 26 and Pier 28[e] ***Piers 28-30 Water Area***	✓					✓	✓	✓			• Fire, safety, and access improvements • Roof and exterior wall repairs and replacement, lead paint and asbestos abatement, waterproofing, mechanical system upgrades, deck resurfacing, new utility services • Dredging between Pier 28 and Pier 30 to approximately -12 feet MLLW • Possible apron and fender repairs
Seawall Lot 330								✓			
Rincon Point Open Water Basin (Piers 14-22½)						✓					• Dredging of portion of water basin to approximately -12 feet MLLW
Pier 19 and Pier 19½[f]				✓		✓	✓	✓			• Repair of the deck and piling for the north and south aprons, if needed • Fire, safety, and access improvements, if needed
Pier 23				✓		✓	✓		✓		• Repair of the deck and piling for the north and south aprons, if needed • Fire, safety and access improvements, if needed
Piers 27-29 ***Northeast Wharf Open Water Basin (Piers 19-23 and Piers 23-27)*** ***Piers 29-31 Water Area***		✓		✓	✓	✓				✓	• Demolish Pier 27 shed and portion of Pier 29 shed, and construct new Pier 29 shed east/corner wall • Demolish Pier 27 annex building • Construct Pier 27 cruise terminal core building and shell • Repair surface and provide Americans with Disabilities Act (ADA) access • Repair the Piers 27-29 substructure, if needed • Strengthen and seismically upgrade Pier 29 superstructure, if needed • Repair Pier 29 apron and fendering, if needed • Relocate shoreside power • Install stormwater management features • Repair Piers 27-29 and Piers 29-31 marginal wharfs, if needed
Pier 29½							✓[g]				
Other Water Areas Piers 9-15 water area Piers 17-19 water area Fort Mason											• Possible apron and fender repairs at one or more of these areas.
Crissy Field			✓	✓	✓			✓		✓	
Marina Green			✓	✓	✓			✓		✓	
Fort Mason			✓ (private)	✓ (private)				✓	✓	✓	
Aquatic Park			✓	✓						✓	
Alcatraz			✓ (private)	✓ (private)					✓[h]	✓	
Fort Baker Pier at Cavallo Point			✓ (private)	✓ (private)				✓	✓[h]	✓	
Live Sites			✓	✓							

[a] Spectator venues are designated locations besides the AC Village where hospitality services and/or spectator seating accommodations are proposed as part of AC34. See text for details.
[b] Certain existing parking/paved areas dedicated to serve AC34 staff, guests and/or for event.
[c] While Piers 30-32 would be the primary location of team bases for AC34 2013, Pier 80 would be used as an overflow/ancillary team base. See text for details.
[d] Hospitality services (e.g., catering facilities) at Pier 80 and/or Piers 30-32 for team bases only.
[e] Under AC34 2012 Team Base Option 1, the temporary and permanent improvements listed in this table proposed at Piers 30-32, the Piers 32-36 Open Water Basin, Pier 26, and Pier 28 (with the exception of floating docks at Pier 26 and Pier 28) would be completed as part of the AC34 2012 event, in which case they would not occur as part of the AC 34 2013 event. See text for details.
[f] Permanent Improvements at Piers 19 and 19 ½ may occur as part of AC34 2012 or AC34 2013.
[g] Pier 29½ would be used for food preparation and other back-of-house activities.
[h] Location for minimal equipment (e.g., satellite dishes)

The following provides additional detail on specific proposed venues and associated facilities. Additional construction details for temporary installations (e.g., temporary floating docks and wave attenuators) and permanent improvements (e.g., dredging, pier seismic upgrades and repairs) at venues are described in Section 3.4.5, Construction, below. Information on tenant displacement and relocation is discussed in Section 3.4.6.

Piers 30-32 and Piers 32-36 Open Water Basin (Proposed Team Bases)

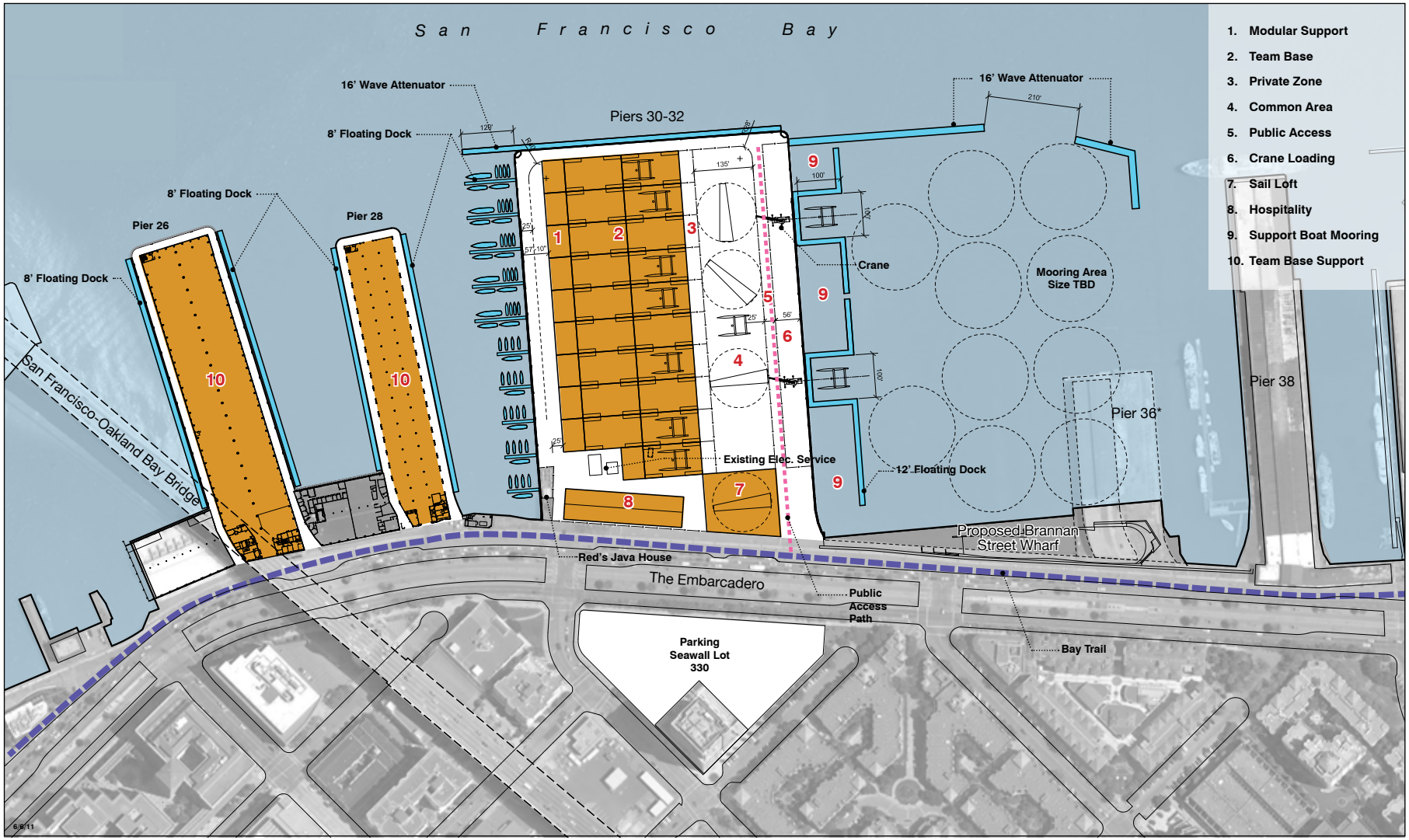
Piers 30-32 and adjacent the Piers 32-36 Open Water Basin would serve as the primary team bases for AC34 2013. If Piers 30-32 and the Piers 32-36 Open Water Basin are also the primary team bases for AC34 2012 (i.e., Team Base Option 1, as described under AC34 2012: Venue Plan, above), then the associated temporary team base facilities (including team base tents and modules, and in-water facilities, including wave attenuators and floating docks and anchorage field) that are in place for AC34 2012 would remain at Piers 30-32 and the Piers 32-36 Open Water Basin and be used through the AC34 2013 event. Under this condition, since the permanent improvements described under Team Base Option 1 for Piers 30-32 (e.g., seismic upgrades and repair) and the Piers 32-36 Open Water Basin (i.e., dredging) would be completed prior to the AC34 2012 event, no additional permanent improvements would occur at this location for AC34 2013.

However, if Pier 80 is the location of the primary team bases for AC34 2012 (i.e., Team Base Option 2), then much of the temporary team land- and water-based event-related facilities from Pier 80 would relocate to Piers 30-32 and Piers 32-36 Open Water Basin, along with site-specific new temporary facilities (e.g., wave attenuators) for the AC34 2013 event. In addition, the permanent improvements that would not occur prior to the AC34 2012 event at Piers 30-32 and the Piers 32-36 Open Water Basin under Team Base Option 2 would instead occur at those sites prior to AC34 2013 event.

A preliminary site plan for the proposed team bases and other proposed facilities at Piers 30-32 and the adjacent Piers 32-36 Open Water Basin for AC34 2013 is presented in **Figure 3-27**. The type, number, size, and location of temporary land- and water-based temporary facilities proposed at Piers 30-32 and the Piers 32-36 Open Water Basin for AC34 2013, including but not limited to, tents and modules, sail loft, cranes, floating docks, wave attenuators, boat washdown facilities and other features would be similar to that described for Piers 30-32 and the Piers 32-36 Open Water Basin in Team Base Option 1 under AC34 2012: Venue Plan, above.

Primary Team Bases Support Facilities at Pier 26 and Pier 28; and Piers 26-28 and Piers 28-30 Water Area

A preliminary site plan for the proposed team base support facilities for AC34 2013 is presented in Figure 3-27. Pier 26 and Pier 28 would provide support space for office, storage, logistics, parking and other team-related needs for the team bases, and temporary storage of signage and traffic management improvements. Permanent improvements at these piers (i.e., fire, safety and access improvements; shed roof and wall repairs and abatement; mechanical and utility improvements; potential apron and fender repairs, and minor dredging between Pier 28 and Pier 30), if they do not occur as part of Team Base Option 1 in AC34 2012, would be constructed



NOTE: Pier 36 to be removed as part of the proposed Brannan Street Wharf project.

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SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-27

AC34 2013: Proposed Primary Team Bases at Piers 30-32, Piers 32-36 Open Water Basin, and Team Base Support at Pier 26 and Pier 28

as part of AC34 2013. In addition, Piers 26-28 would be used as berthing sites for sponsor, race support, and/or private spectator boats. Approximately 2,100 linear feet (8-foot width) of floating docks and gangways would be installed on the north and south sides of Piers 26 and 28 (see Figure 3-27), along with gangways, to provide berthing capacity for boats.

The installation of all temporary docks and gangways and their connection to pier aprons, and all proposed permanent improvements, would be subject to Port Commission Resolution No. 04-89 which requires all Port projects to conform to the Secretary's Standards.

Pier 80 (Proposed Ancillary Team Base)

Pier 80 would serve as a team base for the Oracle Racing team and teams that would not be able to be accommodated at the primary team bases at Piers 30-32. The type, number, size, and location of temporary land- and water-based temporary facilities proposed at Pier 80 for AC34 2013, including but not limited to, tents and modules, sail loft, parking facilities, cranes, floating docks, boat washdown facilities, and other features would be similar to that described for the ancillary base at Pier 80 in Team Base Option 1 under AC34 2012: Venue Plan, above. The site plan for the ancillary base at Pier 80 for AC34 2013 would be similar to that illustrated in Figure 3-16 for the Team Base Option 1 under AC34 2012: Venue Plan, above.

Team Base Boat Fabrication, Assembly, Maintenance and Repair

For AC34 2013, the team bases would accommodate the fabrication and assembly of the AC72 racing yachts and wing masts for all competing teams. Many of the types of proposed fabrication activities are common to modern boat fabrication. In addition, creating the racing yachts to aerospace standards would require the use of certain high-tech materials and advanced techniques in order to meet quality and safety criteria for the racing yachts. In some cases, the carbon fiber components would be sent to the team bases in finished but unassembled form, and then attached to the catamaran platforms, wing masts, and other ancillary systems for the AC45 yachts at the team bases.

Shed A at Pier 80 would be used as a workshop for a number of the specialized fabrication and assembly steps requiring a controlled, enclosed environment. Boat hull construction activities at Pier 80 would take place in compliance with the applicable America's Cup AC72 rules and protocols. The hulls would be cured in an 80-foot-long modular oven heated by recirculating electric heaters. Other smaller boat parts would be cured in a smaller process oven with heat provided by an electric heater. Both ovens would cure at approximately 80 degrees Celsius (heat source would not produce combustion) and would be monitored and recorded by computers to assure safety and process standards. The enclosed workshop area where fabrication would take place would be dust free, and temperature and humidity controlled so the mechanical properties of carbon preimpregnated (prepreg) materials can be achieved.[38]

[38] Prepreg refers to composite material that has a catalyzed resin system pre-impregnated into the reinforcement. In the case of the AC72 race boats, carbon is the reinforcement matrix. The prepreg material is partially cured at the supplier's factory to remove approximately 98 percent of the volatiles prior to shipment to the team bases. The materials are then shipped frozen to the team bases ensuring that the resin does not catalyze with in the reinforcement. All prepregs are cured under vacuum bags that are fed to vacuum pumps with carbon filters on the exhaust, and consequently no noxious fumes would be emitted.

Part of the boat assembly process would involve the adherence of various components to one another using aerospace quality adhesives and laminating processes. All adhesives and composite materials would be used under strict standards of quality and safety in accordance with supplier specifications and standard industry practices, and in compliance with applicable regulatory requirements. This would include carrying out all mixing procedures in specialized controlled areas and storing these materials in purpose-built cabinets for hazardous materials. All carbon materials would be stored in freezer units on-site.

A variety of maintenance and repair activities would also occur on a regular basis in designated work areas. The mechanic shop work area would be used to service onboard systems such as winches and deck hardware, the sail loft work area would contain sewing machines used to fabricate sails and the metal work area would include lathes and mill equipment for metal projects. Another work area would be used for woodworking and would be kept clean using an extraction venting systems to collect debris. All abrasive surface preparations would be done in a purpose-built space in a work area in conformance with applicable air quality regulatory standards. Another work area would include a purpose-designed paint booth for touching up parts of the yacht, and which would include an extraction fan in compliance with applicable regulations.

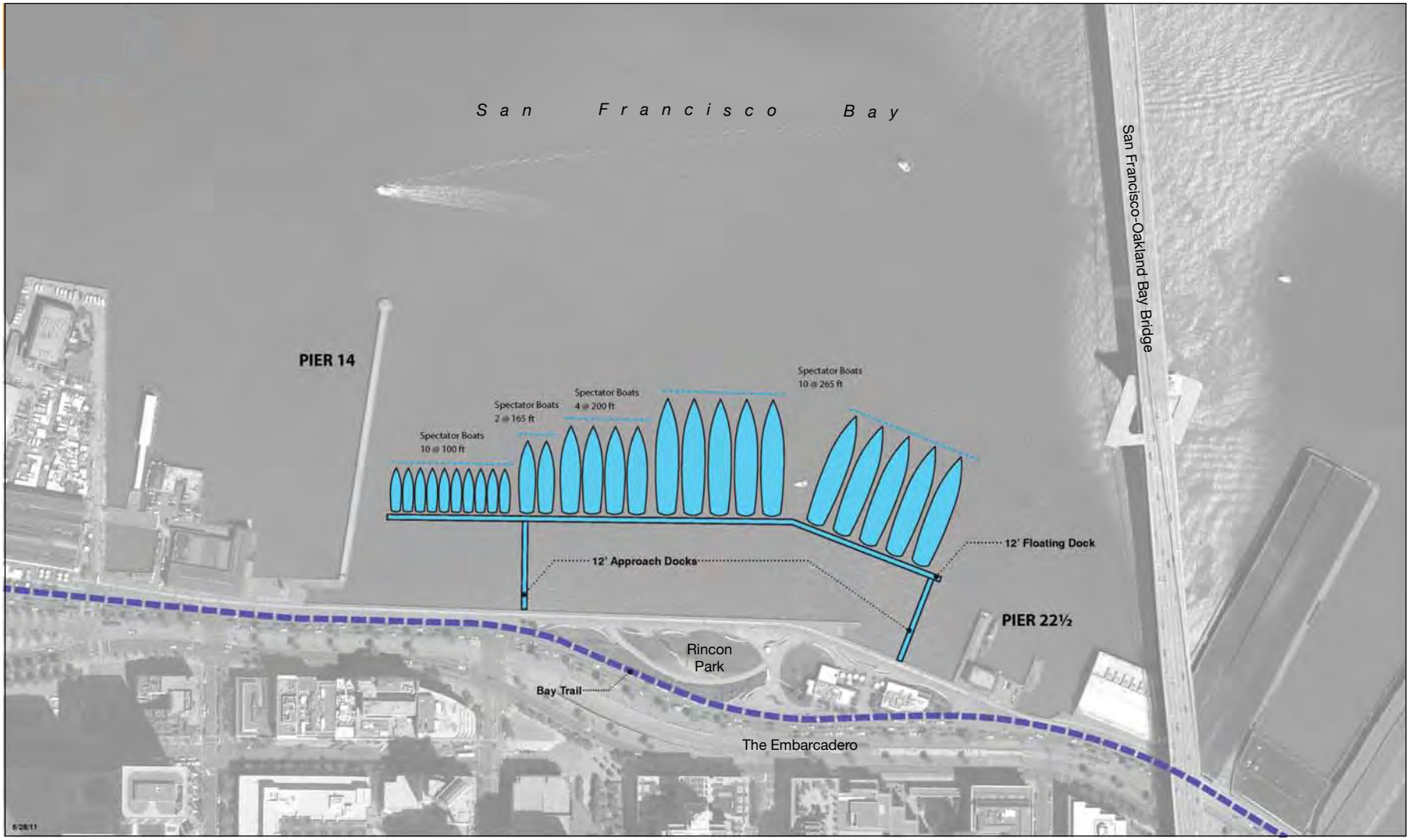
The manufacturing, processing and maintenance practices conducted by AC34 race teams would be subject to all applicable environmental and safety requirements, standards and best management practices that would be contained in an Team Base Operations Manual. (Additional description of the Team Base Operations Manual that would be implemented for AC34 is described in Section 3.4.7, Implementation Plans, below.

Helipad / Helicopter Operations

As described for AC34 2012, helicopters would be used for AC34 2013 races to serve broadcasting and media operations. ACEA TV would use three helicopters for the fleet race days. The helicopters would follow the race route; two are proposed to fly at between 100 and 400 feet asl and one at 1,000 feet asl in the vicinity of the race area, except where flight restrictions are specified. As in 2012, a barge equipped with a helipad is proposed for AC34 2013 to serve as a temporary staging location for these helicopters, such as between individual races on a race day. As in 2012, the helipad options for AC34 2013 would be either an existing helipad located at the southeast corner of Treasure Island (see Figure 3-18), or on a barge stationed at the southeast corner of Pier 80 (see Figure 3-16). Similarly, helicopter fueling and overnight landing and storage would occur at one or more existing regional airports. (A Water and Air Traffic Plan would be implemented for AC34. Please see description in Section 3.4.7, Implementation Plans, below.)

Rincon Point Open Water Basin (Piers 14-22½)

As shown in **Figure 3-28**, Piers 14-22½ would be a berthing site for event sponsor and/or private spectator boats. An approximately 1,300-foot-long temporary floating dock (12-foot width), gangways, and bow anchor moorings would be installed in this water basin. In order to provide sufficient water depth for boat clearance, a number of remnant submerged pier piles within the basin would be cut and removed, and dredging within the basin would be conducted. Dredging



SOURCE: AECOM

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Figure 3-28

AC34 2013: Proposed Piers 14-22 1/2 Open Water Basin Venue Plan

would occur to a depth of approximately -12 feet MLLW (11 feet plus 1 foot overdepth), amounting to approximately 29,000 cy of dredged materials that would require disposal (see **Appendix PD-2**, **Figure PD-2.3**, for an illustration of approximate dredging boundary).

Pier 19 and Pier 19½

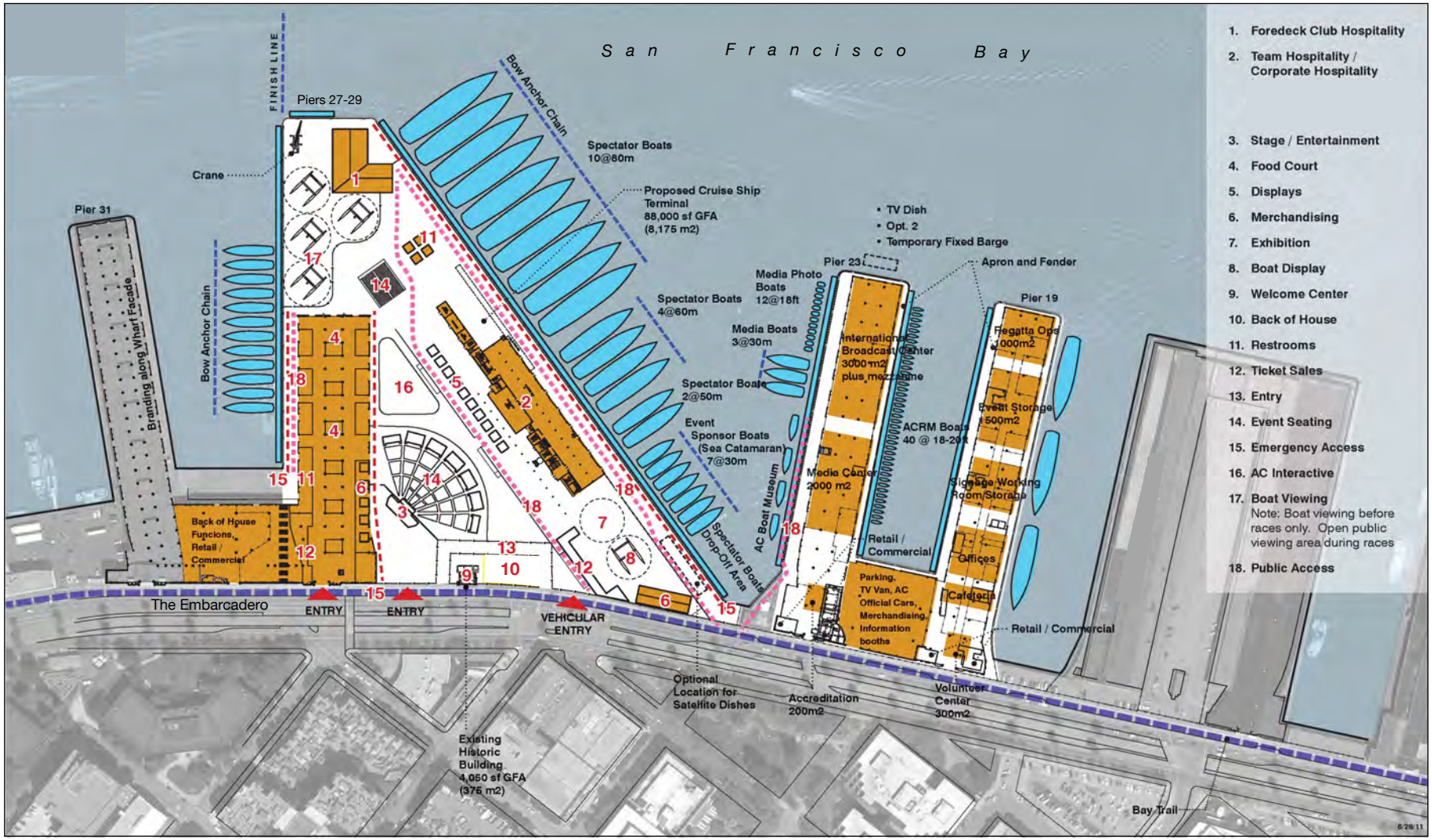
A preliminary site plan for the Pier 19 and Pier 19½ (along with Pier 23, Piers 27-29½, and adjacent water basins, as described below) is presented in **Figure 3-29**. Temporary structures and installations that would be constructed at Pier 19 would consist of a temporary cafeteria for AC34 staff, media, and volunteers; a volunteer center; and ancillary office and storage. Pier 19½ would be used for truck loading, deliveries, parking, and/or commercial/retail activities. Permanent improvements (i.e., repairs to the pier apron deck and support pile structures, along with fire safety and access improvements, if needed) if they do not occur as part of AC34 2012, would be constructed as part of AC34 2013. As an option, rather than the floating docks proposed on the south side of Pier 23 (see description below), approximately 600 linear feet of floating docks (8 feet in width) and gangways would be installed on the north side of Pier 19 for berthing of ACRM boats. The installation of all temporary docks and gangways and their connection to pier aprons, and all proposed permanent improvements, would be subject to Port Commission Resolution No. 04-89 which requires all Port projects to conform to the Secretary's Standards.

Pier 23

Pier 23 would serve as the media operations center location for AC34 2013. (Fort Mason is an optional location under consideration for media operations for AC34 2013). As shown in Figure 3-29, temporary structures and installations would be constructed at Pier 23 for a proposed media center, an international broadcast center, television production and studios, and a staff, media, volunteer credential center, and/or commercial/retail activities. An approximately 4,000-square-foot barge would be set on piles at the east end of Pier 23 to accommodate up to 10 satellite dishes. In addition, up to four 200-square-foot temporary broadcast booths may be set up on the Pier 23 apron or other location. Approximately 600 linear feet of floating docks (8-foot width) and gangways would be installed on the south side of Pier 23 (see also installation of floating docks on north side of Pier 23 in the discussion of the Northeast Wharf Open Water Basin [Piers 23-27], below). The installation of all temporary docks and gangways and their connection to pier aprons, and all proposed permanent improvements, would be subject to Port Commission Resolution No. 04-89 which requires all Port projects to conform to the Secretary's Standards.

Piers 27-29 (AC Village) and Pier 29½

The proposed AC Village at Piers 27-29 would serve as the focal point for AC34 in 2013 and a hub of hospitality, entertainment, and spectator viewing of the sailing races in 2013. As would be the case with the AC Village at Marina Green in 2012, the majority of areas within the AC Village at Piers 27-29 for AC34 2013 would be open to the general public, although certain areas and functions within the venue would be limited to, and security controlled for, private guests and/or sponsors and staff. Figure 3-29 presents a preliminary site plan for the proposed AC Village at Piers 27-29. **Figure 3-30** illustrates the proposed AC Village during periods when AC34 races are occurring.



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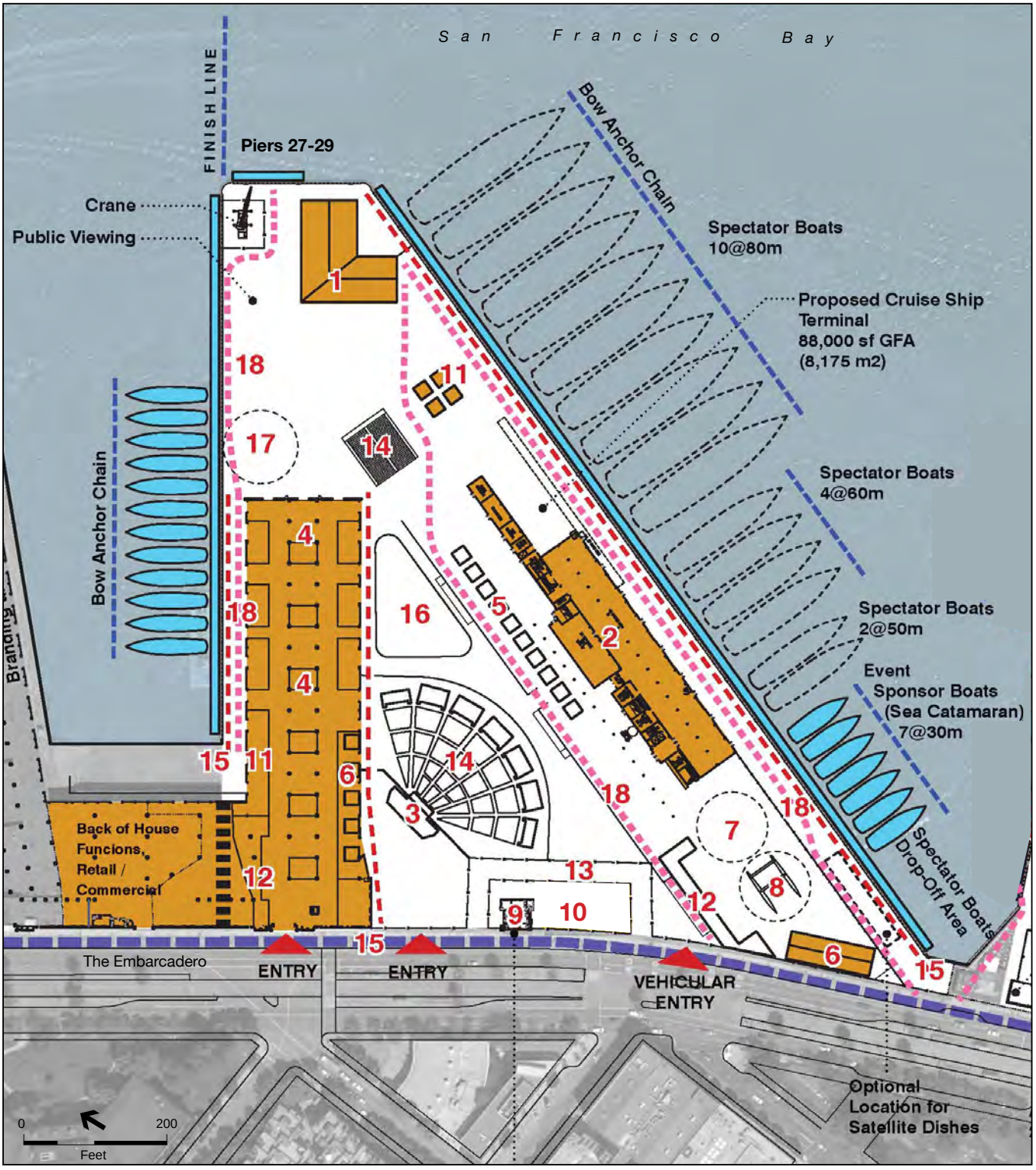
SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-29

AC34 2013: Proposed Pier 19, Pier 19 1/2, Pier 23, AC Village at Piers 27-29 and Pier 29 1/2 Venue Plan



1. Foredeck Club Hospitality
2. Team Hospitality / Corporate Hospitality
3. Stage / Entertainment
4. Food Court
5. Displays
6. Merchandising
7. Exhibition
8. Boat Display
9. Welcome Center
10. Back of House
11. Restrooms
12. Ticket Sales
13. Entry
14. Event Seating
15. Emergency Access
16. AC Interactive
17. AC72 Cradle Storage Area
18. Public Access

SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-30
AC34 2013: AC Village at Piers 27-29 during Races

The improvements required to support this use would be coordinated with the phased development of the proposed Cruise Terminal project at Pier 27. **Figure 3-31** illustrates buildings on Piers 27-29 that would be removed and those retained. In Phase 1, the Pier 27 shed would be demolished in its entirety,[39] along with the easternmost portion of the Pier 29 shed,[40] to create an area for a proposed expansive temporary public viewing platform at the east end of Piers 27-29. A new east and corner wall for the Pier 29 shed would be constructed to complete the modified pier shed consistent with the Secretary's Standards. The Pier 27 Annex office building would also be demolished. Facilities associated with current tenants of Piers 27-29, including the Teatro Zinzanni tent facility and associated facilities and the soccer field, would be removed. Buildings to remain would include the balance of the Pier 29 shed not demolished and the historic Belt Line office building.

In Phase 1, the Port would also include constructing the cruise terminal core building and shell. This would include most improvements required for the cruise terminal building, with the exception of portions of the interior space that would be left unfinished (such as Customs and Border Protection offices), and specific interior building equipment and exterior maritime equipment specific to cruise terminal operations. Other permanent improvements during Phase 1 would include improving the Piers 27-29 and Piers 29-31 marginal wharfs, if needed.

During AC34 2013, the cruise terminal core building and shell would accommodate proposed AC34 team hospitality suites and associated uses at the AC Village. After the conclusion of the AC34 2013 race events, the Port would follow with construction of Phase 2, involving further construction and improvements to complete the cruise terminal and wharf plaza. (See full description of Phase 2 improvements in Section 3.5, The James R. Herman Cruise Terminal and Northeast Wharf Plaza Project Characteristics, below.)

Other permanent improvements to Piers 27-29 during Phase 2 would include strengthening and seismically upgrading the Pier 29 superstructure, if needed; repairing the Pier 29 apron and fendering; repairing the Piers 27-29 substructure, if needed; and improving Piers 27-29 and Piers 29-31 marginal wharfs, if needed (if that work did not occur in Phase 1). In addition, stormwater management features, including storm drains and collection and conveyance facilities, consistent with the San Francisco Stormwater Management Guidelines, would be installed in Phase 2.

As shown in Figure 3-29, the cruise terminal core building and shell would serve as the temporary location for AC34 team and corporate hospitality functions; the Pier 29 shed would contain food concessions, merchandising, and ticket sales; the adjacent Pier 29½ bulkhead building is where food preparation and other "back of house" activities, and/or commercial/retail activities, would occur; and the historic Belt Line office building would be used as the AC Village welcome center. The open valley of Piers 27-29 would provide a range of functions and services, including event seating

[39] The Pier 27 loading dock that abuts the Pier 27 shed would be retained. In addition, two railroad track remnants located in the vicinity of this loading dock would be retained.

[40] The demolition would span from a point approximately where the Pier 27 shed connects to the Pier 29 shed to the east end of the Pier 29 shed.

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-31
Buildings/Facilities to be Removed or Retained at Piers 27-29

for live entertainment, exhibitions and interactive display areas, and sponsor displays. Tents would be installed within open areas at the AC Village, the largest being for foredeck club hospitality,[41] along with a variety of smaller tents and other temporary structures. An AC72 race boat viewing area would be created at the east end of the Piers 27-29 deck. Up to two cranes (mobile or tower crane) would be used to lift the boats on and off the pier deck at this location.

The AC Village would have two large event seating areas. The event seating in the valley of Piers 27-29 would be approximately 44,000 square feet and 40 feet tall, with a seating capacity of 4,000 people, and would face a stage.[42] In addition, at the east end of Piers 27-29, bleacher-style seating would be installed to provide open Bay views of the AC34 2013 races. This would consist of bleacher-style seating up to 35 feet in height with a seating capacity for 1,100 people. As shown in Figure 3-30, areas would be opened up the deck at the end of the Piers 27-29 deck and along the Pier 27 berthing area to enable open public viewing of the races from the AC Village.

Northeast Wharf Open Water Basin (Piers 23-27) and Piers 29-31 Water Area

As shown in Figure 3-29, the Northeast Wharf Open Water Basin between Piers 23-27 and the Piers 29-31 water area are two potential distributed berthing sites being considered for AC34 sponsor and/or private spectator boats. Because the existing aprons on these piers are at an elevation too high to accommodate the range of smaller boats that could be docked there during AC34 2013, temporary floating docks and gangways would be installed at these pier locations. Specifically, approximately 760 linear feet of floating docks (12-foot width), gangways, and bow anchor moorings would be installed on the north side of Pier 23; 1,280 linear feet of floating docks (16-foot width), gangways, and bow anchor moorings would be installed on Pier 27; and another 830 linear feet of floating docks (12-foot width) would be installed on Pier 29 and the east end of Piers 27-29, in addition to gangways and bow anchor moorings. Potential apron and fender repairs may be needed at one or more of these piers to accommodate these facilities.

Spectator Venues

Except where noted, the majority of areas within each spectator venue for AC34 2013 would be open to the general public, although certain areas and functions within the venue would be limited to, and security controlled for, private guests and/or sponsors and staff.

Crissy Field

The proposed spectator area at Crissy Field would be the largest of the proposed spectator venues for AC34 2013 in terms of geographic area and seating accommodations, and would be similar in design to that proposed for AC34 2012 (see preliminary site plans for the Crissy Field West and Crissy Field East venues in Figure 3-20 and Figure 3-21, respectively, under AC34 2012: Venue Plan). As in 2012, the proposed outdoor seating at Crissy Field in 2013 would: accommodate approximately 6,200 spectators for public viewing of the races; provide a range of hospitality

[41] The foredeck club structure would be approximately 5,000 square feet, and measure 100 feet long by 42 feet wide by 30 feet tall.

[42] The overall maximum height of accompanying stage set (i.e., top of scaffolding) would be approximately 70 feet.

services, including general merchandise sales, food and beverage concessions, educational elements and sponsor displays; and contain a large event stage for live entertainment.

Marina Green

The Marina Green would be developed as a spectator venue in 2013 (in contrast to AC34 2012 where it would serve as the site of the AC Village). The preliminary site plan for the Marina Green venue in 2013 is presented in **Figure 3-32**. The primary difference in site designs at Marina Green between 2012 and 2013 is that there would be no crane, floating docks, or anchorage field at Marina Green in 2013. As in 2012, Marina Green in 2013 would have tents containing hospitality areas for the public and for corporate and private functions; a large event stage for live entertainment; outdoor event seating for 2,000 people for public viewing of the races, and areas of sponsor displays, exhibitions, general merchandise, food and beverage sales, and restrooms.

Fort Mason

The proposed venue at Fort Mason for AC34 2013 may contain some or all of the same media operations uses as those proposed at Fort Mason for the AC34 2012. (see preliminary site plan for the Fort Mason venue in Figure 3-22, under AC34 2012: Venue Plan). Accordingly, the Fort Mason venue in 2013 may include a temporary international broadcast center and television studios, satellite communications, a barge docked at Fort Mason Pier 3 for media boats, and provide hospitality. Similarly, the Fort Mason venue may serve as a berthing location for spectator vessels.

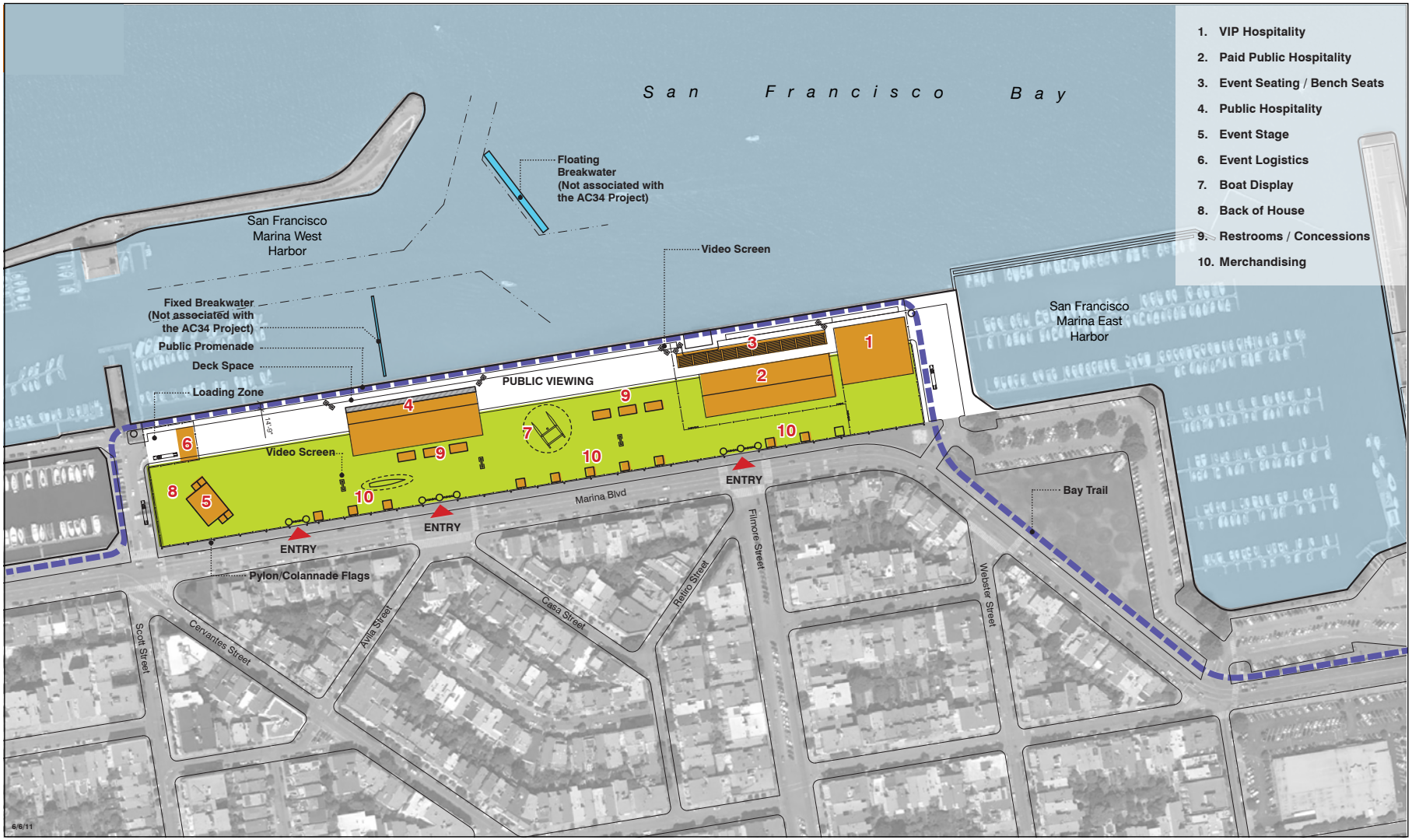
Existing uses within Piers 2 and 3 at Fort Mason (including Herbst Pavilion, Festival Pavilion, and Cowell Theater), and public fishing at these two piers, may not be available during certain periods for the AC34 2013 event.

Aquatic Park

The proposed spectator venue at Aquatic Park in 2013 would be similar to that proposed in 2012 (see the preliminary site plan for the Aquatic Park venue in Figure 3-21 under AC34 2012: Venue Plan, above) and provide general merchandise sales and exhibitions, including boat displays, and a large video screen set on a floating platform for viewing of AC34 2013 races. Access to Hyde Street Pier would be controlled during AC34 2013 races. In addition, Municipal Pier would be closed on race days during the periods that AC34 races occur.

Alcatraz

As in 2012, the proposed hospitality venue at Alcatraz in 2013 would be used exclusively for hosting corporate and private functions and are anticipated to be held indoors within the main cellhouse building (see preliminary site plan for the Alcatraz venue in Figure 3-24, under AC34 2012: Venue Plan, above). Similarly, weather monitoring and communication broadcasting equipment (satellite dishes) would be installed within the grounds at this venue in 2013 for signal transmission at an agreed upon location with NPS.



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SOURCE: AECOM

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-32

AC34 2013: Proposed Marina Green Venue Plan

Fort Baker Pier at Cavallo Point

As in 2012, the proposed hospitality venue at the Fort Baker Pier at Cavallo Point in 2013 would be used exclusively for hosting corporate and private functions (see preliminary site plan for the Cavallo Point venue in Figure 3-25, under AC34 2012: Venue Plan, above). Television cameras and associated communications equipment for following the AC34 2013 races would also be installed either at Cavallo Point or nearby Cavallo Battery.

Live Sites

As for AC34 2012, the Live Sites for AC34 2013 would consist of viewing locations at Union Square, Justin Herman Plaza, and San Francisco Civic Center where the AC34 2013 races could be viewed remotely on large outdoor television screens. A range of hospitality services would be provided, including general merchandise sales, food and beverage concessions and entertainment.

Distributed Retail Vendors along The Embarcadero

Similar to 2012, the project sponsor proposes to allow authorized food cart vendors to provide food, beverage, information and ancillary merchandising services to race spectators and visitors to the waterfront for AC34 2013. The vendor program would follow composting, recycling and sustainable debris handling practices recommended in the AC34 Waste Management Plan (see discussion in Section 3.4.7, Implementation Plans, below).

Weather Stations

As for AC34 2012, small-scale weather equipment installed at a number of strategic locations in the race course vicinity (e.g., Piers 27-29, Municipal Pier at Aquatic Park, Alcatraz, Treasure Island, Angel Island, and the Golden Gate Bridge) would be used to monitor relevant meteorological conditions for the AC34 2013 races. Following the AC34 2013 event, all weather equipment discussed above would be removed.

AC34 2012 and AC 34 2013: Potential Secondary Viewing Areas

While there are no additional designated spectator venues and/or associated improvements or facilities proposed as part of AC34 at any locations beyond those sites discussed above, there are other public areas where spectators might watch the AC34 races (hereafter, described as "secondary viewing areas"). These secondary viewing areas would include, but not be limited to, other public areas along the San Francisco waterfront, other GGNRA lands (e.g., within the Presidio or Marin Headlands), the Sausalito waterfront, Angel Island (managed by California State Parks), and Treasure Island/Yerba Buena Island. A full description of the potential "secondary viewing areas" is provided in the Chapter 5, Section 5.1.3 of this EIR, and potential project impacts on these areas are addressed in all applicable impact sections of the EIR.

3.4.4 AC34 Staffing

Total staff for the operation of AC34 is estimated to be approximately 4,000 people for the event in 2012 and 9,200 people for the event in 2013. Up to 2,000 staff in 2012 and 2,500 staff in 2013 at Piers 30-32 / Pier 80 would be associated with the team bases, including, but not limited to, staff associated with the individual competing teams (race and shore team staff), and a variety of support contractors (e.g. caterers, fork lift operators, security personnel, etc.). AC34 would also employ a range of race management officials, media, and support staffing for the races, including accreditation team, jury staff, communications and public relations staff, technical support, boat drivers (e.g., officials boats, safety boats, marker boats), logistics staff (e.g., for accommodations, travel, etc.) and other administrative staff. The balance of AC34 staffing would be associated with a variety operations that would occur at the proposed AC Village and spectator venues, including retail sales, food service, information booth staff, entertainment-related staff (e.g., for audio-visual and lighting, etc.), crowd and traffic management, cleaning and waste management staff, and security personnel. Volunteer staff would be used at most AC34 venues to provide a broad range of support services.

3.4.5 AC34 Construction

Table 3-11 presents a summary schedule for construction that would be associated with AC34. As indicated in Table 3-11, AC34 construction would occur at varying levels of intensity over 2012 and 2013. At times, construction would be expected to be concurrent at individual AC34 venues. Furthermore, some of the preliminary construction associated with AC34 2013 event would occur in 2012, and consequently would overlap with construction work associated with the AC34 2012 event. All construction activities are proposed to occur Mondays through Fridays for up to 10 hours per day, and within allowable construction requirements permitted by City code.

In-Water Construction

In-water construction activities and best management practices are summarized based on information provided by the Event Authority and typical construction practices in San Francisco Bay. All in-water construction would be conducted in compliance with regulatory permits, including scheduling of work during appropriate seasons to minimize or avoid effects on sensitive biological resources. Depending on activity, demolition and/or construction work required at Piers 30-32 and Piers 27-29 and other waterfront locations would likely be conducted from both land and water (i.e., from barge).

Table 3-12 summarizes the location and types of in-water construction activities (pile driving, floating docks, gangways and wave attenuators, anchoring systems and dredging,) at each AC34 venues. Additional detail on construction methods for various in-water construction activities is described below. See also Construction Best Management Practices, below, for a summary of applicable best management practices for in-water construction activities.

TABLE 3-11
AC34 CONSTRUCTION SCHEDULE

Location	Activity	Proposed Start Date[a]	Duration (weeks)
AC34 2012			
Piers 30-32[b]	Substructure Team bases, floating docks, wave attenuators and moorings	January-March 2012	28
Pier 80[b]	Team bases, floating docks and moorings	Spring 2012	4-8
Marina Green	AC Village landside installations	Spring 2012	2-4
Marina Green	Floating docks and moorings	Summer 2012	3-6
Spectator Venues (2-3 weeks per site)	Landside installations	Spring 2012	12
Marina Green	Removal of AC Village landside installations	Fall 2012	2
Marina Green	Removal of floating dock and moorings	Fall 2012	2
Spectator Venues (1-2 weeks per site)	Removal of landside installations	Fall 2012	8
AC34 2012/2013			
Pier facilities	Pier apron/fender repairs	Spring 2012	28
Piers 28-30 Water Area, Piers 32-36 Open Water Basin, and Piers 14-22½ Open Water Basin	Dredging	June 2012	8
AC34 2013			
Piers 27-29	Demolish Pier 27 shed, portion of the Pier 29 shed, and Pier 27 Annex office building; construct new east and corner wall for Pier 29 shed; and construct cruise terminal core building and shell	January 2012 through December 2012	52
Pier 28, Pier 26, Piers 14-22½ Open Water Basin, Pier 19, Pier 23, Piers 27-29	Floating docks and moorings	October 2012	24
Pier sheds	Interior improvements and temporary support installations	Summer 2012/Spring 2013	8-12
Piers 27-29	AC Village landside installations	Spring 2013	2-4
Spectator Venues (2-3 weeks per site)	Landside installations	Spring 2013	12
Piers 27-29	Removal of AC Village landside installations	Fall 2013	2
Spectator Venues (1-2 weeks per site)	Removal of landside installations	Fall 2013	8
Piers 30-32 and Piers 32-36 Open Water Basin	Removal of team bases, floating docks and moorings	Fall 2013	6-8
Pier 80	Removal of team bases, floating docks and moorings	Fall 2013	6-8
Pier 28, Pier 26, Piers 14-22½ Open Water Basin, Pier 19, Pier 23, Piers 27-29	Removal of floating docks, wave attenuators and moorings	Fall 2013	12-16
Pier sheds	Removal of temporary support installations	Fall 2013	6-8

[a] AC34 construction schedule subject to change and would be conducted in conformance with all of applicable permitting requirements.
[b] Under Team Base Option 1, Piers 30-32, Piers 32-36 Open Water Basin, and Pier 26 and Pier 28 sheds would serve as the preferred primary team bases, and Pier 80 would be used as the ancillary team bases, for AC34 2012. This assumes all proposed temporary and/or permanent improvements at these locations would be completed, and associated required permits would be secured, in time for the 2012 event. Otherwise, Team Base Option 2 would occur, in which case Pier 80 would serve as the primary team bases for AC34 2012, and Piers 30-32, Piers 32-36 Open Water Basin, Pier 26, and Pier 28 would not be used for the 2012 event.

SOURCE: AECOM, 2011

TABLE 3-12
SUMMARY OF IN-WATER CONSTRUCTION ACTIVITIES FOR AC34

Location	Dredging	Pile Driving	Anchoring System Installation	Floating Dock Installation	Floating Wave Attenuators Installation
AC34 2012					
Pier 80[a]		✓	✓	✓ 400 to 1,000 ft x 12 ft[b]	
Piers 32-36 Open Water Basin[a]	✓ 130,000 cy	✓	✓		✓ 1,600 lf
Piers 30-32[a]		✓	(✓)	✓ south, 1,200 ft x 12 ft north, 1,100 x 16 ft	
Piers 26-28 water area	✓ 6,000 cy				
Marina Green offshore		(✓)	(✓)	500 ft x 16 ft	
AC34 2013					
Pier 26 and Pier 28		✓	(✓)	✓ total, 2,100 ft x 8 ft	
Piers 14-22½	✓ 29,000 cy	✓	✓	✓ 1,300 ft x 12 ft	
Pier 19 and Pier 19½[c]		✓	(✓)	✓ 600 ft x 8 ft	
Pier 23[c,d]		✓	(✓)	✓ 600 ft x 8 ft 800 ft x 12 ft	
Piers 27-29			✓	✓ 1,300 ft x 16 ft 800 ft x 12 ft	
Fort Mason			(✓)		

[a] Under Team Base Option 1, Piers 30-32, Piers 32-36 Open Water Basin, and Pier 26 and Pier 28 sheds would serve as the preferred primary team bases, and Pier 80 would be used as the ancillary team bases, for AC34 2012. This assumes all proposed temporary and/or permanent improvements at these locations would be completed, and associated required permits would be secured, in time for the 2012 event. Otherwise, Team Base Option 2 would occur, in which case Pier 80 would serve as the primary team bases for AC34 2012, and Piers 30-32, Piers 32-36 Open Water Basin, Pier 26, and Pier 28 would not be used for the 2012 event. See text for details.

[b] Under Team Base Option 1, approximately 400 feet of floating docks would be installed at Pier 80; under Team Base Option 2, approximately 1,000 linear feet of floating docks would be installed at Pier 80.

[c] Floating docks proposed on the north side of Pier 19 are an alternative to the floating docks proposed on the south side of Piers 23.

[d] It is assumed pile driving would also be required for placement of the temporary barge at the east end of Pier 23.

✓ = proposed as part of AC34 (✓) = possible as part of AC34

cy = cubic yards, lf = linear feet, ft = feet

SOURCE: AECOM

Pile Driving

Pile driving would be required to provide structural support for floating docks and floating wave attenuators, as well as to support the seismic and structural loads at Piers 30-32 and potentially for marginal wharf and pile repairs at other locations. Steel piles are proposed for both structural seismic work as well as installation of floating docks. Pile size would vary between 1.5-foot diameter for floating dock guide piles and 6-foot diameter for seismic upgrades at Piers 30-32. Pile driving is proposed to be conducted using vibratory hammers. Vibratory hammers would be used unless difficult driving conditions are encountered, in which case impact hammers would be necessary to complete the last 5 to 20 feet of drive, depending on conditions.

Floating Docks

Proposed floating docks would be a combination of a concrete dock system. The concrete dock system would be comprised of concrete encased styrofoam pontoons connected via external structural members or internal steel reinforced concrete. The encapsulated foam filling adds buoyancy and protects the floats from filling with water, and the top of the concrete floats and serves as the walking surface for the system. The composite dock system would use structural members to frame the walers and blocking as the structural elements of the dock. The floatation is provided by high-strength plastic to encase styrofoam flotation billets, and composite planks or other synthetic materials would be used as the walking surface.

The dock system modules would be fabricated off-site and delivered to the pier site via truck. A crane would be used to offload the dock sections from the trucks, and place them on a material barge to be towed to the specific location for each section. The sections would then be assembled and located in the correct positions. Guide piles would be driven through pile guides to fix the dock system in place. The removal of the systems would include each step in reverse.

Gangways

The gangways are designed to be perpendicular to the pier or seawall or roughly parallel to the pier or seawall. For the perpendicular connection a simple drop link hinge to the pier or seawall connection is proposed. The parallel connection would require an external platform measuring approximately 5 feet square. In most cases the abutment connections can be installed from the landside. At pier locations, the platform would be designed as a cantilevered connection to the pier face with sufficient strength to support the gangway dead and live loads. At locations such as Marina Green, the gangway platform is also anticipated to be a cantilever structure so as to avoid any impact on the historic seawall. The design may include a concrete counterweight installed behind the seawall and a steel frame structure would be constructed to cantilever over the wall to provide the support for the proposed gangway.

Wave Attenuators

The design purpose of the wave attenuator is to absorb the energy of the short period surface waves, but not restrict any existing local currents in direction or velocity. The wave attenuators would be located in areas where water depths range between -17 to -30 feet MLLW and would configured to be approximately 16 feet wide by 6 feet in depth.

Anchoring Systems

Anchoring or mooring systems are proposed to be installed at a number of AC34 venues, including, but not limited to, Pier 80, Piers 32-36 Open Water Basin, Piers 14-22½ Open Water Basin, Piers 27-29, Marina Green and Aquatic Park. The two types of anchors that would be suitable for the mooring systems given the sediment conditions in the project area would be either a concrete weight, or mechanical soil anchor such as a Helix anchor.

The concrete weights would typically be a cube of concrete approximately 125 cubic feet with a steel fitting for transportation of the blocks and for anchor connection. These cubes would be lowered to the seafloor as the anchor for the mooring. Typically, one cube is sufficient for vessels up to approximately 70 feet. For larger vessels, multiple cubes would be connected together to provide the resistance as required for the larger vessels.

The soil anchor is a small square shaft to which helical blades are attached. The number and diameter of the blades and the length of the anchor shaft are determined by the design resistance required and the properties of the sediment. The anchors are installed with an underwater hydraulic torque motor in the exact position required for the mooring. The mooring tackle is then connected directly to the top of the anchor shaft. If required, the anchor can also be easily removed with the same torque motor used for installation.

Small boats can use typical anchoring systems; however it is possible that larger vessels, specifically those in areas of strong tidal currents, may require pile or helical anchors to secure anchors due to the very soft Bay Mud substrate. Installation for these types of anchors is likely to occur via derrick barge or other platform. The anchor would be either placed through gravity drop or through diver assistance or from A-Frame with powered device.

Dredging

Dredging of approximately 130,000 cy is proposed in the Piers 32-36 Open Water Basin; 6,000 cy within the berth at Pier 28 South and Pier 30 North; and 29,000 cy within the Piers 14-22½ Open Water Basin. This dredging would be conducted in order to accommodate mooring of the AC72 boats and other AC34 support and spectator boats. Sediment would be characterized and tested for multiple disposal options through the Dredged Material Management Office (DMMO) regulatory process. Dredging would be accomplished with a clamshell bucket. If upland disposal is determined to be required, dredged material would be placed onto barges and transported to Pier 94-96 for rehandling and ultimate disposal at an approved landfill.

Apron Repairs

Aprons are defined as those areas on the edges of each pier where vessels are moored. Generally they are supported by piles (e.g., wood piles such as Pier 19 and concrete piles such as at Pier 28), approximately 15 feet to 30 feet in width, usually with wood deck and beams. Fender piling and mooring cleats are on the pier edges. Apron and fender pile repair in general would include, repair of pilings as needed to carry the design loads, replacement of timber beams and deck structure as needed to restore capacity, and repair of edge curb, mooring cleat anchorage and

fender piling as needed due to deterioration. Existing damaged fender piles would typically be replaced with new fender piles and the damaged fender pile removed, and consequently, may involve in-water construction for pile replacement.

On-Land Construction

On-land construction activities would occur at most of the proposed event facility and spectator venue sites. The longest duration of landside construction would be at Piers 30-32 where the seismic upgrades and deck repairs, along with installation of the temporary team base facilities, would occur; and at Piers 27-29, where proposed activities include demolition of the Pier 27 shed and portion of the Pier 29 shed, construction of the cruise terminal core building and shell, and installation of temporary facilities for the 2013 AC Village. Typical landside demolition and construction equipment at these sites would include excavators, bulldozers, dump trucks, concrete mixers, concrete pumps, hoe rams, cranes, scissor lifts, boomlift, and pickup/flatbed/bobtail trucks. Smaller equipment would include, but not be limited to, generators, pumps, compressors, jack hammers and saws. Other notable land-based construction would include the installation of temporary team bases at Pier 80, installation of temporary event facilities (e.g., spectator seating, stages, tents, etc.) at spectator venues at Crissy Field and Marina Green (AC Village in 2012/spectator venue in 2013).

Construction Best Management Practices

In order to minimize environmental impacts related to demolition or construction activities, the following Best Management Practices' elements represent examples of measures to be implemented as part of the AC34 project:

1. The United States Army Corps of Engineers (USACE) "Proposed Procedures for Permitting Projects that will Not Adversely Effect Selected Listed Species in California" (November 2006) establishes general procedures for minimizing impacts to natural resources associated with projects in or adjacent to jurisdictional waters. The United States Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) completed Section 7 consultation on these procedures. These procedures detailed in the associated Section 7 consultation documents from USFWS and NOAA would be implemented, as appropriate.

2. Care would be used by equipment operators to control debris associated with demolition activities conducted from land and water so that it does not enter the Bay. The work area would be isolated by using a debris containment boom. Floats with debris screens would be used to catch any falling concrete or debris during cutting and removal operations. In the event that debris does reach the Bay, personnel in workboats within the work area would immediately retrieve the debris for proper handling and disposal.

3. Well-maintained equipment would be used to perform the work, and except in the case of a failure or breakdown, equipment maintenance would be performed off site. Equipment would be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak would be identified, the leak would be cleaned up, and the cleaning materials would be collected and would be properly disposed.

4. Fueling of marine-based equipment would occur at designated safe locations adjacent to the project. Fueling of land-based equipment would occur in a staging area or over pavement, and the location would be inspected after fueling to document that no spills have occurred. Spills would be cleaned up immediately using spill response equipment.

5. Construction crews would reduce the amount of disturbance within the project site to the minimum necessary to accomplish the project.

6. All construction material, wastes, debris, sediment, rubbish, trash, etc., would be removed from the site once the project is completed and transported to an authorized disposal area, as appropriate, in compliance with applicable federal, state, and local laws and regulations.

7. Measures to maintain public access to the Bay and shoreline during construction and AC34 race days would be followed.

8. Litter control would be provided.

9. Sanitation (port-a-potty maintenance) would be provided.

10. Post-event site restoration (e.g. resodding) would be provided.

3.4.6 Tenant Displacement and Relocation

It is expected that most existing tenants currently leasing and occupying Port facilities that would be used for AC34 venues (specifically, at Piers 30-32, Seawall Lot 330, Pier 26, Pier 28, Pier 19, Pier 19½, Pier 23, Piers 27-29 and Pier 29½) would be displaced prior to the AC34 2012 event. An exception would be at Pier 80; the Port's stevedore contractor at Pier 80, Metro Ports, would have sufficient space to accommodate existing maritime business and operations alongside the proposed temporary AC34-related facilities and operations.

Most of the leases that would be affected are for storage and light industrial uses, and small office spaces commonly present in the Port's pier sheds and warehouse facilities, and bulkhead buildings and small office spaces. Prior Event Authority use of these sites as AC34 venues, the Port would terminate the existing tenant leases (consistent with the terms of their existing leases), and all existing tenants and occupants would vacate these facilities. The Port's portfolio and San Francisco's broader real estate market offer numerous location options for most small and mid-sized tenant businesses. However, three tenants in the affected facilities are recognized as having unique requirements that may limit relocation options. The City and Port are working with the following businesses at Piers 27-29 to identify possible relocation sites: Teatro Zinzanni dinner theater, Bauer's California Coach Sales and Service, and San Francisco Soccer's Telegraph Field.

The Teatro Zinzanni relocation site would need to accommodate the theater's tent structure which houses its restaurant and entertainment venue, plus support spaces. There are three potential relocation sites being considered:

- A site located approximately 1/3-mile south of Piers 27-29 on Embarcadero at Broadway (see Figure 3-6). The level, paved site currently serves as a surface parking lot. Public walkways are located on The Embarcadero and Broadway to the south and east of the site, with ornamental street trees located along The Embarcadero. Office uses are located across

Davis Street and Broadway, and Piers 15-17 is located directly across The Embarcadero. This site is located in the Northeast Waterfront Local Historic District; consequently any development design would require review by the Historic Preservation Commission in addition to review by the Waterfront Design Advisory Committee.

- A site located approximately 2½ miles south of Piers 27-29 in Mission Bay. This triangular-shaped, level, paved site is bounded by Third Street on the east, Channel Street on the south, Fourth Street on the west and China Basin Channel on the north (see Figure 3-5). The site currently serves as a surface parking lot. Public walkways are present on Third Street, Fourth Street, and Channel Street adjacent to the site. An approximate 100-foot wide unpaved open space buffer is located between the site and the edge of China Basin Channel. Mission Creek Park is located to the west across Fourth Street. Surface parking lots are located to the east across Third Street and to the south across Channel Street. AT&T Park is located approximately 600 feet north of this site, across China Basin Channel.

- A site to be determined located on property outside the jurisdiction of Port of San Francisco.

Teatro Zinzanni would be required to develop a design and construction proposal that would be subject to City review for compliance with applicable zoning and design review requirements. This EIR provides an environmental analysis of the first two potential relocation sites (Embarcadero/Broadway and Mission Bay sites). Depending on details of the site and design, further environmental review may be required for either of these potential relocation sites if/when the site is selected. The site to be determined be determined located on property outside the jurisdiction of Port of San Francisco is not analyzed in this EIR and if selected would be subject to environmental review as needed.

Bauer's California Coach Sales and Service (which operates and stores coaches and limousines within the Pier 27 shed) is proposed to relocate approximately 2½ miles south of Piers 27-29 to Pier 50. This approximately 20-acre site is located in China Basin south of AT&T Ballpark and Pier 48, off Third Street at the terminus of Mission Rock Street. Pier 50 includes four large sheds and three shelters and serves as the Port's Maintenance Center in addition to housing various general warehouse uses.

San Francisco Soccer's Telegraph Field is considering relocation approximately 0.2 miles south of Piers 27-29 to the Pier 17 shed at Piers 15-17. The Pier 17 shed is approximately 111,000 gross square feet, and is a contributing resource to the Port of San Francisco Embarcadero National Register Historic District. The Pier 17 shed is under long-term lease to the Exploratorium as part of the Piers 15-17 facility, which is currently undergoing construction to improve Pier 15 and adjacent valley and pier aprons for the new Exploratorium Interactive Science Museum. A portion of the west end of Pier 17 is being improved to provide new office and facility for Bay Delta Tug and Tow. The remainder of Pier 17 is for future expansion of the Exploratorium; in the interim, the Exploratorium will sublease Pier 17 for commercial and light industrial users, which could include the soccer field.

Other existing tenants that would be displaced as a result of AC34 would need to relocate to other available Port facilities, and/or other available locations in San Francisco or the surrounding area for lease. Please see Section 5.4, Population and Housing, for additional discussion of this topic.

3.4.7 Implementation Plans

The Host Agreement provides that the City, in consultation with the Event Authority, would develop a number of event-related implementation plans to support AC34 during both the 2012 and 2013 events. A summary of relevant plans is provided below.

People Plan

Consistent with the provisions of the Host Agreement, the City has developed a Draft "People Plan,"[43] a plan describing a safe, reliable and efficient traffic and transportation scheme to facilitate the movement of thousands of visitors on any day to and from the America's Cup events. The People Plan would examine alternatives for transportation to event venues oriented to minimize private automobile use and plans for expanded transportation access by multiple modes that connect visitors to AC34 events, as well as serve residents and workers in the affected areas who may not attend AC34 events. The People Plan would include temporary transit enhancements along the Embarcadero corridor and temporary transit service to certain AC34 venues. The People Plan would also examine the need for possible partial street closures to encourage pedestrian and bicycle access, and satellite parking locations with connections to public transit. Major event areas would include secure bicycle parking facilities. The People Plan would also examine water-oriented transportation service, including ferry and excursion access to potential secondary viewing areas such as Treasure Island and Angel Island.

The Host Agreement calls for the People Plan to be reviewed and accepted by the Event Authority by September 30, 2011, and after such acceptance the City would consider the Plan for adoption as part of the Event project approvals once environmental review is complete. There may be certain aspects of the People Plan upon which the City and other responsible public agencies would not be able to take binding action until the completion of environmental review as required under CEQA, and in some cases, the National Environmental Policy Act (NEPA). Accordingly, the People Plan is included as part of the project for review in this EIR. The CEQA review process may result in additional recommendations, including mitigation measures, about how to manage transportation, traffic and spectators. Those measures may be imposed as mitigation measures as part of the approval of the project or may be incorporated into the People Plan. The People Plan may be revised as a result of the CEQA analysis and process, and as project details are refined and broad community input is received. Please see also, Section 5.6, Transportation and Circulation, for additional detail.

Parks Event Operations Plan

The Host Agreement states that as a further element of the People Plan, the City shall work with the Event Authority "to develop and implement a plan to secure certain of the on-shore spectator areas and the on-the-water spectator areas." The Parks Event Operations Plan would focus on the on-shore spectator venue sites and would be developed in consultation with the Event Authority

[43] City and County of San Francisco, America's Cup People Plan for the 2012 and 2013 Regattas on the San Francisco Bay, March 2011.

and responsible jurisdictional authorities, including the NPS, California Department of Parks and Recreation, Presidio Trust, and SFRPD. The Plan would be implemented as part of the AC34 project. The Plan would identify potential issues and develop cost-effective solutions to help create a positive spectator experience during the AC34 events as well as aim to respect the needs of other incidental visitors that may be in affected areas, consistent with the mission and objectives of all parties. The implementation of the Plan for the AC34 events in 2012 would provide an opportunity for refinement of the Plan for use during the AC34 events in 2013 based on actual experience at the different spectator venues.

The Plan would link to and reinforce existing management and operational strategies in applicable park venues, such as the GGNRA's established management zones. The NPS has provided preliminary planning information for GGNRA lands to assist the City and Event Authority in the development of the Parks Event Operations Plan; this information is included in **Appendix PD-3**. The Plan would be coordinated and be consistent with other pertinent implementation plans supporting the AC34 events, including the Public Safety Plan, Waste Management Plan, People Plan, Sustainability Plan, Workforce Development Plan, and Youth Involvement Plan.

Key considerations to be addressed into the Plan are crowd management, safety, visitor comfort, visitor experience and post-event restoration. The roles and responsibilities of implementing entities would be clearly described.

Water and Air Traffic Plan

Consistent with the Host Agreement, the City would develop a Water and Air Traffic Plan in consultation with the Event Authority and ACRM and in cooperation with members of the Intergovernmental Task Force and/or other governmental authorities having relevant jurisdiction, particularly the United States Coast Guard and Federal Aviation Administration. The purpose of the Water and Air Traffic Plan is to provide guidelines for adequate and safe access to the race course area and provisions for use of the race course area by AC34-related water transportation. It would also establish effective enforcement mechanisms for traffic controls in the airspace and water space for AC34. The proposed AC34 airspace would include an area extending laterally from the proposed race course area one-half mile in every direction, as well as the air space above the proposed AC Village, in each case up to an altitude of 6,000 feet. AC34 water space would be confined to areas within the perimeter of the designated race course area on the Bay (see Figure 3-2).

The Water and Air Traffic Plan would implement navigational and operational safety guidelines for race team, support, spectator, and large luxury yacht vessel activities associated with AC34 that meet United States Coast Guard regulations. The Water and Air Traffic Plan would also include provisions for coordination with on-going commercial operations on the Bay, including, but not limited to: cargo transport, commercial fishing, maintenance dredging, ferry boats, and cruise ships.

Waste Management Plan

Consistent with the provisions of the Host Agreement, the Department of the Environment, in consultation with the Event Authority, the Port, GGNRA, and SAFR would develop a Waste Management Plan to provide options for recycling, composting and waste reduction to meet or exceed the City's goals for landfill diversion. Elements of the Waste Management Plan would include requirements for food and beverage vendors to use compostable and/or recyclable to-go food utensils and packaging, requirements for vendors to maintain adequate composting and recycling receptacles and service levels to meet demand for expected crowds, coordination with local recycling and composting collection firms to ensure adequate collection service, and prohibitions on the use of non-recyclable or non-compostable food service materials in event areas. In addition, the Waste Management Plan would include procedures and specifications for portable restrooms and washing stations in public park and spectator areas.

Sustainability Plan

The proposed project would include the development and implementation of an event Sustainability Plan, led by the Event Authority in consultation with the San Francisco Department of the Environment and other involved organizations. The Sustainability Plan would describe event-related sustainability activities taking place in San Francisco and throughout the event life cycle. It would be an overarching document covering event sustainability activities implemented by various organizations. The Sustainability Plan would include sustainability-related regulations required by the City and County of San Francisco, and would cover both onshore and offshore event sustainability activities, such as: local employment, carbon emissions, waste, water, food, habitat protection and transport. It would make reference to other Plans being developed for the event, such as the People Plan.

Team Base Operations Manual

The Event Authority, in consultation with the Port, would develop an Team Base Operations Manual that would identify all environmental and safety requirements, standards and best management practices that would be applicable to all proposed industrial-related practices at the team bases, including but not limited to boat fabrication and assembly, equipment and materials use and storage, and maintenance and cleaning activities. The Team Base Operations Manual would also contain a list of all applicable environmental and safety permits for AC34, including, but not limited to, those that may be required by the Regional Water Quality Control Board, Bay Area Air Quality Management District, and other jurisdictional agencies.

Public Safety Plan

The City would develop in consultation with the Event Authority, and implement a Public Safety Plan to address all reasonable safety and security measures (including emergency and rescue services) to protect the public, media, event related staff and competitors. The Public Safety Plan would include specific measures to ensure a high level of security within and around all elements

of the event venues and within and around sensitive locations such as airports, rail, BART, and metro and bus stations.

Workforce Development Plan

As indicated in the Host Agreement, the Event Authority, in consultation with the City's Office of Economic and Workforce Development, would develop a local hiring plan consistent with Chapter 6.22 and Chapter 83 of the San Francisco Administrative Code. The Workforce Development Plan would include local hiring opportunities for San Francisco residents in certain required AC34-related infrastructure improvements, AC34 event staging, and other AC34 event-related activities.

Youth Involvement Plan

As indicated in the Host Agreement, a Youth Involvement Plan would be developed by the Event Authority, in consultation with the Department of Children, Youth and Families. The plan would set forth the approach by which the Event Authority would incorporate and support sailing-related programs and activities, outreach, event internships, and other activities related to the event.

3.4.8 Long-Term Development Rights

In addition to the provisions for AC34, the Host Agreement provides the Event Authority with certain long-term development rights as a means for recovering the investment in infrastructure work (Authority Infrastructure Work*)*. Subject to various contingencies, the Host Agreement states that if the Event Authority invests at least $55 million in venue infrastructure before the Match race, the City will enter into Disposition and Development Agreements (DDAs) with the Event Authority, under which the City will agree to lease to the Authority Piers 30-32 for a term of 66 years, and Seawall Lot 330 for a term of 75 years and, if the public trust is lifted, transfer to the Event Authority fee title to Seawall Lot 330 under a separate purchase and sale agreement (Transfer Agreement). The Host Agreement includes a balancing process under which the Event Authority may obtain additional long-term leases for one or more of the short-term venues if the cost of the pre-Match Authority Infrastructure Work exceeds $55 million. If the Event Authority invests in repair work on Piers 26 and 28 specified in the Host Agreement (Additional Work), the Event Authority would enter into DDAs and the City would lease to the Event Authority Piers 26 and 28 for 66-year terms. The Host Agreement also includes provisions that could lead to long-term use of Piers 19, 23, and 29 and the Open Water Basins at Piers 32-36 and/or Piers 14-22½ after conclusion of the AC34 race events, if the Event Authority undertakes further infrastructure investment.

The Host Agreement directs that any such future development plans and uses allowed under the Transfer Agreement would be required to undergo separate environmental review to comply with CEQA, when site-specific development program details are proposed. The completion of such future CEQA review would be required to support any permits and regulatory approvals associated with the long-term development improvements. There are no specific development proposal under consideration at this time at any of the sites, nor has it been decided which of the sites would be proposed for long-term development. In the absence of such information, for

purposes of this EIR, an assessment was conducted to identify a conceptual outline of possible development programs that could be considered for the candidate development sites, taking into consideration: (1) the WLUP; (2) public trust considerations including public access standards; (3) the San Francisco Planning Code and Zoning Map; and (4) consistency with the Secretary's Standards.

Table 3-13 provides a summary description of the assumed development programs for each long-term development site that is conceptually analyzed in the EIR (i.e., without further characterization of uses or site-specific construction details) and incorporated into the cumulative analyses.

TABLE 3-13
ASSUMPTIONS FOR LONG-TERM DEVELOPMENT USES UNDER THE HOST AGREEMENT
(square feet)

Site	Residential	Retail / Commercial	Office (Maritime or General)	Entertainment & Assembly / Commercial	Maritime	Total by Site
Landside Development						
Pier 26		15,000		60,000		75,000
Pier 28		6,700	76,000	37,000		119,700
Piers 30–32		220,000	370,000	20,000	2 Cruise Ship Berths[a]	610,000
Seawall Lot 330	250,000[b]					250,000
Pier 19		6,700		73,000		79,700
Pier 19½					50,000[c]	50,000
Pier 23		6,700	87,000	37,000		130,700
Pier 29		6,700		37,000		43,700
Total by Use	**250,000**	**261,800**	**533,000**	**264,000**	**50,000**	**1,358,800**
Waterside Development						
Piers 32-36 Open Water Basin					Marina	
Piers 14-22½ Open Water Basin					Marina	

[a] Assumes Piers 30-32 is a location for cruise ship berthing on simultaneous berthing days when Pier 27 and Pier 35 are occupied with cruise ships and/or would be otherwise unavailable.
[b] Assumes approximately 1,000 gross square feet per unit.
[c] Assumes sight-seeing (non-commuter) ferry use would locate at Pier 19 ½.

Piers 26, 28, 19, 19½, 23, and 29

Under the long-term development scenario, this EIR assumes that most of the piers under long-term lease could be developed or occupied with a mix of retail, entertainment and assembly, and office (for maritime or general office use) activities that would be principally or conditionally permitted under the existing underlying M-1 zoning use district and Waterfront Special Use District (SUD) No. 1, as well as consistent with the Port's WLUP. These regulations are described

in Chapter 4, Plans and Policies, of the EIR. The EIR also assumes that Pier 19½ could host a maritime use, such as a ferry launch for sightseeing.

Any future rehabilitation developments for Piers 26, 28, 19, 19 ½, 23, and 29 would be required to comply with the existing 40-X height and bulk district, which limits the maximum height of buildings to 40 feet but does not regulate building bulk. Such development also would be required to comply with the 5.0 floor area ratio requirements of the Waterfront SUD No. 1. Any alteration or rehabilitation of historic pier sheds, bulkhead buildings or contributing resources to the Port of San Francisco Embarcadero Historic District, if undertaken, would be required to comply with the Secretary's Standards.

Piers 30-32

Redevelopment of Piers 30-32 also is assumed to include a mix of retail, office, entertainment, and commercial uses. This redevelopment would be required to comply with the existing 40-X height and bulk district and the Waterfront SUD No. 1 maximum floor area ratio of 5.0. However, this site would also be used to accommodate back-up cruise ship berthing. Assembly space would be temporarily devoted to cruise terminal uses while ships are in port.

Seawall Lot 330

Regarding Seawall Lot 330, the WLUP acknowledges that non-public trust uses may be acceptable long-term uses for seawall lots. This is because surrounding parcels in this South Beach neighborhood have already undergone conversion from former industrial use to mixed residential and commercial and non-public trust activities. The WLUP further states that residential development may be appropriate if a seawall lot is not required to support maritime activities on the adjacent pier. Therefore, regardless of whether the Public Trust is lifted from Seawall Lot 330 as described above, Seawall Lot's 330 redevelopment with non-public trust uses is considered a reasonable assumption in the long term.

This EIR assumes that Seawall Lot 330 could be developed pursuant to existing zoning (SB-DTR), which allows for downtown residential use. The height and bulk zoning district allows for a building with a maximum podium height of 65 feet. Above 65 feet, a tower could be set back from the lot line and rise to a maximum height of 105 feet. The building could cover a maximum of 80 percent of the lot, and any parking would likely be required to be below-grade.

Open Water Basins at Piers 32-36 and Piers 14-22½

The Rincon Point Open Water Basin at Piers 14-22½ and the Brannan Street Wharf Open Water Basin at Piers 32-36 may be proposed for recreational marinas as part of future long-term development proposals. The design of marina(s) could take many forms, depending on several considerations, including the sizes and types of boats expected to use the marinas, wave action and currents, water level fluctuations, silt deposition rates and anticipated frequencies of dredging to maintain the minimum design depths. Marinas typically involve a range of waterside facilities, including breakwaters or other barriers to attenuate waves, piers and/or

floating docks for boat berthing, gangways and other pedestrian access facilities, and boat launch ramps. Landside facilities can include vehicular access and parking, structures (e.g., for administration uses, etc.), and a range of utilities. Any future marina proposal(s) would require detailed design studies and future project-specific environmental review and permitting. For purposes of this EIR, it is assumed the Piers 32-36 Open Water Basin may accommodate up to 90 berths for boats ranging between 50 and 200 feet in length, and the Piers 14-22½ Open Water Basin would accommodate up to 425 berths ranging between 25 and 50 feet in length. In the absence of any detailed proposals for marinas at this time, marina development is addressed qualitatively at a program-level in this EIR.

3.4.9 Successive Defense Potential

The possibility exists that if GGYC were to succeed in defending the America's Cup in AC34, it would propose to hold subsequent America's Cup events in San Francisco. The Host Agreement provides that the Event Authority's leases of project venues may be extended for future America's Cup events, but only on condition that the Event Authority would enter into a new Host Agreement with the City. Any future America's Cup events would be subject to environmental review under CEQA along with applicable permits and approvals. At this time, it is speculative whether the GGYC would successfully defend the America's Cup in AC34 and, if so, would elect to hold the subsequent America's Cup event in San Francisco.

Similarly, it would be speculative to assume that any challenging team that may win AC34 would propose to hold the subsequent America's Cup event in San Francisco. Likewise, any such proposal would be subject to a new Host Agreement between the Event Authority and the City, along with associated environmental review under CEQA and other applicable approvals and permits.

3.4.10 Amendments to BCDC Special Area Plan for AC34

As part of the proposed AC34 project, the Port or the Event Authority would initiate a request to amend the BCDC Special Area Plan (an element of the San Francisco Bay Plan). Any such revisions to the Special Area Plan also would involve amendments to the Port's WLUP to maintain consistent policies of the two agencies. The proposed amendments are:

1. *Rincon Point Open Water Basin (Piers 14- 22½):* Amendments to permit berthing on a temporary basis for the AC34 events of large spectator yachts, race support vessels and smaller recreational boats. Any future proposal for development or fill proposals within the Rincon Point Open Water Basin would require a separate amendment to BCDC plans and associated project-specific environmental review.

2. *Brannan Street Wharf Open Water Basin (Piers 32-36):* Amendments to permit berthing on a temporary basis for the AC34 events of AC45s and AC72s, large spectator yachts, race support vessels and smaller recreational boats. Any future proposal for development or fill proposals within the Brannan Street Wharf Open Water Basin would require a separate amendment to BCDC plans and associated project-specific environmental review.

A description of the proposed temporary berthing in the water basins between Piers 14-22½ and Piers 32-36 is provided in Section 3.4.3, AC34 Races, above, under AC34 2012: Venue Plan and 2013: Venue Plan.

Fill removal at a number of sites may be reviewed by BCDC in the context of the above proposed amendments to the Special Area Plan for the AC34 project. Please see also Section 3.5.5, below, for detail on the location and characteristics of these possible fill removal sites.

3.5 The James R. Herman Cruise Terminal and Northeast Wharf Plaza Project Characteristics

3.5.1 Introduction

The San Francisco Port Commission proposes to develop of a new passenger cruise terminal at Pier 27.[44] The cruise terminal is proposed to be named in honor of the late James "Jimmy" R. Herman, former Port Commissioner and President of the International Longshore and Warehouse Union. The proposed James R. Herman Cruise Terminal would be designed to meet modern ship and operational requirements of the cruise industry and provide a welcoming gateway to the City for cruise ship passengers and staff.

The Port's current cruise terminal is located at Pier 35, four piers (about one-quarter mile) north of Pier 27. Pier 35 has become increasingly constrained for accommodating modern cruise ship operations, as cruise ship size, servicing and security requirements have grown. These increasing operational requirements tax the limited capacity of Pier 35's shed and narrow pier apron needed for provisioning as well as the facility's ground transportation access and passenger services. Under the Port's proposed plan for a new facility at Pier 27, Pier 35 would be retained as a secondary terminal when there are multiple cruise calls.

In concert with the cruise terminal facility, the Port also proposes to construct the Northeast Wharf Plaza, a public open space along the west end of Pier 27. The Northeast Wharf Plaza is identified as a planned public open space in the Port's WLUP and BCDC's Special Area Plan.

The Port contracted with San Francisco Department of Public Works (DPW), Bureau of Project Management, which is working with the joint venture design team of KMD Architects/Pfau Long Architecture consultant team, including cruise industry experts (Design Team) to prepare integrated concept designs for the Cruise Terminal project. On December 14, 2010, the Port

[44] A Blue Ribbon Cruise Terminal Advisory Panel was appointed to provide recommendations to the San Francisco Port Commission regarding improvements to retain and support San Francisco's cruise ship industry, in light of major business, operational and regulatory changes affecting the industry. The panel recommended Pier 27 as the location for a new cruise terminal. Following completion of a Pier 27 feasibility analysis, the Port Commission entered into a Memorandum of Understanding with the City's Department of Public Works to secure design services and cruise terminal consultants to analyze and produce conceptual proposals for a Pier 27 cruise terminal, and integrated public open space, the Northeast Wharf Plaza. More information is available on the Port's website at http://www.sfport.com/index.aspx?page=282. The Port had previously approved development of a new cruise terminal at Piers 30–32, in partnership with a private development team, but that project was not constructed.

Commission selected "Design Concept B2" as its preferred proposed design and directed staff to work with DPW and the Design Team to produce schematic design plans that would undergo design and regulatory review by public and permitting agencies. Design Concept B2 is the cruise terminal design that is the subject of review in this EIR.

In addition, as part of the proposed Cruise Terminal project, the Port would initiate a request to amend the BCDC Special Area Plan proposing a number of modifications to the Special Area Plan (see discussion under Section 3.5.5, Amendment to BCDC Special Area Plan for Cruise Terminal Project, below).

3.5.2 James R. Herman Cruise Terminal

Cruise Ship Operations

In recent years, the Port has received cruise ship calls that have fluctuated between 40 and 80 calls a year; this level is expected to continue for the foreseeable future. If the proposed cruise terminal is constructed, the relationship of the cruise facilities at Pier 27 and Pier 35 would be reversed from current conditions; Pier 27 would become the Port's primary cruise terminal, and Pier 35 would serve as a secondary facility in the event that two cruise ships require berthing at the same time. While the annual number of ship calls is expected to remain the same in the future, cruise ship size is growing, with newer, larger ships holding larger numbers of passengers. The level of improvements and equipment proposed in the Pier 27 cruise terminal would be designed to optimally handle vessels carrying 2,600 passengers (base design load) and would provide additional capacity at key areas to serve vessels carrying up to 4,000 passengers (peak design load). Additionally, the facility would continue to be used for other maritime events, such as Fleet Week, foreign naval diplomatic calls, Tall Ships Festivals, and visits by oceanic research vessels. Full operation of the proposed cruise terminal is expected beginning in part of the 2014 cruise season.

Proposed Cruise Terminal Facilities

Figure 3-33 presents the proposed site plan for the completed Cruise Terminal project. The cruise terminal building would be sited within the larger footprint of the Pier 27 shed (which would be demolished) along an axis adjacent and parallel to the Pier 27 berth. Proposed provisioning facilities would be located east of the building. Vehicular access to and from The Embarcadero would be provided at a new driveway located just south of the Pier 29 shed. This access point would provide direct connection to the cruise facility's proposed ground transportation area located within the triangular-shaped valley of Piers 27-29. The approximately 2½-acre Northeast Wharf Plaza would be located along the west end of Pier 27, fronting The Embarcadero promenade.

Individual components of the proposed cruise terminal are described below. (The proposed Northeast Wharf Plaza and potential commercial uses at Pier 27, along with the site landscaping plan, are described later in this chapter.)

Cruise Terminal Building

A summary of the proposed cruise terminal building characteristics is presented in **Table 3-14**, below. The proposed building would consist of two stories approximately 91,200 square feet in size, and would occupy a footprint of approximately 46,100 square feet.

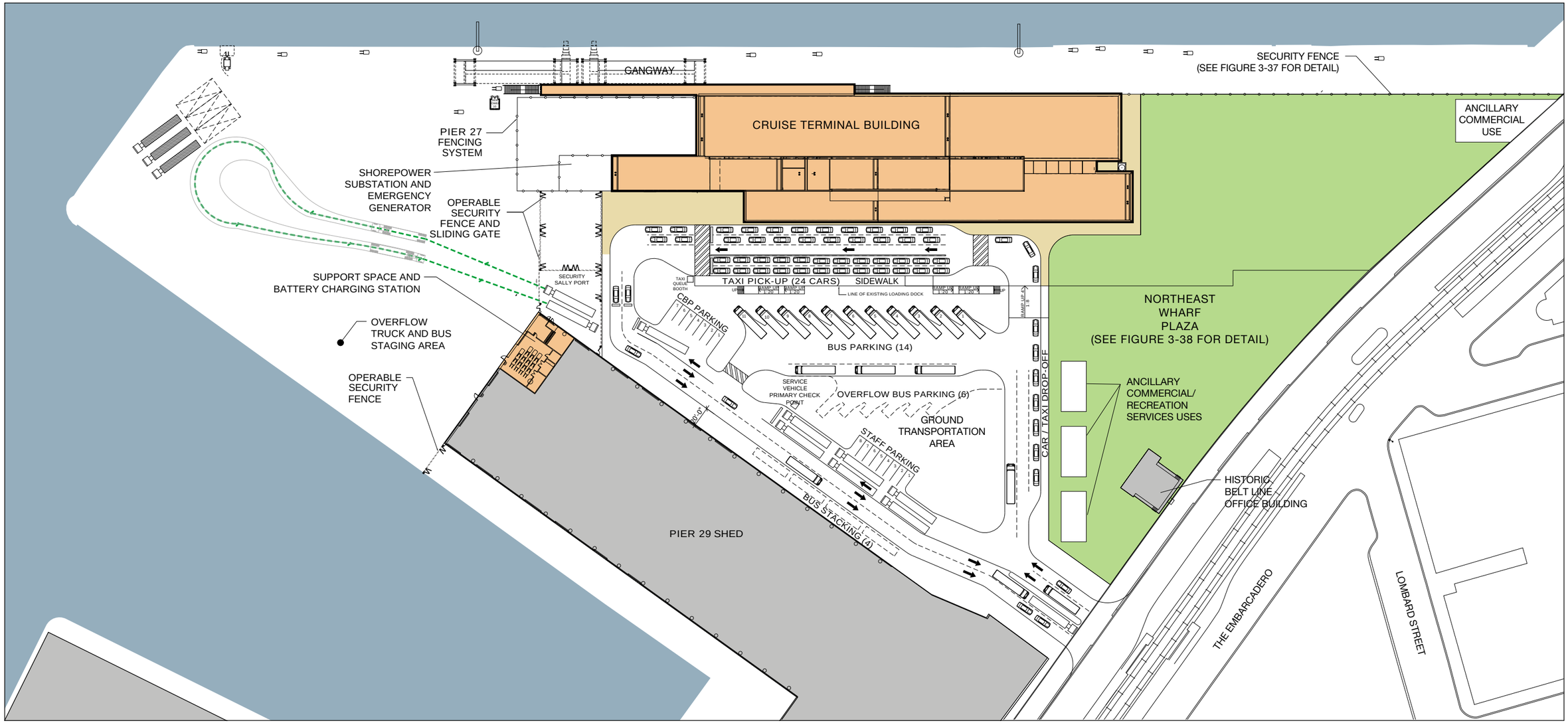
TABLE 3-14
CRUISE TERMINAL BUILDING SUMMARY

Time	Activity Program
Number of Stories	2
Floor Area	Level 1: 46,061 square feet Level 2: 45,135 square feet Total 91,196 square feet
Building Height (above grade plane)	40 feet to roof 46 feet to core elements
Building Length (enclosed space) Roof length (with overhangs)	504 feet 520 feet
Building Width (variable)	35-116 feet
Construction	Steel Frame with Concrete Fill
Exterior	Glazing / Modular Metal Panels
Lot Area (Pier 27)	±480,000 square feet (11 acres)
Proposed Lot Coverage	±48,000 square feet (10%)

SOURCE: Pfau Long Architects, KMD Architecture, 2011

The cruise terminal building would be constructed on top of the existing Pier 27 concrete deck. The building would use a steel structural column grid design that would align with the existing concrete pier piles beneath the pier deck, along with a lateral force resisting system consisting of steel moment frames. The building's second-floor structure would consist of concrete fill over a steel metal deck supported by steel beams and girder framing. The building roof structure would consist of a steel metal deck supported by steel beams and girder framing.

The cruise terminal building floor plans are presented in **Figure 3-34**. The two-story configuration would separate passenger embark/disembark areas from provisioning and baggage handling areas. As shown in Figure 3-34, the building's first floor would contain the building entrance/lobby; elevators and escalators, and stairs to provide access to and from the second floor for embarking/disembarking passengers; a large baggage claim area; a Customs and Border Protection (CBP) office suite; restrooms; and various utility and storage rooms. The CBP office suite would contain CBP-associated office space, interrogation rooms, holding facilities, and storage. A secure outdoor area located east of and adjacent to the cruise terminal building would serve as an additional area for baggage laydown.



SOURCE: Pfau Long Architecture

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-33

Cruise Terminal and Northeast Wharf Plaza Site Plan

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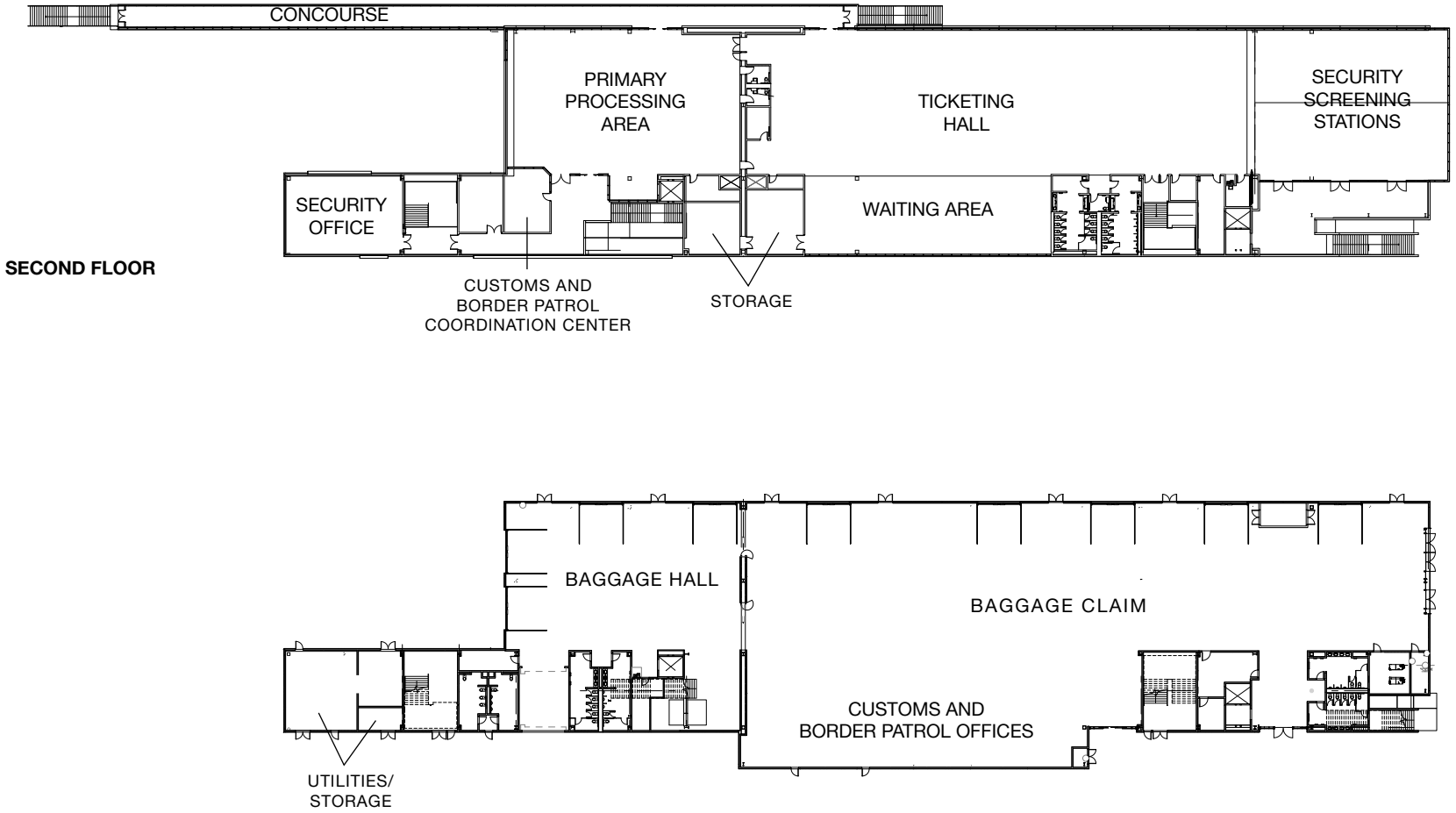


Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: Pfau Long Architecture

Figure 3-34
Cruise Terminal Building Floor Plans

The second floor would contain the cruise terminal check-in and waiting/seating area, primary CBP processing area, a concourse walkway providing passenger access to/from the gangway, security screening facilities, additional CBP space and other security offices, restrooms, and utility space. The concourse would be located parallel to the cruise ship and would allow access to the cruise ship's passenger doors. Since the location of passenger doors varies for different

cruise ships, the concourse would be constructed several hundred feet in length. Similarly, an automated self-propelled gangway would be used to move along the Pier 27 apron to provide easy alignment with the cruise ship passenger doors.

Profiles of the cruise terminal building elevations are presented in **Figure 3-35**. The height of the building would measure 40 feet from plane grade to top of roof, and 46 feet to the top of roof core elements. The exterior materials used for the building would consist of corrugated metal panels (including much of the building west wall facing the proposed ground transportation area; see below), and glazed windows (including large portions of the building south end in the vicinity of the lobby, and the east-facing second floor). The building roof would be installed with skylights to provide additional natural lighting.[45]

Provisioning

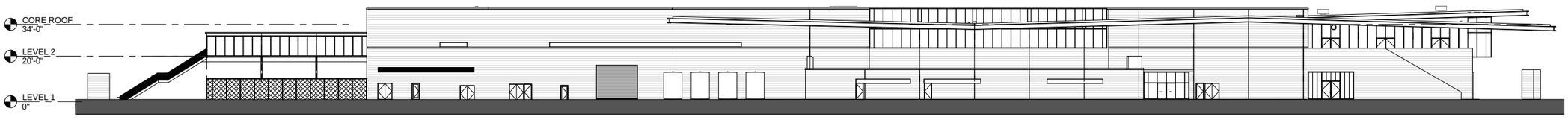
As shown in Figure 3-33, the primary proposed provisioning area for the cruise terminal would be located east of the cruise terminal building. The provisioning area, including off-loading dock for stores removal, and space for staging and security check, would be directly accessible by delivery trucks via a vehicular lane extending east from the ground transportation area to and from this location. Delivery trucks would enter the provisioning area via a security sallyport located between the cruise terminal building and Pier 29 shed. Approximately 3,000 square feet of space would also be located within the interior space of the rehabilitated Pier 29 shed to house a battery recharging station for provisioning equipment (forklifts), and support space for longshore workers.

Cruise Terminal Ground Transportation Area

As shown in **Figure 3-36**, the proposed ground transportation area (GTA) for the cruise terminal would be located in the center of Piers 27-29. The GTA would be approximately 3 acres in size and provide sufficient space to support access, drop-off, and exiting by trucks, taxis, buses, and passenger vehicles to meet both ship provisioning and passenger loading needs of the cruise terminal. The GTA circulation and operation plan would include vehicle queuing space, and consequently is designed to remedy traffic congestion and transportation conflicts currently experienced along The Embarcadero roadway and promenade related to existing operations at the Pier 35 cruise terminal. As shown in Figure 3-36, the GTA would be striped to provide separated access and circulation for buses, taxis, and vehicles serving passenger drop-off and pick up needs, with management provided by transportation control personnel. The managed

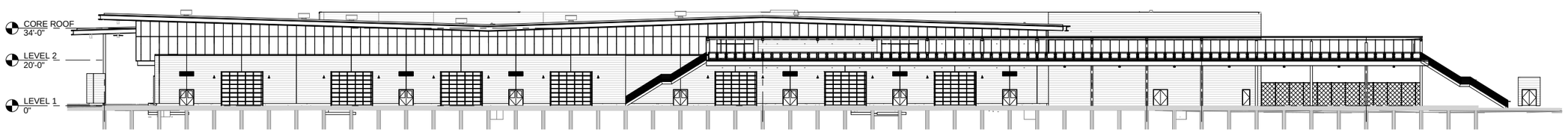
[45] The roof would also be constructed to accommodate the potential for installation of solar panels in the future, although these are not currently proposed as part of the project.

NORTH



WEST

SOUTH



EAST

0 40

Feet

SOURCE: Pfau Long Architecture

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-35
Cruise Terminal Building Elevations

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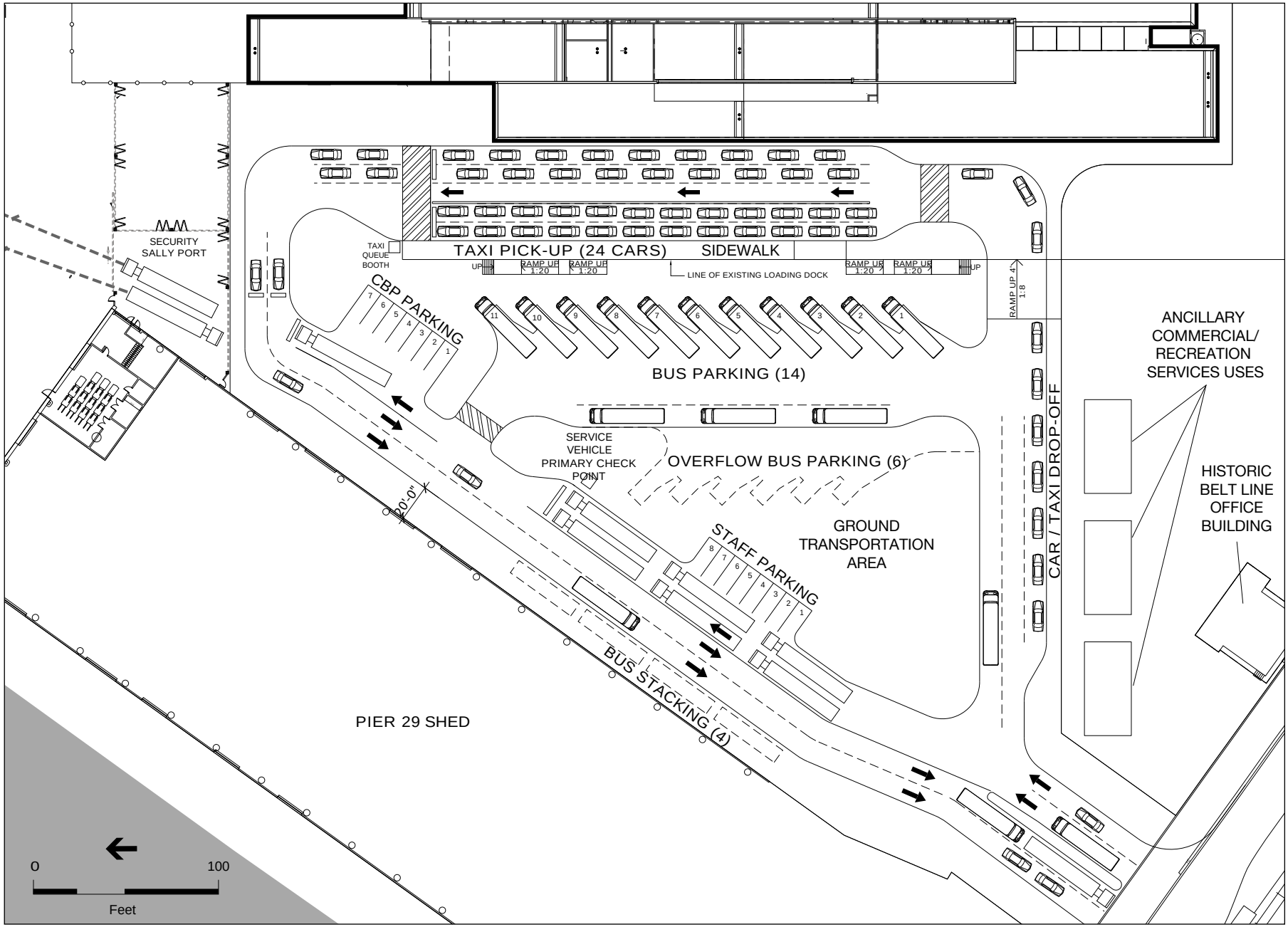

SOURCE: Pfau Long Architecture

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-36
Proposed Ground Transportation Area

operation of the GTA also would include schedules and designated areas to accommodate provisioning trucks that deliver supplies and services for the cruise ships before and after passenger embark/debark periods.

As part of cruise ship operations planning, the cruise terminal would use a number of staff to ensure efficient and safe vehicular, bicycle, and pedestrian circulation at and adjacent to the cruise terminal. This would include the use of traffic monitors at the cruise terminal entrance at The Embarcadero to monitor vehicular, bicycle and pedestrian ingress and egress; serve as safety crossing guards; and provide way-finding assistance for provisioning trucks to designated pick-up/drop off areas. Within the GTA, cruise terminal ground staff would direct passengers to their connecting transportation or terminal arrival area. In addition, porters-baggage staff would to attend to passenger baggage and ship provision handling. Finally, security personnel would monitor terminal access and screen passengers, baggage, provisions and vehicles. See additional information on cruise terminal staffing under Cruise Terminal Employment, below.

Cruise Terminal Security Fencing

When a cruise ship is in port, and for periods prior to a cruise ship arrival and after a cruise ship departure, United States Department of Homeland Security regulations require that a secure zone be established around the vessel perimeter. As shown in Figure 3-33, this would be provided by security fencing provided at strategic locations on the project site, including along the Pier 27 apron, and between the west ends of the cruise terminal building and Pier 29 shed. **Figure 3-37** (upper image) shows the operable array of metal gates that would provide security as required along the Pier 27 apron (extending south from the cruise terminal building to approximately The Embarcadero). With the security fence in place, no public access would be allowed along the length of the Pier 27 apron. However, when no cruise ship is on the dock, the fence would be retracted to allow free passage by the public from the plaza to the edge of the dock (see Figure 3-37, lower image).

Cruise Terminal Utilities

The Cruise Terminal project site would require a number of utility improvements to serve the cruise terminal. The cruise terminal building would be served by new domestic water distribution lines, emergency fire water distribution lines, wastewater collection lines, electricity and natural gas utilities, and communications. These proposed utilities would connect to existing utility infrastructure within The Embarcadero.

Rainwater that falls on the cruise terminal roof would be collected via siphonic roof drains and may be harvested for re-use on site. Under this condition, rainwater would first be routed through a vortex separator[46] and then to storage tanks (33,000 gallon capacity total) located within the cruise terminal building. The reclaimed water could be distributed via reclaimed water distribution lines

[46] Vortex separators remove particulates from rainwater without the use of filters through the use centrifugal force and gravity.

Security Fence Gate Closed

Security with Fence Gate Open

SOURCE: Pfau Long Architecture

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-37
Proposed Security Fence

to building reclaimed water fixtures, landscaping, and other potential uses. The cruise terminal building would also be equipped for connection to a future reclaimed water line in The Embarcadero, when such service becomes available.

Other outdoor areas on the site, such as the GTA and/or pier apron, would be served by stormwater improvements (e.g., catch basins and stormwater filters) and electrical lines (e.g., for night lighting).

As under existing conditions, shoreside power infrastructure would power cruise ships while berthed at the pier. As shown in Figure 3-23, the shoreside power substation would be relocated to an open air electrical yard just east of the cruise terminal building. The shoreside power system would be upgraded from 12 MW to 20 MW to support the larger cruise ships. This would require installation of larger cables through the switchboard in Pier 29 to draw more power from PG&E, and could also require new conduits, cables and utility work in portions of adjacent Embarcadero promenade and street areas.

Cruise Terminal Landscaping

The proposed landscaping plan for the Cruise Terminal project is presented in **Figure 3-38**. The cruise terminal would contain a combination of hardscape and softscape improvements. Hardscape improvements would include the installation of a system of ground pavers within the area adjacent to the length of the west and south sides of the cruise terminal building, including the taxi pickup/drop-off area. As indicated in Figure 3-38, the area identified as "main event space" may contain public art. Other vehicular circulation areas within the GTA would be paved with asphalt using thermoplastic paint for ground markings/striping. Tree planting would occur along the vehicular entrance aisle to the GTA, and planting areas would be installed between the GTA bus parking areas and the adjacent taxi pickup/drop-off area and the Northwest Wharf Plaza. (See additional discussion of landscaping improvements in Section 3.5.3, Northeast Wharf Plaza, below.)

Cruise Terminal Employment

Table 3-15 presents estimated employment at the cruise terminal. As shown in the table, the cruise terminal is anticipated to employ an estimated 220 workers.

TABLE 3-15
CRUISE TERMINAL EMPLOYMENT

Category	Number of Employees
Shore Services	50
Port/Operator Personnel	12
U.S. Customs/Police	18
Security	40
Longshoremen/Stevedores	80
Vendors	20
Total	***220***

SOURCE: Port of San Francisco, 2011

SOURCE: Pfau Long Architecture

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 3-38
Proposed Landscape Plan

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Shared Use of Cruise Terminal

While the proposed cruise terminal would be a permanent facility, there are, and would continue to be, down times between cruise ship calls that would allow for the potential for the cruise terminal to be used to accommodate other uses. These shared uses could include events such as conferences and public or private gatherings, and maritime-oriented events such as Fleet Week and diplomatic visits by foreign government vessels. The design for the proposed cruise terminal building provides for approximately 46,000 square feet of interior space (including the first-floor baggage area and second-floor waiting area) for shared uses. In addition, depending on needs of the shared-use event, the GTA could also be used for temporary installations (e.g., tents, stands, stages) and holding of outdoor public gatherings. It is estimated that up to 100 shared-use events could occur at the cruise terminal site annually.

3.5.3 Northeast Wharf Plaza

The Northeast Wharf Plaza would provide an approximately 2½-acre open space at the south end of Pier 27, fronting along The Embarcadero promenade (see Figure 3-38). Pursuant to the planning policies and objectives in Port and BCDC plans, the proposed Northeast Wharf Plaza would be designed to serve as a major waterfront park resource to support passive recreational enjoyment and provide expansive public views of San Francisco Bay.

The cruise terminal Design Team evaluated various design concepts for the proposed Northeast Wharf Plaza, considering various topographical, material, and landscaping treatments and characteristics. A preferred improvement plan for the plaza has been developed that will undergo review by the public and BCDC and City waterfront design committees. The plaza design would integrate the historic Pier 29 Belt Line office building and proposed ancillary structures for commercial and recreational services (e.g., snacks, bike rentals) into the park/piazza design. Hardscaping at the plaza would include pavers, concrete seating/steps, and planters. The multi-use recreational space would consist of a natural turf underlaid by a soil bed and base drain mat.

3.5.4 Construction: James R. Herman Cruise Terminal and Northeast Wharf Plaza

Construction of the Cruise Terminal project would be carried out in two phases. Phase 1 would be coordinated with the development of the proposed AC Village at Piers 27-29. As described in more detail for Piers 27-29 in Section 3.4.4, AC34 Races, under the AC34 2013: Venue Plan, above, in Phase 1 the Pier 27 shed, a portion of the Pier 29 shed, and the Pier 27 Annex office building would be demolished; the remainder of the Pier 29 shed would be retained and rehabilitated, and the historic Belt Line office building would be retained, consistent with the Secretary's Standards. The cruise terminal core building and shell would be built and would accommodate proposed AC34 team hospitality suites and associated uses at the AC Village during the AC34 2013 event. Also under Phase 1, the shoreside power transformer would be relocated from its existing location at the north end of the Pier 27 shed to its proposed location adjacent to the cruise terminal core building and shell.

After the conclusion of the AC34 race events, and removal of all temporary AC34 facilities at Piers 27-29, the Port would implement Phase 2 of the construction, involving further construction and improvements to complete the Cruise Terminal project. Phase 2 construction components required for cruise terminal operations would include completion of certain interior spaces (e.g., Customs and Border Protection offices), interior building equipment (e.g., screening facilities), exterior maritime equipment (e.g., mobile gangway, bollards, and fendering), and finishing of the GTA (e.g., groundmarkings, signage, landscaping). The Northeast Wharf Plaza would also be constructed, including hardscape and landscape improvements, and proposed ancillary structures for commercial and recreational services.

During Phase 1 and Phase 2 of construction of the Cruise Terminal project at Piers 27-29, as well as during the AC34 2013 event, the Port would have limited ability for Piers 27-29 to serve as a secondary berth for cruise ships. As a result, the Port would adjust it cruise ship schedule accordingly to maximize use of Pier 35 for cruise ships and minimize need for use of Piers 27-29 as a secondary berth.

3.5.5 Amendment to BCDC Special Area Plan for Cruise Terminal Project

As part of the proposed project, the Port would initiate a request to amend the BCDC Special Area Plan (an element of the San Francisco Bay Plan). The purpose of the amendments is to resolve conflicts that would arise from the proposed development of the Cruise Terminal project and to provide comparable public benefit to the Special Area Plan. Thus, the following modifications to the BCDC Special Area Plan, which are subject to public review and comment, are part of the proposed project and are analyzed in this EIR. These revisions to the Special Area Plan also would involve amendments to the Port's WLUP to maintain consistent policies of the two agencies.

1. Amend provisions for the Northeast Wharf Open Water Basin to allow cruise ship terminal and berthing at Pier 27; to allow the removal of pier sheds of Pier 27 and a part of Pier 29, consistent with the Secretary's Standards; and to replace the existing requirement to remove the northeast half of the Pier 23 shed.

2. Increase the size of the Northeast Wharf Plaza with design features and retractable security fencing to allow cruise ship provisioning on cruise days, and accelerated delivery of the Northeast Wharf Plaza if the City includes the plaza in the next General Obligation Bond issuance for public open space projects, and San Francisco voters approve the Bond proposal

3. Provide for later, phased development of public plaza space at the end of Piers 27-29, with provisions to allow cruise ship provisioning on cruise days

4. Allow Pier 27 to be permanently maintained as a berth for cruise ships, and for ceremonial and temporary berthing

5. Phased public access improvements to the Pier 27 and Pier 23 aprons, along The Embarcadero, and through the Pier 29 shed to the Pier 29 apron

6. Augment the Northeast Wharf Open Water Basin at Piers 23-27 with two new Open Water Basins at Piers 29-31, and Pier 43½ in Fisherman's Wharf, while maintaining maritime access to Pier 45 and Pier 41

7. Improve the pedestrian experience on the west side of The Embarcadero by building wider sidewalks, improved landscaping, and seating and amenities to enliven pedestrian use and enjoyment, consistent with the City's Better Streets Guidelines

8. Phased new opening to view the Bay through Pier 19½, upon major improvements to this facility, which may include the removal of existing Pier 19½ connector building, preserving the option to build new maritime or other trust-consistent facilities that may include replacement structures within a portion of the Pier 19½ footprint. Such improvements would require reconstruction of the north wall of the Pier 19 bulkhead and westernmost portion of the Pier 19 shed, consistent with Secretary's Standards.

With respect to the Amendment No. 1, above, the proposed removal of the Pier 27 shed and modifications to Pier 29 shed is described in Section 3.4.3, AC34 Races; please see also Section 5.5, Cultural and Paleontological Resources for additional detail on project compliance with Secretary's Standards for historic preservation.

In addition to the proposed Northeast Wharf Plaza, the proposed demolition of Pier 27 shed and portion of Pier 29 shed would open up approximately 160,000 square feet at the end of Piers 27-29, and the smaller footprint of the proposed cruise terminal building (as compared to the existing Pier 27 shed) would also result in larger expanses of open deck area in the center area in the valley.

Fill removal is included in the scope of issues that would be reviewed by BCDC in the context of the above proposed amendments to the Special Area Plan for the Cruise Terminal project, and potentially for the proposed amendments for the AC34 project (presented in Section 3.4.10). The Port has identified possible fill removal sites that may be considered in BCDC's public process. These sites currently include dilapidated piers, wharfs, and remnant pilings that were constructed with creosote-treated wood and have no current maritime uses. The locations of these sites are shown in **Figure 3-39**, and the structures and conditions at each of the fill removal sites are as follows:

- ***Pier 98 LASH Terminal.*** This approximately 1,250-foot-long by 14-foot-wide (17,500-square-foot) terminal runs parallel to and north of Herons Head Park on Pier 98 and south of Pier 96. Constructed in 1972, portions of this terminal have since collapsed into the Bay. The structure is no longer structurally sound, and no public access is permitted. The proposed fill removal at this location would be limited to the remnant piles in the Bay and would not remove the terminal itself. The lighter aboard ship (LASH) system refers to the practice of loading barges (lighters) aboard a larger vessel for transport. The LASH system was developed in the 1960s as an alternative and supplement to the developing container system but was never implemented in San Francisco.

- ***Pier 84 and Pier 88 along Islais Creek.*** Pier 84 is an abandoned dilapidated pier paralleling the north shore of Islais Creek, constructed in 1965 and previously supported a bulk copra processing plant. The pier connects to the shore at the base of Indiana Street and extends approximately 625 feet to the west toward I-280. A copra crane sits atop the eastern end of Pier 84 that the Port intends to retain for historical purposes. In all, this pier encompasses

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: Google Maps; ESA

Figure 3-39
Possible Fill Removal Sites

approximately 18,850 square feet. Located on the opposite shore of Islais Creek, Pier 88 consists of a collection of remnant piles paralleling the south shore of the creek from the Third Street Bridge for approximately 1,575 feet to the east. This pier was constructed in 1965 and previously used for the same purposes at Pier 84. In all, this pier originally encompassed approximately 129,000 square feet. The structures are no longer structurally sound, and no public access is permitted on the piers themselves. Islais Creek is identified as a toxic hot spot under the Bay Protection and Toxic Cleanup Program;[47] the pollutants present in the sediments include polychlorinated biphenyls (PCBs), chlordane, dieldrin, endosulfan sulfate, polycyclic aromatic hydrocarbons (PAHs), and anthropogenically enriched hydrogen sulfate and ammonia.

- ***Pier 70, Wharves 6, 7, and 8, and area adjacent to Pier 68.*** The 65-acre former Union Iron Works/Bethlehem Steel Shipyard is commonly known as Pier 70. The wharves are within the boundaries of the Pier 70 National Historic District, which has been determined eligible for listing in the National Register of Historic Places. The wharves were constructed in the 1940s to support Navy operations at the site during World War II. In all, the pier and wharves originally encompassed approximately 409,000 square feet. Currently, Wharves 6 and 7 are largely submerged. The structures are no longer structurally sound, and no public access is permitted. Wharves 6, 7, and 8 are non-contributors to the Pier 70 National Historic District due to their lack of integrity either as a result of advanced deterioration (Wharves 6 and 7), or because it was recently rebuilt (Wharf 8).

- ***Pier 64 adjacent to the Mission Bay Bayfront Park.*** This pier consists of a collection of remnant piles adjacent to the Mission Bay Bayfront Park. Pier 64 was constructed in the first half of the 20th century and demolished in the 1970s, leaving a substantial number of remnant piles. In all, this pier encompasses approximately 234,250 square feet. The few remaining platforms are in dilapidated condition but provide nesting for the Caspian tern and other migratory birds. If piles were to be removed at this location, the Port would provide alternative nesting platforms for the Caspian tern and other migratory birds.

- ***The former site of Carmens restaurant in China Basin Channel.*** The former Carmens restaurant is situated on a dilapidated pier in China Basin constructed circa 1915. The 30-foot-wide pier extends west from the Third Street Bridge for approximately 200 feet. In all, this pier encompasses approximately 600 square feet. The now abandoned restaurant building was extensively damaged by fire within the past 5 years.

The Port would conduct removal activities in accordance with applicable regulatory permits and would cut or break the piles off at least one foot below the mudline. The Port would minimize sediment disturbance during removal, use a floating boom around the work area to contain and capture debris, and have absorbent pads available in the event that a petroleum sheen develops during removal of the structures. At present, no known eelgrass beds are present at any of these locations. However, depending on timing of removal, should eelgrass beds establish themselves in the future at any of the fill removal sites, marine equipment would not be grounded over existing eelgrass beds, and no equipment would be allowed to set on the bottom in areas of eelgrass beds.

[47] San Francisco Regional Water Quality Control Board, *Sediment Quality and Biological Effects in San Francisco Bay, Bay Protection and Toxic Cleanup Program, Final Technical Report*, August, 1998/

3.6 Project Variant (Pier 27 Shed Variant)

3.6.1 Pier 27 Shed Variant

The Pier 27 Shed Variant would occur if the cruise terminal building core and shell and associated improvements (e.g., utility improvements, etc.) were not constructed in time for use for hospitality for the AC Village in 2013. Under this variant, either of the following scenarios could occur:

1. The existing Pier 27 shed would remain but would be physically modified (along with the existing Pier 29 shed) to serve the AC Village for the 2013 event. Specifically, portions of the east end of the Pier 27 and Pier 29 sheds would be removed to accommodate those AC Village uses proposed at the end of Piers 27-29, including spectator seating, foredeck club, and boat viewing. It is assumed that the extent of Pier 29 shed removal that would occur under this variant would be similar to that which would occur under the proposed project. A segment of west end of the Pier 27 shed would also be removed to open up additional outdoor space for the AC Village. Temporary walls would be installed the east and west ends of the truncated Pier 27 shed. The interior space of the center segment of the Pier 27 shed would be used for hospitality for the AC Village during the 2013 event, similar to that which would otherwise occur the cruise terminal core building and shell under the proposed project in 2013. Under this variant, the existing shoreside power transformer is assumed to be relocated off-site during the AC34 2013 event.

2. The existing Pier 27 shed would be demolished in its entirety and temporary structures would be installed in its place to serve the AC Village for the 2013 event. The temporary structures would house hospitality services for the 2013 event, similar to what would otherwise occur in the cruise terminal core building and shell under the proposed project in 2013. Under this variant, the existing shoreside power transformer is assumed to be relocated off-site during the AC34 2013 event.

This variant assumes that the cruise terminal and wharf plaza project would be constructed following the AC34 2013 event. Consequently, construction and first year of operation of the cruise terminal and wharf plaza would be delayed for at least 1 year. As a result, the availability of shoreside power to the site would also be delayed by approximately 1 year. Otherwise the proposed cruise terminal and wharf plaza design, and use of these facilities would be identical to that proposed under the proposed project.

3.7 Intended Uses of the EIR

This is a project-specific EIR, intended to provide review under CEQA for the proposed 34th America's Cup facilities and races as well as the James R. Herman Cruise Terminal and Northeast Wharf Plaza, and associated amendments to the BCDC Special Area Plan. In addition to describing the proposed project and required approvals, this EIR analyzes potential environmental impacts of the proposed project, and identifies mitigation measures where those impacts are significant, addresses cumulative adverse impacts to which the proposed projects could make a substantial contribution, and evaluates alternatives to the projects that could avoid or reduce significant impacts while still meeting most of the projects' respective objectives.

As part of the analysis in this EIR, potential future long-term development at certain Port properties that could occur as a result of conditions of the AC34 Host Agreement is conceptually analyzed in this EIR, and future project-specific CEQA review would be required if or when specific developments are proposed. It is expected that federal agencies with discretionary approval authority over any portion of the projects would prepare environmental documents pursuant to the National Environmental Policy Act (NEPA) and would use this EIR as a background document as applicable.

3.7.1 Approvals Required

The proposed project would require a host of local, state, and federal permits and approvals.

Based on the current understanding of the project, the following is a list of the agencies and approvals likely to be required for both the AC34 and the Cruise Terminal projects.

United States Coast Guard

- Determination of race area requirements, including parameters to manage race events with maritime traffic, and safety rules for recreational boaters
- Determination, review and authorization of maritime facility and vessel security plans and amendments in accordance with the Maritime Transportation Security Act of 2002 (33 CFR Chapter 1 parts 101-105) for Pier 27 cruise terminal

United States Customs and Border Protection

- Approval of cruise terminal design as it applies to Customs and Border Protection facility guidelines

Federal Aviation Administration

- Determination of flight area requirements

United States Army Corps of Engineers

- Clean Water Act, Section 404 permit for the discharge of dredged or fill material into Waters of the U.S.

United States Fish and Wildlife Service

- Consultation under Section 7 of the Federal Endangered Species Act, in conjunction with the U.S. Army Corps of Engineers Section 404 permit and National Park Service permits

National Marine Fisheries Service

- Consultation under Section 7 of the Federal Endangered Species Act, in conjunction with the United States Army Corps of Engineers Section 404 permit

National Historic Preservation Act Section 106 Compliance

- State Historic Preservation Officer consultation, in conjunction with the United States Army Corps of Engineers Section 404 permit

National Park Service

- Permits to use GGNRA and SAFR lands, including Crissy Field, Fort Mason, Aquatic Park, Fort Baker Pier at Cavallo Point, and Alcatraz
- Historic preservation consultation with the National Park Service, Golden Gate National Recreation Area in accordance with its Memorandum of Agreement with the State Historic Preservation Office

Presidio Trust

- Permits to use portions of Crissy Field within their jurisdiction

San Francisco Bay Conservation and Development Commission

- Approval of *San Francisco Bay Plan, San Francisco Waterfront Special Area Plan* amendments
- Approval of one or more Major Permits for fill and uses in San Francisco Bay and the Bay shoreline

California State Lands Commission

- Consultation regarding use plan, permit dredging, and Public Trust determination

California Regional Water Quality Control Board, San Francisco Bay Region

- Section 401 Water Quality Certification; confirmation of compliance with Waste Discharge Requirements; confirmation of National Pollutant Discharge Elimination System, Construction General Permit coverage and approval of a Stormwater Pollution Prevention Plan

California Department of Fish and Game

- California Endangered Species Act Section 2080.1 consistency determination or California Endangered Species Act Section 2081 incidental take permit

Bay Area Air Quality Management District

- Authority to Construct and Permit to Operate applicable facilities

San Francisco Planning Commission

- Certification of the Final EIR

San Francisco Port Commission

- Approval of the AC34 project and venue leases on Port property; approval of the Cruise Terminal project; adoption of CEQA findings and a Mitigation Monitoring and Reporting Program

San Francisco Recreation and Park Department/Commission

- Approval of use of Marina Green

San Francisco Board of Supervisors

- Consideration of any appeals of the Planning Commission's certification of the Final EIR
- Approval of the AC34 project and adoption of CEQA findings and a Mitigation Monitoring and Reporting Program
- Approval of a Disposition and Development Agreement including improvements to Port and San Francisco property

3.7.2 Coordination with Other Agencies

As part of preparation and planning for the AC34 events in 2012 and 2013, the City and Event Authority are conducting extensive outreach and coordination efforts with multiple federal, state, regional, and local agencies and jurisdictions for various aspects of the project. The development of the proposed AC34 implementation plans includes involvement of numerous agencies with specific expertise in the areas needed for each plan, as described above. Section 3.7.1, Approvals Required, above, describes the approvals and permits required for AC34, and the City and Event Authority are actively engaged in coordination and studies needed to secure the appropriate permits and approvals. However, in recognition of the magnitude of the crowds expected to visit the Bay Area during the AC34 event, the City and Event Authority are working with the Cities of Sausalito and Belvedere, the Town of Tiburon, Marin County, and California Department of Parks and Recreation (Angel Island) in the planning and preparations for AC34.

CHAPTER 4
Plans and Policies

4.1 Overview

In accordance with CEQA Guidelines Section 15125(d), this chapter provides a summary of the plans and policies of the City and County of San Francisco,[1] and regional, state, and federal agencies that have policy and regulatory control over the project sites. Although many of the plans and policies relate to regulations under the jurisdiction of these agencies, the primary discussion of regulations pertinent to the proposed AC34 and Cruise Terminal projects and their environmental effects are included in Chapter 5 under the regulatory framework subsection of each environmental topic.

Development of the AC34 and Cruise Terminal projects are subject to the primary agencies with jurisdiction over the project sites, including the Port of San Francisco (Port), the San Francisco Bay Conservation and Development Commission (BCDC), the State Lands Commission (SLC), the Golden Gate National Recreation Area (GGNRA) under the National Park Service (NPS), and the U.S. Coast Guard (USCG). Other agencies with permitting jurisdiction over one or more elements of the proposed projects that have plans and policies applicable to the proposed projects include the U.S. Army Corps of Engineers (Corps), Metropolitan Transportation Commission (MTC), San Francisco Bay Regional Water Quality Control Board (RWQCB), Bay Area Air Quality Management District (BAAQMD), Water Emergency Transportation Authority (WETA), and Association of Bay Area Governments (ABAG).

Policy conflicts do not, in and of themselves, indicate a significant environmental effect within the meaning of CEQA, in that the intent of CEQA is to determine physical effects associated with a project. Many of the plans of the City and County of San Francisco and the other relevant jurisdictions contain policies that address multiple goals pertaining to different resource areas. To the extent that physical environmental impacts of a proposed project may result from conflicts with one of the goals related to a specific resource topic, such impacts are analyzed in this EIR in that respective topical section, such as Section 5.7, Noise, Section 5.8, Air Quality, and Section 5.6, Transportation and Circulation. For example, policies that direct new development away from ecologically sensitive areas are discussed in Section 5.14, Biological Resources, while policies that

[1] This section does not discuss plans and policies applicable to Marin County jurisdictions, other than GGNRA policies, as no AC34 primary venues are proposed there. Sections of Chapter 5 contains regulatory setting for Marin County jurisdictions, as applicable.

limit location of sensitive uses in areas with high noise and air emissions are discussed in Section 5.7 and Section 5.8, respectively.

4.2 Plans and Policies Relevant to the Project

4.2.1 Federal

Plans Considered Under the 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 (U.S.C.) Sections 3501 *et seq.*, as amended in 1990 under the Coastal Zone Act Reauthorization Amendments. 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 may include permits issued by the Corps, NPS, and other federal agencies where required. The state coastal management plans, laws, and regulations applicable to the proposed projects are the McAteer-Petris Act, BCDC's regulations, and the BCDC's *San Francisco Bay Plan, Special Area Plan*, and the *Bay Area Seaport Plan* (all are discussed below).

Long-Term Management Strategy Management Plan[2] and the U.S. Army Corps of Engineers (Corps)

The project would require permits from the 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 (see Chapter 5 for further description of these regulations). The Corps has worked collaboratively with regional and local agencies to implement its policies through the Long-Term Management Strategy Management Plan (*LTMS Management Plan*) for dredged materials in the Bay, which is discussed below. Detailed information regarding the effects of dredging on biological resources and water quality is discussed in Sections 5.14 and 5.16, Biological Resources and Hydrology/Water Quality, respectively. As part of permitting, the Corps would be required to consult with other federal agencies, including the Federal Emergency Management Agency (FEMA), U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration (NOAA) Fisheries, as determined necessary.

[2] 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 Strategy for the Placement of Dredged Material in the San Francisco Bay Region Management Plan*, 2001.

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.

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 the *LTMS Management 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 the project sites that will require dredging 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 34th America's Cup project would be required to comply with the *LTMS Management Plan,* as discussed in Sections 5.14 and 5.16, Biological Resources (Aquatic Resources) and Hydrology/Water Quality, respectively. No potential conflicts of the proposed projects with the *LTMS Management Plan* have been identified.

U.S. Coast Guard Plans

Marine Safety Performance Plan, FY 2009 - 2014

The Coast Guard Marine Safety program ensures the safety of U.S. mariners, passengers on ferries and other vessels, and recreational boaters. The program also seeks to protect the marine environment from oil spills and the introduction of other harmful substances. The goals of the Marine Safety Performance Plan are: 1) reduce risk of maritime casualties; 2) facilitate commerce; 3) improve program processes and management; and 4) improve human resource capabilities.

National Park Service (NPS) and Golden Gate National Recreation Area (GGNRA) Plans

National Park Service Management Policies

By enacting the *NPS Organic Act of 1916* (Organic Act), Congress directed the U.S. Department of the Interior and the NPS to manage units "to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations."[3] The

[3] U.S. Congress, *Organic Act of 1916.*

Organic Act prohibits actions that impair park resources unless a law directly and specifically allows for these actions.[4]

In addition to determining the environmental consequences of implementing the project, NPS *Management Policies 2006* (section 1.4) requires analysis of potential effects to determine whether or not proposed actions would impair a park's resources and values (which were defined by the Organic Act). The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the *General Authorities Act*, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give the NPS the management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park. That discretion is limited by the statutory requirement that the NPS must leave resources and values unimpaired unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts.

An impact on any park resource or value may, but does not necessarily, constitute impairment. Impairment may result from visitor activities; NPS administrative activities; or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park.

An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose primary goal is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

The project would be required to comply with the NPS Management Policies, including but not limited to:

[4] Ibid.

8.6.2 Special Events, 8.6.2.1 General

Special events—such as sports, pageants, regattas, public spectator attractions, entertainment, ceremonies, and encampments—may be permitted by the superintendent when (1) there is a meaningful association between the park area and the event, and (2) the event will contribute to visitor understanding of the significance of the park area. However, a permit must be denied if the event would be disallowed under the criteria listed for unacceptable impacts in sections 1.4.7.1 and 8.2.[5]

Superintendents must ensure that appropriate permit conditions are imposed for special events. Permit conditions are intended to mitigate damage to park resources and values while ensuring that any necessary resource restoration and rehabilitation is completed. Permit conditions should include conditions on resource protection as well as requirements for cost recovery and fees, a hold-harmless clause, liability insurance, and bonding.

The Park Service will not permit the staging of an event in an area that is open to the public, or the closure of an area that is open to the public, when the event:

- *is conducted primarily for the material or financial benefit of a for-profit entity; or*
- *awards participants an appearance fee or prizes of more than nominal value; or*
- *requires in-park advertising or publicity (unless the event is co-sponsored by the Service); or*
- *charges a separate public admission fee.*

However, park buildings or specially designated locations that are suitable and appropriate may be made available for private, invitation-only events. Admission fees or any other monies associated with the event will not be collected by the permittee on park premises.

Large-scale events will be managed using the Incident Command System.

The AC34 project would be required to comply with the *NPS Management Policies*, as discussed in Sections 5.11 and 5.14, Recreation and Biological Resources, respectively. No potential conflicts of the proposed AC34 project with the *NPS Organic Act and Management Policies* have been identified.

General Management Plan—Golden Gate National Recreation Area

The original GGNRA General Management Plan (GMP)[6] was combined with the plan for Point Reyes National Seashore, which adjoins GGNRA. The GMP is a document that ensures that a park has a clearly defined direction that sets achievable and sustainable goals for resource preservation and visitor use. The joint GMP notes that the resources in these two park units would be of outstanding significance even if they did not exist at the fringes of a large city.

[5] Pursuant to sections 1.4. 7.1 and 8.2, unacceptable impacts are impacts that, individually or cumulatively, would: (1) be inconsistent with a park's purpose or values; (2) impede the attainment of the park's desired future conditions for natural and cultural resources; (3) create unsafe or unhealthful environment for visitors or employees; (4) diminish opportunities for current or future generations to enjoy, learn about, or be inspired by the park; (5) unreasonably interfere with programs or activities, appropriate use, atmosphere or peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations; or NPS concessioner or contractor operations or services.

[6] 1980 "GGNRA General Management Plan and Environmental Analysis."

Together, these two parks represent one of the nation's largest coastal preserves—more than 100,000 acres of "superlative North Pacific Coast landscape."[7] This has since grown to more than 150,000 acres. The GMP goes on to say that "in spite of the outstanding quality of the scenic, natural, and historic resources" in GGNRA, it may be the sharp contrast between the intensively developed urban environment of San Francisco and the park's adjacent and undeveloped areas that make it particularly unique. It points to the chance to view wilderness-quality scenery, headlands that are much like they were when gold-seekers first viewed them a century ago, and the chance to be removed "from the sights and sounds of man" a short hike away[8] as examples. This wide variety of resources and outdoor settings provide opportunities for a correspondingly diverse array of recreational and educational activities of "a quality and character found nowhere else."[9]

GGNRA and Point Reyes National Seashore are currently updating and creating their own separate GMPs. The updated GMP for GGNRA will be the blueprint for GGNRA to move into the future. Since 1980, GGNRA has doubled in size, and park staff members have gained a better understanding of the natural and cultural resources and recreational uses within the park. Although always valued for its preservation of public open spaces, GGNRA is now considered to be one of the most biologically diverse areas along the California coast and is recognized by the United Nations as part of the Golden Gate Biosphere Reserve. Numerous and varied landscapes, including military landscapes, ranch sites, and historic districts, have been identified with the park since 1980, expanding awareness of the park's historical importance.

The AC34 project would be required to comply with the *GGNRA General Management Plan,* as further discussed in Sections 5.11 and 5.14, Recreation and Biological Resources, respectively. No potential conflicts of the proposed project with the *GGNRA General Management Plan* have been identified.

General Management Plan—San Francisco Maritime National Historical Park

The General Management Plan (GMP) for San Francisco Maritime National Historical Park[10] guides the management of resources, visitor use, and general development at the park over the next 15 to 20 years. It summarizes the final actions that were approved in the park's Final General Management Plan / Environmental Impact Statement completed in September 1997.

The direction for future park management is based on the laws establishing the park, the purpose of the park, and the park's significant resources. The park's purpose, as mandated by Congress, is to preserve and interpret the history of achievements of seafaring Americans and the nation's maritime heritage, especially on the Pacific Coast.

The park encompasses about 35 acres on San Francisco's northern waterfront of what was once an industrial and foodpacking section of the city. Significant resources include the fleet of historic vessels; a collection of approximately 90 small watercraft; a museum artifact collection of

7 Ibid.
8 Ibid.
9 Ibid.
10 NPS, *San Francisco Maritime National Historical Park, General Management Plan*, October 1997.

approximately 30,000 items, historic documents, photography, and manuscripts; a maritime library estimated at over 21,000 titles; and historic structures including the Aquatic Park Bathhouse and historic district, the Tubbs Cordage Company office building, and the Haslett Warehouse.

The AC34 project would be required to comply with the *San Francisco Maritime National Historical Park General Management Plan,* as discussed in Sections 5.5 and 5.11, Cultural and Paleontological Resources and Recreation, respectively. No potential conflicts of the proposed project with the *San Francisco Maritime National Historical Park General Management Plan* have been identified.

4.2.2 State

The Public Trust and the State Lands Commission

The State of California, upon admission to the United States in 1850, was granted title to all submerged lands and tidelands, then held by the United States. Jurisdiction and management of these lands is under the California State Lands Commission, which provides stewardship of state-owned lands, waterways, and resources through economic development, protection, and restoration. The State Lands Commission's responsibilities include presiding over oil and gas development on all state-owned properties, determining boundaries between trust lands and private property, removing hazards from its jurisdiction, protecting the environment through review of permit applications and environmental documents, monitoring land granted to local jurisdictions to ensure compliance with terms of the statutory grant, and granting leases.

The State Lands Commission is the State's Trustee of Public Trust lands except where the State has transferred property to a local jurisdiction, such as the City. In 1968, the state legislature adopted the Burton Act, which enabled transfer of former submerged lands and tidelands to the City and County of San Francisco to be held in Trust for the people of California for the purposes of maritime commerce, navigation and fisheries (the Public Trust) and in accordance with the provisions of the Burton Act (the Burton Act Trust), uses that enhance natural resources or attract people to use and enjoy the Bay, as well as other specified uses. In accordance with the Burton Act and accompanying the Transfer Agreement relating to Transfer of the Port of San Francisco between the State and City of San Francisco (Transfer Agreement) the State transferred the administration and control of some of the Port property from the San Francisco Port Authority, a state agency, to the City and County of San Francisco in 1969, to be held in trust for the people of California and, administered by the Port Commission separately from other City property. The Port also separately acquired additional waterfront property that had been in federal and private ownership, separate from the Burton Act. These "after-acquired" Port lands are not necessarily impressed with the Public Trust or the Burton Act Trust (together, "the Trust"). Please see Section 4.2.4, below, for a description of the Port's jurisdiction.

The Burton Act granted the Port broad powers relative to the transferred property. There are, however, three key constraints: (1) property subject to the Trust cannot be sold or otherwise alienated by the Port, unless the property is found to be valueless for trust purposes and is a small portion of the total land held in the Trust; (2) the properties cannot be leased for a period

exceeding 66 years (except for certain seawall lots identified in Senate Bill 815 (Statutes 2007, ch. 660); and (3) the revenues derived from the operation from leases of the Trust property must be maintained in a separate account and used only for trust purposes. The Port Commission may also determine that Port property is surplus to trust purposes and may lease the property for other purposes contemplated by Section 3 of the Burton Act. It is also acceptable for the Port to lease property for short-term interim periods (generally 10 years or less) for non-trust purposes if the property will not be required for trust purposes during the interim period. The interim lease can be terminated should the property be required for trust purposes.

The State Lands Commission oversees compliance by the Port with its grant under the Burton Act. While the Port Commission has the authority under the Burton Act to determine whether proposed non-maritime uses are consistent with the Trust, the Port generally will seek the concurrence of the State Lands Commission before approving development projects on Port lands. The Commission provides no formal approvals however, and acts only in an advisory capacity. Under the Burton Act, the State lands Commission also works closely with the State Attorney General's Office, which has s the authority to enforce the Burton Act if the Port is acting outside of its granted authority. The Attorney General's Office can also issue formal opinions as to whether certain proposed uses conform to the Public Trust use restrictions.

When considering any request for long-term entitlements, the Port Commission makes a determination as to whether the proposed use would be consistent with the Trust, informed by the advice of and consultation with the State Lands Commission and Attorney General opinions. Maritime uses, maritime support uses, water-related uses, public open space and specialty retail designed to draw people to the waterfront are general categories deemed to be consistent with the Public Trust. General office, housing and non-water related industrial uses with no rail or water connection, generally are considered to be inconsistent with the Trust.

The Port is required to obtain the agreement of the State Lands Commission to any proposal to lift the Public Trust from Port lands unless the action is authorized by the State through legislation without further action by the State Lands Commission. The State Lands Commission may agree to remove Public Trust restrictions from trust property if: 1) the land has been filled and reclaimed; 2) the land is cut off from access to the waters of San Francisco Bay and is no longer in fact tidelands or submerged lands or navigable waterways; 3) is relatively useless for Public Trust purposes, and constitutes a relatively small portion of the granted lands within the City; and 4) the removal of Public Trust restrictions will not substantially interfere with public rights of navigation and fishing.

The 34th America's Cup and the James R. Herman Cruise Terminal and Northeast Wharf Plaza projects would require consistency with the Trust. A final determination of Trust consistency, as well as consistency with the Port's Waterfront Land Use Plan, would be made by the Port Commission, in consultation with the State Lands Commission.

Long-term development of Port properties subject to long-term leases would also require determination of consistency with the Waterfront Land Use Plan and Public Trust or the removal of Trust restrictions. The Host Agreement proposes removal of the Public Trust from Seawall Lot

330 by agreement or in consultation with the State Lands Commission or enabling California State legislation.

Past legislation affecting some of the AC34 sites includes Assembly Bill 1389 (Statutes 2001, ch. 489) and Senate Bill 815 (2007), which were enacted with the concurrence of the State Lands Commission. In Assembly Bill 1389, the legislature conditionally authorized development on Piers 30-32 of a modern two-berth cruise ship terminal meeting BCDC public access requirements, and up to 300,000 leasable square feet of office space. Although development did not proceed as authorized under AB 1389, the bill demonstrates that the State Lands Commission may find substantial non-trust development on Piers 30-32 to be consistent with the Public Trust when it concludes that the non-trust development is necessary to support substantial public benefits, such as a new two berth cruise terminal.

By Senate Bill 815, the legislature, after finding that certain Port property, including Seawall Lot 330, was filled and reclaimed as part of a highly beneficial plan of harbor development, has ceased to be tidelands, constitutes a relatively small portion of the tidelands granted to the City, and is not necessary for the Trust purposes, freed Seawall Lot 330 from the use restrictions of the Trust through 2094. Under SB 815, the Port is authorized to enter into a long term non-trust lease for Seawall Lot 330 for up to 75 years on condition that: (1) the lease revenues be deposited into a separate account of the harbor fund dedicated to preservation of historic piers and other historic structures, or public access areas on Port property; (2) the non-trust lease is for fair market value and on terms consistent with prudent land management practices; and (3) the State Lands Commission has found that the lease is for fair market value, is otherwise consistent with the Public Trust; and is otherwise in the best interest of the State.

The Host Agreement provides that long-term development of Port piers subject to long-term leases would also require a determination of consistency with the Public Trust by the State Lands Commission. The Host Agreement requires the Port to use best efforts to obtain additional legislation that would permanently remove the Trust designation and use restrictions to permit the sale of Seawall Lot 330 for fair market value as set forth in the Host Agreement.

San Francisco Bay Conservation and Development Commission's (BCDC) Plans and Policies

The BCDC is a state agency with permit authority over the Bay and its shoreline. Created by the McAteer-Petris Act in 1965 (Title 7.2, commencing with Section 66000, of the California Government Code), BCDC regulates filling, dredging, and changes in use in San Francisco Bay. The creation of BCDC was a legislative response to address environmental damage created by years of extensive and unmanaged filling, by developing policies and regulations that recognize and protect San Francisco Bay, an invaluable natural resource of the Bay Area region.

Of primary concern to BCDC is the placement of new "fill" (generally defined as any material in or over the water surface, including pilings, structures placed on pilings, and floating structures) in the Bay. The McAteer-Petris Act imposes very strict standards for the placement of new fill. Placement of fill may be allowed only for uses that are (1) necessary for public health, safety or

welfare of the entire Bay Area; (2) water-oriented uses, such as water-related industry, water-oriented recreation, and public assembly and the like; or (3) minor fill to improve shoreline appearance and public access. Fill must be the minimum necessary for the purpose and can be permitted only when no alternative upland location exists.

In addition, BCDC regulates new development within 100 feet of the shoreline to ensure that maximum feasible public access to and along the Bay is provided. BCDC is also charged with ensuring that the limited amount of shoreline property suitable for regional high-priority water-oriented uses (ports, water-related industry, water-oriented recreation, airports, and wildlife areas) is reserved for these purposes. Land-side uses and structural changes are governed by policies regarding public access. BCDC can require, as conditions of permits, shoreline public access improvements consistent with a proposed project, such as, but not limited to, pathways, observation points, bicycle racks, parking, benches, landscaping, and signs.

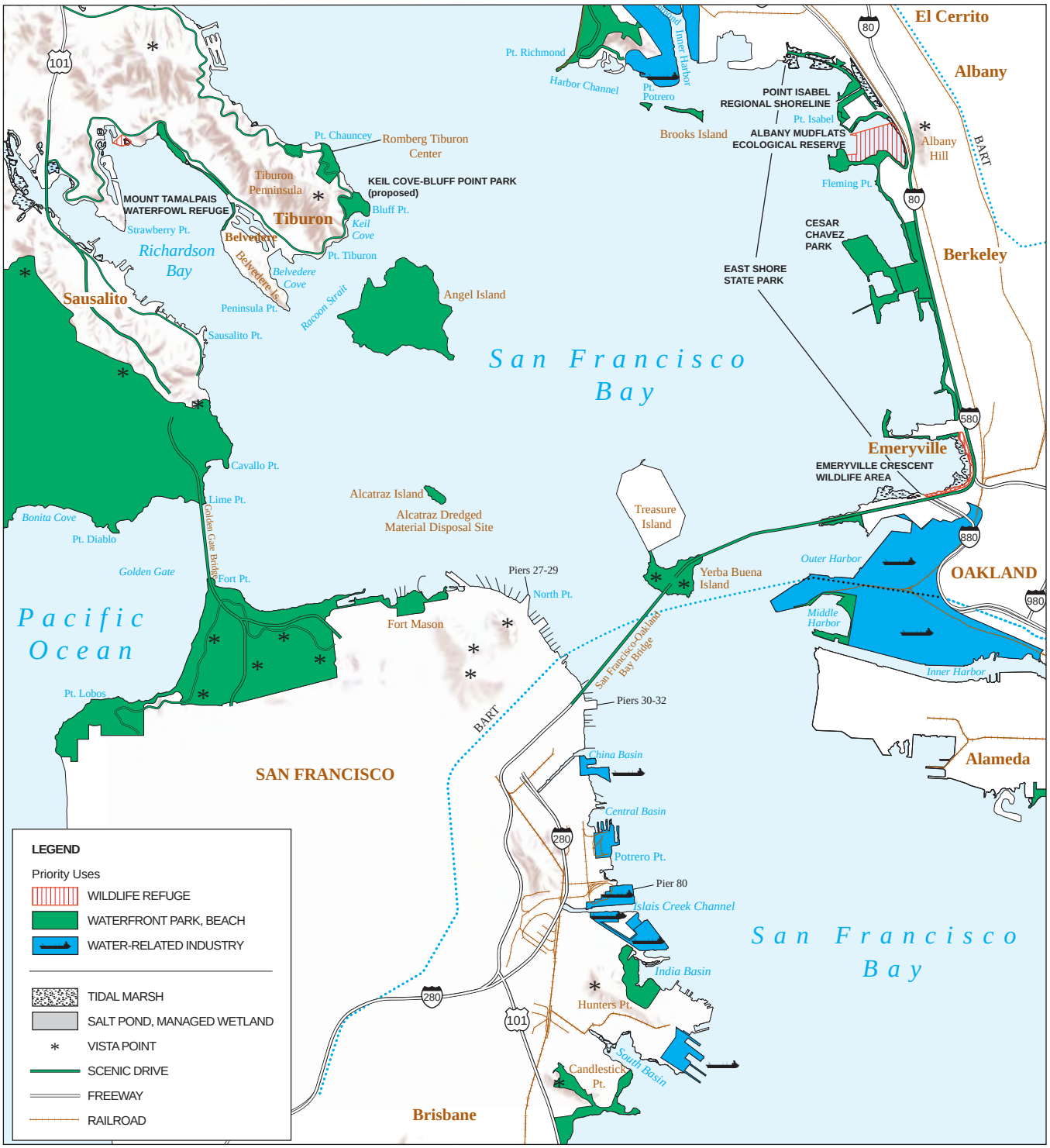
BCDC planning documents applicable to San Francisco's waterfront are described below.

San Francisco Bay Plan (Bay Plan)[11]

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*, the *Bay Plan* provides policy direction for BCDC's permit authority regarding the placement of fill, extraction of materials, determining substantial changes in use of land, water, or structures within its jurisdiction, protection of the Bay habitat and shoreline, and maximizing public access to the Bay. General *Bay Plan* uses applicable to the Central Bay, which includes the San Francisco waterfront are shown in **Figure 4-1**.

Part IV of the *Bay Plan* contains findings and policies that pertain to development of the Bay and shoreline. These findings and policies address the many facets that comprise the uses, needs and design issues associated with balancing the environmental, ecological, economic, recreational and social objectives of development within or along the shoreline of the Bay. They include: 1) Safety of Fills; 2) Protection of the Shoreline; 3) Dredging; 4) Water-Related Industry; 5) Ports; 6) Airports; 7) Transportation; 8) Commercial Fishing; 9) Recreation (including Marinas); 10) Public Access; 11) Appearance, Design and Scenic Views; 12) Salt Ponds and Other Managed Wetlands; and 13) Other Uses.

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



SOURCE: San Francisco Bay Conservation and Development Commission

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 4-1
San Francisco Bay Plan

BCDC, in its review process (described below) of the proposed temporary marinas associated with the AC34 events, as well as the development of permanent marinas under the future long-term development scenario, would consider the following policies:

(1) *Marinas should be allowed at any suitable site on the Bay. Unsuitable sites are those that tend to fill up rapidly with sediment and require frequent dredging; have insufficient upland; contain valuable tidal marsh or tidal flat, or important subtidal areas; or are needed for other water-oriented priority uses. At suitable sites, the Commission should encourage new marinas, particularly those that result in the creation of new open water through the excavation of areas not part of the Bay and not containing valuable wetlands.*

(2) *Fill should be permitted for marina facilities that must be in or over the Bay, such as breakwaters, shoreline protection, boat berths, ramps, launching facilities, pumpout and fuel docks, and short-term unloading areas. Fill for marina support facilities may be permitted at sites with difficult land configurations provided that the fill in the Bay is the minimum necessary and any unavoidable loss of Bay habitat, surface area, or volume is offset to the maximum amount feasible, preferably at or near the site.*

(3) *No new marina or expansion of any existing marina should be approved unless water quality and circulation will be adequately protected and, if possible, improved, and an adequate number of vessel sewage pumpout facilities that are convenient in location and time of operation to recreational boat users should be provided free of charge or at a reasonable fee, as well as receptacles to dispose of waste oil.*

(4) *In addition, marinas should include public amenities, such as viewing areas, restrooms, public mooring docks or floats and moorages for transient recreational boaters, non-motorized small boat launching facilities, public parking; substantial physical and visual access; and maintenance for all facilities.*

In addition, within the policy framework of Part IV of the *Bay Plan*, the document also includes area plans for specified uses or geographic locations which provide more detailed and site-specific policy direction. There are two such plans that apply to the San Francisco Waterfront, discussed below: 1) the Bay Area Seaport Plan; and 2) the San Francisco Waterfront Special Area Plan (SAP).

Bay Area Seaport Plan

The *San Francisco Bay Area Seaport Plan* (Seaport Plan) is a joint regional policy document of BCDC and the Metropolitan Transportation Commission (MTC). The Seaport Plan was adopted in 1996 and last amended in 2003. It constitutes the maritime element of MTC's Regional Transportation Plan and provides more detailed policy direction that extends from the *Bay Plan's* Port policies. The *Seaport Plan* contains policies for existing and future waterfront areas reserved for cargo terminals and port-priority uses, based on economic forecasts and projected future needs of Bay Area ports, including the Port of San Francisco. The *Seaport Plan* designates Piers 48, 50, portions of Pier 70, Pier 80 and Piers 94-96 as marine terminals or port-priority areas. Pier 80, one of the sites proposed for AC34 team bases in 2012, if Piers 30-32 cannot be improved for that purpose by then, would be consistent with the Seaport Plan, because the Port would be able to continue to use the Pier 80 terminal for cargo shipping and still support team base operations at that facility.

San Francisco Waterfront Special Area Plan (SAP)

In 1975, after a collaborative planning process with the San Francisco Planning Department, BCDC adopted the San Francisco Waterfront SAP. The SAP sets forth specific policies for uses, fill, public access, and design for piers and shoreline areas between Hyde Street Pier in Fisherman's Wharf to India Basin, including all Port of San Francisco piers and pile-supported facilities. The SAP includes general policies that apply to all areas covered by the plan, as well as geographic- or site-specific policies. The SAP divides the waterfront into three geographic areas, in which permitted uses, policies, and maps are addressed in each area: Fisherman's Wharf, Northeastern Waterfront, and Southern Waterfront.

In July 2000, BCDC approved major amendments to the SAP for the Northeastern Waterfront, which extends from Pier 35 to China Basin. They were coordinated with action taken by the San Francisco Port Commission to update the Port's Waterfront Land Use Plan, to align BCDC and Port policies for the San Francisco waterfront. Within the Northeast Waterfront, the amendments set forth new policies for: 1) repair, seismic upgrades and development on certain existing piers, consistent with the public trust; 2) public access on piers; 3) replacing prior fill removal rules with new requirements for the removal of specified piers to create four designated "Open Water Basins;" 4) creating two major new waterfront public plazas, one of which is the Northeast Wharf at Pier 27; and 5) funding and timeline requirements for implementing fill removal and public plazas, linked to new development on piers.

The policies in the SAP, in addition to the McAteer-Petris Act and other sections of the Bay Plan, are the basis for BCDC's permit decisions and for federal consistency review under the federal Coastal Zone Management Act for proposed projects along the San Francisco Waterfront.

The project sites are all located within the Northeastern Waterfront, except for Pier 80, which is in the Southern Waterfront. The SAP's most detailed policies apply to the Northeast Waterfront. This reflects the intricacies of preserving historic pier and waterfront structures in the Embarcadero Historic District while defining strategic locations to remove fill to create major public plazas; designating Open Water Basins around these plazas and major public spaces to preserve expansive Bay views for the public; and articulating how individual development projects should meet public trust and maximum feasible public access requirements. According to the SAP, public access should be provided free of charge to the public, be generally accessible at any time, and emphasize passive recreation and focus on its proximity to the Bay and on the views and unique experiences that nearness to the Bay affords.

Public Plazas

Northeast Wharf Plaza. The SAP requires the creation of a two-acre "Northeast Wharf Plaza" as a "new, major, destination plaza between Piers 23 and 29 along the Embarcadero, opening up views from Lombard Street and the Embarcadero to the Bay, Yerba Buena and Treasure Islands, and the Bay Bridge." To create this plaza, approximately 56,000 square feet of the Pier 27 shed is to be removed. According to the SAP, the plaza "should provide for water-side uses, such as temporary, small craft tie-ups and hand-held boat launching" and "create connections with the water's edge such as ramps, stairs or docks that allow users to easily access the Bay."

The Pier 27 cruise terminal's proposed berthing of cruise ships along the Pier 27 apron and associated cruise security requirement, would conflict with the SAP's Northeast Wharf Plaza policies because cruise ships would extend into the viewing area afforded through the development of the Northeast Wharf Plaza. In addition, security requirements would require the closure of public access along the Pier 27 apron when cruise ships are in port. The physical environmental effects of berthing cruise ships along the Pier 27 apron on the Northeast Wharf Plaza are addressed in Chapter 5 of the EIR, including Section 5.2, Land Use, Section 5.3, Aesthetics, and Section 5.11, Recreation.

Brannan Street Wharf Plaza. The SAP requires the creation of the Brannan Street Wharf public plaza, located between Piers 30-32 and Pier 38 south of the Bay Bridge in the South Beach neighborhood. The development of Brannan Street Wharf requires the removal of Piers 34 and 36. The Port is proposing to carry out this project, which is analyzed in the Brannan Street Wharf Final EIR, certified June 16, 2011.

Open Water Basins

The SAP requires the creation of four Open Water Basins as "focal points of public use and enjoyment of the Northeastern Waterfront" and to "enhance the ecological health of the Bay and to facilitate needed public recreation and access opportunities. They are intended to "provide new and substantial Bay views from the boundary piers framing the Open Water Basins," and are supported by adjacent major waterfront open spaces. The four open water basins are (1) the "Northeast Wharf Open Water Basin" between Piers 23 and 27, centered around the Northeast Wharf Plaza, including the removal of a portion of the Pier 23 shed to improve Bay views; (2) the "Broadway Open Water Basin" between Piers 3 and 9, centered around the existing Pier 7 Public Access Pier; (3) the "Rincon Point Open Water Basin" from the Downtown Ferry Terminal breakwater (Pier 14) to Pier 22 ½ opposite the existing Rincon Park; and (4) the "Brannan Street Wharf Open Water Basin" between Piers 32 and 38, including the removal of Piers 34 and 36, in which location the Brannan Street Wharf park is planned for construction. Within these Open Water Basins, new fill is limited to certain improvements and uses, which the SAP specifies for each particular location.

Northeast Wharf Open Water Basin. The proposed cruise terminal at Pier 27 and the retention of the entire Pier 23 shed within the Northeast Wharf Open Water Basin would be inconsistent with the SAP. Under the SAP, cruise ship berthing at Pier 27 would conflict with current policies that limit temporary berthing of ceremonial and visiting ships to that portion of the Pier 27 berth that does not extend into the viewshed to be created in the Northeast Wharf Plaza. The Port's proposal to retain and preserve the entirety of Pier 23 would conflict with current SAP policies that call for removing the easternmost 315 feet of that pier shed structure. As discussed in Chapter 3, Project Description, the Port proposes amendments to the SAP to address these issues, including proposals to create or augment Open Water Basins at Pier 43.5 and Piers 23-31. The physical effects of these actions on the environment are addressed in Chapter 5 of the EIR including Section 5.2, Land Use, Section 5.3, Aesthetics, and Section 5.5, Cultural and Paleontological Resources.

Rincon Point Open Water Basin. No new berthing facilities are permitted in this location except for limited numbers of mooring dolphins or buoys for non-commercial, transient boating. The

proposed use of the Rincon Point Open Water Basin for AC34 temporary berthing for spectator boats would conflict with current SAP policies. As described in Chapter 3, Project Description, ACEA and the Port have proposed SAP amendments to permit the temporary berthing within this Open Water Basin for the 2012 and 2013 AC34 race events only. The effects of temporary berthing in the Rincon Point Open Water Basin are addressed in this EIR, in Section 5.2 Land Use, Section 5.3 Aesthetics, and Section 5.14 Biological Resources.

Brannan Street Wharf Open Water Basin. Current SAP policies do not allow berthing of AC34 racing yachts, race support boats or spectator vessels within the Brannan Street Wharf Open Water Basin. As described in Chapter 3, Project Description, ACEA and the Port have proposed SAP amendments to permit temporary berthing within this Open Water Basin for the 2012 and 2013 AC34 race events only, including the proposed temporary wave attenuators. The effects of temporary berthing in the Brannan Street Wharf Open Water Basin are addressed in this EIR in Section 5.2, Land Use, Section 5.3, Aesthetics, and 5.14, Biological Resources.

BCDC Review

As indicated above, the proposed temporary berthing use proposed within the Rincon Point and Brannan Street Wharf Open Water Basins would require BCDC approval of SAP amendments prior to approving a BCDC permit to carry out the improvements. Other proposed work in the Bay associated with AC34, including dredging, construction of temporary docks, gangways, mooring blocks, pile-driving, and the placement of temporary barges, would be located in BCDC's Bay jurisdiction and would require approval of a BCDC permit, pursuant to its laws and policies. Work proposed within BCDC's 100-foot shoreline band, including the placement of temporary structures, storage, parking, office space, retail and merchandising vendors, and viewing improvements would also require BCDC permit approval. Depending on the scope and the extent of work proposed on piers over the Bay, including work at Piers 30-32, Piers 26 and 28, Piers 19 and 19 ½, Pier 23, and Piers 27-29, the work may be treated as within BCDC's Bay jurisdiction and would be subject to the Public Trust use limitations and requirements for new Bay fill and maximum feasible public access requirements.

With respect to the Port's proposed improvements to Pier 27 for the cruise terminal and Northeast Wharf Plaza, this would be a major project evaluated by BCDC within its Bay jurisdiction. Prior to authorizing the cruise terminal and plaza project, BCDC would need to approve amendments to the SAP. As discussed in Chapter 3, Project Description, the Port proposes the following approach to amend the SAP, subject to public review and comment.

1. Amend provisions for the Northeast Wharf Open Water Basin to allow cruise ship terminal and berthing at Pier 27; to allow the removal of pier sheds of Pier 27 and a part of Pier 29, consistent with the Secretary's Standards; and to replace the existing requirement to remove the northeast half of the Pier 23 shed

2. Increase the size of the Northeast Wharf Plaza with design features and retractable security fencing to allow cruise ship provisioning on cruise days, and accelerated delivery of the Northeast Wharf Plaza if the City includes the plaza in the next General Obligation Bond issuance for public open space projects, and San Francisco voters approve the Bond proposal

3. Provide for later, phased development of public plaza space at the end of Piers 27-29, with provisions to allow cruise ship provisioning on cruise days

4. Allow Pier 27 to be permanently maintained as a berth for cruise ships, and for ceremonial and temporary berthing

5. Phased public access improvements to the Pier 27 and Pier 23 aprons, along The Embarcadero, and through the Pier 29 shed to the Pier 29 apron

6. Augment the Northeast Wharf Open Water Basin at Piers 23-27 with two new Open Water Basins at Piers 29-31, and Pier 43½ in Fisherman's Wharf, while maintaining maritime access to Pier 45 and Pier 41

7. Improve the pedestrian experience on the west side of The Embarcadero by building wider sidewalks, improved landscaping, and seating and amenities to enliven pedestrian use and enjoyment, consistent with the City's Better Streets Guidelines

8. Phased new opening to view the Bay through Pier 19½, upon major improvements to this facility, which may include the removal of existing Pier 19½ connector building, preserving the option to build new maritime or other trust-consistent facilities that may include replacement structures within a portion of the Pier 19½ footprint. Such improvements would require reconstruction of the north wall of the Pier 19 bulkhead and westernmost portion of the Pier 19 shed, consistent with Secretary's Standards.

In coordination with the SAP amendments, the Port's Waterfront Land Use Plan (including the Design and Access Element) would be amended to incorporate conforming revisions to maintain consistent BCDC and Port policies for the Port waterfront. The Port Commission would be responsible for approving amendments to the WLUP; BCDC would be responsible for approving amendments to the SAP.

The environmental effects of the proposed AC34 and Cruise Terminal projects and SAP amendment issues for the AC34 and Cruise Terminal projects are addressed in this EIR in Sections 5.2, Land Use, Section 5.3, Aesthetics, 5.5, Cultural and Paleontological Resources, 5.6, Transportation and Circulation, 5.11, Recreation, and 5.14, Biological Resources for purposes of meeting CEQA requirements. While BCDC will consider the information and analysis presented in this EIR, the Commission maintains independent authority in evaluating issues and implications of proposed amendment to BCDC plans and determinations for the AC34 and Cruise Terminal projects. Ultimately, in order to approve the proposed uses and improvements, BCDC would need to find them to be consistent with the McAteer-Petris Act, the policies and findings of the Bay Plan and SAP, as amended, prior to approving BCDC permits to allow the implementation of improvements.

San Francisco Bay Subtidal Habitat Goals

Published in 2010, the San Francisco Bay Subtidal Habitat Goals Report provides guidance for conservation planning for the submerged areas of the Bay, including recommended approaches for removing pile-supported fill in the Bay. The BCDC, California Ocean Protection Council/California State Coastal Conservancy, the National Oceanographic and Atmospheric Administration (NOAA),

and the San Francisco Estuary Partnership, in collaboration with each other and the broader scientific community, managers, restoration practitioners, and stakeholders have identified a set of restoration planning goals and guidelines for the subtidal areas and habitats of the San Francisco Bay-Delta. This 50-year conservation plan takes a Bay-wide approach in setting science-based goals for maintaining a healthy, productive, and resilient ecosystem. Physical impacts related to implementation of the proposed AC34 and Cruise Terminal projects relative to the Subtidal Habitat Goals Report are addressed in Section 5.14, Biological Resources.

4.2.3 Regional

The principal planning agencies and their policy plans that guide planning for the proposed AC34 and Cruise Terminal projects and the nine-county Bay Area region are: (1) the BAAQMD and its *2010 Bay Area Clean Air Plan* (*Clean Air Plan)* and the 2010 *California Environmental Quality Act Air Quality Guidelines;* (2) MTC and its *Transportation 2035 Plan for the San Francisco Bay Area*; (3) the San Francisco Bay Area Water Emergency Transportation Authority and its *Final Implementation & Operations Plan* and *Emergency Water Transportation System Management Plan;* (4) the San Francisco RWQCB and its *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan); and (5) ABAG and its regional development and conservation program (FOCUS*),* biennial projections, and *San Francisco Bay Trail Plan*.

Bay Area Air Quality Management District's Plans

The most recently adopted air quality plan in the San Francisco Bay Area Air Basin is the *2010 Bay Area Clean Air Plan* (*Clean Air Plan*). In September 2010, the BAAQMD adopted the *Clean Air Plan*, which updates the *Bay Area 2005 Ozone Strategy*. The 2010 Clean Air Plan requires implementation of "all feasible measures" to reduce ozone; provide a control strategy to reduce ozone, particulate matter, toxic air contaminants, and greenhouse gas in a single, integrated plan; review progress in improving air quality in recent years; and establish emission control measures to be adopted or implemented in the 2010-2012 time frame. The *2010 Clean Air Plan* and physical impacts of the proposed AC34 and Cruise Terminal projects relating to attainment of air quality standards are addressed in Section 5.8, Air Quality. In addition, Section 5.8, Air Quality, presents the evaluation of potential air quality impacts of the proposed project with respect to the BAAQMD's 2010 *California Environmental Quality Act Air Quality Guidelines.*

Metropolitan Transportation Commission's Plan

On April 22, 2009, the Metropolitan Transportation Commission (MTC) adopted the *Transportation 2035 Plan for the San Francisco Bay Area*, which specifies how some $218 billion in anticipated federal, state and local transportation funds will be spent in the nine-county Bay Area during the next 25 years. The vision for Transportation 2035 is to support a prosperous and globally competitive Bay Area economy, provide for a healthy and safe environment, and promote equitable mobility opportunities for all residents. Among the cornerstones of the new plan are a joint regional planning initiative known as FOCUS, which provides incentives for cities and counties to promote future growth near transit in already urbanized portions of the Bay Area. The plan also launches a Transportation Climate Action Campaign to reduce transportation-

related greenhouse gas emissions. In addition, a new market-based pricing system would — with legislative authorization — convert and expand current carpool lanes into a Regional Express Lane Network that continues to grant carpoolers and buses free access to the lanes but permits solo drivers to pay to use available space in the carpool lanes for a price. Revenue generated by the tolls would pay for the completion of the planned express lane network sooner and fund other mobility improvements like more express bus and rail services in the region's most heavily traveled corridors.

The proposed AC34 and Cruise Terminal projects were reviewed in the context of MTC's *Transportation 2035 Plan for the San Francisco Bay Area*, and no inconsistencies were found. The physical impacts of implementing the proposed project relevant to the topics addressed in this plan are discussed in Section 5.6, Transportation and Circulation.

San Francisco Bay Area Water Emergency Transportation Authority's Plans

The Water Emergency Transportation Authority (WETA) replaced the San Francisco Bay Area Water Transit Authority, which was a regional agency authorized by the State of California to operate a comprehensive San Francisco Bay Area public water transit system. In 2003, the Water Transit Authority issued a *Final Implementation & Operations Plan,* which provides a strategy to improve public transit with an environmentally friendly ferry system. In 2009, the Water Emergency Transportation Authority adopted the *Emergency Water Transportation System Management Plan*, which complements and reinforces other transportation emergency plans that will enable the Bay Area to restore mobility after a regional disaster. The proposed AC34 and Cruise Terminal projects were reviewed in the context of these plans, and no inconsistencies were found. The physical impacts of implementing the proposed projects relevant to the topics addressed in these plans are discussed in Section 5.6, Transportation and Circulation.

California Regional Water Quality Control Board's Plans

Water quality control plans (basin plans) provide the basis for protecting water quality in California. Basin Plans are mandated by both the Federal Clean Water Act (CWA) and the State Porter-Cologne Water Quality Act (Porter-Cologne). Sections 13240-13247 of Porter-Cologne specify the required contents of a regional basin plan. Each plan must contain water quality objectives, which in the judgment of the Regional Water Board will ensure the reasonable protection of beneficial uses and the prevention of nuisance, and a program of implementation for achieving those objectives, including a description of the nature of actions that are necessary to achieve the objectives, time schedules for the actions to be taken, and a description of surveillance to be undertaken to determine compliance with objectives. The goal of the Basin Plan is to provide a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in the San Francisco Bay. The Basin Plan is used as a regulatory tool by the Regional Water Board's technical staff. Regional Water Board orders cite the Basin Plan's water quality standards and prohibitions applicable to a particular discharge. The Basin Plan is also used by other agencies in their permitting and resource management activities. It also serves as an educational and reference document for dischargers and members of the public. 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 Basin Plan. No potential conflicts were identified. The physical impacts of implementing these systems and permitting requirements of the RWQCB are discussed in Section 5.12, Utilities and Service Systems, Section 5.14, Biological Resources, and Section 5.16, Hydrology and Water Quality.

Association of Bay Area Governments (ABAG) Plans

ABAG is the regional 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 region as a whole.

ABAG administers various 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 and Priority Conservation Areas. The project sites have been designated as a proposed Priority Development Area, which is discussed further in Section 5.4, Population and Housing, and Chapter 6, Section 6.1, Growth-Inducing Impacts.

ABAG is also responsible for preparing and developing biennial population and employment projections. ABAG's *Projections 2009* are discussed in Section 5.4, Population and Housing.

In addition, 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.[12] The proposed AC34 and Cruise Terminal projects were 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 Section 5.2, Land Use, Section 5.6, Transportation and Circulation, and 5.11, Recreation.

4.2.4 Local

Local plans and policies only apply to portions of the project within the boundaries of the City and County of San Francisco.

Port of San Francisco

The Port oversees a broad range of maritime, commercial, and public activities that are integral to the local and regional economy, and it is responsible for 7.5 linear miles of waterfront and adjacent seawall lots. As a public enterprise, the Port is required to promote maritime, recreational, industrial, transportation, public access and commercial activities on a self-supporting basis through appropriate management and development of the waterfront for the benefit of the public. Title to Port property is held by the City and County of San Francisco, and administered through its

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

Port Commission. As described above in Section 4.2.2, under the Burton Act, the Port has the power to use, manage, operate, and regulate Port lands consistent with Public Trust restrictions established by common law, the Burton Act, the City Charter, the Transfer Agreement, and local and regional plans. Approval by the Port Commission is required for any uses on land under its jurisdiction.

Under the Burton Act, the Transfer Agreement, and the City Charter, the Port has exclusive land use jurisdiction over maritime activities, subject to the City's zoning powers over "surplus" property not needed for Trust purposes and the Board's fiscal oversight. Port maritime projects and leases, therefore, are not subject to review for consistency with the *San Francisco General Plan* (except in certain circumstances that are not applicable to the proposed America's Cup and Cruise Terminal projects). The proposed projects would be entitled under the Port's Waterfront Land Use Plan, described below, and be subject to the Port Building Code. The Port will issue all permits required for demolition and construction on Port property.

The proposed projects will be entitled under the Port's Waterfront Land Use Plan, described below, and be subject to the Port Building Code. The Port will issue all permits required for demolition and construction on Port property.

Waterfront Land Use Plan

The Waterfront Land Use Plan (WLUP) was adopted by the San Francisco Port Commission in 1997, defining acceptable uses, policies, and land use information applicable to all properties under the Port Commission's jurisdiction. Developed through a lengthy public planning process, the WLUP has enabled the Port Commission, the City, and the community to jointly define locations for new public-private partnership projects, coordinated with major public open space, maritime, and historic preservation improvements along the waterfront.

The WLUP is intended to 1) actively promote the continuation and expansion of industrial, commercial, and recreational maritime activities; 2) support new and existing open space and public access; 3) recognize the structure of the Port for revenue-generating land uses to fund maritime activities, open space, and public activities along the waterfront; 4) adapt to fluctuating economic, social, and political structures by identifying the range of acceptable uses for Port properties; 5) encourage efficient use of currently underutilized Port properties by allowing a range of interim uses; and 6) establish a framework for streamlining the entitlement process for new development. After Port Commission approval of the Plan, the Port worked with the City to amend the *San Francisco General Plan*, Planning Code, and Zoning Map to align policies and requirements within these documents, which were then approved by the Planning Commission and Board of Supervisors.

The WLUP has seven goals: 1) to encourage the Port to function as a working port for cargo, shipping, fishing, passenger cruise ships, ship repair, ferry and excursion boats, recreational boating, and other water-dependent activities; 2) to stimulate new investment that will revitalize the waterfront, create jobs, revenues, public amenities, and other benefits; 3) to promote diversity of activities and people, including maritime, commercial, entertainment, civic, open space,

recreational, and other waterfront activities for all to enjoy; 4) to provide access to and along the waterfront through a network of parks, plazas, walkways, open spaces, and integrated transportation improvements that would enhance enjoyment of the bay environment; 5) to enhance the waterfront's historic character, while creating new opportunities for San Franciscans to integrate the waterfront into their everyday lives; 6) to ensure appropriate quality of urban design along the waterfront; and 7) to provide economic access to all people in San Francisco.

To enable waterfront revitalization, the Port continues to work closely with the San Francisco Board of Supervisors, BCDC, and the State Lands Commission to align the various land use plans and policies held by each entity. Port projects must comply not only with the WLUP, but also adopted plans of BCDC, and undergo Public Trust review by the State Lands Commission.

Fisherman's Wharf Subarea

The Fisherman's Wharf subarea of the WLUP extends from the east end of Aquatic Park to the east end of Pier 39 in the east along Jefferson Street, which is roughly between Hyde Street and Grant Avenue.

The Fisherman's Wharf area is home to the historic and current fishing industry in the City of San Francisco. It is also one of the top visitor attractions in the United States, generating substantial revenues for the Port and the City. The WLUP promotes new public access, retail, visiting ships and other activities to attract more local residents, and the plan encourages fishing and visitor-serving uses.

Objectives for the Fisherman's Wharf subarea include the following:

- Restore and expand the area as a working fishing port
- Attract revenue-generating new uses to help support and subsidize the fishing industry and public activities
- Provide space for existing and expansion needs of other maritime activities
- Continue to integrate public, commercial, and maritime activities to preserve and enhance the diversity of uses
- Encourage activities that will facilitate the use of the area by local residents and diminish the Wharf's image as a "tourist-only" attraction
- Rationalize and enhance the public access and open space program
- Provide efficiently planned parking and loading facilities

Within the Fisherman's Wharf subarea, there are development standards for the Opportunity Area, which Pier 49, Pier 47, the east side of Pier 45, Pier 43 ½, and Seawall Lot 301.

Northeast Waterfront Subarea

The Northeast Waterfront subarea of the WLUP extends from Pier 35 to Pier 7 along The Embarcadero, which is roughly between Kearny Street and Jackson Street.

The Northeast Waterfront is part of a former maritime and industrial district that has evolved into a mixed-use neighborhood. A few of the adjacent Port piers continue to support cargo shipping support operations. The WLUP encourages reuse of these piers, however, as cargo activities continue to consolidate in the Southern Waterfront.

Any new, mixed-use pier development will include commercial recreation activities along with excursion boats, cruise ships, or other maritime uses and public access activities that appeal to the local and regional population. New development on adjacent inland sites will complement the area's evolving mixed-use residential and commercial neighborhood. In addition, the WLUP designates a site in the center of the Northeast Waterfront, at the foot of Pier 27, for a major public open space, the Northeast Wharf Plaza.

Objectives for the Northeast Waterfront subarea include the following:

- Protect historic resources as the area evolves
- Continue cargo support activities for as long as feasible
- Encourage new activities to draw San Franciscans to the water's edge
- Highlight gateways to Fisherman's Wharf, North Beach, and Chinatown

South Beach/China Basin Subarea

The South Beach/China Basin subarea of the WLUP extends from Pier 22½ to the north to Mariposa Street to the south. The WLUP contains the following objectives for the South Beach/China Basin subarea: (1) preserve and rationalize existing maritime activities in the area; (2) preserve and improve existing maritime uses that provide focal points for public enjoyment of commercial and recreation-oriented maritime activities; (3) promote activities and public access to make the waterfront inviting and safe, and improve the living environment of the new and emerging Rincon Hill, South Beach, and Mission Bay neighborhoods; (4) take advantage of proximity to downtown San Francisco by providing attractions for the general public, while respecting the needs of adjacent residents; (5) create an integrated series of public access improvements that extend a shoreline Port Walk through the South Beach area; and (6) establish high standard in the design of new developments that give rise to a new architectural identity for the shoreline north of China Basin Channel.

For the South Beach/China Basin subarea, the WLUP specifies acceptable land uses by the location at which they may be developed along San Francisco's waterfront, including new uses and existing uses that may continue long term, those that may be continued as an interim use, or those that may be permitted as an accessory use. Generally, a wide variety of maritime uses (e.g., cargo shipping, maritime office and support services, and ceremonial berthing), open space/recreation, commercial, and other uses, including general institutional, are permitted on specified AC34 sites

Within the South Beach/China Basin subarea, there are development standards for the Bryant Street Pier Opportunity Area, which includes Piers 30-32, Pier 36, and Seawall Lot 330.

Southern Waterfront Subarea

The Southern Waterfront extends from Pier 70 to India Basin, which is roughly between Mariposa Street and Hunters Point Boulevard.

The Southern Waterfront will remain home to most of the Port's cargo and ship repair operations. The WLUP promotes expansion of cargo and maritime support uses on 206 acres in the Southern Waterfront that are already developed, but greatly underused, for such uses. In addition, the plan reserves 97 new acres in the Southern Waterfront for further long-term maritime expansion.

In the meantime, interim uses are allowed to generate revenues urgently needed to subsidize Port operations until the sites are needed for expansion of cargo operations. Also, revenues can be generated on three sites not needed for cargo expansion.

The Southern Waterfront's industrial activities are interspersed with natural habitat, habitat restoration, and public access and recreation areas. The WLUP supports preservation of these resources and additional public access improvements compatible with the continuation of cargo and industrial maritime uses.

Objectives for the Southern Waterfront subarea include the following:

- Continue and expand cargo and ship repair operations
- Allow limited non-maritime uses to generate revenues
- Enhance wetlands, public access, and open space
- Restore Union Iron Works historic buildings

San Francisco General Plan

The *San Francisco General Plan* provides general policies and objectives to guide land use decisions and contains some policies that relate to environmental issues. The General Plan contains 10 elements (Commerce and Industry, Recreation and Open Space, Housing, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that set forth goals, policies, and objectives for the physical development of the city. The City has adopted amendments to the General Plan and area plans described below to conform to the WLUP. The compatibility of the project with General Plan policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision whether to approve or disapprove the proposed project. Any potential conflicts between the AC34 and Cruise Terminal project and policies that relate to physical environmental issues are discussed in Chapter 5, Environmental Setting, Impacts and Mitigation Measures.

Northeastern Waterfront Area Plan

The *Northeastern Waterfront Area Plan*, an area plan of the General Plan, guides growth and development along San Francisco's northeastern waterfront, an irregularly shaped area that contains four subareas: Fisherman's Wharf, Base of Telegraph Hill, Ferry Building, and South Beach. Portions of the project sites are within all four subareas. Map 2 of the plan indicates that the project sites are located mostly within the 40-X Height and Bulk District. The *Northeastern*

Waterfront Area Plan recommends objectives and policies designed to "contribute to the waterfront's environmental quality, enhance the economic vitality of the Port and the City, preserve the unique maritime character, and provide for the maximum feasible visible and physical access to and along the Bay." Specifically, the *Northeastern Waterfront Area Plan* has policies that include but are not limited to the following:

- Strengthen and expand the recreation character of the Northeastern Waterfront and develop a system of public open spaces and recreation facilities that recognizes its recreational potential, provides unity and identity to the urban area, and establishes an overall waterfront character of openness of views, water and sky and public accessibility to the water's edge.

- Allow the development at Pier 26 and 28 of commercial recreation, some community facility, artist and designers studios and galleries, public assembly and/or maritime uses, but exclude, hotel and boatel uses. Permit such uses in the existing sheds or new replacement structures, and incorporate new public access areas onto the piers which connect with and complement The Embarcadero Promenade and adjacent planned Rincon Park. Orient this development towards Bay Area residents and workers rather than tourists. Permit the minimum amount of short-term parking necessary to serve uses in the pier sheds until inland parking sites are available.

- Recommend the development of a new cruise terminal in the Northeastern Waterfront.

- Promote commercial and recreational maritime activities (e.g., a cruise terminal, excursion boats, historic ships, recreational boat mooring) that may be complemented with water-oriented commercial recreation and public assembly uses and public access improvements on piers no longer needed or suitable for cargo shipping facilities.

- Retain architecturally interesting and historically significant buildings or buildings that contribute substantially to the overall architectural character of the area, ensure the compatibility of new development with the historic and architectural maritime character of the Northeast Waterfront Historic District in terms of scale, materials and design.

- Promote new development on Piers 30-32 which provides commercial recreation and public assembly activities, and maritime operations such as an excursion boat or cruise terminal.

- Include public access improvements as a key component of major new development on Piers 30-32 to further the creation of a Port Walk that guides circulation on the pier, takes maximum advantage of views of the City and the water, and connects to the pedestrian improvements along The Embarcadero.

- Develop uses that support and enhance the mix of maritime and commercial recreation uses developed on Piers 30-32, as well as provide a transition between residential uses on inland blocks and public-oriented activities on the waterfront.

- Block 3771 [Seawall Lot 330] would be a desirable location for a mixed commercial and residential development or a hotel, depending on the combination of uses developed on Piers 30-32. Incorporate off-street parking into the development program for Block 3771 to serve a significant amount of the parking demand associated with the Piers 30-32 development, if necessary.

San Francisco Planning Code

The San Francisco Planning Code regulates development in the City by prescribing the permitted uses and development standards consistent with the land use designations and policies in the *San Francisco General Plan*. Through the Waterfront Land Use Plan, the Port has incorporated Planning Code zoning classifications. While the Port grants land use entitlements for development on Port property, the Planning Commission issues conditional use authorization and variances from zoning requirements for uses on Port property.

Zoning Districts and Height and Bulk Districts

Zoning in San Francisco generally consists of two layers of districts. Use Districts are the base zoning districts that prescribe permitted land uses and most development standards (except height and bulk). Height and Bulk Districts are mapped separately from Use Districts and prescribe the height and bulk of buildings. On top of the Use Districts and Height and Bulk Districts, Special Use Districts (SUDs) are mapped in some instances to address particular issues for targeted areas; SUDs provide controls that supersede some or all of the underlying Use Districts to meet certain goals.

Seawall Lot 330 is zoned SB-DTR (South Beach Downtown Residential District) and a 65/105-R Height and Bulk District. The SB-DTR District comprises the former South Beach Redevelopment Area. High-density residential uses and supporting commercial and institutional uses are allowed and encouraged within the limits set by height, bulk, and tower spacing controls. Individual townhouse dwelling units with ground floor entries directly to the street are generally required.

Piers 19 and 19 ½, Pier 23, Piers 27-29 and Piers 26-28 are zoned M-1 (Light Industrial), within the Northern Waterfront Special Use District (SUD) No. 1 and within a 40-X height and bulk district. Section 210.5 of the Planning Code indicates that the M-1 District is intended for light industrial use and is usually suitable for smaller industries dependent on truck transportation (as opposed to larger industries that rely on rail or water transportation). In accordance with Planning Code Sections 217 and 218, most institutional and retail uses are permitted by right in the M-1 District; specifically, educational, social service, and philanthropic institutional facilities are permitted. As defined in Planning Code Section 240.1, the Waterfront SUD No. 1 is intended for maritime uses (uses that require access to San Francisco Bay waters in order to function or operate in the normal course of business) and any use permitted by the Planning Code if the use is identified as acceptable in the Port's *Waterfront Land Use Plan*. The height limit in this district is 40 feet. In "X" bulk districts, there are no limitations on length or diagonal dimensions for the buildings.

Piers 30-32 and Pier 80 are zoned M-2 (Heavy Industrial) and within a 40-X height and bulk district. Piers 30-32 is within the Waterfront SUD No. 1 (described above). The M-2 districts are the least restricted as to use and are located at the eastern edge of the City, separated from residential and commercial areas. Maritime industries are permitted, with generally fewer requirements as to screening and enclosure than in M-1 Districts, but many of these uses are permitted only as conditional uses or at a considerable distance from Residential Districts.

Marina Green is zoned P (Public) and within an OS (Open Space) height and bulk district. The P district applies to land that is owned by a governmental agency and in some form of public use, including open space.

NPS properties within the boundaries of the City and County of San Francisco are governed by Section 105(e) of the Planning Code that addresses uses on property that are not specifically included in any use district shown on the Zoning Map. 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 Fort Mason, Alcatraz, Crissy Field and Aquatic Park areas within the City are currently zoned P (Public Use) District. Treasure Island is also zoned within a P (Public Use) District, in accordance with this provision.

Section 105(f) of the Planning Code addresses height and bulk of property that is not specifically included in any height and bulk district shown on the Zoning Map of the Planning Code. This section excludes property within the City and County of San Francisco that is not 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. Therefore, under the provisions of Section 105(f) of the Planning Code, the Fort Mason, Alcatraz, Crissy Field and Aquatic Park areas within the City are currently within an OS (Open Space) height and bulk district. Treasure Island is also zoned within an OS (Open Space) height and bulk district in accordance with this provision.

The uses proposed by both the AC34 and Cruise Terminal project would be consistent with the uses permitted by right in the M-1 and M-2 Districts in accordance with Planning Code Sections 210.5 and 210.6. The proposed uses would also be consistent with the uses permitted in Waterfront SUD No. 1, because the uses are permitted by the Planning Code and are identified as acceptable in the *Waterfront Land Use Plan*. Consistency with existing zoning and height and bulk districts are discussed in Section 5.2, Land Use.

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, ten 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 five 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 AC34 and Cruise Terminal projects, including their components, are reviewed against the goals and issues addressed in the *San Francisco Sustainability Plan* in Section 5.9, Greenhouse Gas Emissions.

San Francisco Green Building Program

San Francisco Green Building Code

The San Francisco Building Code was amended in 2008 to add Chapter 13C, Green Building Requirements. The new requirements under this ordinance 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 became 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 systems points for types of residential and commercial buildings; the requirements are summarized below.

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.

The AC34 project would require the construction of several temporary and permanent facilities within the jurisdiction of the Port of San Francisco, San Francisco Recreation and Parks Department (RPD) and Golden Gate National Recreation Area (GGNRA). All new construction projects and major alterations (including the proposed Piers 27-29 AC Village) of City-owned facilities and City leaseholds used for America's Cup activities shall comply with Environment Code Chapter 7 and the 2010 Port Building Code Chapter 13C (if on Port property), and be LEED® Gold certified by the Green Building Certification Institute.

The cruise terminal and the Northeast Wharf Plaza shall comply with Environment Code Chapter 7 and the 2010 Port Building Code Chapter 13C (if on Port property), and be LEED® Silver or higher, certified by the Green Building Certification Institute. These requirements will be included in construction bid requirements for the proposed Cruise Terminal project. Additionally, the cruise ships would be powered by shoreside power while berthed at the cruise terminal. The shoreside power system enables cruise ships to plug into the City's electrical grid while in port, instead of relying on the vessel's diesel generators for power, thereby substantially reducing diesel emissions and GHG emissions.

Thus, the proposed projects would meet or exceed the provisions of the City's Green Building in the Port's Building Code and Municipal Green Building Program and no potential conflicts were identified.

CHAPTER 5
Environmental Setting, Impacts, and Mitigation Measures

5.1 Impact Overview

This chapter presents the analysis of the physical environmental effects of implementing the two related projects as described in Chapter 3, Project Description: (1) the proposed 34th America's Cup (AC34) project, and (2) the proposed James R. Herman Cruise Terminal and Northeast Wharf Plaza (Cruise Terminal) project. This chapter describes the environmental setting, assesses impacts, and identifies mitigation measures for potentially significant and significant impacts. This impact overview section describes the general scope, approach, and assumptions used in the impact analysis.

5.1.1 Scope of Analysis

Chapter 5 addresses the full range of environmental topics required under the California Environmental Quality Act (CEQA). In addition to this overview section, there are 18 main sections in Chapter 5, corresponding to each environmental resource topic identified under CEQA. Each section is organized as follows:

- **Setting.** This subsection presents a description of the existing physical environmental conditions in the project area with respect to each resource topic at an appropriate level of detail to allow the reader to understand the impact analysis.

- **Regulatory Framework.** This subsection, where applicable, describes the relevant laws and regulations that apply to protecting the environmental resources within the project area and the governmental agencies responsible for enforcing those laws and regulations.

- **Impacts and Mitigation Measures.** This subsection evaluates the potential for the proposed projects to result in adverse effects on the physical environment described in the setting. It identifies the significance of each impact based on topic-specific significance criteria. For impacts determined to be significant or potentially significant, this subsection identifies feasible mitigation measures that could avoid or lessen the severity of the impact. The project sponsors—consisting of the Port of San Francisco (Port), the America's Cup Event Authority, LLC (Event Authority), and the City and County of San Francisco (CCSF or City)—have reviewed the proposed mitigation measures and will recommend that the City decisionmakers adopt them if the project(s) is (are) approved.

This subsection is further subdivided into the following:

- *Significance Criteria* for evaluating the environmental impacts are defined at the beginning of each impact analysis section and are specific to each environmental resource topic. The impact significance criteria used in this EIR are based on San Francisco Planning Department guidance regarding the environmental effects to be considered significant. This guidance is, in turn, based upon CEQA Guidelines Appendix G and the Planning Department's Initial Study checklist, with some modifications. In cases where potential environmental issues associated with the projects are identified, but are not clearly addressed by the guidance listed above, additional impact significance criteria are presented. This section also describes if and why any of the significance criteria do not apply to the proposed project(s); those significance criteria are not discussed further.

- *Approach to Analysis* describes the general approach and methodology used to apply the significance criteria in evaluating the impacts of the project. The methodology provides the basis for the impact analysis, which could be either qualitative or quantitative, relative to the significance criteria. The methodology identifies use of applicable regulatory guidelines, thresholds, or standards, or in some cases, accepted professional practices or protocols used to assess the nature and severity of environmental impacts.

- *AC34 Event and Cruise Terminal Impacts and Mitigation Measures* presents project-specific analysis of impacts of the proposed AC34 and Cruise Terminal projects under two separate subsections (except where otherwise noted). The project considerations used in this analysis are based on the project description as presented in Chapter 3, plus for the AC34 project, the additional considerations described in Section 5.1.3, below. Each of the numbered impact statements is followed by discussion and analysis of the various components of the proposed project with potential for physical environmental effects. The conclusion of each impact analysis is expressed in terms of the impact significance, which is discussed further in Section 5.1.2, below. For significant or potentially significant impacts, feasible project-specific mitigation measures, numbered corresponding to the impact number, are described. In some cases, for impacts determined to be less than significant, improvement measures are recommended to reduce or avoid impacts; implementation of improvement measures is not required under CEQA, since they only apply to impacts determined to be less than significant.

- *Future Long-Term Development Impacts and Mitigation Measures* presents the analysis of impacts associated with the potential long-term development that could occur as a direct consequence of implementation of the AC34 project, as described in Chapter 3, Project Description. The purpose of the future long-term development impact analysis is explained in Section 5.1.4, below. For significant or potentially significant impacts of the future long-term development, feasible mitigation measures are described.

- *Cumulative Impacts* considers the effects of the proposed projects together with potential effects of other past, present, or reasonably foreseeable future projects in the project vicinity proposed by the City, Port, or other jurisdictions. The analysis of cumulative impacts under each resource topic is based on the same setting, regulatory framework, and significance criteria as the direct impacts. Additional

mitigation measures are identified if the analysis determines that the project's contribution to a cumulative, adverse impact would be considerable (i.e., significant). The overall approach to the cumulative impact analysis is described in Section 5.1.5, below.

5.1.2 Significance Determinations

The purpose of an EIR is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.[1] Mitigation measures are not required for effects that are not found to be significant.[2] As defined by CEQA Guidelines section 15382:

"Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant. The conclusion of each impact analysis provides a significance determination to indicate if mitigation measures are warranted. The categories used to designate impact significance are as follows:

- **No Impact (NI).** An impact is considered not applicable (no impact) if there is no potential for impacts, or if the environmental resource does not occur within the project area or the area of potential effect. For example, there would be no impacts related to grading if there is no grading proposed at a particular project site.

- **Less-Than-Significant Impact (LTS).** This determination applies if there is a potential for some limited adverse impact, but not a substantial adverse effect that qualifies under the significance criteria as significant. No mitigation is required for impacts determined to be LTS.

- **Less-Than-Significant Impact with Mitigation (LTSM).** This determination applies if the project would or could potentially result in a significant adverse effect when evaluated with one or more significance criteria, but feasible mitigation is available that would reduce the impact to a less-than-significant level.

- **Significant Unavoidable Impact with Mitigation (SUM).** This determination applies if the project would result in a significant adverse effect when evaluated with one or more significance criteria, but there is no feasible mitigation available to reduce the impact to a less-than-significant level. There might be some feasible mitigation measure(s) that would lessen the impact, but the residual effect after implementation of the measure would remain significant, and therefore the impact is considered significant and unavoidable.

- **Significant Unavoidable Impact (SU).** This determination applies if the project would result in a significant adverse effect when evaluated with one or more significance criteria, but there appears to be no feasible mitigation available to reduce the impact to a less-than-

[1] Public Resources Code section 21002.1(a)
[2] California Code of Regulations section 15126.4(3)

significant level, or implementation of the mitigation measure is not within the control of the project sponsor(s). Therefore the impact is considered significant and unavoidable.

5.1.3 AC34 Event and Cruise Terminal Impacts

This chapter describes and analyzes the physical environmental impacts of the proposed AC34 and Cruise Terminal projects and the Pier 27 Shed Variant. As described in Chapter 3, Project Description, both the AC34 and Cruise Terminal projects have multiple components that are analyzed in this EIR. For the AC events, including construction and operation of proposed facilities, and the Cruise Terminal project, the impact analysis is based on detailed, project-specific information. For the long-term development rights under the AC34 project, however, the impacts are analyzed at a conceptual level as described below in Section 5.1.4. The discussion below provides an overview of the approach and considerations used in the impact analysis of the various project components and the project variant.

5.1.3.1 Approach to AC34 Event Impact Analysis

The impact analysis of the AC34 event addresses the following project components that are described in Chapter 3, Project Description: AC34 2012 and 2013 construction and operations, including secondary viewing areas; tenant displacement and relocation; and amendments to the Bay Conservation and Development Commission (BCDC) Special Area Plan. To avoid redundancy, impacts associated with AC34 2012 and 2013 are combined to the extent possible since most of the sites, facilities and types of activities would be similar; in most cases, the worst-case scenario of the AC34 2012 and 2013 activities is analyzed to provide a conservative impact analysis. Impacts associated with proposed tenant displacement and relocation, as well as with the proposed amendments to the BCDC Special Area Plan, are discussed only under those resource topic areas where there are potential impacts, as described further below.

AC34 Impact Analysis, Additional Considerations—Secondary Viewing Areas

This chapter analyzes the construction and operation of the AC34 project in both 2012 and 2013. As part of the operational impact analysis, this chapter also considers "secondary" viewing areas in addition to the "primary" venues described in Chapter 3 because of the size of crowds anticipated to attend the AC34 events. The secondary viewing areas—both land-based and water-based locations—are locations not specifically identified as part of the proposed project but nonetheless may attract numerous visitors and spectators due to their potential viewing opportunities for the AC34 races, even though they would not have any programmed amenities, event information, or hospitality attractions sponsored by the Event Authority that would be available at the primary venues. Even though visitor use of the secondary areas is not part of the proposed AC34 project *per se*, these areas could experience a physical change in the environment and were therefore considered in the project-specific impact analysis as part of the "whole of the action" in accordance with CEQA Guidelines Section 15378. (In contrast, with respect to the James R. Herman Cruise Terminal and Northeast Wharf Plaza project, the description presented in Chapter 3 is considered the "whole of the action" for that project, and no additional considerations are used in the impact analysis.) The location of the AC34 secondary viewing

areas and assumed level of activities at these locations are described below for the purposes of the impact analysis in this EIR.

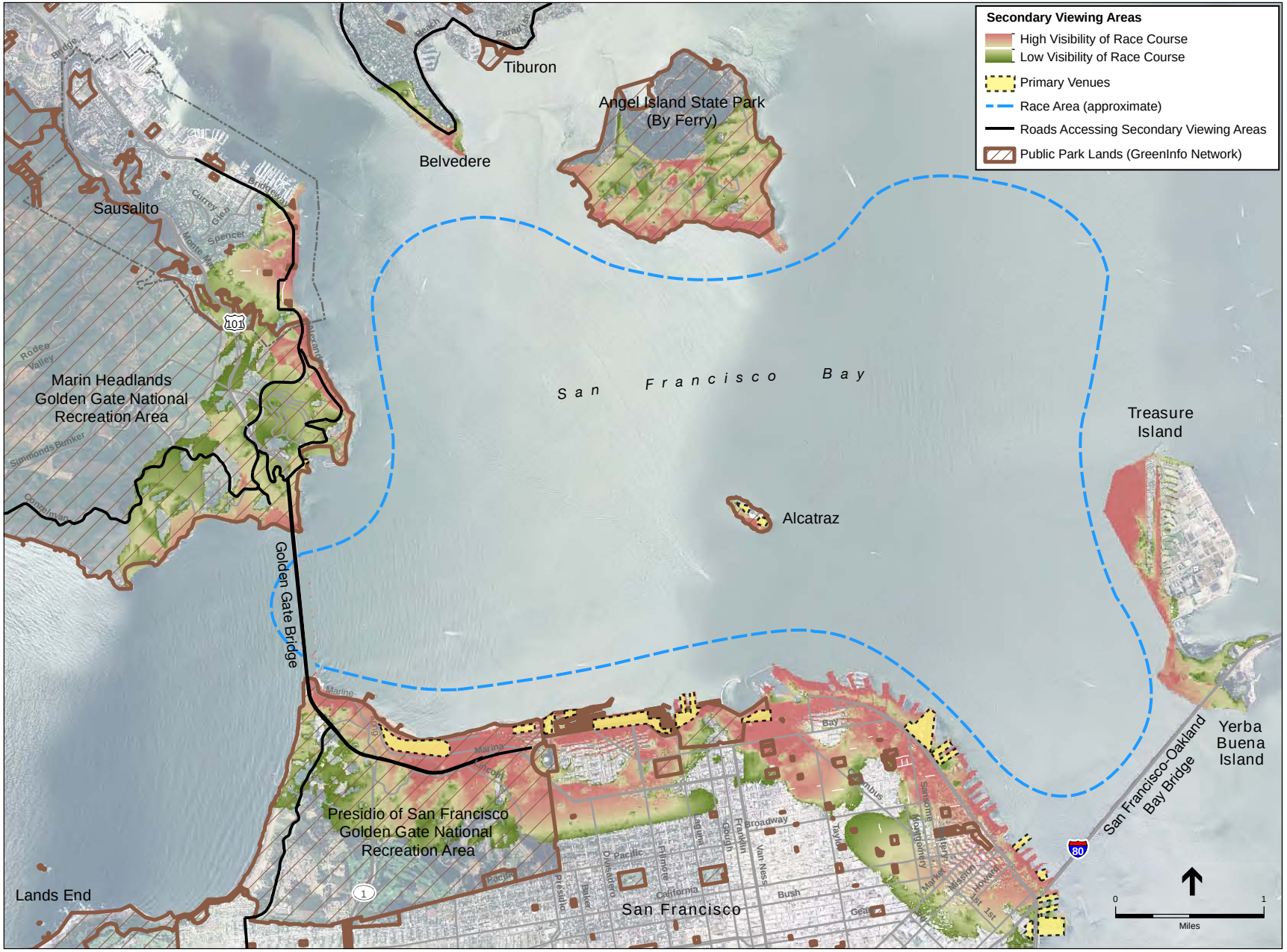
AC34 Secondary Viewing Areas for Land-Based Spectators

One of the objectives of AC34 is to provide maximum physical and visual public access to the regattas and racing events. Chapter 3 identifies the AC34 venues that would be developed and designed specifically to accommodate spectators and visitors to the AC34 events in both 2012 and 2013. These project or primary venues include Piers 30-32, Piers 27-29, Aquatic Park, Marina Green, Crissy Field, and Aquatic Park. Due to the geography and topography of the Bay Area, there are a number of other potential secondary viewing areas surrounding the proposed race area where the AC34 races might be observed and could attract spectators. For the purposes of this EIR, the impact analysis considers the potential for the AC34 events to result in impacts at these secondary viewing areas.

To identify potential secondary viewing areas, the EIR analysts conducted a viewshed analysis of the AC34 race area using geographic information system technology augmented by local knowledge of potential viewing locations and access. Using the proposed AC34 race area shown in Chapter 3, Figure 3-2, a digital elevation model of topography was used to calculate locations where it may be possible to see broad areas of the races. This analysis encompassed a potential viewing area of approximately one mile from the outer edge of the proposed AC34 race area, which is considered a maximum distance from which spectator viewing would be possible to distinguish features of the race. The viewshed analysis is based on topography only and does not take into account intervening structures (including boats), established vegetation, weather factors (e.g., fog), or areas inaccessible or prohibited to the public (including private properties), all of which would limit or preclude public views of the proposed AC34 race area from certain vantage points. As a consequence, the viewshed analysis provides only a conceptual, conservative indication of potential race course visibility at secondary viewing areas.

Figure 5.1-1 identifies areas within one mile of the AC34 race area in which broader areas of the race course could be visible (shown in rust color) as compared to areas in which narrower portions of the race course would be visible (shown in dark green), in the absence of intervening structures, vegetation, and other factors discussed above. Known roads, viewpoints, and destinations are overlaid on the viewshed analysis to identify publicly accessible secondary viewing areas, although the actual visibility of the race course from these locations and public accessibility to these locations could vary widely. It should be noted that the actual race courses for the sailing races would be located within a smaller area within the identified race area based on government agency coordination and race conditions in 2012 and 2013. Thus, from some of the secondary viewing areas identified in Figure 5.1-1, the distance from the viewing location to the race course could be much greater than one mile.

In San Francisco, the potential secondary viewing areas from which the AC34 race area could be visible primarily include the waterfront and shoreline areas and north-facing slopes of the Presidio, Pacific Heights, Russian Hill, and various vista points, such as Coit Tower. Locations along the waterfront include popular public destinations, such as Fisherman's Wharf, Pier 39,



SOURCE: USGS, 2011; GreenInfo Network, 2011: ESA, 2011

Note: Secondary viewing areas are identified as locations within one mile of the proposed race area, separate from the primary venues, that might provide views of the AC34 events within the proposed race area. However, identification of the secondary viewing areas is based solely on topography, and actual visibility of the race area could be affected by intervening structures or vegetation. Public access or amenities at these locations is not considered.

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Figure 5.1-1

AC34 Race Area Viewshed, Secondary Viewing Areas

Broadway Pier (Pier 7), and the Ferry Building. Other locations beyond the designated primary venues at Crissy Field, the Presidio, Fort Point, and other Golden Gate National Recreation Area (GGNRA) lands in San Francisco may provide additional potential locations for viewing portions of the race course.

Outside of mainland San Francisco, the north and west sides of Treasure Island would offer broad viewing areas of the race area available to the public, although depending on the actual location of the race course, the distance could be greater than one mile. While a small portion of Yerba Buena Island is within the race course viewshed, most of that portion of the island has constrained public accessibility. Within southern Marin County, secondary viewing areas primarily include shoreline areas and south- and east-facing slopes, such as roadside pulloffs in the GGNRA's Marin Headlands and at Fort Baker, as well as along the Sausalito waterfront and south side of Angel Island. Both the Marin Headlands and Angel Island are within the race course viewshed and contain large public open spaces and have visitor facilities. However, Angel Island is accessible only by ferry or private boat, and the Marin Headlands has limited accessibility and hilly, vegetated terrain that could obscure portions of the race area. As noted above, none of the secondary viewing areas would have the programmed amenities, event information, or hospitality attractions sponsored by the Event Authority similar to what has been proposed at the primary venues.

In addition to the open space areas, hillside and street views in areas of San Francisco, Belvedere, Tiburon, and Sausalito shown on Figure 5.1-1 could also provide passing views of San Francisco Bay and segments of the AC34 race course, although views could be restricted by intervening structures, vegetation, or boats. None of these locations would offer public viewing areas or public amenities. Potential vantage points in Alameda County are considered too distant from the AC34 race course for optimal viewing.

Similar to the information presented in Chapter 3, **Table 5.1-1** lists the estimated range of visitors expected at each of these secondary viewing areas from non-peak to peak days. These estimates were based on a "penetration rate analysis" conducted by AECOM[3] to estimate attendance at the AC34 events and indicate the large majority of spectators would be expected to be at the primary venues rather than the secondary viewing areas. This estimate is largely based on the fact that the primary venues would offer a unique and appealing programmed experience for spectators interested in the AC34 events and therefore would attract the large majority of visitors to the San Francisco waterfront. Secondary viewing areas, on the other hand, would lack event information and hospitality attractions, and would have limited public-serving amenities; they could also have intervening obstructions blocking views of the race (such as large spectator boats), and therefore are expected to attract fewer spectators.

[3] AECOM, 2011. *Analysis of Visitation for America's Cup 34*. June 17, 2011. Please see Appendix PD of this document.

TABLE 5.1-1
ESTIMATES OF LAND-BASED SPECTATORS AT AC34 SECONDARY VIEWING AREAS
(total daily spectators)

Secondary Viewing Areas Outside San Francisco[a]	Estimated Daily Visitors[b]	Secondary Viewing Areas Within San Francisco	Estimated Daily Visitors[b]
Treasure Island	2012: 1,300 – 5,500 2013: 1,500 – 12,000	The Presidio	2012: 450 – 2,000 2013: 500 – 5,000
Angel Island	2012: 50 – 1,000 2013: 50 – 1,000	Fort Mason	2012: 900 – 3,000 2013: 1,000 – 7,000
Fort Baker/Marin Headlands	2012: 250 – 2,000 2013: 300 – 3,500	Fisherman's Wharf	2012: 3,500– 15,000 2013: 3,900 – 25,000
Sausalito	2012: 200 – 3,500 2013: 225 – 5,000	The Embarcadero (Pier 42 to Fisherman's Wharf)[c]	2012: 4,600 – 10,000 2013: 5,200 – 48,000
Tiburon/Belvedere	2012: 25 – 1,000 2013: 25 – 1,200	Other	2012: 0 – 3,000 2013: 0 – 5,000

[a] Secondary viewing areas are based on topographic data to identify areas within one mile from the outer edge of the proposed AC34 race area that may afford broad views of the race events, but the identified locations do not account for intervening structures, vegetation, weather factors, or areas inaccessible or prohibited to the public which would limit or preclude views of the race area.

[b] The range of visitors at each site represents the total number of daily visitors estimated to go to these locations specifically to watch the AC34 races; these visitors would be in addition to visitors/tourists who would typically go to these locations. The daily total includes some degree of turnover of visitors at each location on a given day. It is estimated that the peak number of spectators at any given time could be about 80 percent of the total daily number. For both 2012 and 2013 events, the range represents the average of peak race weekday events on the low end and average of the five most popular peak weekend race days on the high end.

[c] Encompasses public areas along The Embarcadero and public piers, but not including the proposed venues sites at Piers 27-29 or Justin Herman Plaza. Estimate includes visitors to team bases at Piers 30-32.

SOURCE: AECOM, 2011. *Analysis of Visitation for America's Cup 34*. June 17, 2011. See Appendix PD-1 of this document.

AC34 Secondary Viewing Areas for Water-Based Spectators

As part of the AC34 events, it is expected that in addition to the land-based spectators at the primary and secondary viewing areas, many of the spectators would view the race events from boats in the Bay. As shown on Figure 3-2 in Chapter 3, the proposed race area encompasses a large area of Central San Francisco Bay, spanning an area from San Francisco and the Bay Bridge on the south to west of the Golden Gate Bridge and Sausalito on the west, Belvedere and Angel Island on the north, and Treasure and Yerba Buena Islands on the east. This area provides abundant opportunities for viewing the AC34 events and races from the water, although as noted in Chapter 3, the America's Cup Event Authority and America's Cup Race Management in cooperation with the U.S. Coast Guard would regulate maritime travel within the race area during event periods to ensure safety and in accordance with the proposed Water and Air Traffic Plan. During the AC34 race events, access to areas within the race course would be restricted; however, as shown in Figure 3-2, limited spectator viewing from privately owned boats would be permitted within designated portions of the race area, outside of the race course. Other water-based viewing of the race would be expected to occur around the perimeter of the race area.

As shown in **Table 5.1-2,** there would be three general categories of non-America's Cup-sponsored spectator boats—recreational, commercial charter, and large private yachts—originating mostly from Bay Area residents but including a large percentage of tourists traveling in boats from outside of the local area. The total number of boats expected during the AC34 2012 event ranges from about 655 to 1,810, carrying from about 4,600 to 13,000 passengers. The total number of boats expected during the AC34 2013 event ranges from about 790 to 2,280, carrying from about 6,300 to 18,000 passengers.

TABLE 5.1-2
ESTIMATES OF WATER-BASED SPECTATORS IN THE CENTRAL BAY ON AC34 RACE DAYS, 2012 AND 2013[a]

Type of Boat	Estimated Number of Boats	Estimated Average Passengers per Boat	Total Number of Passengers
Recreational	2012: 650– 1,800 2013: 750 – 2,200	6	2012: 3,800 – 11,000 2013: 4,400 – 13,200
Commercial charter	2012: 5 –13 2013: 7 – 20	150	2012: 800 – 2,000 2013: 1,000 – 3,000
Large private yachts	2012: 0 2013: 30 – 60	30	2012: 0 2013: 900 – 1,800
Total	**2012: 655 -1,810 2013: 790 - 2,280**		**2012: 4,600 – 13,000 2013: 6,300 – 18,000**

[a] The range represents average peak weekday race days to average peak weekend race days.

SOURCE: AECOM, 2011. *Analysis of Visitation for America's Cup 34*. Draft Report, June 17, 2011

Tenant Displacement and Relocation

As described in Chapter 3, most existing tenants currently leasing and occupying the Port facilities that would be used for AC34 venues would be displaced prior to the AC34 2012 event. The Port would terminate the existing tenant leases consistent with the terms of their existing leases, and those tenants would need to relocate, either at other Port properties, elsewhere in San Francisco, or the surrounding area. The Port's portfolio and San Francisco's broader real estate market offer numerous location options for most tenants. However, three tenants in the affected facilities are recognized as having unique relocation requirements, and this EIR addresses the impacts of relocation on these tenants; Teatro Zinzanni dinner theater, Bauer's California Coach Sales and Service, and San Francisco Soccer's Telegraph Field.

Tenant displacement and location of these three businesses would have no impacts on the following topics: cultural resources, noise, greenhouse gas emission, wind/shadow, recreation, utilities, public services, biological resources, geology, hydrology, hazards, energy, agriculture/forest resources. For these topics, any environmental effect would be no change from the existing condition, either because it would simply be relocation of regional effects from one location to another (such as recreation, utilities, public services) or because it has no impact at all

on that resource (such as biological resources, geology, hydrology). Therefore, those sections of Chapter 5 listed above do not discuss tenant displacement and relocation. For the remaining topic areas, the analysis of tenant displacement and relocation is included as part of the AC34 events impact analysis, even though for Piers 27-29, tenant displacement and relocation would be attributable to the Cruise Terminal project.

AC34 Impact Analysis—Amendments to the BCDC Special Area Plan

For the AC34 project, there are two proposed amendments to the BCDC Special Area Plan included as part of the project. These amendments relate to the Rincon Point Open Water Basin (Piers 14-22½) and the Brannan Street Wharf Open Water Basin (Piers 32-36) to allow for temporary berthing at these locations during the AC34 events. Therefore, environmental implications of these proposed amendments are incorporated in the analysis of construction and operation of the AC34 events in each of the resource topic areas, and the impacts are not specifically called out for the proposed amendments. In addition, fill removal at a number of sites (including various dilapidated piers, wharfs, and remnant pilings) may be reviewed by BCDC in the context of the proposed amendments to the *San Francisco Waterfront Special Area Plan* for the AC34 project; this project component is the same as for the Cruise Terminal project, so the impact discussion is consolidated in one location in the impact analysis under the Cruise Terminal project impacts.

5.1.3.2 Approach to Cruise Terminal Project Impact Analysis

Cruise Terminal Impact Analysis—Amendments to the BCDC Special Area Plan

Similar to the AC34 project, there are amendments to the BCDC Special Area Plan included as part of the Cruise Terminal project. In most cases, the provision under the proposed amendments are incorporated in the analysis of construction and operation of the Cruise Terminal and Wharf Plaza and are not specifically called out as impacts of the proposed amendments. However, as explained in Chapter 3, fill removal is included in the scope of issues that would be reviewed by BCDC in the context of the above proposed amendments to the Special Area Plan, and the Port has identified possible fill removal sites that may be considered in BCDC's public process. The environmental impact analysis of the potential effects of fill removal are included in Chapter 5 only under the resource areas that could be affected, namely, biological resources (marine), hydrology and water quality, hazards and hazardous materials, and air quality. There would be no substantial effect on any of the other resources, and therefore, there is no discussion of fill removal under any of the other topics.

5.1.3.3 Project Variant Impact Analysis

Chapter 3 describes the Pier 27 Shed Variant, which is analyzed in this EIR at an equal level of detail as the proposed AC34 and Cruise Terminal projects. Under the Pier 27 Shed Variant, demolition activities would occur during 2012, with demolition of all or only a portion of the Pier 27 shed, and the construction of the cruise terminal core building and shell would be delayed until after completion of the AC34 2013 events. Therefore, construction of the Cruise Terminal

and Northeast Wharf Plaza would begin after the AC34 2013 events are completed in late 2013, and would continue for about a two-year period. Under the Pier 27 Shed Variant, the cruise terminal would be operational in 2015 rather than 2014. As a result, the availability of shoreside power to the site would also be delayed by approximately one year. The main difference between this variant and the proposed combined AC34 and Cruise Terminal projects would be that instead of using the cruise terminal core building and shell for the 2013 AC Village hospitality center, the Event Authority would use either the partial Pier 27 shed with a temporary structure or a stand-alone temporary structure would be put in place and later removed after the conclusion of 2013 event. In addition, the full construction schedule for the cruise terminal and the availability of shoreside power would be delayed by about one year.

Environmental impacts of the Pier 27 Shed Variant would be largely identical to those of the proposed project. Construction-related disruption and associated temporary impacts of the Variant—including transportation, noise, and dust effects—would occur during a different timeframe than under the proposed projects—shifting from 2012-2013 to 2013-2014— but the nature, magnitude, and duration of those impacts would be same as those described for the proposed projects. With respect to long-term operational impacts of the Variant, there would be no differences from those identified for the proposed projects with the exception of the delay in shoreside power. Thus, with the exception of Air Quality, impacts of the Variant on all environmental resources and associated mitigation measures would be the same as those of the proposed projects. Therefore, only Section 5.8, Air Quality, includes a discussion of the impacts of the Variant; all other resource topics address the impacts of the Variant congruent with the analysis of the proposed projects and are not specifically called out.

5.1.4 Future Long-Term Development Impacts

As described in Chapter 3, the proposed AC34 project includes components for which site-specific details have not yet been developed, namely the Event Authority's long-term development rights under future Disposition and Development Agreements (DDAs) provided for under the AC34 Host Agreement. Because no specific long-term development proposal is defined at this time, this EIR analyzes the long-term development options at a conceptual level in order to ensure comprehensive environmental review of the project as a whole. When site-specific development or construction proposals are available, those development proposals will be subject to subsequent, project-specific CEQA review. The San Francisco Planning Department will make the determination of the appropriate level of CEQA review at that time. Long-term development mitigation measures identified in this EIR would be re-evaluated as part of project-specific CEQA review to determine their applicability and effectiveness to address any impacts identified for the site-specific development proposal and would be re-iterated, clarified to be more project-specific, or replaced with equally or more effective measures, if needed.

The AC34 Host Agreement specifies that after the completion of the AC34 race event, in consideration of the Event Authority's investment in infrastructure required for AC34, the Event Authority will have commensurate long-term development rights under DDAs. The DDAs would provide for the execution and delivery of legacy leases and a transfer agreement on the

satisfaction of certain conditions. Consequently, after conclusion of the AC34 race events, the implementation of the AC34 project could lead to potential long-term development of the following sites: Piers 30-32, Seawall Lot 330, and Piers 28, 26, 19, 19½, 23, and 29 as well as Brannan Street Wharf (Piers 32-36) Open Water Basin and Rincon Point (Piers 14-22½) Open Water Basin. However, neither the Event Authority nor the City currently has specific plans for development of any of the venues that may be subject to DDAs, and the Host Agreement specifies that particular plans for development of those venues after AC34 will be subject to further project-specific environmental review under CEQA.

In the absence of specific long-term development proposals, the impact analysis the future long-term development in this EIR is based on the generalized development assumptions available within existing land use policies and guidelines for the sites identified for potential long-term development, as described in Chapter 3. Thus, the future long-term development impact discussions provide an assessment of potential physical effects of the long-term development from a broad, qualitative perspective, identifying the range of potential impacts or--in some cases--providing a screening threshold for potential impacts. The evaluation also identifies mitigation measures that appear feasible based on the conceptual nature of the future long-term development description. As stated above, when more detailed information becomes available on specific development proposals at these sites following the completion of AC34 events, those development proposals will be subject to subsequent, project-specific CEQA review.

5.1.5 Cumulative Impacts

Cumulative impacts, as defined in Section 15355 of the CEQA Guidelines, refer to two or more individual effects that, when taken together, are "considerable" or that compound or increase other environmental impacts. A cumulative impact from several projects is the change in the environment that would result from the incremental impact of the project when added to those of other closely related past, present, or reasonably foreseeable future projects. Pertinent guidance for cumulative impact analysis is provided in Section 15130 of the CEQA Guidelines:

- An EIR shall discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable" (e.g., the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects, including those outside the control of the agency, if necessary).

- An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.

- A project's contribution is less than cumulatively considerable, and thus not significant, if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

- The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the project alone.

- The focus of analysis should be on the cumulative impact to which the identified other projects contribute, rather than on attributes of the other projects that do not contribute to the cumulative impact.

The cumulative impact analysis for each individual resource topic is described in each subsection of this chapter, immediately following the description of the direct project impacts and identified mitigation measures.

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines Section 15130(b)(1): (a) the analysis can be based on a list of past, present, and probable future projects producing related or cumulative impacts; or (b) a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. In general, for the purpose of this EIR, the analysis employs the list-based approach to identify cumulative effects associated with near-term projects that could contribute to cumulative impacts during the construction and operations of the AC34 facilities and events as well as during construction of the James R. Herman Cruise Terminal and Northeast Wharf Plaza. Projects that are relevant to the cumulative analysis include those that could contribute incremental effects on the same environmental resources and would have similar environmental impacts as those discussed in this EIR. The following factors were used to determine an appropriate list of projects to be considered in the near-term cumulative impact analysis:

- **Similar Environmental Impacts.** A relevant project contributes to effects on resources that are also affected by the proposed project. A relevant future project is defined as one that is "reasonably foreseeable," such as a proposed project for which an application has been filed with the approving agency or has approved funding.
- **Geographic Scope and Location.** A relevant project is located within the defined geographic scope for the cumulative effect.
- **Timing and Duration of Implementation.** Effects associated with activities for a relevant project (e.g., short-term construction or demolition, or long-term operations) would likely coincide in timing with the effects of the proposed project.

In addition to the near-term cumulative impacts, this EIR considers cumulative impacts associated with the potential long-term development with a planning horizon of 2035 that could contribute to cumulative impacts associated with long-term operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza and development options under the AC34 Host Agreement. The basis for the long-term cumulative analysis is based mainly on economic forecast derived from the Association of Bay Area Governments' forecasts and Metropolitan Transportation Commission regional transportation forecasts. The long-term cumulative analysis applies mainly to the transportation and circulation impacts.

The cumulative impacts portions of Sections 5.2 through 5.19 in this chapter analyze the potential cumulative impacts that could occur when the impacts of the proposed project are considered in combination with the impacts of other past, present, and reasonably foreseeable future projects. It should be noted that the reasonably foreseeable future projects are subject to independent environmental review and consideration by approving agencies. Consequently, it is possible that some of the projects will not be approved or will be modified prior to approval (e.g., as a result of the CEQA alternatives process). For the purposes of assessing worst-case cumulative impacts, however, the cumulative impact analysis is premised on the approval and construction of the identified projects.

The projects used in the cumulative impact analysis relevant to the construction and operations of the AC34 facilities and events as well as during construction of the James R. Herman Cruise Terminal and Northeast Wharf Plaza are listed in **Table 5.1-3**. The projects used in the long-term cumulative impact analysis are listed in **Table 5.1-4**.

5.1.6 Impacts of Mitigation Measures

CEQA Guidelines Section 15126.4 states that "if a mitigation measure would cause one or more significant effect in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed."

Chapter 5 identifies project-specific mitigation measures for all potentially significant and significant impacts where feasible. In most cases, implementation of the mitigation measure would reduce or avoid the magnitude, duration, and/or overall severity of the identified impact with no additional secondary effects. However, in a few cases, implementation of a mitigation measure could result in other environmental impacts. For example, a mitigation measure to increase transit or ferry service to reduce transportation impacts would result in increased air pollutant emissions and noise from those sources. In those few cases, the analysis of impacts of the mitigation measure follows that mitigation measure and explains why the additional significant effects would not change the overall impact conclusion. Unless otherwise stated, the mitigation measures presented would not result in additional significant effects.

With respect to mitigation measures related to the analysis of long-term development options under the AC34 Host Agreement, subsequent, project-specific CEQA review will be required on all specific development proposals. At that time, the CEQA review will identify the specific mitigation measures that apply to the specific development proposal, and the project-specific CEQA analysis will provide the appropriate discussion of impacts of identified mitigation measures. Therefore, impacts of mitigation measures related to long-term development options are not discussed in this EIR.

TABLE 5.1-3
NEAR-TERM PROJECTS THAT COULD CONTRIBUTE TO CUMULATIVE IMPACTS

Project Name (Jurisdiction, if applicable)	Project Summary
Southern Waterfront Planning (Port of San Francisco)	Planning effort for 370 acres of land in the Southern Waterfront, most of which is designated for existing or future expanded maritime uses.
Pier 90 - 94 Backlands (Port of San Francisco)	The Port is seeking necessary approvals and is preparing site engineering plans to use a 23-acre area near the Islais Creek channel for construction lay down, storage, construction material recycling, and other uses.
Southern Waterfront Gateway Sites (Port of San Francisco)	The Port has identified three Gateway Sites to promote economic development of the Southern Waterfront: Cargo Terminal Gateway, Third & Cargo Gateway, and Islais Creek Gateway.
Pier 70 Area (Port of San Francisco)	Master planning effort for a 69-acre site located in the city's Central Waterfront (between Mariposa and 22nd Streets) which is proposed to rehabilitate historic resources, provide new shoreline open space, allow infill development, and conduct environmental remediation where required.
Pier 48/Seawall Lot 337 (Port of San Francisco)	Development of the 16-acre Seawall Lot 337, which includes improvements to Terry Francois Boulevard, partial conversion to open space, and possible rehabilitation of Pier 48.
Pier 40 – Phase II Rehabilitation (San Francisco Redevelopment Agency)	Rehabilitation work consisting of refurbishment of the historic Pier 40 shed, improved public access, and upgrades to the Pier 40 substructure.
Pier 36/Brannan Street Wharf Project[4] (Port of San Francisco)	Construction of a 57,000 square-foot public park over the water and parallel to the Embarcadero Promenade consisting of a lawn, walkway with seating, and floating dock for kayaks.
Pier 24 Annex Rehabilitation (Port of San Francisco)	Rehabilitation of the Pier 24 Annex Building located along the Embarcadero at Harrison Street for use as a multi-use retail facility.
Pier 22 ½ Fireboat Station Rehabilitation and Alteration (Port of San Francisco)	Rehabilitation and alteration of Fire Station 35 at pier 22 ½.
Downtown Ferry Terminal Project (Port of San Francisco)	Plans for the Phase II development of the Downtown Ferry Terminal are currently being studied by the Water Emergency Transportation Authority (WETA).
Pier 15 to 17, Exploratorium Relocation (Port of San Francisco)	Relocation of the Exploratorium from the Palace of Fine Arts to Piers 15 and 17 on the Embarcadero at Green Street.
Piers 19 to 23 Rehabilitation for Mixed Use Occupancy (Port of San Francisco)	Rehabilitation of Piers 19 to 23 for mixed use occupancy to meet compliance with the Secretary of Interior Standards.
Piers 31-33 Alcatraz Landing Improvements (Port of San Francisco)	Improvements and alterations to existing facilities to support existing ferry service under a contract with the National Park Service to Alcatraz Island National Park.
Fisherman's Wharf Improvement Project	Planning effort consisting of transportation and public access improvements to stimulate economic revitalization at Fisherman's Wharf.
Maintenance Dredging (Port of San Francisco)	Maintenance dredging of sediments from Fisherman's Wharf, Hyde Street Harbor, Pier 9, Berth 27, Berths 35 East and West, Pier 40, Berths 80A through D, Islais Creek and Approach, Berths 92 East and West, Berth 94, Berth 96, Downtown Ferry Terminal and other similar sites at the Port of San Francisco waterfront.
Embarcadero Pedestrian Signage and Map Program (Port of San Francisco)	Installation of pedestrian signage and maps along the Embarcadero.

[4] If for some reason the Brannan Street Wharf project does not get approved, minor changes may need to be made to the AC34 project description to provide for additional scope of work that would have been done as part of the Brannan Street Wharf project.

TABLE 5.1-3 (Continued)
NEAR-TERM PROJECTS THAT COULD CONTRIBUTE TO CUMULATIVE IMPACTS

Project Name (Jurisdiction, if applicable)	Project Summary
Proposition A Clean and Safe Parks Project (Port of San Francisco)	Open space improvements along the waterfront, including the Pier 43 Trail Promenade.
Ferry Building Area, Seawall Lot 351	Development of the existing 27,937 square-foot parking lot for restaurant/retail and parking uses in conjunction with 8 Washington Street.
Blue Greenway Project (Port of San Francisco)	Improvements to San Francisco's southern portion of the Bay Trail and the Bay Water Trail, which may include installation of tables, benches, lights, bollards, and bike racks.
8 Washington Street	Demolition of the existing Golden Gateway Tennis and Swim Club and construction of two new mixed-use buildings and outdoor health club facilities with tennis courts and pool.
921 Front Street	Construction of 6,992 square feet of additional floor area on two new mezzanine levels and a third floor penthouse for office/commercial uses.
717 Battery Street	Construction of a two-story penthouse addition to an existing three story office building.
1255-1275 Columbus Street	Demolition of an existing 15,852-square-foot and 32-foot high office building, and construction of a new 54,420-square-foot and 40-foot high mixed-use building.
Agriculture Building located on The Embarcadero at Mission Street	Rehabilitation and seismic upgrades to the existing Agriculture Building, which may include the following uses: support for expanded ferry services, restaurant, retail, and office.
Street Car Line F Extension (GGNRA and others)	Extension of the F-Market & Wharves Line (F-line) from Fisherman's Wharf through the San Francisco Maritime National Historical Park and the GGNRA's Fort Mason.
Transbay Tube Vibro Replacement (Bay Area Rapid Transit)	Thickening of the soil surrounding the Transbay Tube as part BART's systemwide Earthquake Safety Program.
San Francisco Bicycle Plan	Includes near-term bicycle route improvement projects, long-term bicycle route network improvement projects, and minor improvements such as signage and pavement marking changes.
Fisherman's Wharf Public Realm Plan	Includes the following improvements: Jefferson Street Redesign, streetscape design improvements, a parking management plan, design guidelines, and an open space plan.
Planned Renovation and Upgrade Projects (SAFR)	Various upgrades to Aquatic Park, including rehabilitation of the Aquatic Park Bathhouse building and amphitheater, completion of renovations of the historic ship the *C.A. Thayer*, retrofitting Building E of the Fort Mason Center, repairs o the municipal pier, and more.
San Francisco Marina Renovation (SFRPD)	Construction of waterside improvements and landside improvements, such as installation of new breakwater segments, removal of an existing breakwater, reconfiguration of riprap slopes, increase in the number of boat slips, renovation of public restrooms, and other improvements.
GGNRA Dog Management Plan (GGNRA)	Plan will provide a clear, enforceable policy to determine the manner and extent of dog uses in appropriate areas of the Golden Gate National Recreation Area.
Fort Mason Center Long-Term Lease (GGNRA)	Long-term 60-year lease agreement between NPS and the Fort Mason Foundation, a non-profit organization, for the continued renovation and maintenance of Fort Mason, as well as development and administration of the Fort Mason Center located in the lower part of Fort Mason.

TABLE 5.1-3 (Continued)
NEAR-TERM PROJECTS THAT COULD CONTRIBUTE TO CUMULATIVE IMPACTS

Project Name (Jurisdiction, if applicable)	Project Summary
Energy Improvements on Alcatraz Island (GGNRA)	Installation of photovoltaic panels on the Prison Building and New Industries Building to reduce the island's reliance on diesel-generated power and to help move towards the park's goal of becoming carbon neutral.
Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan (GGNRA)	Improvements to 11 miles of historic roads in the Marin Headlands and Fort Baker, including roadway surface improvements, drainage structures, and directional signage.
Sausalito-Marin City Sanitary District New Administration Building (GGNRA)	Demolition of the existing Sausalito-Marin City Sanitary District administration building and construction of a new 2-story, 2,200-square-foot administration building.
Presidio Coastal Trail Project (GGNRA and Presidio Trust)	Near-term trail improvements in the Presidio include upgrade and widening the Presidio Coastal Trail, installation of a new trail bridge, construction of new Class II bicycle lanes on Lincoln Boulevard, tree pruning and tree removal.
Treasure Island/ Yerba Buena Island Redevelopment (Treasure Island Development Authority)	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; and a new Ferry Terminal and intermodal Transit Hub.
Belvedere-Tiburon Library Expansion Project	Expansion of an existing public library which is located in the southern part of Tiburon and includes a loss of 54 parking spaces.
Lyford Drive Multi-Modal Parking Lot Project, Town of Tiburon	Construction of a new 60-foot wide paved parking area within the Tiburon Boulevard right-of-way to provide a total of approximately 50 parking spaces.
Sausalito Harbor Improvements (Sausalito Harbor Improvement Project)	Creation of a new City harbor in front of Gabrielson Park, which includes constructing a new 20-foot wide stone seawall. The harbor would accommodate 50 to 70 boats.
70-76 Liberty Ship Way (Sausalito)	Construction of 57,075 square feet of industrial buildings on a 3.9 acre parcel located at Schoonmaker Point.
Mallya Warehouse (Sausalito)	Development of 6,675 square feet of warehouse structure to be used for storage and maintenance of a private car collection and for storage and repair of unique boats
Doyle Drive Phase II Construction (Caltrans and others)	Reconfiguration of Doyle Drive into the seismically improved Presidio Parkway, which would create a regional gateway between the Golden Gate Bridge and the city of San Francisco and provide direct access to the Presidio.
San Francisco/ Oakland Bay Bridge Seismic Safety Projects	Seismic improvements to the San Francisco Bay Bridge, including construction of a new approach and seismic improvements to the west span of the bridge, reconstruction of the two-mile long east span, a new transition structure on Yerba Buena Island, among other improvements.
Port of Oakland Maintenance Dredging (Port of Oakland)	Ongoing dredging of Port of Oakland facilities.

SOURCE: Compiled by Orion Environmental Associates, 2011.

TABLE 5.1-4
LONG-TERM DEVELOPMENT PROJECTS
THAT COULD CONTRIBUTE TO CUMULATIVE IMPACTS

Project Name (Jurisdiction, if applicable)	Project Summary
Piers 31 – 33 (Port of San Francisco)	10,000 square feet of commercial retail uses.
Piers 15 – 17 Exploratorium (Port of San Francisco)	256,700 square feet of institutional uses, 31,000 square feet of office uses, and 22,900 square feet of commercial uses.
Embarcadero Hotel (Port of San Francisco)	245 hotel rooms.
8 Washington Street	165 residential units, 12,800 square feet of institutional uses, 29,100 square feet of commercial spaces, 420 parking spaces.
Piers 48 – 50, Seawall Lot 337 Mixed Use Project (Port of San Francisco)	875 residential units; 500 hotel rooms; 181,000 square feet of institutional uses; 1,700,000 square feet of office uses; and 281,000 square feet of commercial uses.
California Pacific Medical Center (CPMC) Long Range Development Plan	Multi-phased strategy to meet State seismic safety requirements for hospitals (SB 1953) and create a 20-year framework and Institutional Master Plan for its four existing medical campuses (Pacific Campus at Sacramento and Buchanan Streets; California Campus at Maple and California Streets; Davies Campus at Castro and 14th Streets; and St. Luke's Campus at Cesar Chavez and Valencia Streets), and a proposed new medical campus (Cathedral Hill Campus at Van Ness Avenue and Geary Boulevard) in San Francisco.
San Francisco/Oakland Bay Bridge Seismic Safety Projects	Seismic improvements to the San Francisco Bay Bridge including construction of a new approach and seismic improvements to the west span of the bridge, reconstruction of the two-mile long east span, a new transition structure on Yerba Buena Island, among other improvements.
Central Subway	Extend Muni's T-Third light rail line from the intersection of Fourth/King into Union Square and Chinatown. Utility relocation prior to tunnel boring is under way, and construction is scheduled to be completed by 2018.
Doyle Drive / Presidio Parkway	Reconfiguration of Doyle Drive into the seismically improved Presidio Parkway near the Presidio which would create a regional gateway between the Golden Gate Bridge and the city of San Francisco and provide direct access to the Presidio. Project construction is currently under way.
Transbay Transit Center	Currently under construction. Project would provide existing transit service at the temporary terminal, as well as Caltrain's Downtown Extension, and possibly intercity high-speed rail.
Van Ness Avenue Bus Rapid Transit Project (BRT)	Would run two miles along Van Ness Avenue between Mission and Lombard Streets. Typical BRT improvements include travel lanes for exclusive transit use; wider sidewalks at bus stops; traffic signal priority for transit vehicles; full stations with passenger amenities; multi-door boarding at sidewalk-level platforms; pre-paid boarding areas; and real-time information systems. This project is currently under environmental review by the Transportation Authority with construction scheduled to start in the Fall of 2013.

SOURCE: Compiled by Adavant Consulting, 2011.

5.2 Land Use

This section presents the existing land uses in the vicinity of the project sites and discusses the compatibility of the 34th America's Cup (AC34) and James R. Herman Cruise Terminal and Northeast Wharf Plaza (Cruise Terminal) projects with surrounding uses. Cumulative land use impacts are also evaluated at the end of this section. Chapter 3, Project Description, lists the approvals required for the projects with the respective approving body. Chapter 4, Plans and Policies, discusses relevant plans, policies, and regulations of agencies with jurisdiction over the project sites. Consistency of the projects with the Bay Conservation and Development Commission's (BCDC) Special Area Plan (SAP) is also discussed below. BCDC policies related to fish and wildlife are discussed in Section 5.14, Biological Resources, and water-related policies are discussed in Section 5.16, Hydrology and Water Quality.

5.2.1 Setting

5.2.1.1 Existing Land Uses at Project Sites and Vicinity

Existing zoning designations, which generally regulate land uses in the AC34 and Cruise Terminal project areas in San Francisco are shown in **Figure 5.2-1,** Existing Zoning Districts in Project Sites along San Francisco Waterfront. Uses can generally be divided into two broad geographical areas: (1) the maritime, industrial, commercial, office, retail, storage, and tourism-related uses of The Port of San Francisco (Port); and (2) the tourism-related, residential, government, recreational, and open space uses of the northern San Francisco waterfront, the Golden Gate National Recreation Area (GGNRA), and the AC34 Live Sites in various locations in San Francisco. The two areas overlap at approximately the Hyde Street Pier, on the northern San Francisco waterfront within the San Francisco Maritime National Historic Park (SAFR). Land uses at each project site, as well as surrounding general land uses, are described below. Land uses at Live Sites, which would host viewing events using large television screens, are also described below.

Port of San Francisco Piers, Water Areas, and Other Facilities

The Port manages approximately 7.5 miles of San Francisco Bay shoreline properties, stretching from India Basin in the south to Hyde Street Pier in the north. The Port has jurisdiction of more than 1,000 acres, and figures in Chapter 3 delineate the jurisdictional boundary within the vicinity of the project sites. Port property comprises numerous piers, open water basins, and seawall lots. Note that the pier numbering convention used by the Port assigns numbers based on the relative location of each pier to the Ferry Building, which is located on The Embarcadero, eastward of the eastern terminus of Market Street. Piers north of the Ferry Building are assigned odd numbers, starting with Pier 1 directly north of the Ferry Building. Piers south of the Ferry Building are assigned even numbers, and the first pier to the south is Pier 2. Piers retain their original numerical designation; numbers are not reassigned when an intervening pier is demolished or two piers are joined.

Two north-south arterial roadways traverse, and provide access to, most of the Port jurisdiction. The Embarcadero roadway is the primary north-south arterial through the Port jurisdiction along

the northeastern waterfront. It is a two-way roadway with two travel lanes in each direction, with parking mostly limited to one side of the street, Class II bicycle lanes on both sides of the street, and a landscaped median with Muni light rail tracks. The Embarcadero promenade, also known as Herb Caen Way, is a 3.2-mile-long pedestrian promenade that extends from Fisherman's Wharf in the northwest to China Basin in the southeast and provides open space along the waterfront.

South of China Basin, Third Street connects the South of Market / South Beach neighborhoods to the Mission Bay, Dogpatch, Bayview and Hunters Point neighborhoods. Third Street runs parallel to the central waterfront to Islais Creek and turns inland before terminating at Bayshore Boulevard near Candlestick Point. In the vicinity of Pier 48 (described below), Third Street is a two-way roadway with two travel lanes in each direction and parking on the west side of the street. In the vicinity of Pier 80 (described below), Third Street is a two-way roadway with two travel lanes in each direction, and no on-street parking lane or bicycle lanes are provided. Muni light rail tracks run down the median of the street.

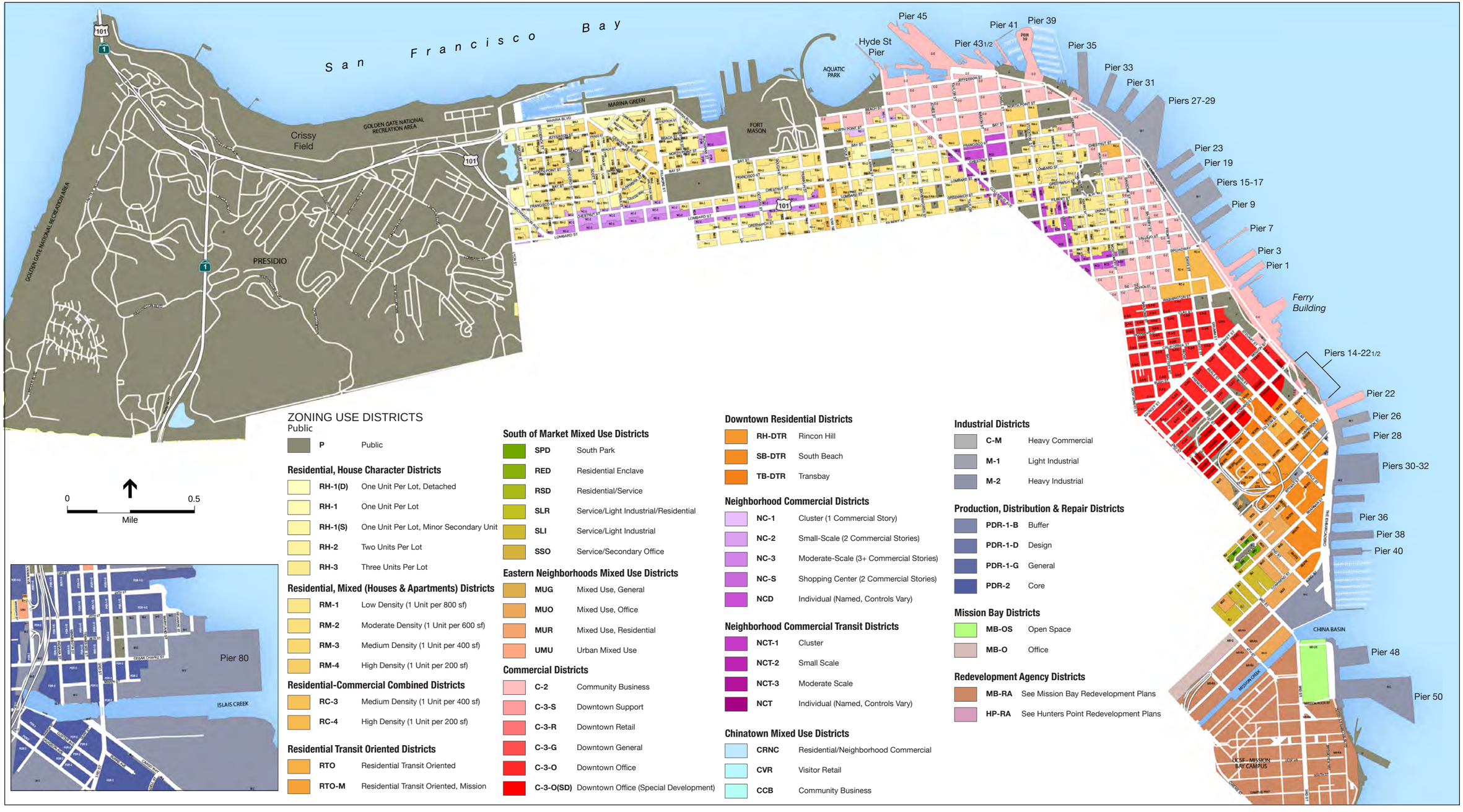
The Port jurisdiction surrounding the project sites is divided into "subareas" within the Port's Waterfront Land Use Plan (*WLUP*): Fisherman's Wharf, the Northeastern Waterfront, the Ferry Building, South Beach / China Basin, and the Southern Waterfront. The description of land uses at, and in the vicinity of, project sites are organized below by these subareas and from north to south. Figures depicting the extent of each subarea, as well as generalized land uses in these locations, are provided in Appendix LU of this document.

Fisherman's Wharf

Fisherman's Wharf, a major visitor attraction in San Francisco, encompasses approximately 374 acres of land and water generally bounded by the U.S. pierhead line in the Bay to the north, Pier 35 to the east, Bay Street and Francisco Street to the south, and the SAFR (which includes Hyde Street Pier, Municipal Pier and Aquatic Park) to the west. Tourist- and commercial-oriented uses dominate the piers and waterfront. Fisherman's Wharf is a center of the San Francisco Bay Area's fishing industry and retains many fish handling and processing facilities.

Pier 45 in the Hyde Street Commercial Fishing Harbor (Hyde Street Harbor) constitutes a major element of the Fisherman's Wharf commercial fishing center. Hyde Street Harbor extends into the Bay just beyond the Outer Lagoon at the northern terminus of Hyde Street Harbor Access Road. To the west of this fishing harbor lies Hyde Street Pier, which is leased to the National Park Service and managed as part of the SAFR. Hyde Street Pier is home to an important collection of historic maritime vessels berthed there, along with historic artifacts and exhibits on the maritime history of the West.

In general, Jefferson Street, between the SAFR and Pier 39, contains a high concentration of visitor-related commercial development, including more than 120 shops and other visitor attractions, such as a carousel, an aquarium, and a 300-boat marina. Fresh seafood restaurants, chowder houses, and crab shacks, for which Fisherman's Wharf is well-known, dominate the north side of Jefferson Street.



ZONING USE DISTRICTS

Public
- **P** Public

Residential, House Character Districts
- **RH-1(D)** One Unit Per Lot, Detached
- **RH-1** One Unit Per Lot
- **RH-1(S)** One Unit Per Lot, Minor Secondary Unit
- **RH-2** Two Units Per Lot
- **RH-3** Three Units Per Lot

Residential, Mixed (Houses & Apartments) Districts
- **RM-1** Low Density (1 Unit per 800 sf)
- **RM-2** Moderate Density (1 Unit per 600 sf)
- **RM-3** Medium Density (1 Unit per 400 sf)
- **RM-4** High Density (1 Unit per 200 sf)

Residential-Commercial Combined Districts
- **RC-3** Medium Density (1 Unit per 400 sf)
- **RC-4** High Density (1 Unit per 200 sf)

Residential Transit Oriented Districts
- **RTO** Residential Transit Oriented
- **RTO-M** Residential Transit Oriented, Mission

South of Market Mixed Use Districts
- **SPD** South Park
- **RED** Residential Enclave
- **RSD** Residential/Service
- **SLR** Service/Light Industrial/Residential
- **SLI** Service/Light Industrial
- **SSO** Service/Secondary Office

Eastern Neighborhoods Mixed Use Districts
- **MUG** Mixed Use, General
- **MUO** Mixed Use, Office
- **MUR** Mixed Use, Residential
- **UMU** Urban Mixed Use

Commercial Districts
- **C-2** Community Business
- **C-3-S** Downtown Support
- **C-3-R** Downtown Retail
- **C-3-G** Downtown General
- **C-3-O** Downtown Office
- **C-3-O(SD)** Downtown Office (Special Development)

Downtown Residential Districts
- **RH-DTR** Rincon Hill
- **SB-DTR** South Beach
- **TB-DTR** Transbay

Neighborhood Commercial Districts
- **NC-1** Cluster (1 Commercial Story)
- **NC-2** Small-Scale (2 Commercial Stories)
- **NC-3** Moderate-Scale (3+ Commercial Stories)
- **NC-S** Shopping Center (2 Commercial Stories)
- **NCD** Individual (Named, Controls Vary)

Neighborhood Commercial Transit Districts
- **NCT-1** Cluster
- **NCT-2** Small Scale
- **NCT-3** Moderate Scale
- **NCT** Individual (Named, Controls Vary)

Chinatown Mixed Use Districts
- **CRNC** Residential/Neighborhood Commercial
- **CVR** Visitor Retail
- **CCB** Community Business

Industrial Districts
- **C-M** Heavy Commercial
- **M-1** Light Industrial
- **M-2** Heavy Industrial

Production, Distribution & Repair Districts
- **PDR-1-B** Buffer
- **PDR-1-D** Design
- **PDR-1-G** General
- **PDR-2** Core

Mission Bay Districts
- **MB-OS** Open Space
- **MB-O** Office

Redevelopment Agency Districts
- **MB-RA** See Mission Bay Redevelopment Plans
- **HP-RA** See Hunters Point Redevelopment Plans

SOURCE: San Francisco Planning Department, 2001

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.2-1
Existing Zoning Districts in
Project Sites Along San Francisco Waterfront

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Other destinations along the south side of Jefferson Street include The Cannery and the Argonaut Hotel, located on the block bounded by Jefferson, Beach, Leavenworth, and Hyde Streets. The Cannery, a brick warehouse that was originally built as a peach cannery in 1907, was renovated in the 1960s into a retail complex. The Argonaut Hotel borders The Cannery to the west and is located in the renovated historic Haslett Warehouse, managed by the NPS, a four-story timber and brick building completed in 1909 by the California Fruit Canners Association. In addition to the hotel, the Argonaut houses the Visitor Center for the SAFR.

Northeast Waterfront

Adjacent to Fisherman's Wharf is the Northeastern Waterfront, which extends from Pier 7 near the base of Broadway and The Embarcadero to Pier 35½ at the foot of Kearny Street. Historically a maritime, industrial, and manufacturing district, it has been evolving over the last 25 years into a mixed-use neighborhood. Cargo-shipping, ship repair, tug and barge operations, excursion, and cruise boat uses — once the predominant uses on these piers — are now part of a larger mix of uses in a district that also includes open space, commercial, amusement, and parking uses. Short-term uses, including office and light industry, are on Port property in the Northeast Waterfront.

Northeast Waterfront Subarea Project Sites

Piers 27-29. Piers 27-29 would be used as the AC Village in 2013, and is the site of the proposed Cruise Ship Terminal and Northeast Wharf Plaza. Piers 27-29 is located along The Embarcadero at the intersection of Lombard Street. As shown in Chapter 3, this 14.8-acre triangular-shaped facility is the largest pier in the northern half of the Port waterfront (north of the Ferry Building), and includes the longest functional wharf face for vessel berthing (approximately 1,300 feet long, with an apron width of 48 feet). Pier 27 has long been in continuous maritime usage for berthing deep-draft vessels. Pier 27 is currently a secondary berth for passenger cruise ships when more than one cruise ship is in port. It also provides berthing for military vessels, large research vessels, and ceremonial ships. The berth at Pier 27 is maintained at a depth of -35 feet mean lower low water (MLLW) under the Port's existing permitted maintenance dredging program.

The Pier 29 shed and associated bulkhead, which fronts on The Embarcadero, contains approximately 119,000 square feet of warehouse space. Together, the Pier 27 and Pier 29 sheds line the entire outboard perimeter of the pier facility. This creates an approximately 170,000-square-foot triangular open "valley" in the middle of the pier. Abutting the Pier 29 shed along the Pier 29 west boundary is the Pier 29 bulkhead building. Also fronting The Embarcadero are two small ancillary structures: the approximately 12,000-square-foot Pier 27 Annex office building, and the historic Pier 29 Belt Line office building (or Belt Railroad office building). These two buildings are leased to multiple tenants for office use.

Current uses at Piers 27-29 are varied. Approximately 25 percent of the Pier 27 shed is currently leased and supports preparations for San Francisco's Chinese New Year Parade and a transportation services company. The remainder is used for parking operated under a Port parking management agreement. The parking operator vacates the area to allow the Port to

accommodate back-up cruise terminal berthing when there are multiple cruise ship calls in San Francisco and the existing Pier 35 cruise terminal is fully used.

There are 12 leases in Pier 29 and Pier 29½ with warehouse and parking tenants. As part of the shoreside power project, the electrical utilities within the Pier 29 shed were improved. The Piers 27-29 valley is leased for parking, an artificial turf soccer field, and the Teatro Zinzanni dinner theater, which is housed in a tenant-owned tent structure, plus other ancillary support structures.

Piers 27-29 and Pier 29½ are designated by the *WLUP* as Existing Waterfront Mixed Use Opportunity Areas, and the end of Piers 27-29 is designated for Temporary Berthing. The area is zoned M-1 (Light Industrial) on the City's Zoning Map.

Northeast Wharf Open Water Basin. Ships would moor in the water area between Piers 23–27 during the AC34 events, and cruise ships would moor in this basin while in port. The triangular-shaped Open Water Basin is located directly southwest, and adjacent to, Piers 27-29. As stated above, the water area is used as a secondary location for the mooring of passenger cruise ships when more than one cruise ship is in port. It is designated as the Northeast Wharf Open Water Basin, fronting the planned Northeast Wharf Plaza, in the Port's *WLUP* and the BCDC SAP.

Piers 19, 19½, and 23. These piers would be used as storage, parking, and/or office spaces for the AC34 events. They are located along The Embarcadero near the intersection with Front Street. There are 28 leases for space in Piers 19-23, mostly for warehouse purposes with ancillary parking. A commercial parking facility is located in the Pier 19½ shed, and office uses are located in the Pier 23 shed. The Pier 23 Café, located directly adjacent north of Pier 23, is a freestanding building that is not included in the project. These piers are designated by the Port's *WLUP* as Transitional Maritime Areas and zoned M-1 (Light Industrial) on the City's Zoning Map.

Other Uses in the Northeast Waterfront Subarea

The most prominent existing open space along the Northeast Waterfront is the Pier 7 Public Access Pier, at the foot of Broadway. As a public fishing pier and open space, Pier 7 extends 900 feet over the water. It has become a popular local outdoor gathering and fishing spot on the Northeast Waterfront. It is the second-longest fishing pier in San Francisco, after Municipal Pier at Aquatic Park.

The inland area opposite Piers 15-29 contains medium-scale development with some landscaping. Development intensity in the vicinity is moderate, as wide areas of water separate piers from neighboring piers, and nearby properties consist of surface parking lots and low-rise office structures. Three-story commercial buildings, with landscaped setbacks, and surface parking lots are located across The Embarcadero from Piers 15-17. Residential development is present farther to the southwest along The Embarcadero, as well as to the west approaching and along the base of Telegraph Hill.

Tourist, recreation, cruise ship, and other marine-oriented uses are located on Piers 31½, 33 and 35. The excursion vessels operated by Hornblower Cruises & Events, including the ferry to Alcatraz Island, are currently berthed at Pier 31½. San Francisco's existing passenger cruise ship terminal facility is located on Pier 35. When Pier 35 is not accommodating cruise ships, it is occasionally used for special events. Once the cruise ship terminal is built at Pier 27, Pier 35 would continue to serve as a backup cruise ship terminal.

Inland, buildings in the Northeast Waterfront district range from approximately ten stories closest to the base of Telegraph Hill to four stories at The Embarcadero and the Bay. Of particular note are the large brick and concrete industrial buildings from nearly every decade of San Francisco's history. The warehouses in the Northeast Waterfront district were in continuous industrial use from the Gold Rush to the mid-1960s. Since that decade, showrooms, office and retail uses have been integrated into renovated warehouse structures in the district, and the district has "proven its capacity for incremental adaptation to new uses."[1]

Office uses in the area are accommodated in contemporary buildings and rehabilitated historic structures. Levi's Plaza – a corporate campus bounded by Greenwich Street, Union Street, Sansome Street, and The Embarcadero – consists of four office buildings, a public garage on Sansome and Lombard Streets, and an open space along The Embarcadero. At 1700 Montgomery Street is the four-story San Francisco Bay Office Park East, which was built in the mid-1970s; other office buildings within that complex extend to the west along Francisco Street to Kearny Street. Two Roundhouse Plaza is a two- to four-story building on a triangular parcel along The Embarcadero that contains a construction management firm and other businesses. Other nearby office uses are accommodated in rehabilitated buildings, such as the McGraw-Hill Company, which is located in a seven-story masonry structure at 55 Francisco Street, and Enterprise IG, which is located in a three-story-plus-attic building at 1725 Montgomery Street.

Residential uses are also located inland from The Embarcadero and are generally clustered around the base of Telegraph Hill. These uses are typically dense multi-family condominium or apartment developments in buildings ranging from four to ten stories with some ground-floor retail or other pedestrian amenity. On the block bounded by Sansome, Chestnut, Montgomery, and Lombard Streets, the Telegraph Landing Condominium complex contains 189 dwelling units in a combination of four- and seven-story structures. Across Montgomery Street, abutting the southern base of Telegraph Hill, is the Parc Telegraph Condominium complex, containing 288 units in a nine-story building. Adjacent to the Levi's Plaza office park is the 101 Lombard condominium development, consisting of one four-story and one nine-story building containing a total of 202 dwelling units. The six-story Wharf Plaza complex at 1855 Kearny Street includes 230 units of subsidized senior housing.

A number of recreation and neighborhood-serving commercial uses including cafés and restaurants are interspersed throughout the area. The San Francisco Bay Club is a membership-based/private health club and gym complex located at the intersection of Greenwich and Battery Streets at The Embarcadero. The Bay Club's physical therapy center is located in a three-story

[1] San Francisco Planning Code, Article 10, Section 2 (f).

structure at 1333 Battery Street. Small markets and other convenience retail, such as delis and dry cleaners, are located on the ground floor of office and residential buildings, mainly on Sansome Street. A few garages in the area provide enclosed off-street parking (55 and 80 Francisco Street; Bay Club; and the Levi's Plaza garage on Sansome between Lombard and Greenwich Streets).

Ferry Building Area

The Ferry Building Area extends from the Pier 5 bulkhead building to Rincon Park near Pier 22, which is roughly between Jackson Street and Harrison Street. Although there are no water side America's Cup venues in this location, a Live Site would be located in Justin Herman Plaza (described below). In addition, this area would be heavily traversed by America's Cup spectators traveling between Piers 27-29 (the AC Village) and Piers 30–32 (AC Team Bases).

The Ferry Building is a City landmark and a contributing resource to the Port of San Francisco Embarcadero Historic District. It is home to artisanal foods shops and restaurants on the ground floor. A twice-weekly farmer's market occurs outside. Offices occupy the second and third floors. Ferries to Tiburon, Angel Island, Larkspur, Vallejo, Oakland, and Alameda depart from the Downtown Ferry Terminal on the west side of the Ferry Building.

On the east side of the Embarcadero, Pier 1 is located just north of the Ferry Building. Pier 1 contains a building housing the Port's main offices and additional office space. Restaurants occupy the bulkhead buildings at Pier 1, Pier 1 ½, and Pier 3. South of the Ferry Building and State Agriculture Building is the Amtrak Railroad Passenger Station, and Pier 14 public access which sits atop the breakwater for the Downtown Ferry Terminal.

Ferry Building Area Project Sites

Rincon Point Open Water Basin. Between Pier 14 and the Pier 22 ½ Fireboat Station, there are no pier facilities. This approximately 1,400 foot-long stretch of waterfront is designated as the Rincon Point Open Water Basin in the *WLUP* and BCDC plans. Inland of this Basin, is Rincon Park, which comprises passive recreation areas and two restaurants with unique Bay views. The Open Water Basin is proposed as a spectator yacht berthing area during the AC34 events.

Justin Herman Plaza. On the west side of The Embarcadero is downtown San Francisco's financial district, which comprises high-rise office buildings, ground-floor retail spaces, restaurants, hotels, and recreational spaces. North of Market Street and within one block of The Embarcadero are Sue Bierman Park and Justin Herman Plaza (under the jurisdiction of the Recreation and Park Department [SFRPD]), which are primarily passive open spaces. Justin Herman Plaza would be an AC34 Live Site. Southwest of these parks is the Embarcadero Center, which comprises a hotel, high-rise office spaces, and an open-air mall. South of Market Street are high-rise office and residential buildings.

South Beach/China Basin

This subarea extends from Pier 22 ½ in the north to Seawall Lot 345, which is roughly between Harrison Street and Mariposa Street, in the south. Historically, the South Beach/China Basin

Waterfront was dominated by maritime and industrial uses and railroad terminals. The area is bisected by China Basin. The South Beach segment, north of the basin, is characterized by finger piers housing a mix of tenants, a marina, recreational open space, and the AT&T Baseball Park. South of the basin, in the China Basin segment, maritime uses occupy the piers, and Seawall Lot 337 serves as a surface parking lot.

South Beach/China Basin Subarea Project Sites

Piers 26-28 and Piers 28-30 water area. As shown in Chapter 3, Piers 26 and 28 are located along The Embarcadero between Harrison Street and Bryant Street. Pier 26 is an approximately 151,000-square-foot facility with approximately 122,000 square feet of space within a pier shed. Pier 28 is an approximately 100,000-square-foot facility with approximately 75,000 square feet of space within a pier shed. A portion of Pier 26 is located directly under the San Francisco-Oakland Bay Bridge. Both Piers 26 and 28 are contributing resources to the Port of San Francisco Embarcadero Historic District. Fifteen leases are currently maintained in Pier 28 for warehouse storage, office and parking uses. There are 21 leases in Pier 26 for warehouse storage (including commercial fishing equipment), office and parking uses. Piers 26 and 28 are designated by the Port's *WLUP* as Waterfront Mixed-Use Opportunity Areas and zoned M-1 (Light Industrial) on the City's Zoning Map. Piers 26 and 28 would be used for team base parking and storage during the AC34 events.

Piers 30-32, Seawall Lot 330, and Brannan Street Wharf (Piers 32-36) Open Water Basin. As shown in Chapter 3, Piers 30-32 is an approximately 13-acre (566, 280 square-foot) facility located along The Embarcadero at approximately Bryant Street. Piers 30-32 is formed from two originally separate piers that were altered and merged into one facility prior to 1955. The deck of the newer center section of Piers 30-32 is constructed at a lower elevation than the two former individual pier sections. It has no on-deck structures, except for Red's Java House. Red's Java House is a restaurant operating within a small structure that is identified as an eligible resource in the Port of San Francisco Embarcadero Historic District, listed on the National Register of Historic Places in 2006. Piers 30-32 is currently used for parking; secondary passenger cruise, military vessels, research and other vessel moorage on the east berth; and special events. Piers 30-32 is in poor structural condition and has load restrictions that preclude large truck access. The facility would be the location of the primary America's Cup team bases in 2013, and may be the location of team bases in 2012 as well.

As shown in Chapter 3, Seawall Lot 330 is an approximately 2-acre (87,120 square-foot) paved, inland site, located directly west across The Embarcadero from Piers 30-32. Seawall Lot 330 is currently operated as a commercial parking lot.

Piers 30-32 are zoned M-1 (Light Industrial) and Seawall Lot is zoned SB-DTR (South Beach Downtown Residential District) on the City's Zoning Map. The lot would be used for team base parking for the AC34 events.

The Brannan Street Wharf Open Water Basin between Piers 32 and 36 is located immediately south of Piers 30-32 along The Embarcadero between Delancey Street and Beale Street. The

approximately 600-foot-long area is designated as an Open Water Basin in the Port's *WLUP* and the BCDC SAP. This area fronts the proposed Brannan Street Wharf public open space, a 57,000 square foot park currently planned for construction, which involves the removal of Pier 36.[2] The Open Water Basin would be used for race boat mooring during the AC34 events.

Other Uses in the South Beach / China Basin Subarea

To the north of Pier 26 and Pier 22½ is Fire Engine Station #9. To the south of Pier 36 is Pier 38, which is currently used for recreational yacht berthing, vessel docking, and a marine support center. To the south of Pier 38 is Pier 40 and South Beach Harbor, which is a 700-berth marina. The South Beach Harbor complex includes public open space and access to South Beach Park and the Pier 40 Breakwater public access area. The South Beach Harbor Center provides community meeting rooms, operational space for the South Beach Harbormaster, and the location of the South Beach Yacht Club. Next to the Harbor Center is AT&T Ballpark, on the north side of China Basin Channel. South of China Basin lies Mission Bay, a new mixed-use neighborhood which includes the new UC San Francisco campus and hospitals. Within Mission Bay, the Port maintains Piers 48, 50 and 54 for maritime and light industrial uses, and Seawall Lot 337—a 16 acre (696,960 square-foot) surface parking lot also known as "Lot A," which serves the ballpark.

Inland, to the south and west of Piers 30-32 and Seawall Lot 330, are several mixed-use residential and commercial buildings. These include the four-story Bayside Village apartment complex located at Brannan and Beale Streets; the Delancey Street project, a four-story, multiunit residence and rehabilitation center located immediately across The Embarcadero; the South Beach Marina Apartments, a 414-unit complex in two 13-story towers and two low-rise (3- and 4-story) structures located at Townsend Street and The Embarcadero; the Steamboat Point Apartments, which is a four-story, multi-family affordable housing development located at King Street and The Embarcadero; the Portside condominiums, an eight-story, multifamily residential building at Bryant Street and The Embarcadero; One Embarcadero South, consisting of two 13- and 14- story towers containing 233 dwelling units at 88 King Street; The Brannan, consisting of three towers and 130 units; and the 21-story Watermark condominiums at the corner of Bryant and Beale Streets directly abutting Seawall Lot 330. A number of recreation and neighborhood-serving commercial uses, including cafés and restaurants, are interspersed throughout the area.

Southern Waterfront

The Southern Waterfront subarea extends from Pier 70 to India Basin, which is roughly between Mariposa Street and Hunters Point Boulevard. It is home to most of the Port's cargo and ship repair operations and comprises a total of 206 acres. The only project site within this sub-area is Pier 80, at the eastern terminus of Cesar Chavez Street, which would be used for the AC34 event team bases and could host the helipad barge.

[2] The Brannan Street Wharf is also designated in Port and BCDC plans as a major, strategic public open space. The Port is working jointly with the United States Army Corps of Engineers (which would remove Pier 36), to design and construct this project, which is undergoing separate, concurrent environmental review and permitting. The Brannan Street Wharf Draft EIR (Case File 2009.0418E) was published in February 2011 and certified in June 2011. Chelsea Fordham is the EIR Coordinator for this project at the San Francisco Planning Department, Chelsea.Fordham@sfgov.org.

Pier 80 and Surrounding Uses. As shown in Chapter 3, Pier 80 is located on the north side of Islais Creek Channel at the terminus of Cesar Chavez Street, and is adjacent to the City's Potrero Hill/Dogpatch and Bayview-Hunters Point neighborhoods. Pier 80 is a 69-acre facility and one of the Port's primary cargo terminals, operated by Metropolitan Stevedore Company (dba Metro Ports). Pier 80 handles multiple types of breakbulk and project cargoes and includes outside yard and enclosed warehouse storage and on-deck freight rail access. Pier 80 is designated by the *WLUP* as Existing Maritime Area, and the end of the pier is designated for Temporary Berthing. It is zoned M-2 (Heavy Industrial) on the City's Zoning Map. Storage, office, parking areas for transportation services companies, an SFMTA service yard, and other industrial uses surround Pier 80.

Northern Shore of San Francisco and GGNRA

As stated in Chapter 3, several existing recreational areas along the northern shore of San Francisco and Golden Gate National Recreation Area would host AC34 events and viewing locations. These include areas under the jurisdiction of both the City and County of San Francisco and GGNRA. AC34 venues would also be located at GGNRA locations outside of San Francisco. Chapter 3 includes aerial site plans of GGNRA lands and surrounding vicinities. GGNRA lands within or near the AC34 project venues are also illustrated in **Appendix PD-3**.

Parks and recreational areas under the jurisdiction of the City and County of San Francisco are managed by the San Francisco Recreation and Parks Commission and managed by the San Francisco Recreation and Parks Department (SFRPD). SFRDP administers about 220 parks, playgrounds, and open spaces over more than 4,100 acres. Areas under SFRPD management include the Marina Yacht Harbor, Candlestick Park, the San Francisco Zoo, and the Lake Merced Complex.

GGNRA, established in 1972, encompasses 80,500 acres in San Francisco, Marin, and San Mateo Counties. The GGNRA owns about 31,000 acres of this area and manages about 14,000 of those acres. Land uses within the area are primarily passive and active outdoor recreation, although a hotel, retail spaces, and other ancillary uses are present.[3]

The primary east-west arterial along the northern San Francisco waterfront is a combination of Bay Street, Laguna Street, and Marina Boulevard, all of which run adjacent to public open spaces. These arterials feed directly to both Mason Street, which runs adjacent to Crissy Field, and Doyle Drive, which is a highway that connects Marina Boulevard and Lombard Street (Route 101) with the Golden Gate Bridge. The following is a description of each project site and surrounding land uses.

Cavallo Point, Marin County

Cavallo Point, shown in Chapter 3, is located at the base of the north end of the Golden Gate Bridge in the Marin Headlands. It is part of GGNRA and occupies a section of the Fort Baker Historic District. Historic buildings at Cavallo Point were recently rehabilitated to house the

[3] National Park Service, *Golden Gate National Recreation Area: Draft Dog Management Plan / Environmental Impact Statement, U.S. Department of the Interior, January 2011.*

Cavallo Point Lodge. Fort Baker also contains the Bay Area Discovery Museum (a children's museum and learning center), the Institute at the Golden Gate, the U.S. Coast Guard Station Golden Gate, and the Travis Sailing Center. Access to the area is limited due to topography. Only Bunker Road and East Road provide access to Alexander Avenue, which connects to South Street in the City of Sausalito and Route 101 just north of the Golden Gate Bridge. Please see Section 5.6 of this document for a detailed description of roadways within the vicinity of the AC34 project sites. The Fort Baker Pier at Cavallo Point would be used with a tent on it for hosting private events during the AC34 races.

Alcatraz Island

Alcatraz Island (Alcatraz) is illustrated in Chapter 3. Alcatraz consists of 22 acres and is located approximately 1.5 miles offshore from San Francisco. Alcatraz is a former Civil War outpost and later served as a federal prison until 1963. Alcatraz is part of GGNRA and operated by the National Park Service (NPS). Currently, Alcatraz is a major museum exhibit attraction accessible only by ferry operators under contract with the NPS. The existing cell house facilities are proposed for hosting private race-sponsored events during the AC34.

Presidio, Presidio Trust Jurisdiction and Crissy Field

The Presidio of San Francisco is a historic military installation in the City of San Francisco. It contains a total land area of 1,480 acres that includes 500 historic buildings, a collection of coastal defense fortifications, a national cemetery, a saltwater marsh and ecological reserve, forests, beaches, native plant habitats, coastal bluffs, and hiking and biking trails. The Presidio also includes a wide range of commercial, institutional, and creative uses, such as a museum, schools, gift shops, restaurants, medical services, golf course, national cemetery, bank, residential housing, and digital arts offices. The entirety of Presidio is in a P (Public) District and an OS (Open Space) Height and Bulk District on the City's zoning map.

Presidio Trust Jurisdiction. The GGNRA establishing legislation stated that if the military deemed the Presidio to be in excess of its needs, jurisdiction would be transferred to the NPS. In 1994, the military transferred jurisdiction of the Presidio to NPS, and the GGNRA General Management Plan was amended to include the former military installation. In 1996, Congress passed the Presidio Trust Act, which established the Presidio Trust as a federal government corporation. The Act granted jurisdiction of the 1,168-acre interior area of the Presidio south and west of Mason Street, known as Area B, from the Secretary of the Interior to the Trust.

None of Area B is proposed for direct use by the America's Cup Event Authority, although spectators may traverse this area to access the Crissy Field Shoreline.[4,5] The buildings within Area B and the proximity of Crissy Field are occupied by a sporting goods store, rock-climbing gymnasium, indoor trampoline park, and sports medicine facility.

4 Ibid.
5 Presidio Trust, *Presidio Trust Management Plan*, May 2002.

Crissy Field. Area A of the Presidio, known as "Crissy Field," is located between Mason Street and the San Francisco Bay. This area remains under the jurisdiction of GGNRA. Crissy Field has undergone a major habitat restoration that included the conversion of approximately 22 acres into a tidal marsh. The area also includes more than 1,000 paved and unpaved parking spaces. Crissy Field is zoned P (Public) on the City's Zoning Map. The field is used as a passive and active recreational area for residents and tourists in the City. Crissy Field is proposed to be an America's Cup primary spectator venue in both 2012 and 2013.

Marina Green and Vicinity

Marina Green is illustrated in Chapter 3. The Marina Green is a public park managed by SFRPD. It is located in San Francisco's Marina District, north of Marina Boulevard between Fort Mason on the east and the San Francisco Marina and St. Francis Yacht Club on the west. This approximately 7 acre park is located between West Harbor and East Harbor. Marina Green includes several "par course" workout stations along the park's perimeter, restrooms, a concession stand, and parking lots. This park is home to many large athletic and community events such as Escape from Alcatraz and marathon races. It also serves as the headquarters to Fleet Week every October.

Marina Green is zoned P (Public) on the City's Zoning Map. Marina Green is proposed as the site of the America's Cup Village in 2012 and as a spectator area in 2013.

Residential uses are located to the south, southeast, and southwest of Marina Green. Single-family homes line the south side of Marina Boulevard across the street from the green. These homes are mostly two to three stories and are typically set back from the street. Many of these homes date from the 1920s; however, some contemporary infill development has occurred among them. Larger, multifamily apartment houses, generally four stories tall, are located to the south and southwest of the green, predominately along Alhambra, Beach, Fillmore, and Scott Streets.

West and east of Marina Green is the Marina Yacht Harbor, which comprises 671 berths and 10 guest berths over a 35-acre area. The Harbor is divided into two areas: East Harbor (Gashouse Cove), which is located between Marina Green and Fort Mason, has 343 slips. The West Harbor is the location of the Saint Francis and Golden Gate Yacht Clubs, the Harbormaster's Building, concession areas, and parking lots. It also has 343 slips.

Fort Mason

Fort Mason is illustrated in Chapter 3. Fort Mason is a former U.S. Army post and military port facility. It is a National Register-listed historic district that includes Lower Fort Mason, also known as the San Francisco Port of Embarkation, another National Historic Landmark. The San Francisco Maritime National Historic Park (SAFR) headquarters are located at Building E in Fort Mason Center, and the GGNRA headquarters are located in Building 201 in Upper Fort Mason. Fort Mason contains historic buildings, public open spaces, piers, and warehouses. It includes Fort Mason Center, which hosts a variety of environmental, cultural, and arts organizations. Fort Mason is zoned P (Public) on the City's Zoning Map. The proposed venue at

Fort Mason for AC34 would contain media operations, spectator amenities, a media barge, and a place for spectator boat docking.

Uses to the southwest of Fort Mason include a grocery store, fitness center, multifamily apartment houses, and the George R. Moscone Recreation Center, which comprises softball fields, tennis courts, and the Marina Branch Public Library. Directly south of Fort Mason is a mix of single-family attached houses and multifamily apartment buildings. Chestnut Street, the primary neighborhood commercial corridor of the Marina neighborhood, is two blocks south; Lombard Street (Route 101) is a primary arterial and commercial thoroughfare one block farther south. Southeast of Fort Mason are residential uses and a school. East of Fort Mason is high-rise residential development and Aquatic Park.

San Francisco Maritime National Historical Park and Aquatic Park

As shown in Chapter 3, the San Francisco Maritime National Historic Park (SAFR) extends from the west end of Fisherman's Wharf, starting west of Hyde Street, to Fort Mason just west of Van Ness Avenue. It includes areas within both Aquatic Park (which are zoned for Public Use) and the Port of San Francisco (which are zoned for Community Business uses). Aquatic Park includes a beach, concrete stadium, grassy lawns, and the horseshoe-shaped Municipal Pier extending into the Bay. The National Park Service Pacific West Information Center is currently located in the SAFR visitor center on the corner of Hyde and Jefferson Streets. The Aquatic Park Historic District is a National Historic Landmark and is listed on the National Register of Historic Places. South of SAFR are residential uses of mixed density, and east of SAFR is Fisherman's Wharf, described above.

Aquatic Park is zoned P (Public) on the City's Zoning Map. South of Aquatic Park are residential uses of mixed density, and east of Aquatic Park is Fisherman's Wharf. Aquatic Park is proposed to be used as a spectator and hospitality venue for the AC34 events.

San Francisco Civic Center, Union Square, and Justin Herman Plaza

San Francisco Civic Center is bounded by Market Street on the south, Franklin Street on the west, Turk Street on the north, and Leavenworth and Seventh Streets on the east. The Civic Center contains two large plazas, Civic Center Plaza and United Nations Plaza, and many of the city's largest government and cultural institutions, including City Hall. San Francisco Civic Center was designated a National Historic Landmark in 1987 and is also a City-designated historic district under Article 10 of the San Francisco Planning Code.

Union Square is a plaza of 2.6 acres bordered by Geary Street on the south, Powell Street on the west, Post Street on the north, and Stockton Street on the east. It is located within the central shopping, hotel, and theater district of the city.

Justin Herman Plaza is a public plaza located at the terminus of Market Street, across from the Ferry Building. The area around the Ferry Building is described above.

All three sites are zoned P (Public) on the City's Zoning Map and would used as Live Sites for the AC34 events.

Treasure Island

Treasure Island is a man-made island that was constructed from fill between 1936 and 1939. The United States Navy took possession of Treasure Island from the City and County of San Francisco in 1941 and operated a military base, Naval Station Treasure Island, until it was closed in 1997. The base will be transferred to the Treasure Island Development Authority under agreements approved by the Board of Supervisors in June 2011. Treasure Island includes 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. An approximately 100-slip marina is located along the southern shoreline of Treasure Island in Clipper Cove. A federally-supported Job Corps location will remain on Treasure Island. The existing helipad is located on the southeastern corner of the island, surrounded by industrial and open space uses. As stated in Chapter 3, the helipad is used for special or emergency landings, and permits are required to allow regulated use by public agencies and private groups.

As discussed Chapter 4, Plans and Policies, neither the *San Francisco General Plan* nor the San Francisco Planning Code addresses land uses on Treasure Island. The island is zoned P (Public Use) under Section 105 (e) of the Planning Code, and is included in the 40-X height and bulk district under Section 105 (f) of the Planning Code. These sections of the Planning Code address property within the City and County of San Francisco that are not explicitly included in the Planning Code.

Yerba Buena Island

The U.S. Coast Guard maintains an active 39-acre station on the southeast side of Yerba Buena Island The Vessel Traffic Service tower and traffic operations center are located on the peak of the island, and the Coast Guard San Francisco headquarters base is located at water-level on the southeast coast of the island.

5.2.1.2 Existing Water Uses in the Central San Francisco Bay

Central San Francisco Bay is a major intersection of shipping, recreational, and commuter ferry routes. **Figure 5.2-2**, Navigational Waters Designations, shows waterway routes in the Bay used for shipping. The figure routes indicate required paths of travel for vessels of 1600 gross tons or more, as well as designated anchorage areas. As shown, west of Alcatraz Island, there are two travel routes for large vessels. Vessels with a draft of 45 feet or more are required to traverse the two-way deep-draft route closer to Richardson's Bay. In contrast, vessels with a draft of less than 45 feet are permitted to travel in designated lanes, westward north of Alcatraz Island and eastward south of Alcatraz Island. Large vessels are not permitted to enter recreation areas, which are shown along the northern shoreline of San Francisco and between Sausalito, Tiburon, Belvedere, and Angel Island. East of Alcatraz Island, large vessels enter a Precautionary Area, which includes ships traveling in several directions to and from area ports.[6]

[6] National Oceanic and Atmospheric Administration (NOAA), *Entrance to San Francisco Bay (Map)*, http://www.charts.noaa.gov/OnLineViewer/18649.shtml, accessed April 22, 2011.

As shown in Figure 5.2-2**,** a dredged materials disposal area is located south of Alcatraz Island. Currently, there are four open-water dredged material disposal sites in San Francisco Bay: (1) the Alcatraz disposal site (2) the San Pablo Bay disposal site; (3) the Carquinez Strait disposal site, and (4) the Suisun Bay disposal site. A fifth disposal site is located about one nautical mile west of Lands End, and a sixth is located about three miles west of the City of San Francisco. Under the Long Term Management Strategy (LTMS) for Placement of Dredged Material in the San Francisco Bay Region, regional and federal agencies regulate the disposal at these sites. Each aquatic disposal site also has monthly and annual target disposal volume limits. If the number of projects requesting disposal at a specific site are projected to exceed the monthly or annual limits, the LTMS agencies—including BCDC, RWQCB, the Army Corp of Engineers, the U.S. Environmental Protection Agency—redirect disposal to an alternate disposal site through the application process with the Dredged Materials Management Office (DMMO).[7] (Please see Section 5.16, Hydrology and Water Quality, for further explanation of dredged materials disposal, LTMS agency requirements, and the DMMO).

Commuter ferries traverse the Central Bay to and from San Francisco, Sausalito, Tiburon, Angel Island, Larkspur, Vallejo, Oakland, and Alameda. Sightseeing ferries also traverse the Bay to Alcatraz, the Golden Gate and Bay Bridges, Angel Island, and other destinations. Unlike large vessels, these ferries are not required to traverse specific lanes in route to their destinations. However, ferry captains are required to adhere to all other applicable navigation requirements. Please see Section 5.6, Transportation and Circulation, for a detailed description of existing ferry services in the Central San Francisco Bay. Recreational boaters and fishers, as well as commercial fishers, are also present in the Central Bay. These vessels are not required to adhere to specific traffic lanes, but must adhere to all other applicable navigation requirements.

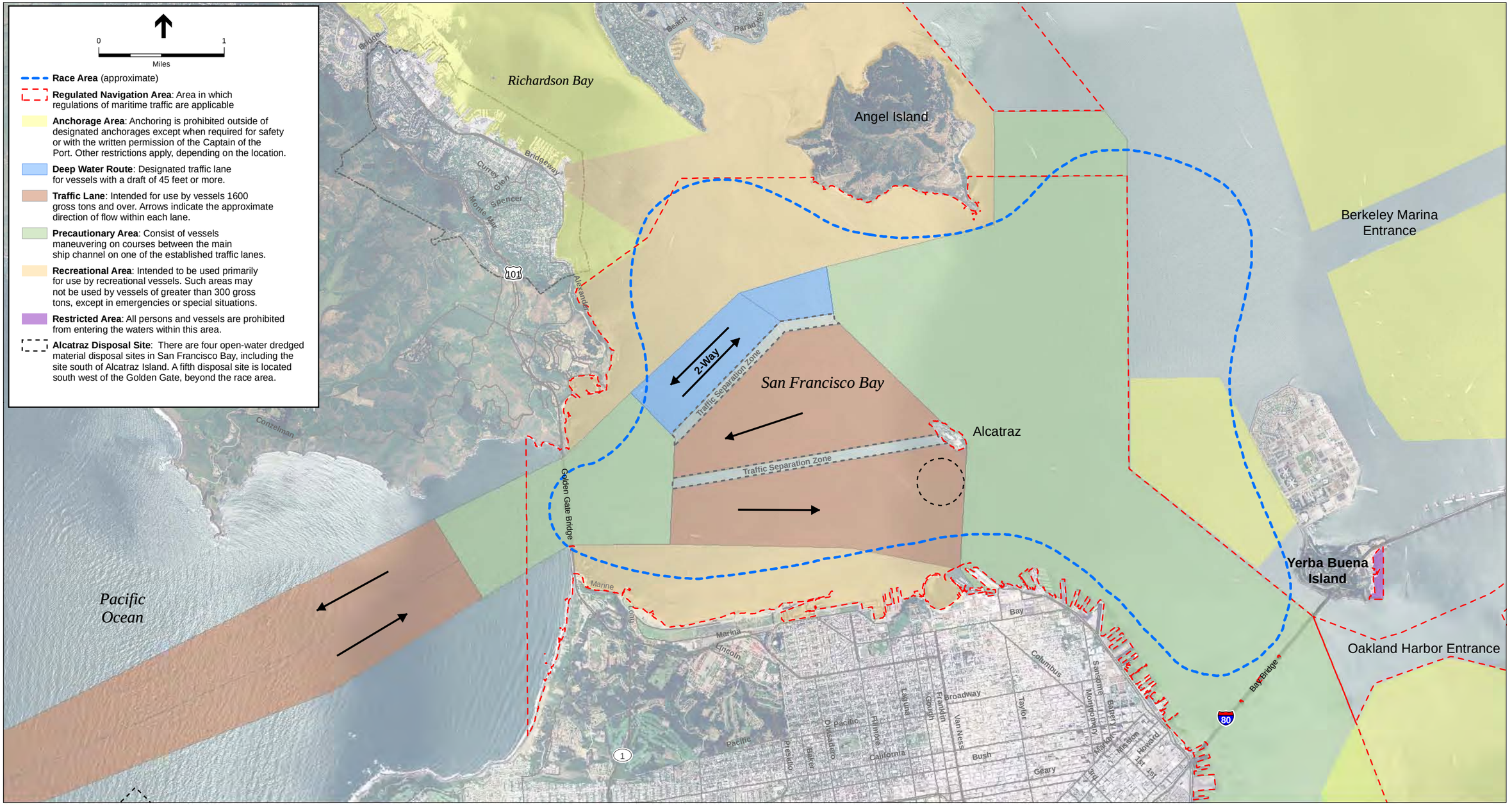
5.2.1.3 Uses at Secondary Viewing Areas

As stated in Section 5.1, spectators of the AC34 races are not expected to confine themselves to the AC34 venues. In San Francisco, the potential secondary viewing areas include the north-facing slopes of the Presidio, Pacific Heights, Russian Hill, and various vista points, such as Coit Tower within the Telegraph Hill neighborhood. These are primarily medium-density residential neighborhoods with a mix of attached and detached units and multi-family buildings. Along the San Francisco waterfront, secondary viewing areas include Fisherman's Wharf, Pier 39, Broadway Pier (Pier 7), the Ferry Building, and the Presidio. The uses in these areas are described above.

Outside of mainland San Francisco, Treasure and Yerba Buena Islands would also offer secondary viewing locations. During summer 2011, the Coast Guard will open the new Interagency Operations Center (IOC) at the station. The IOC will house the Vessel Traffic Services and the San Francisco Command Center together in one building.[8] In addition, Interstate 80 traverses the

[7] San Francisco Bay Conservation and Development Commission (BDCD), "Long Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region (LTMS) Program, " http://www.bcdc.ca.gov/dredging/ltms/ltms_program.shtml, accessed April 22, 2011.

[8] City and County of San Francisco, *Treasure Island / Yerba Buena Island Redevelopment Project Draft Environmental Impact Report*, Planning Department, July 12, 2010.



SOURCE: NOAA ENC, 2011; ESA, 2011

Note: This map is for illustrative purposes only and does not represent all regulations applicable to navigation in Bay waters

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.2-2
Navigational Waters Designations

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Yerba Buena Tunnel through the island. Ramps connect from the Bay Bridge to Yerba Buena Island at this location to service east and west bound traffic.

The remainder of Yerba Buena Island and all of Treasure Island are a former military installation under the jurisdiction of the Treasure Island Development Authority. Treasure Island includes 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 Marin County, secondary viewing areas primarily include shoreline areas and south- and east-facing slopes, such as roadside pulloffs in the GGNRA's Marin Headlands and at Fort Baker, as well as along the Sausalito waterfront and south side of Angel Island State Park. Partial views would be available from a portion of the Sausalito Boardwalk and Bridgeway, which is fronted by a mix of residential and commercial uses, as well as the Sausalito ferry terminal. Partial views from Belvedere would be primarily from streets in residential areas, and views from the Tiburon would be primarily in an area comprising a mix of residential, open space, and restaurant and retail uses. However, due to the location of the spectator fleet, views of the race from Sausalito and other northern areas may be impaired.

5.2.2 Impacts and Mitigation Measures

5.2.2.1 Significance Criteria

The City has not formally adopted significant standards for impacts related to land use, but generally considers that implementation of the projects could have a potentially significant impact related to land use if the projects were to:

- Physically divide an existing community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Have a substantial impact on the existing character of the vicinity.

5.2.2.2 Approach to Analysis

The analysis compares land use conditions at each full buildout phase of the projects against the existing land use environment, on the ground, as of the date of publication of the NOP in February 2011. The AC34 2012 component would be mostly temporary uses such as spectator areas operational in 2012. The AC34 2013 component would include some permanent improvements that would be built out by the year 2013, with full operation occurring in 2013. The Cruise Terminal project would be built out by year 2014 with full occupation occurring in 2014. Changes in land use character from each of the projects – AC34 (2012 and 2013) and the cruise terminal and wharf plaza – at project buildout are described and assessed according to the significance criteria listed above.

The analysis considers whether the projects would contribute to physical division of an established community by constructing physical barriers or obstacles to circulation that would restrict existing patterns of movement between the project sites and the adjacent neighborhoods. The projects' contributions to the continuity of the existing land uses and circulation patterns are also considered in this analysis.

The analysis of the projects' effects on existing land use character includes consideration of the character of proposed development relative to the existing land use context. An adverse effect would occur if a new use were placed next to an incompatible existing use, such that the basic function of either the existing use or the new use would be impaired. For example, if a residential use were located next to a factory with toxic air emissions, either or both uses would be unable to function as intended.

The analysis also discusses whether the projects would be consistent with applicable land use plans and policies that were adopted for the purpose of avoiding or mitigating an environmental impact. Land use policies are policies that pertain to the type, location, and physical form of new development.

CEQA Guidelines, Section 15125(d), states that an EIR shall discuss any inconsistencies between a proposed project and applicable general plans and regional plans. Chapter 4, Plans and Policies, of this EIR includes a comprehensive discussion of the relationship of the projects, including the proposed BCDC Special Area Plan amendments.

Project construction would have temporary or no impacts related to land use, and therefore discussion regarding construction impacts is included in discussion of operational impacts.

Because there are currently no specific development proposals, the impacts of future long-term development at Piers 30-32, Seawall Lot 330, and Piers 26-28, 19, 19 ½, 23 and 29, and Rincon Point and Brannan Street Wharf Open Water Basins as provided for under the Host Agreement are conceptually evaluated.

Additionally, the projects' potential contribution to cumulative land use impacts is evaluated in the context of existing, proposed, and reasonably foreseeable future development expected in the projects' vicinity.

5.2.2.3 AC34 Event and Cruise Terminal Impacts

Proposed Uses of the 34th America's Cup in 2012 and 2013

AC34 2012 and 2013 Event Facilities

Marina Green and Vicinity. The proposed America's Cup Village (AC Village) at Marina Green would serve as the focal point for AC34 in 2012 and a hub of hospitality, entertainment, and spectator viewing of the sailing races. The majority of areas within the AC Village would be open to the general public, although certain areas and functions within the venue would be limited to private guests and/or sponsors and staff.

As discussed in Chapter 3, Project Description, the AC Village at Marina Green would contain a range of facilities and services, including the AC34 Operations Office, a hospitality area for corporate and private functions, outdoor amphitheater event seating, a stage, music events, and areas of sponsor displays, general merchandise, and food and beverage sales. Up to two large tents (each measuring up to 300 feet long by 100 feet wide and 42 feet in height) would house the operations office and hospitality functions, along with various smaller tents (each measuring up to 40 feet long by 20 feet wide and 15 feet in height) for other uses. Ancillary on- and off-street parking would be dedicated to serve the AC Village.

For the AC34 2013 events, Marina Green would continue as programmed spectator area; however, it would not function as the AC Village, which would move to Piers 27-29. Spectator areas are discussed further below.

These uses are permitted temporary land uses on Marina Green in the City's P (Public) zoning district, with permits issued by SFRPD. The temporary facilities would generally preclude active recreational activities from taking place for the duration of the 2012 events. The AC Village use, however, could be considered a passive recreational use. Therefore, given the temporary and recreational nature of the event, the AC 2012 Village at Marina Green would not be considered a major change in use.

Piers 27-29 and Pier 29½. A preliminary site plan for the AC Village at Piers 27-29 is presented in Chapter 3. As shown in Chapter 3, the cruise terminal core building and shell would serve as the location for team and corporate hospitality functions in 2013. The Pier 29 shed would contain food concessions, merchandising, and ticket sales. The adjacent Pier 29½ bulkhead building is where food preparation and other "back of house" activities would occur, and the historic Belt Line office building would be used as the AC Village welcome center. The open valley of Piers 27-29 would provide a range of functions and services, including event seating and stage for live entertainment, exhibitions and interactive display areas, and sponsor displays. Tents would be installed within open areas at the AC Village, including the foredeck club hospitality (approximately 5,000 square feet and 30 feet in height) at the end of Piers 27-29, along with a variety of smaller tents. Additionally, event amphitheater seating would be located at the end of Piers 27-29.

These AC34 2013 temporary uses are permitted land uses on Piers 27-29 in the *WLUP* Waterfront Mixed Use Opportunity Area and the City's M-1 (Light Industrial) zoning district, and would not be considered a major change in use.

Northeast Wharf Open Water Basin and Piers 29-31 Water Basin. As shown in Chapter 3, the Northeast Wharf Open Water Basin and Piers 27-29 are two proposed locations for distributed berthing for AC34 sponsor and/or private spectator boats. Given that the existing aprons on these piers are at an elevation too high to accommodate the range of smaller boats that could be docked there during AC34 2013, temporary floating docks and gangways would be installed at these pier locations.

As discussed in Chapter 3, the berth at Pier 27 is routinely dredged under the Port's existing permitted maintenance dredging program. It is anticipated that a small amount of additional dredging may be required in the water areas between Pier 23 and Pier 29 to accommodate larger AC34-related boats. Such dredging outside of the Port's existing maintenance dredging permit area would require a new dredging permit.

These AC34 2013 temporary berthing uses would require permits from several agencies, as described in Sections 5.14, Biological Resources, and 5.16, Hydrology and Water Quality. The temporary berthing, however, would be permitted uses in the Port's Open Water Basin and the Waterfront Mixed Use Opportunity Areas, and would not be considered a major change in use.

Piers 19 and 19½. A preliminary site plan for Pier 19 and Pier 19½ (along with Pier 23, Piers 27-29½, and adjacent water basins, as described below) is presented in Chapter 3. Temporary structures and installations would be constructed at Pier 19 consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties. These piers would be used as a temporary cafeteria for AC34 staff, media, and volunteers; a volunteer center; a regatta operations center; and ancillary office and storage. Pier 19½ would be used for truck loading, deliveries, an information center, merchandising, and parking. Repairs would be required to the pier apron deck and support pile structures. In addition, the project would include temporary mooring within the water area.

These AC34 2013 temporary uses are permitted land uses on Piers 19 and 19½ in the *WLUP* and the City's M-1 zoning district, and would not be considered a major change in use.

Pier 23. Pier 23 would serve as the media operations location for AC34 2013 (relocated from Fort Mason, the media operations center for AC34 2012). As shown in Chapter 3, temporary structures and installations would be constructed at Pier 23 (consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties) for a proposed media center, an international broadcast center, television production and studios, and a staff, media, and volunteer credential center. A barge would be set on piles at the east end of Pier 23 to accommodate up to 10 satellite dishes. In addition, a temporary broadcast booth would be set up on the Pier 23 apron. As described below for the Northeast Wharf Open Water Basin, approximately floating docks would be installed at Pier 23.

These AC34 2013 temporary uses are permitted land uses on Pier 23 in the *WLUP* and the City's M-1 zoning district, and would not be considered a major change in use.

Rincon Point (Piers 14-22½) Open Water Basin. The waters between Piers 14 and 22½ are designated as the Rincon Point Open Water Basin in the Port *WLUP* and BCDC SAP. This area would be used for mooring of private spectator boats during the AC34 2012 and 2013 race events. As stated in the Project Description, this area would be a berthing site for event sponsor and private spectator boats during the AC34 2013 events. Remnant submerged pier piles within the basin would be cut and removed, and dredging within the basin would be conducted. Afterwards, floating docks would be installed. The AC34 2013 temporary berthing uses would

require permitting along the Bay, and as they are considered maritime uses in keeping with existing activity along the Bay, would not be considered a major change in use.

Piers 26-28 and Piers 28-30 Water Areas. Pier 26 and Pier 28 would be used for storage, parking, and regatta and team operations. Either Pier 26 or Pier 28 could be dedicated exclusively to parking use for workers of team support staff working at Piers 30-32, and for temporary storage of signage and traffic management improvements that may be used along The Embarcadero. Permanent improvements at these piers would be constructed to meet repair, fire safety and other existing requirements, consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties.

In addition, Piers 28-30 water areas are two of several sites being considered for distributed berthing for AC34 sponsor boats and private spectator boats. Should Piers 26 and 28 be used as distributed berthing sites, floating docks would be installed on the north and south side of Piers 26 and 28, along with gangways, to provide berthing capacity. Potential apron repairs and dredging may be required at these piers to accommodate these temporary facilities. It is anticipated that a small amount of dredging may be required near Pier 28.

These AC34 2013 temporary uses are permitted land uses on Piers 26-28 in the *WLUP* and the City's M-1 zoning district, and would not be considered a major change in use. The AC34 2013 temporary berthing uses would require permitting along the Bay, and as they are considered maritime uses in keeping with existing activity along the Bay, would not be considered a major change in use.

Seawall Lot 330. Seawall Lot 330 would be used for parking during the AC34 2013 events. No change in use would occur. However, Seawall Lot 330 could be used as construction staging for the construction at Piers 30-32 in 2012. This AC34 2013 parking use would be the same as current on Seawall Lot 330, as permitted within the City's SB-DTR (South Beach Downtown Residential District) zoning district and would not be considered a major change in use.

Piers 30-32 and Brannan Street Wharf (Piers 32-36) Open Water Basin (Proposed Team Bases). Piers 30-32 would serve as the primary team bases for AC34 2013 (relocated from Pier 80, the team bases for AC34 2012), unless construction and dredging at this site could be completed in time to allow team bases to be provided here in 2012 instead of Pier 80. The Brannan Street Wharf Open Water Basin between Piers 32 and 36 would provide mooring for AC 72 catamarans and is one of the proposed private spectator boat berthing areas for AC34 2013. A preliminary site plan for the proposed team bases and other proposed facilities at Piers 30-32 and the adjacent Piers 32-36 Open Water Basin is presented in Chapter 3. Bases for up to 10 teams would be provided at Piers 30-32,[9] and would include space for boat work, storage and maintenance facilities, as well as office space and ancillary team parking.

The east face of Piers 30-32 would continue to be used for berthing large ships, including the AC supply ship. The Host Agreement also provides for possible cruise ship berthing during

[9] Additional may compete in AC34 2013. Consequently, some team bases could occur at the Pier 80 ancillary base.

non-race periods. The west end of Piers 30-32 would be used for team hospitality uses, including team catering facilities. Temporary tents (up to 40 feet in height) would be installed to house team base operations and hospitality uses. Up to four mobile cranes would be located along the south side of Piers 30-32 to lift the racing yachts into and out of the adjacent water basin; these cranes would extend a minimum height of 150 vertical feet above the pier deck to provide adequate clearance while moving the yachts. As shown in Chapter 3, there would be a public access corridor created on Piers 30-32 for viewing of team base operations. The proposed improvements would not include changes to Red's Java House, which would remain at Piers 30-32 during the AC34 event.

A number of temporary features would be installed at Piers 30-32 and the Brannan Street Wharf (Piers 32-36) Open Water Basin to provide protection from waves and increase berthing capacity at this location. Approximately 1,400 linear feet of floating wave attenuators would be installed to create a breakwater and reduce wave energy within this water basin, including along the east face of and extending south from Piers 30-32, and extending north from Pier 36. Anchored moorings would be installed within the water basin for an anchorage field of AC72 yachts within this water basin. (As shown in Chapter 3, the planned Brannan Street Wharf would be constructed. This planned project includes demolition and removal of Pier 36 and a portion of the adjacent bulkhead wharf, development of a new wedge-shaped wharf containing 57,000 square feet of open space, and repair of the adjacent seawall to which the new wharf would connect.)

In order to provide sufficient water depth for boat clearance, the Brannan Street Wharf (Piers 32-36) Open Water Basin would be dredged to a depth of 17 feet MLLW. **Appendix PD-2** includes diagrams of preliminary dredging prisms.

Floating docks would be installed at Piers 30-32 to increase the available area for boat berthing at Piers 30-32. A floating dock (measuring 850 feet long by 12 feet wide) would be installed alongside the pier south apron to provide an additional temporary berthing area for the AC72 race yachts. A system of floating docks would also be installed on the north side of Piers 30-32, creating a marina for berthing of AC34 sponsor boats and private spectator boats. This would include a floating dock (measuring 850 feet long by 12 feet wide) alongside the pier north apron, and approximately 750 linear feet of smaller connecting docks (8 feet in width). This area presently has a controlling depth of 9 feet MLLW limiting the vessel moorage to shallow draft vessels unless dredged to depths similar to the south berth.

These uses are permitted land uses on Piers 30-32 in the *WLUP* and the City's M-2 (Heavy Industrial) zoning district as well as within the Brannan Street Wharf Open Water Basin. As they are considered maritime uses, they would not be considered a major change in use.

Pier 80 (Proposed Ancillary Team Bases). Pier 80 would serve as the back-up team bases for AC34 2012, assuming the proposed Piers 30-32 team bases can be completed in time. In addition, it would be an AC34 2013 team base location for the Oracle Racing Team and other teams that cannot be accommodated at the Piers 30-32 team bases (planned to support 10 teams) in 2013. As a consequence, some or all the facilities installed at Pier 80 for AC34 2012, including tents, cranes, and floating docks, would remain in place through the AC34 2013 races.

Under one of the project options for helicopter use, a barge helipad would be located at Pier 80 (the other option would be to use an existing helipad at Treasure Island). Helicopters would be used for AC34 2012 and 2013 races to serve broadcasting and media operations, as described in Chapter 3.

These AC34 2013 temporary uses are permitted land uses on Pier 80 in the *WLUP* Existing Maritime Areas and the City's M-2 zoning district and, as permitted maritime uses, would not be considered a major change in use.

Other San Francisco Piers. In addition to the locations discussed above, temporary berthing may be proposed along Piers 15-17, if authorized by the Port, or the tenant that holds a lease for the berthing area. The installation of temporary dock facilities for AC34 would require permitting along the Bay. Some of these areas are already used as berthing facilities. They are considered maritime uses consistent with similar uses along the waterfront, would not be considered a major change in use.

Treasure Island. The existing helipad at Treasure Island may be used for helicopter landing. Helicopters would be used for AC34 2012 and 2013 races to serve broadcasting and media operations. Given that the helipad is an existing use, the increased temporary use during AC34 race events would not be considered a major change in use.

AC34 2012 and 2013 Spectator Areas

Except where noted, all spectator venues described below would be public venues. The majority of areas within each spectator venue would be open to general public, although certain areas and functions within the venue would be limited to private guests, sponsors and staff. As shown in **Appendix PD-2**, a preliminary management zone plan for each venue has been prepared by GGNRA.

Fort Baker Pier at Cavallo Point. The pier at Fort Baker would be used exclusively for corporate and private functions. A hospitality tent would be positioned at the end of the pier for hosting events. Public access to the pier would be available when an event is not taking place. The proposed temporary uses would be required to obtain GGNRA permits and comply with GGNRA regulations and would not be considered a major change in use.

Crissy Field. The proposed spectator area at Crissy Field would be the largest of the proposed spectator venues in 2012 in terms of geographic area and seating accommodations. The proposed outdoor amphitheater at Crissy Field would accommodate approximately 8,000 spectators for public viewing of the races. This venue would also provide a range of hospitality services, including general merchandise sales, food and beverage concessions, restrooms, first aid, and sponsor displays. The proposed temporary uses would require GGNRA permits under GGNRA regulations.

These uses would be a departure from the open space recreational use of Crissy Field during typical days when a major event, such as Fleet Week, is not taking place. Instead, these uses

would be similar to those of major events, but intensified and over a longer period of time. In effect, Crissy Field's open recreational uses would be limited to the areas not occupied by these temporary uses. During days of peak attendance, it is likely that typical recreational uses could not be accommodated within Crissy Field, due to the numbers of spectators that would occupy the area. This would be considered a minor, temporary change in use. Please see Section 5.11 for an analysis of impacts to recreational resources.

Marina Green and Vicinity. Marina Green would be developed as a spectator area for 2013 after serving as the America's Cup Village in 2012. The proposed outdoor amphitheater at Marina Green would accommodate approximately 4,000 spectators for public viewing of the races (two structures, with each structure the same dimensions as that discussed for Crissy Field, above). The proposed temporary uses are permitted under the City's P (Public) zoning with SFRPD permits, and would not be considered a major change in use.

Temporary berthing facilities at each of the water areas would include floating docks and gangways that would require anchoring systems. Potential apron repairs may be required at one or more of these locations to accommodate these proposed temporary facilities. These water areas are currently used for maritime use and would not be considered a major change in use.

Fort Mason. The proposed venue at Fort Mason would potentially serve as the site for media operations for AC34 2012 and would include an international broadcast center and television studio. The Fort Mason venue may also serve as the berthing location for large spectator vessels. The proposed temporary uses would require GGNRA permits under GGNRA regulations and would not be considered a major change in use.

SAFR / Aquatic Park. The proposed spectator venue at Aquatic Park would provide a limited range of hospitality services, including general merchandise sales, food and beverage concessions, and sponsor displays. Aquatic Park is also a potential location for public viewing of moored USA-17 and AC45[10] yachts. The proposed temporary uses would require permits from GGNRA and would not be considered a major change in use.

Alcatraz Island. Only existing facilities at Alcatraz would be used during the AC34, and uses would be exclusively for corporate and private functions. Communications equipment (satellite dishes) would be installed at an agreed upon location with NPS for broadcasting signal transmission. Weather monitoring equipment would also be installed. The proposed temporary uses would require permit approval from the NPS and would not be considered a major change in use.

Live Sites. The Live Sites would consist of viewing locations at Union Square, Justin Herman Plaza, and Civic Center (2013 races only) where the AC34 2012 and 2013 races could be viewed remotely on large outdoor television screens. Temporary seating would be provided at these

[10] The AC45 class yachts are a scaled-down one-design version of the AC72 class yachts used by teams in the initial AC World Series Pre-regattas in 2011 and first three months of 2012 (and accordingly, would not be raced in the World Series races held in San Francisco). The AC45s are designed to give new teams an opportunity to learn wing-sailed multi-hulls as they design and build their own AC72 that will be raced in the America's Cup.

locations along with a range of hospitality services, including general merchandise sales, food and beverage concessions, and entertainment.

These AC34 2012 and 2013 temporary viewing location uses are permitted land uses in areas zoned by the City for P (Public) use and would not be considered a major change in use.

America's Cup Secondary Viewing Locations and Vicinity

No permanent improvements are proposed within the secondary viewing locations as part of the AC34 2012 and 2013 projects, and therefore the projects would not disrupt or divide the physical arrangements of existing uses and activities that surround it. The installation of temporary facilities, such as portable wash stations, toilets, and solid waste receptacles, will be determined through sponsor coordination with the managers of the secondary viewing locations. These temporary installations would not substantially alter land use.

As stated in the Project Description, most existing tenants currently leasing and occupying Port facilities that would be used for AC34 venues (specifically, at Piers 30-32, Seawall Lot 330, Pier 26, Pier 28, Pier 19, Pier 19½, Pier 23, Piers 27-29 and Pier 29½) would be displaced prior to the AC34 2012 event. Three tenants in the affected facilities are recognized to have unique requirements that may limit relocation options: Teatro Zinzanni dinner theater, Bauer's California Coach Sales and Service, and San Francisco Soccer's Telegraph Field.

Teatro Zinanni would relocate from Piers 27-29 to either a site near the intersection of Broadway and The Embarcadero within the Northeast Embarcadero Historic District, a site in Mission Bay bounded by Third Street, Channel Street, Fourth Street, and the China Basin Channel, or another location not on Port property to be determined. The Broadway and Embarcadero and the Third and Channel Street sites are both surface parking lots. Nearby uses to the Broadway/Embarcadero site are low- to mid-rise commercial buildings and surface parking lots. Nearby uses to the Mission Bay site include China Basin Park, Mission Creek Park, Mission Bay Library, and a mix of commercial and residential uses along Berry Street, north of the channel. To the east and south are additional surface parking lots. Relocation of the dinner theater to either of these locations would change the existing land use. Both moves would require a zoning change to accommodate the dinner theater use.

Bauer's California Coach Sales and Service would relocate from Piers 27-29 to Pier 50. Pier 50 includes 4 large sheds and 3 shelters and serves as the Port's Maintenance Center as well as various general warehouse uses. Surface parking lots are located to the west, north, and south. Given the industrial- and transportation-related uses in the vicinity, the limousine service would not substantially alter land use in this area.

Finally, San Francisco Soccer's Telegraph Field is considering moving to the Pier 17 shed at Piers 15-17. A portion of the west end of Pier 17 is being improved to provide a new office and facility for dba Baydelta Marine Inc. Bay Delta Tug and Tow. The remainder of Pier 17 is for future expansion of the Exploratorium; in the interim, the Exploratorium will sublease Pier 17 for commercial and light industrial users, including the soccer field. The change in use at Pier 17 due to the sublease with the soccer field would be temporary and not substantially alter land use.

Impacts of America's Cup

Impact LU-1: Construction and operation of the America's Cup facilities and events in 2012 and 2013 would not physically divide an established community. (Less than Significant)

The AC34 2012 and 2013 facilities and events would not contribute to a land use impact resulting from the physical division of an established community by constructing physical barriers or obstacles to circulation that would restrict existing patterns of movement between the project sites and the adjacent neighborhoods. The AC34 would primarily construct all temporary event facilities for 2012 and temporary and permanent facilities for 2013.

The only physical division that could occur related to the event itself would be any temporary street closures to vehicular travel during peak race event days. (See Section 5.6 for a further discussion of street closures.) The purpose of the closures would be to reduce vehicular access and traffic congestion, and allow increased pedestrian volumes and cyclists to circulate through the area during the event. Therefore, these temporary street closures would not physically divide an established community.

The proposed project would create a temporary new maritime attraction accompanied by a mix of supporting entertainment and public access activities along the waterfront, and would not disrupt or divide the physical arrangements of existing surrounding uses and activities. As stated in the Project Description, stages, spectator seating, support offices, storage spaces, team bases, media operations centers, and merchandising stands would be installed and utilized during the events. The uses within these structures would all be temporary, and the structures would be removed upon completion of the events. Although they would increase impediments to travel on City and GGNRA properties, these impediments would be temporary and would not physically divide the surrounding established communities.

As stated in the Project Description, up to 334,000 people could view the AC34 races on the average peak weekend day. Such an influx of visitors to San Francisco, County of Marin, and GGNRA lands could somewhat impede physical access and ease of travel. These impacts would be temporary and would not physically divide an established community.

Regarding tenant relocations, the relocation of Bauer's California Coach Sales and Service and San Francisco Soccer's Telegraph Field to existing pier sheds at Piers 17 and 50 would not result in street closures or other physical impediment to existing public thoroughfares or access. No substantial new structures would be constructed. Although the uses would change locations, the new locations would not physically divide an established community.

Teatro Zinzanni dinner theater would move either to (1) The Embarcadero and Broadway site, (2) Third and Channel site in Mission Bay or (3) another location not on Port property. If the theater moved to the Mission Bay site, the facility's tent would be a new structure in an otherwise primarily unbuilt area. If it moved to the Embarcadero/Broadway site, it would be surrounded by office and surface parking lot uses. The new structure would be built within existing lot lines and would not physically divide an established community.

The project would not present a permanent physical barrier to movement throughout the community. For these reasons, the project would neither disrupt nor divide the neighborhood and, as such, land use effects related to implementing the proposed AC34 project are considered to be less than significant.

Summary

Since all proposed AC34 improvements and uses would occur within the boundaries of the existing facilities and no physical barriers to movement throughout the community would be involved, the overall impact related to the potential to physically divide an established community would be *less than significant*.

Mitigation: Not required

Impact LU-2: Construction and operation of the America's Cup facilities and events would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

As stated in Chapter 4, Plans and Policies, the AC34 would not substantially conflict with those applicable land use plans, policies or regulations such that an adverse physical change would result. As stated above, the proposed uses of AC34 events are almost exclusively temporary in nature. Pursuant to the *WLUP*, described in Chapter 4, AC34 would facilitate goals to encourage recreational boating, stimulate new investment that creates jobs and public amenities, promote diversity of activities (including open space and recreational uses), and provide access along the waterfront. *WLUP* objectives include to "encourage new activities to draw San Franciscans to the water's edge." Similarly, as described in Chapter 4, AC34 would meet BCDC's *San Francisco Waterfront Special Area Plan* (SAP) policies to promote public trust uses and activities, including public access.

As discussed in Chapter 3, Project Description, and Chapter 4, Plans and Policies, however, the AC34 project would conflict with certain existing BCDC SAP policies that require the preservation or creation of four Open Water Basins to mitigate, in part, environmental effects of development provided for under the SAP within its Bay jurisdiction. As stated in the SAP, one of the intended purposes of these Open Water Basins is "the restoration of significant areas of open water to enhance the ecological health of the Bay." The fill required for the proposed temporary berthing in the Rincon Point and Brannan Street Wharf Open Water Basins for large spectator boats and AC34 racing yachts would conflict with the SAP policies for these Open Water Basins. The Event Authority and Port have proposed amendments to the SAP policies to allow the proposed temporary berthing within these open water basins during the AC34 race events. The SAP amendments would have to be approved by BCDC prior to seeking approval of BCDC permit(s) to construct the improvements. Given the short-term nature of the proposed uses of the

Open Water Basins for temporary berthing for the AC34, any potential conflicts with the intended ecological benefits of these Open Water Basins as envisioned under the SAP would be *less than significant*.

Regarding tenant relocations required for the AC34 events, as stated above, the Teatro Zinzanni dinner theater use would not require rezoning to allow for its construction and operation at either the Broadway/Embarcadero or Mission Bay sites. Conflict with the existing zoning would not result in a significant environmental effect. Relocation of Bauer's California Coach Sales and Service and San Francisco Soccer's Telegraph Field would not substantially conflict with existing plans or policies.

Overall, the impact of the AC34 event would be *less than significant*.

Mitigation: Not required

Impact LU-3: Construction and operation of the America's Cup facilities and events would not have a substantial adverse effect on the existing character of the project sites and vicinities. (Less than Significant)

The AC34 project would not introduce incompatible land uses to the area and would be a temporary use occurring only during the summer-fall 2012 and summer-fall 2013. As discussed above, the project sites on Port properties are surrounded by mixed-use buildings, light industrial uses, offices, pier structures, marinas, and open spaces. GGNRA lands—including Crissy Field, Fort Baker Pier at Cavallo Point, and Alcatraz—are surrounded by public open spaces, institutional uses, and limited commercial uses. Marina Green is adjacent to maritime uses and surrounded by residential uses.

While the project would represent a change in land use compared to existing conditions on the project sites, these temporary changes would also be in keeping with established development patterns and policies of the City. As described in the *WLUP*, over the last 25 years many of the industrial activities in the Northeast Waterfront have relocated to the Southern Waterfront or have left the Port. Changes in use and improvements in transportation infrastructure, specifically the F-line light rail expansion and pedestrian improvements along The Embarcadero (e.g., Port Walk), have transformed the Northeast Waterfront and the neighborhoods around it from its industrial beginnings to a diverse urban and visitor-serving area. This is evident in the adaptive reuse of historic buildings containing office and other commercial uses (Two Roundhouse Plaza, McGraw-Hill Company, San Francisco Bay Club); recent housing developments (Telegraph Landing, Parc Telegraph); and corporate campuses such as Levi's Plaza. The relocation of industrial uses out of the Northeast Waterfront area also provides an opportunity for adaptive reuse of pier buildings for maritime uses, a mix of commercial uses and attractions, and open space and waterfront access along The Embarcadero. The project sites are surrounded by mixed-use and light industrial activities, and maritime operations. The types of uses proposed as part of the AC34 project would be consistent with the prevailing land uses in the vicinity.

Although the construction of facilities, floating docks, viewing areas, and entertainment uses would result in a change in character at some sites, these temporary facilities would be consistent with the character of the area in terms of proposed uses and physical compatibility. The project as proposed would not result in a significant land use impact because these uses are permitted under the *WLUP* and the City's zoning. Most uses would be temporary in nature, and project sponsors would obtain appropriate permits from regulatory agencies with jurisdiction over each site.

Regarding tenant relocations required for the AC34 events, relocation of Bauer's California Coach Sales and Service and San Francisco Soccer's Telegraph Field would not substantially conflict with existing land use character nearby. The Bauer's transportation use would be consistent with the transportation and warehouse uses at Pier 50, as well as the surrounding surface parking lots uses. Telegraph Field is on an existing pier, and it would move indoors on another existing nearby pier. Recreational uses coexist with industrial, commercial, and maritime uses on the waterfront.

Relocation of Teatro Zinzanni dinner theater would represent a change of use, but land use character in the vicinity of the relocation sites would not be substantially affected. Existing event spaces and tourist attraction uses are located along the waterfront, and the location of the dinner theater within the context of these uses would not substantially affect land use character.

The project would not result in a substantial adverse change in the existing land use character along the waterfront or adjacent areas. The impact would be *less than significant*.

Mitigation: Not required

Proposed Uses of the James R. Herman Cruise Terminal and Northeast Wharf Plaza

James R. Herman Cruise Terminal

Chapter 3 presents the proposed site plan for the completed Cruise Terminal project. The cruise terminal building would be sited within the larger footprint of the Pier 27 shed (which would be demolished) along an axis adjacent and parallel to the Pier 27 berth. Proposed provisioning facilities would be located north of the building. Vehicular access to and from The Embarcadero would be provided at a new driveway located just south of the Pier 29 shed. This access point would provide direct connection to the cruise facility's proposed ground transportation area located within the triangular-shaped valley of Piers 27-29. A summary of the proposed cruise terminal building characteristics is presented in Chapter 3.

The cruise ship shoreside power infrastructure would be relocated back to Pier 27 after AC34 events to power cruise ships while berthed at the pier. As shown in Chapter 3, the shoreside power substation would be located in a building cut-out along building west wall. The shoreside power system would be upgraded from 12 megawatts (MW) to 20 MW to support larger cruise ships. This would require installation of larger cables through the switchboard in Pier 29 to draw more power from PG&E, and could also require new conduits, cables and utility work in portions of adjacent Embarcadero promenade and street areas.

Cruise terminal operations would comprise between 40 and 80 calls per year. Pier 27 would be the Port's primary cruise terminal, and Pier 35 would serve as a secondary facility in the event that two cruise ships require berthing at the same time. The level of improvements and equipment proposed in the Pier 27 cruise terminal would be designed to optimally handle vessels carrying 2,600 passengers and would provide additional capacity at key areas to serve vessels carrying up to 4,000 passengers.

Inside the building, a two-story configuration would separate passenger embark/disembark areas from provision and baggage handling areas. The first floor would contain the lobby, baggage claim area, a Customs and Border Protection area, and security offices, as well as utility and storage rooms. Escalators, elevators, and staircases would connect to the second floor, which would include a check-in and seating area, processing area, a concourse walkway, security screen facilities, restrooms, and access to the gangway, which would be relocated depending on the location of ship doors.

Outside the building, when ships are in port, the ground transportation area would be active with taxis and buses shuttling passengers to and from the terminal. Provisioning facilities would be located north of the building and within the Pier 29 shed. Trucks would deliver to the provisioning area, via the ground transportation area. Security fencing would limit pedestrian access to the provisioning area, as well as the Pier 27 apron, while ships are in port, but when no cruise ship is on the dock, the fence would be collapsed to allow free passage by the public from the plaza to the edge of the dock.

Full operation of the proposed cruise terminal is expected beginning in the 2014 cruise season.

While the proposed cruise terminal would be a permanent facility, there are, and would continue to be, down times between cruise ship calls that could allow for the cruise terminal to be used to accommodate other uses, such as events, conferences, public or private gatherings, and maritime-oriented events such as Fleet Week and diplomatic visits by foreign government vessels. The design for the proposed cruise terminal building provides for approximately 46,000 square feet of interior space (including the first-floor baggage area and second-floor waiting area) for shared uses. In addition, depending on needs of the shared-use event, the ground transportation area could also be used for temporary installations (e.g., tents, stands, stages) and holding of outdoor public gatherings. It is estimated that up to 100 shared-use events could occur at the cruise terminal site annually.

Northeast Wharf Plaza

The Northeast Wharf Plaza would provide an approximately 2½-acre open space at the south end of Pier 27, fronting along The Embarcadero promenade. Pursuant to the planning policies and objectives in Port and BCDC plans, the proposed Northeast Wharf Plaza would be designed to serve as a major waterfront park resource to support passive recreational enjoyment and expansive public views of San Francisco Bay.

The plaza design would include a "piazza" feature in the southwest portion of the plaza, and integrate the historic Pier 29 Belt Line office building and ancillary structures for commercial or recreational services (e.g., snacks, bike rentals) into the park/piazza design.

In addition to the proposed Northeast Wharf Plaza, the proposed demolition of Pier 27 and portion of Pier 29 would open up approximately 160,000 square feet at the end of Piers 27-29, and the smaller footprint of the proposed cruise terminal building (as compared to the existing Pier 27 shed) would also result in larger expanses of open deck area in the valley. In combination, these changes would create new opportunities for public access and viewing from The Embarcadero to the end of Piers 27-29. As discussed in Chapter 3, Project Description and Chapter 4, Plans and Policies, the Pier 27 project would require amendments to the BCDC SAP, to allow phased improvements at the Northeast Wharf Plaza and public access at the northeast tip of Piers 27-29, use of Pier 27 berth for cruise ship berthing and required security options during cruise ship calls at the facility, the retention of Pier 23, and augmentation of Northeast Wharf Open Water Basin.

Impacts of James R. Herman Cruise Terminal and Northeast Wharf Plaza

Impact LU-4: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza at Piers 27–29 would not physically divide an established community. (Less than Significant)

While the proposed cruise terminal and wharf plaza would represent a change to the area and larger, more varied uses at Piers 27-29, the projects would not cause a significant adverse land use impact associated with physical division of the community. The Port waterfront has been home to a diverse mix of maritime uses which are actively promoted in the *WLUP*. Cruise terminal operations are currently to the north of Pier 27, at Pier 35. The Embarcadero has provided and would continue to provide a buffer and transition zone between mixed use residential and commercial uses on its city side, and maritime and commercial uses and public access on the water side. The proposed cruise terminal and wharf plaza would not disrupt or divide the physical arrangements of existing uses and activities that surround them. Additionally, the project's public access and open space elements would continue efforts by the City, Port, and BCDC in recent years to provide improved public amenities in the Northeast Waterfront area, specifically along The Embarcadero. During cruise ship calls, portions of the Northeast Wharf Plaza close to the water, the entire Pier 27 apron, and the Piers 27-29 tip, would be closed to public access pursuant to federal Homeland Security requirements. However, with a projected 40-80 ship calls per year, these public plaza and public access areas would be open for the majority of the year. When a ship is present, security gates would limit access to the Pier 27 apron and the northern tip of Piers 27-29. Therefore, the amount of public open space at Piers 27-29 would be slightly reduced. However, this limitation would be temporary, and access to the remainder of the uses on the piers would continue. Therefore, it would not physically divide an established community.

The Northeast Wharf Plaza would contribute a substantial amount of new open space along The Embarcadero, plus additional public access throughout the pier. Other open spaces in the area include the Pier 7 fishing and public access pier, about 0.5 mile to the south of the project site;

Levi Square Park, a privately owned, publicly accessible park approximately one block inland from the site; and Pioneer Park, located approximately four blocks to the west of Piers 27-29 atop Telegraph Hill. The proposed wharf plaza would increase publicly accessible open space between Pier 7 and Pier 39. There is no public access at the site at present.

Residential and office uses on the west side of The Embarcadero are designed for a high-density urban area. Even at the proposed size, scale, and density, the proposed cruise terminal and wharf plaza would fit within the existing height limit for the site, while still providing a substantial amount of open space. The types of uses proposed as part of the projects would also be generally consistent with the prevailing land uses in the vicinity. For these reasons, the cruise terminal and wharf plaza would neither disrupt nor divide the neighborhood and, as such, land use effects related to implementing the proposed projects are considered to be less than significant.

The proposed cruise terminal and wharf plaza would neither disrupt nor divide the neighborhood and, as such, land use effects related to implementing the proposed projects are considered to be *less than significant*.

Mitigation: Not required

Impact LU-5: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

The construction and operation of the Cruise Terminal project is consistent with adopted City plans and policies for the waterfront, including the San Francisco General Plan, Northeast Waterfront Plan; and the *WLUP*. However, as described in Chapter 3, Project Description and Chapter 4, Plans and Policies, the project conflicts with BCDC Special Area Plan policies regarding the Northeast Wharf Plaza and the Northeast Wharf Open Water Basin. The conflicts that would be created by the cruise terminal use of Pier 27 consist of: (1) cruise ship berthing along the Pier 27 apron would block required public views of the Open Water Basin from the Northeast Wharf Plaza, and (2) closure of the southern edge of the plaza during cruise ship calls to comply with Homeland Security requirements. Both conditions would conflict with current SAP policies. In addition, the Port has proposed to preserve the entirety of the Pier 23 shed, which would be contrary to the existing SAP requirement for removal of at least 315 feet of the easternmost end of Pier 23 shed to expand views of the Northeast Wharf Open Water Basin.

As described in Chapter 3, Project Description, the Port's SAP amendments include proposals to create alternate public view and Open Water Basin public benefits to offset the conflicts with the current SAP policies. The applicable land use significance criterion is whether a proposed project would conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The BCDC plan conflicts associated with the cruise terminal and wharf plaza relate to public views and closure of the southern edge of the plaza during cruise ship calls, and therefore, the Cruise Ship project would not conflict with the

intended ecological benefits of these Open Water Basins as envisioned under the SAP. BCDC would consider the merits of the proposed SAP amendments as part of its policy authority. As a result, the inconsistency of the project with Port and BCDC policies and standards would be *less than significant.*

Mitigation: Not required

Impact LU-6: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not have a substantial adverse impact on the existing character of Piers 27–29. (Less than Significant)

James R. Herman Cruise Terminal and Northeast Wharf Plaza Long-term Operation

Cruise operations currently take place on the northeastern waterfront at Pier 35, and secondary berthing occurs at Pier 27. Therefore, the proposed cruise terminal use would not substantially change land use character in the vicinity.

The proposed projects would alter but not adversely affect the existing maritime character of the area. As described above under Impact LU-3, the project site is located in an area undergoing a transformation since the mid-1960s from mainly industrial and maritime use to a diverse mix of urban and water-oriented recreational uses. This transformation has been encouraged by the policies of various plans that address the project site. The *WLUP* includes policies to "actively promote the continuation and expansion of industrial, commercial and recreational maritime activities," and to "provide new public access amenities which highlight newly created points of interest" in the Northeast Waterfront subarea. The Port's preferred use for the Mixed Use Opportunity Area (of which the projects are a part) is reflected in policies calling for "recreational boating, excursion boats, water taxis, historic and ceremonial ship berthing and other maritime uses to the maximum feasible extent," such as the *San Francisco General Plan, Northeast Waterfront Area Plan*. The General Plan includes policies and objectives, which were adopted to be consistent with the *WLUP*, to "diversify uses in the Northeastern Waterfront, to expand the period of use of each subarea and to promote maximum public use of the waterfront while enhancing its environmental quality" (Objective 2), and "emphasize water-related recreation, Bay-oriented commercial recreation and Bay-oriented public assembly uses in non-maritime development adjacent to, or over, the water" (Objective 2, Policy 2.5).

This relative intensity of this mix of uses, however, would depend on whether a cruise ship is in port. When a ship is present, the ground transportation area would be actively used as passengers are ferried to and from the terminal, or walk from the terminal to The Embarcadero. At the same time, security gates would be closed, and the end of Piers 27–29 would be inaccessible to the public to allow for cruise ship provisioning, and the apron along the southeast side of the Northeast Wharf Plaza would be inaccessible to the public. When a ship is in port, recreational and commercial activities would therefore be concentrated within the valley between Piers 27 and 29, as well as within the Northeast Wharf Plaza.

When a cruise ship is not in port, the Northeast Wharf Plaza would be fully open, allowing direct access to the Pier 27 apron. Security fencing at the eastern end of the valley, between the ends of the Pier 27 and Pier 29 sheds, also would be opened, allowing full public access and broad views of the Bay.

To activate the ground transportation area and cruise terminal spaces when a ship is not in port, as stated in Chapter 3, the Port proposes to allow for permitted special events. It is estimated that up to 100 shared use events could occur at the cruise terminal site annually. These uses would maintain activities on-site, and help activate use of the Northeast Wharf Plaza.

Because the proposed Cruise Terminal project would provide public-oriented recreation, open space, and enhanced public access, and, because such uses are envisioned by the plans and policies directly related to the site and the Northeast Waterfront, the project's effect on community or land use character would be considered *less than significant*.

Mitigation: Not required

5.2.2.4 Future Long-Term Development Impacts

Impact LT-LU: Long-term development under the Host Agreement would not physically divide an established community or result in incompatible changes to land use character. However, long-term marina development in the Rincon Point and Brannan Street Wharf Open Water Basins would conflict with BCDC policies adopted for the purpose of mitigating environmental effects. (Significant and Unavoidable)

As described in Chapter 3, the 34th America's Cup Host and Venue Agreement (Host Agreement) provides the Event Authority with certain long-term development rights under specified conditions. Although no site-specific development projects or programs have been developed, this EIR conceptually analyzes an assumed type and level of development based on current land use policies and guidelines. This development program is outlined in Chapter 3, Section 3.4.8.

The long-term development scenario assumed development pursuant primarily to existing regulations and land use / zoning requirements. Specifically, most of the piers within the Port of San Francisco's jurisdiction—including Piers 26, 28, 19, 19 ½, 23, and 29—would provide office, retail, entertainment, and maritime uses similar to those that currently exist either at these specific piers or along the northeastern waterfront in general. Therefore, long-term development of these sites would neither result in significant land use character or plans and policies conflicts, nor would they physically divide an established community.

Redevelopment of Seawall Lot 330 would be undertaken pursuant to existing zoning, and would allow additional residential development on the site under the long-term development scenario. Mid- and high-rise residential uses are common to the west and south of Seawall Lot 330.

Therefore, the use would be compatible with existing uses. The project would result in a new building on an existing surface parking lot, but this building would not impede movement or otherwise physically divide an established community. As stated in Chapter 4, Public Trust requirements currently apply to Seawall Lot 330, and any redevelopment for permanent non-trust improvements such as residential or general office uses would require removal of the Public Trust. The Port Commission would be required to make a determination as to whether the proposed use would be consistent with the Public Trust, informed by the advice of the State Lands Commission and Attorney General opinions. The State Lands Commission may agree to remove Public Trust restrictions from Trust property if: (1) the land has been filled and reclaimed; (2) the land is cut off from access to the waters of San Francisco Bay and is no longer in fact tidelands or submerged lands or navigable waterways; (3) the land is relatively useless for Public Trust purposes, and constitutes a relatively small portion of the granted lands within the City; and (4) the removal of Trust restrictions will not substantially interfere with public rights of navigation and fishing. The state legislature may also enact legislation lifting the Public Trust.

Development of Piers 30–32, like the other piers above, would likely be similar to the mix of uses that already exist on the waterfront. Although development would displace the existing surface parking lot use, such displacement would allow for uses that would attract more people to this location, which would be similar in character to other development projects completed in the past 20 years. Given that Piers 30–32 is not a historic resource, however, the facility is currently one of the few potential fill removal sites on the northeastern waterfront. Depending on the ultimate site plan under the long-term development scenario, redevelopment could either result in fill removal or foreclose the opportunity for fill removal.

Regarding the Open Water Basins, in reviewing the SAP amendments to temporarily allow berthing at the Rincon Point and Brannan Street Wharf Open Water Basins in conjunction with the AC34 events, BCDC also may consider the implications of a decision to approve temporary berthing for AC34 that could lead to long-term marina development within one or both of these Open Water Basins. The Host Agreement identifies both the Rincon Point and Brannan Street Wharf Open Water Basins as locations for temporary berthing and, if the Event Authority pays to dredge the Basins, this would trigger long-term development rights for construction of a marina in each location.

As described in Chapter 3, the design of marinas could take many forms, depending on several considerations, including the sizes and types of boats expected to use the marina. Possible marina developments could accommodate approximately 425 slips in the Rincon Point Open Water Basin ranging between 25 and 50 feet long, and up to 90 slips for boats ranging between 50 and 200 feet long in the Brannan Street Wharf Basin. There are no conceptual proposals for marinas for either of these locations and thus no details to analyze at this time. As stated above, the Rincon Point and Brannan Street Wharf Open Water Basins were established in the BCDC SAP to mitigate, in part, environmental effects of development provided for under the SAP by restoring" significant areas of open water to enhance the ecological health of the Bay." The development of long-term marinas within the Rincon Point and Brannan Street Wharf Open Water Basins would conflict with the intended long-term ecological and public benefits of these Open Water Basins

under the adopted BCDC policies for these areas. Therefore, development of long term marinas within the Rincon Point or Brannan Street Wharf Open Water Basins would be considered a *significant and unavoidable impact*.

Impact LT-LU Summary

In summary, future long-term development would not physically divide an established community or result in incompatible changes to land use character. However, long-term marina development in the Rincon Point and Brannan Street Wharf Open Water Basins could conflict with BCDC policies adopted for the purpose of mitigating environmental effects. Therefore, long-term development land use impacts would be *significant and unavoidable*.

Mitigation: Not available

5.2.2.5 Cumulative Impacts

Impact C-LU: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts. (Less than Significant)

Other major land use changes would be expected to occur in or near the project vicinity, which extends west to Battery Street and south along The Embarcadero to Mission Street**.** The table listing cumulative projects can be found in Section 5.1.

Cumulative impacts occur when impacts from a proposed project combine with impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. Within the immediate vicinity of the project sites, this EIR identifies several specific cumulative projects. Other past, present, and future projects identified in the project area include the Brannan Street Wharf Project, the Pier 24 Annex Rehabilitation, the Pier 22½ Rehabilitation and Alteration, the Downtown Ferry Terminal project, the Exploratorium Renovation, 8 Washington project, Fisherman's Wharf Improvement project, among others.

Changes and growth in the project area are represented by the Northeast Waterfront's continued transformation from a maritime, industrial, and manufacturing area into a mixed-use urban neighborhood. In general, future projects represent the continuation and expansion of existing uses (e.g., residential, office, or mixed-use development), replacement of existing uses (e.g., the proposed project), and the extension and enhancement of existing uses (e.g., a potential Muni E-line extension along The Embarcadero).

The geographic scope of potential cumulative land use impacts encompasses the Northeast Waterfront. The majority of projects in the vicinity of the project sites involve additions to existing structures and expansion of existing uses. All of the projects on Port property would be subject to applicable City and Port plans and policies. The projects involve a change of use and increased

intensification of uses; however, the proposed uses are consistent with land uses allowed under applicable City and Port plans and policies. Maritime uses would also continue under the projects. In addition to the land use changes at the project sites, other development unrelated to the projects would continue in the city and in the vicinity of the project sites as outlined above. Such cumulative development consistent with allowable land uses would not be expected to result in a substantial adverse change in the area's land use character or divide an established community. The projects would not result in a significant adverse change in the area's land use character or divide an established community and would not contribute to significant cumulative land use impacts.

The projects would result in a different built environment compared to the existing character of the site and vicinity but would develop new uses that would be the same or compatible with other development in the project vicinity. As noted, above, the projects would increase recreational, entertainment, maritime, and non-residential densities at the project sites and would be compatible with the existing land use character. The transition in scale between adjacent neighborhoods and the project sites, and the varied range of proposed uses, would not result in a substantial adverse change in the existing land use character. Since development of cumulative projects within the defined geographic context would not result in an adverse impact on existing land use character, there would be no cumulative impact to which the projects could contribute. Therefore, the cumulative impact would be *less than significant*.

Mitigation: Not required

5.3 Aesthetics

This section addresses the potential aesthetic and visual quality impacts associated with implementation of the proposed America's Cup (AC34) and James R. Herman Cruise Terminal/ Northeast Wharf Plaza (Cruise Terminal) projects. Aesthetic resources, commonly referred to as visual resources, are defined as the visible natural and built landscape features that surround a project site. This analysis describes the existing visual setting, evaluates the project's effects on visual resources, and specifically addresses the impacts of proposed actions on views from designated scenic roads, scenic areas, and/or public view corridors. Scenic vistas, roadways, and corridors are established for the purpose of protecting or preserving an aesthetic resource and are typically documented in general plans and resource management plans.

5.3.1 Setting

5.3.1.1 Definitions

Visual character is the unique combination of landscape features that combine to make up views, including native landforms, water, and vegetation patterns as well as built features such as buildings, roads, and other structures. Landscape and built features combine to form unique perspectives with varying degrees of visual quality.

Visual quality is the intrinsic appeal of a landscape or scene due to the combination of natural and built features in the landscape, and this analysis rates visual quality as high, medium, or low. High visual quality ratings would be used if the scene is particularly distinctive or appealing, moderate if representative of the general visual character of the surrounding area, and low if negatively uncharacteristic.

Visual sensitivity is the level of interest or concern that the public has for maintaining the visual quality of a particular aesthetic resource. Visual sensitivity is a measure of how noticeable proposed changes might be in a particular scene and is determined based on the overall clarity, distance, and relative dominance of the proposed changes in the view, as well as the duration that a particular view could be seen. Facilities such as public parks and promenades, historic resources, and scenic overlooks are typically selected and designed to have high visual quality, and public agencies plan and manage these facilities to maintain visual quality. In these public facilities, viewer sensitivity is also typically high due to viewer's expectations for a quality viewing experience, the sheer numbers of viewers particularly in an urban setting, and the clarity offered by longer duration viewing from a scenic setting.

Visual sensitivity to temporary modifications is consistently lower than visual sensitivity for permanent modifications because over the long term the original visual quality will be maintained. Also, the overall time available (duration) to view the temporary modifications is considerably lower than the duration of permanent changes. Clarity, distance, and relative dominance continue to be factors in evaluating temporary visual changes, but the limited duration of temporary changes reduces the overall visual sensitivity to change.

5.3.1.2 Regional Setting

The City of San Francisco (City) and San Francisco Bay (Bay) provide the regional setting for the 34th America's Cup Race (AC34) as well as the cruise terminal and wharf plaza projects. The San Francisco waterfront provides the setting for most of the AC34 venues as well as for the cruise terminal and wharf plaza. This is a highly developed urban waterfront with considerable density, variation of land form, and land uses that provide numerous scenic vistas and viewing opportunities for activities on San Francisco Bay. Figures in Chapter 3, Project Description, show proposed project sites and the proposed AC34 race area in the context of the regional setting.

The visual quality of the San Francisco waterfront has been incrementally designed to be consistently high. Every building, house, open space, park and streetscape contributes to the visual character of the City and the views available to the Bay. Furthermore, because of the density of the City and the openness of the Bay, large numbers of people are attracted to the waterfront and view it on a daily basis. The attraction of the water, the openness of the Bay, and the natural qualities of the surrounding hills all contribute to a consistently high visual quality. Visual sensitivity to change along the San Francisco waterfront is correspondingly high because so many people have access to waterfront views, and City planning objectives are in place to protect them. The waterfront does change over time however, but those changes tend to be made under the scrutiny of many responsible agencies and observers attracted to the waterfront as the defining edge of San Francisco.

5.3.1.3 Visual Setting – Project Sites

San Francisco Bay offers multiple locations for hosting and viewing the AC34 races, including areas along the northern waterfront of San Francisco and others across the Bay on the southern tip of Marin County. Within the Bay are the islands of Alcatraz, Angel Island, Treasure Island, and Yerba Buena Island, all offering viewing opportunities of the proposed racing area.

Directly above a portion of the race course, the Golden Gate Bridge's pedestrian walkways, could offer aerial views of AC34. Flanking the bridge are the National Park Service lands of the Golden Gate National Recreation Area (GGNRA). To the north are the Marin Headlands with expansive viewing opportunities, but limited capacity to accommodate crowds. To the south is the Presidio and Crissy Field in San Francisco, which would offer some high quality viewing opportunities.

The various project sites that would serve as AC34 venues in 2012 and/or 2013 (and in the case of Pier 27, also serve as the site of the proposed cruise terminal and wharf plaza) are described below and grouped into the following three major categories: (1) Port of San Francisco Piers, Water Areas, and Other Facilities Proposed for Use in AC34, including the Pier 27 Cruise Terminal; (2) AC34 Spectator Venues; and (3) AC34 Secondary Viewing Areas.

Refer to Chapter 3, Project Description, for aerial photographs showing each of the project sites and their immediate vicinity, and to Section 5.1, Impact Overview, for the secondary viewing areas.

Port Piers and Water Areas

The Port of San Francisco manages 7½ miles of the San Francisco Bay shoreline stretching from India Basin in the south to Hyde Street Pier in the north, totaling more than 1,000 acres. The primary project sites and related facilities located within the Port jurisdiction consist of numerous piers,[1] water basins, and a seawall lot, as described below. The lettering of each section below corresponds to the photographs of those sites in **Figures 5.3-1** through **Figure 5.3-3**.

A. Southern Waterfront - Pier 80

The Southern Waterfront's industrial areas, including Pier 80 and its surrounds, are interspersed with natural habitat, habitat restoration, public access and recreation sites. As presented in the project description, Pier 80 is operated as a cargo terminal and includes on-deck and warehouse storage. Visible features at this location include boat sheds and cranes. As part of the cargo terminal operation, ships and vessels sail in and out around Pier 80. Photographs of Pier 80, (see **Figure 5.3-1**, **Photos A1** and **A2**), demonstrate the industrial visual character of this area, as influenced by the proximate warehouse distribution land uses, including the new Muni Third Street Rail maintenance facility at Third Street and the aging and abandoned industrial facilities adjacent to the Potrero Hill Power Plant. As designated in the Port's Waterfront Land Use Plan (WLUP), Southern Waterfront Area (discussed in detail below), Pier 80, near Warm Water Cove offers "compelling visual juxtapositions of the natural bay environment against the urban and industrial forms of the City"[2]. Views of the container shipping operations and the Bay are visible from the bayside terminus of 24th Street, and Warm Water Cove. Views out to the Bay and Islais Creek provide occasional open space relief; however, the visual quality of Pier 80 and the immediate surrounding area, however is generally *low to moderate.*

B. Piers 30-32, Seawall Lot 330, and Brannan Street Wharf Open Water Basin

Piers 30-32 is flat and paved, currently used for parking, constructed over the water, with no existing on-deck structures, except for Red's Java House. The low elevation enables views of the Bay from interior City streets. The adjacent historic bulkhead building at Pier 28 contributes to the architectural, historic, and maritime character of the location. Seawall Lot 330, approximately 2 acres paved, is inland directly across The Embarcadero from Piers 30-32. Seawall Lot 330 is a parking lot, bounded by three-story high-density residential to the west and a twentythree-story tower at the northwest corner. The San Francisco-Oakland Bay Bridge (Bay Bridge) overlooks the site (see **Figure 5.3-1**, **Photos B1** and **B2**). The flat Seawall Lot 330 is landscaped such that views of the water are only available from The Embarcadero promenade or from elevated positions not necessarily available to the public. The presence of the parking lot reduces the visual quality of Seawall Lot 330 to *moderate*.

1 Pier numbering assigns odd-numbers to facilities north of the Ferry Building and even-numbers to facilities south of the Ferry Building.
2 San Francisco Port Commission, 2004

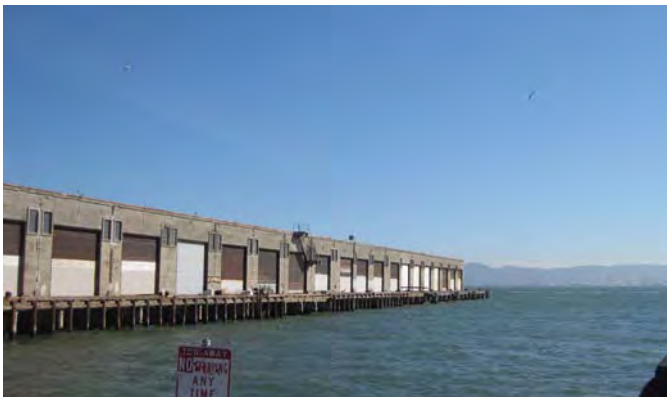
A1. Pier 80 from Warm Water Cove

A2. Pier 80 from Caesar Chavez Street

B1. Piers 30-32 from the site of the Brannan Street Wharf

B2. Piers 30-32 from The Embarcadero

C1. Pier 28 from Bryant Street



C2. Piers 28-30 Open Water Basin

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: ESA, 2011

Figure 5.3-1

Photos A-C of Port Piers and Waterfront Areas

The Brannan Street Wharf (Piers 32-36) Open Water Basin is located immediately south of Piers 30-32 and is designated as an Open Water Basin in the Port's WLUP and the BCDC *Special Area Plan for the San Francisco Waterfront* (Special Area Plan or SAP). This area fronts the proposed Brannan Street Wharf public open space. The Embarcadero promenade provides open views of the Bay and the Bay Bridge framed by palm trees and street furniture, and therefore the visual quality of Piers 30-32 and the Brannan Street Wharf Open Water Basin is *high.* The presence of the Seawall Lot 330 parking lot across the street however, reduces the overall visual quality of the combined areas to *moderately high to high*.

C. Pier 26, Pier 28, and Piers 26-28 Water Basin

Piers 26 and 28 have heavy bulkheads fronting The Embarcadero (see **Figure 5.3-1, Photo C1**) and are contributing resources in the Port of San Francisco Embarcadero Historic District that reflect the Mission Revival period (refer to Section 5.5, Cultural and Paleontological Resources, for further description of the historic district). A portion of Pier 26 is located directly under the Bay Bridge and contributes to the urban waterfront setting. Pier 26 is approximately 150,000 square feet, and Pier 28 is approximately 100,000 square-feet, both with aprons and large sheds covering much of the pier structure. The Piers 26-28 water basin measures approximately 200 feet between the piers, but is not visible from The Embarcadero. Just south of Pier 28, between it and Piers 30-32 is a second water basin of approximately the same size (see **Figure 5.3-1, Photo C2**).

The waterfront setting and the integration of historic resources with recent upgrades to The Embarcadero promenade all contribute to the vitality of the urban setting, which earns a *high* visual quality rating. Consideration of additional features in this setting would require considerable attention to maintaining the already high visual quality, and therefore visual sensitivity to change is rated as *high.*

D. Rincon Point Open Water Basin

The Rincon Point Open Water Basin at Piers 14 to 22½ provides waterfront views from The Embarcadero promenade to the Bay Bridge, Yerba Buena Island and the Oakland Hills**.** This Open Water Basin was created through systematic removal of old non-historic structures, including Piers 16, 18, 20 and 22 from the waterfront over the last 25 years. With the old piers removed, present day views have become available, particularly from Pier 14, a pedestrian-only pier (see **Figure 5.3-2**, **Photo D**) that provides public access out over the Bay. Visual sensitivity to change is rated as *high*. Policy 3 for Open Water Basins describes BCDC's intent for this area:

iii) in the Rincon Point Open Water Basin, lay berthing is only permitted for fireboats at Pier 22½. There should be no new berthing facilities except for limited numbers of mooring dolphins or buoys for non-commercial, transient boating, which may be permitted if it is determined that they would add interest to and improve Bay views in this Basin.[3]

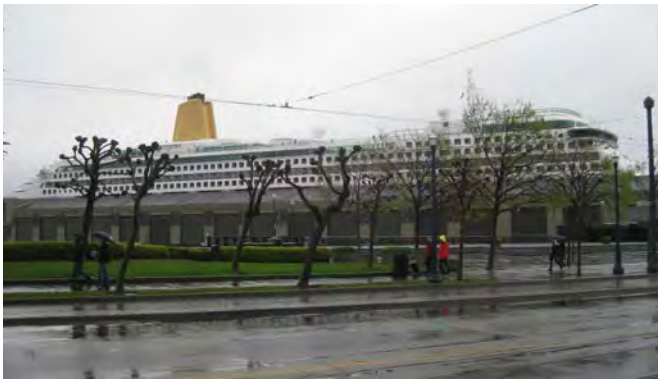
[3] San Francisco Waterfront Special Area Plan, San Francisco Bay Conservation and Development Commission, April 1975 as amended through February 2010, Pg 25

D. Pier 14, offers views of the Bay, the Bridge and Yerba Buena Island

E1. Pier 23, contributing resource to The Embarcadero Historic District

E2. Piers 23 and Pier 19 1/2 (To Right) on The Embarcadero

F. Piers 17-19 water basin



G1. Cruise Ship in Port at Pier 35 from The Embarcadero

G2. Cruise Ship at Pier 35 from Telgraph Hill

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: ESA, 2011

Figure 5.3-2
Photos of Port Piers and Waterfront Areas

E. Piers 19, 19½ and Pier 23

Pier 19, Pier 19½ and Pier 23 are located along The Embarcadero (see F**igure 5.3-2**, **Photos E1** and **E2**) near the intersection of Front Street and The Embarcadero within the Port's WLUP Northeast Waterfront. Piers 19 and 23 and their associated sheds are contributing resources in the Embarcadero Historic District. They are joined by a non-historic connecting shed building, Pier 19½, which runs parallel to The Embarcadero. The current warehouse, office, and parking land uses contribute to an industrial visual character. The Pier 23 Café, a free standing building, is located directly adjacent to and north of Pier 23, and is a contributing resource in the Embarcadero Historic District. Additional features in this setting would require considerable attention to the high visual quality, and therefore visual sensitivity to change is rated as *high.*

F. Other Water Areas: Piers 9-15 and 17-19

The Northeast Waterfront includes a variety of open water areas. Visual quality and sensitivity for all open water areas are *high*.

The water areas at Piers 9-15 and Piers 17-19 are located within the Port's WLUP Northeast Waterfront. These water basins each measure approximately 200 feet wide between respective piers (see **Figure 5.3-2**, **Photo F**).

G. Piers 27–29 and Northeast Wharf Open Water Basin

Piers 27-29 occupy considerable frontage along The Embarcadero between Sansome and Battery Streets (cross streets are Lombard and Chestnut) within the City's Northeast Waterfront neighborhood and the Port's WLUP Northeast Waterfront. This 14.8-acre triangular-shaped facility is the largest pier north of the Ferry Building, and includes the longest functional wharf face for vessel berthing (~1,300 feet long, with 48-footapron width). It is sometimes used as back-up berthing when multiple cruise ship call in San Francisco and the existing Pier 35 cruise terminal is occupied (see **Figure 5.3-2**, **Photos G1** and **G2**). Pier 29 was built in 1915 with approximately 119,000 square feet of warehouse space. Pier 27 was rebuilt in 1967 with 220,000-square-feet of cargo space along a remodeled axis that created the piers' current triangular shape. Outboard aprons line the entire perimeter of the triangular pier facility. This creates an approximately 170,000-square-foot triangular open central space in the middle of the pier (the "valley"). The historic Pier 29 bulkhead building on the Embarcadero has a *high* visual sensitivity to change.

Pier 29 shed is also a contributing historic resource in the Port of San Francisco Embarcadero Historic District. The Pier 27 shed is a noncontributing resource, but is located within the historic district boundaries. Two additional structures front The Embarcadero; the Pier 27 Annex office building, also a non-contributing two story building of approximately 12,000-square-feet, and the smaller historic Pier 29 Belt Line office building, designated as a contributing resource in the Embarcadero Historic District (see **Figure 5.3-3**, all photos). Also fronting the Embarcadero is the Teatro Zinzanni dinner theater in a tenant-owned tent structure. Behind the tents is Telegraph Field, an artificial turf soccer field surrounded by parking and the pier shed structures.

F1. Pier 27 next to historic facade of Pier 23

F2. Pier 27 from The Embarcadero

F3. Historic Belt Line office building, Pier 27 Annex, and Pier 27 (Lto R) from The Embarcadero

F4. Pier 27 and Pier 29 (in distance) from The Embarcadero promenade

F5. Piers 27-29 from Telegraph Hill

F6. Piers 23-39 water basin

SOURCE: ESA, 2011

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-3
Photos of Piers 27-29 and Waterfront Areas

The primary uses within Piers 27-29 currently include parking, fleet operations for a transportation services company, and storage. Pier 27 has long been in continuous maritime use for berthing deep-draft vessels; in addition to providing a secondary berth for passenger cruise ships, Pier 27 provides berthing for military, large research vessels and ceremonial ships. The berth at Pier 27 is maintained at a depth of -35 feet mean lower low water (MLLW) under the Port's existing permitted maintenance dredging program.

The triangular-shaped basin is between the two piers and is a designated Open Water Basin fronting the planned Northeast Wharf Plaza in the Port's WLUP and the BCDC Special Area Plan, therefore visual sensitivity for this Open Water Basin is *high*.

AC34 Spectator Venues

Marina Green, Fort Mason, Aquatic Park, Crissy Field, Alcatraz, and Fort Baker Pier at Cavallo Point are proposed AC34 spectator venues for 2012 and 2013. Marina Green is the proposed site for the America Cup Village (AC Village) in 2012 and a spectator venue in 2013. Fort Mason, Aquatic Park/San Francisco Maritime National Historic Park, Crissy Field, Alcatraz, and Fort Baker Pier at Cavallo Point are proposed spectator venues for both 2012 and 2013 and are operated by the National Park Service (NPS). Photographs of the spectator and event venues are provided in **Figures 5.3-4** and **5.3-5** and are referenced to the organizational lettering of the following discussion. The visual quality for all of these locations is *high*.

A. Marina Green

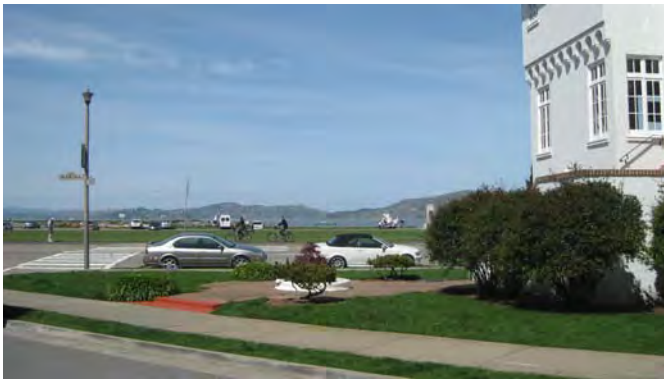
The Marina Green is a public park under the jurisdiction of the San Francisco Recreation and Park Department (RPD). It is located in San Francisco's Marina District, north of Marina Boulevard between Fort Mason on the east and the San Francisco Marina and St. Francis Yacht Club on the west. Marina Green includes an approximately 5.6-acre open grass field, encircled by wide, paved sidewalks on all sides and parking areas to the north, south and west.

Marina Green is used for a variety of passive and active recreational purposes. A constant parade of runners and cyclists pass through the treeless green. Various arts, athletic and epicurean events are held at the Marina for which tents are typically erected. Residences line the south side of Marina Boulevard, and face out across Marina Green to the Bay and the distant horizon.

B. Fort Mason

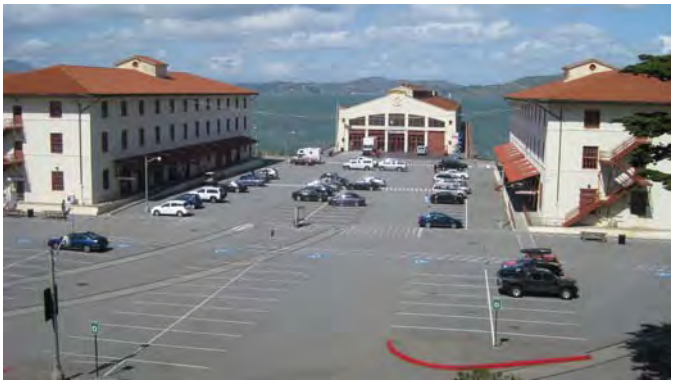
Fort Mason is a former U.S. Army post and military port facility located directly on San Francisco Bay and a National Register-listed historic district. Lower Fort Mason, also known as the San Francisco Port of Embarkation, is another National Historic Landmark and part of the San Francisco Maritime National Historic Park (SAFR). GGNRA's headquarters are located in Building 201 in Upper Fort Mason. Fort Mason contains large historic warehouse buildings and piers on the waterfront as well as public open spaces. It includes Fort Mason Center which leases space to a number of environmental, cultural and arts organizations, and a restaurant.

A1. Marina Green view to the Golden Gate Bridge and Marin Headlands



A2. Views of the Bay from residences along the south side of Marina Boulevard

B1. The Meadow in upper Fort Mason has elevated views of the Golden Gate



B2. Lower Fort Mason has historic buildings on piers in San Francisco Bay

C1. Aquatic Park: Bay oriented amphitheater, beach promenade and museum

C2. Aquatic Park views to the Golden Gate Bridge, Marin Headlands and beyond

SOURCE: ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-4
Photos A-C of Spectator Venues

D1 - D2. Crissy Field, from above Lincoln Boulevard, includes the Coast Guard Station, grassy open spaces and tidal marsh restoration in the distance

E1. Alcatraz is only accessible by ferries from Pier 45

E2. Alcatraz provides views of the AC34 race course in all directions

F1. Cavallo Point renovated lodging at Fort Baker has views to the race course

F2. Fort Baker Pier at Cavallo Point is at the northern base of the bridge

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: ESA

Figure 5.3-5
Photos D-F of Spectator Venues

C. Aquatic Park/San Francisco Maritime National Historical Park

Aquatic Park is located in the SAFR, at the west end of Fisherman's Wharf, starting west of Hyde Street and extending to Fort Mason just west of Van Ness Avenue. The NPS Pacific West Information Center is currently located in the SAFR visitor center on the corner of Hyde and Jefferson Streets. The Aquatic Park Historic District is a National Historic Landmark and is listed on the National Register of Historic Places. It includes a beach, a semi-circular concrete tiered seating area, grassy lawn areas and the horseshoe-shaped Municipal Pier extending into the Bay. The Aquatic Park Historic District is adjacent to Fort Mason and connected to it by a trail.

D. Crissy Field

Crissy Field was once a paved U.S. Army airfield and became part of the GGNRA in the 1990s. GGNRA converted the airfield into 22 acres of tidal marsh habitat (see Section 5.14, Biological Resources, for further description of the tidal marsh) with interpretive paths and over 1,000 paved and unpaved parking spaces. Uses in Crissy Field include the Crissy Field Center, cafés, gift shops and related recreational facilities. The beach area at the east end of Crissy Field is popular for walkers, joggers, cyclists, sailboarders and kite surfers. The Presidio Trust manages an inland area of the Presidio that includes a portion of Crissy Field.

E. Alcatraz

Alcatraz is a 22-acre island, located approximately 1.5 miles offshore from San Francisco. Alcatraz is a former Civil War outpost and later served as a federal prison until 1963. Alcatraz is part of the GGNRA and operated by the NPS. Currently, Alcatraz is a major museum exhibit attraction accessible only by ferry operators under contract with the NPS.

F. Fort Baker Pier at Cavallo Point

Cavallo Point is located at the base of the north end of the Golden Gate Bridge, in the Marin Headlands of the GGNRA, and occupies a section of the Fort Baker Historic District. The Fort Baker Pier at Cavallo Point is a former military wharf originally built in 1937, and modified in the 1940s and most recently in 1985. The pier is approximately 360 feet long and 115 feet wide at its widest point. The Fort Baker Pier is managed by the U.S. Army.

Live Sites (Civic Center, Union Square, and Justin Herman Plaza)

Live sites would provide large temporary outdoor viewing screens and ancillary food and entertainment activities for the public to observe the races.

Civic Center. San Francisco Civic Center is bounded by Market Street on the south, Franklin Street on the west, Turk Street on the north, and Leavenworth and Seventh Streets on the east. Civic Center contains two large plazas, Civic Center Plaza and United Nations Plaza, and many of the city's largest government and cultural institutions, including City Hall. San Francisco Civic Center was designated a National Historic Landmark in 1987 and is also a City-designated historic district.

Union Square. Union Square is a plaza of 2.6 acres bordered by Geary Street on the south, Powell Street on the west, Post Street on the north and Stockton Street on the east. It is located within the central shopping, hotel, and theater district of the city.

Justin Herman Plaza. Justin Herman Plaza is a large public plaza located at the terminus of Market Street, and across from the Ferry Building.

5.3.1.4 Summary of the Visual Sensitivity of the Project Area

Table 5.3-1 summarizes the existing visual qualities and the overall visual sensitivity to change at each of the Port facilities and spectator venues. Visual sensitivity to the proposed changes is rated as high, medium, or low.

5.3.1.5 Visual Setting – AC34 Secondary Viewing Areas

As described in Section 5.1 and shown in Figure 5.1-1, secondary viewing areas are those where people may go to observe the races without any AC34 programming or added attractions. People may already be in these locations doing other things, or they may intentionally go there because they know where to go for particularly good views. In these locations people will appear to congregate spontaneously to watch the races. Many of these areas are small, often filled with tourists and sometimes ill equipped to handle large crowds.

Photos of the secondary viewing areas are shown in **Figure 5.3-6** through **Figure 5.3-8** (the letters on the photos correspond to the lettering of the sections below)**.** The Golden Gate National Recreation Area (GGNRA) manages lands on either end of the Golden Gate Bridge which are addressed separately in the discussion below.

A. Golden Gate Bridge (Golden Gate Bridge, Highway and Transportation District)

The Golden Gate Bridge, operated by Golden Gate Bridge, Highway and Transportation District, offers extraordinary views of San Francisco Bay from approximately 200 feet above the water as seen in **Figure 5.3-6**, **Photo A1**. The bridge has walkways on both sides allowing pedestrian and bicycle access between Marin County and San Francisco. The west walkway looks out to the Pacific Ocean, while the east side overlooks San Francisco Bay. Pedestrian access is generally restricted to daylight hours. Potential secondary viewing areas operated by the Golden Gate Bridge, Highway and Transportation District include:

- ***Golden Gate Bridge Toll Plaza.*** At the south end of the Golden Gate Bridge are facilities for transit, parking, cycling, trails, and tourists. It is often crowded with visitors. Short trails are available to an overlook that provides views of the bridge and the northern Bay. Much of the area surrounding the overlook is sensitive habitat.

- ***Vista Point in Marin County.*** At the northern end of the Golden Gate Bridge is Vista Point. Parking is available, though often the large scenic overlook is completely occupied by tourists, especially on sunny summer days. Vista Point offers extraordinary views from bridge level of the Bay and the City as can be seen in **Figure 5.3-6**, **Photo A2**.

TABLE 5.3-1
SUMMARY OF VISUAL SENSITIVITY AT PROJECT SITES

Facility or Venue	Proposed Use	Existing Visual Qualities and Overall Visual Sensitivity to Change
Port Facilities		
Pier 80	• **Ancillary Team Base** • Boats and berthing facilities	• Active industrial area and pier with cranes • Low landside visual quality, limited but good water views • Warm Water Cove – Open space with views increases sensitivity • **Low to Moderate** visual sensitivity
Piers 30-32	• **Primary Team Base** • Boats and berthing facilities in water	• Pier used as a parking lot and some special events • Moderately High visual quality – The Embarcadero • Excellent views to the water and Bay Bridge • **Moderately High to High** visual sensitivity
Brannan Street Wharf Open Water Basin	• Boats and berthing facilities • Anchored moorings	• Open water area, older piers on either side • Moderately High visual quality – Unfinished Embarcadero • New Brannan Street Wharf, demolition of Pier 36 (separate project) • Excellent views to the water and Bay Bridge • **High** visual sensitivity
Piers 28-30 Water Area	• Boats and berthing facilities	• Narrow water area located between Pier 28 and Pier 30 is 150 feet wide at The Embarcadero widening to 250 feet at the Bay • Pier 26 facades contribute to Embarcadero Historic District • Red's Java House (south side) a contributing historic resource • **High** visual quality and visual sensitivity
Seawall Lot 330	• Parking	• Parking lot-high density residential overlooks The Embarcadero • View to underside of the Bay Bridge passing nearly above lot • Limited ground-level views of water, openness of Bay is apparent • **Moderate** visual quality, **High** visual sensitivity
Pier 26 and Pier 28	• Operations and storage • Parking	• Contributing features to the Embarcadero Historic District • Highly developed urbanized streetscape on The Embarcadero • Pier 26 under the Bay Bridge • **High** visual sensitivity
Rincon Point Open Water Basin	• Boats and berthing facilities • Possible long-term marina	• Designated Open Water Basin in BCDC Waterfront SAP. • Highly developed urban waterfront park, pier and streetscape • **Very High** visual quality and **Very High** visual sensitivity
Piers 19-19½ and Pier 23	• Operations • Parking • Media center	• Piers 19, 23 contribute to the Embarcadero Historic District • Very developed urbanized streetscape on The Embarcadero • **High** sensitivity, BCDC SAP requests removal of Pier for Bay view
Other Water Areas Piers 26-28 water areas Piers 23-27 water basin Piers 29-31 water basin	• Boats and berthing faculties	• Water areas on the Bay edge, bounded by piers • Some piers are contributing historic resources • Visual quality typically high because of proximity of water, views of the Bay and surrounding historic structures • Piers and limited access sometimes block views to the Bay • Visual sensitivity to permanent changes is typically **High**
Piers 27-29 Belt Line office building	• **Piers 27-29: AC Village (2013)** • Existing Pier 27, Pier 27 Annex and East end of Pier 29 would be demolished in advance of AC34. • **Cruise Terminal and Northeast Wharf Plaza**	Port of San Francisco • Pier 29 and the historic Belt Line office building contribute to the Embarcadero Historic District and have **High** visual quality and **High** sensitivity to change. • Pier 27 is a non-contributing resource, has limited detailing, no windows, and is out of character with The Embarcadero in this area. Visual quality and sensitivity to change is **Low** • Pier 27 Annex is a non contributing resource out of character with The Embarcadero in this area • Visual quality and sensitivity to change is **Low**

TABLE 5.3-1 (Continued)
SUMMARY OF VISUAL SENSITIVITY AT PROPOSED SITES

Facility or Venue	Proposed Use	Existing Visual Qualities and Overall Visual Sensitivity to Change
Spectator Venues		
Marina Green-	• ***AC Village (2012)*** • Spectator Venue (with seating) • Food and Beverage	City of San Francisco Recreation and Parks • Open lawn area at edge of the Bay with open views of water • St. Francis Yacht Club, marina provide nautical atmosphere • Residences line Marina Boulevard overlooking the Marina • Absence of tall vegetation enhances openness of Bay edge • Visual quality and sensitivity to change are **High**
Fort Mason	• Food and Beverage	Golden Gate National Recreation Area (NPS) • Lower Fort Mason – Large historic structures on water's edge • Upper Fort Mason – Meadow overlooking Golden Gate Bridge • Activities and City setting generate high pedestrian traffic • Visual quality and sensitivity to change are **High**
Aquatic Park/SAFR	• Spectator Venue (no additional seating) • Food, Beverage and Merchandising	San Francisco Maritime National Historic Park (NPS) • The museum is an art deco boathouse building on the Bay • Park amphitheater faces the Bay, sandy beach and Hyde Street Pier with historic boat displays. Visitor Center next door. • Arching Municipal Pier encloses Aquatic Park • Visual quality and sensitivity to change are **High**
Crissy Field	• Spectator Venue (with seating) • Food and Beverage and Merchandising	Golden Gate National Recreation Area and Presidio Trust • Large open lawn at edge of the Bay with open views of water • Tidal wetlands restoration area just east of lawn area • Golden Gate Bridge views - Historic structures at Bay edge • Visual quality and sensitivity to change are **High**
Alcatraz	• *Private – no public access* • Food and Beverage • Possible media operations	Golden Gate National Recreation Area – Alcatraz Island • In the center of the Bay with views in all directions • Historic lighthouse, fortifications and prison structures • Accessible only by boat, public ferries at Pier 33 • Visual quality and sensitivity to change are **High**
Fort Baker Pier at Cavallo Point	• *Private – no public access* • Food and Beverage	Golden Gate National Recreation Area – Marin Headlands U. S. Army - Fort Baker Pier • Pier at the base of the Golden Gate Bridge, views of the Bay • Horseshoe Cove looks across the Bay to the City • Lodge at Cavallo Point uses Fort Baker historic resources • Visual quality and sensitivity to change are **High**
Live Sites: Civic Center Union Square Justin Herman Plaza	• Large Outdoor Televisions • Food, Beverage, Merchandising	City of San Francisco • Each site is designed for urban public gatherings • Historic buildings surround Civic Center, Union Square • Visual quality and sensitivity to change are **High**

A1. Golden Gate Bridge walkways provide excellent views of the Bay

A2. Golden Gate Bridge Vista Point overlooking Angel Island

B1. San Francisco Bay from Conzulman Drive in Marin Headlands

B2. Expansive view from GGNRA bunker site above Golden Gate Bridge

B3. View of Angel Island from East Road Pullout near Cavallo Point

B4. View of Belvedere and Tiburon from near Cavallo Point

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: ESA

Figure 5.3-6

Photos from Secondary Viewpoints A, B

B. Golden Gate National Recreation Area, Southern Marin County

On the north end of the Golden Gate Bridge, GGNRA manages the Marin Headlands accessed by Conzelman Road, a very curvy two lane scenic road overlooking the bridge, the Golden Gate and San Francisco. The Marin Headlands' steep topography and limited parking restricts the number of cars it can accommodate. There are numerous trails in the Marin Headlands, though because of topography only a few actually overlook the Bay. The visual quality is consistently *high* in GGNRA and the visual sensitivity to change is also *high*. Views of the Bay include:

- ***Golden Gate Bridge Overlook.*** This site offers close-up elevated views of the Golden Gate Bridge, San Francisco Bay, and the City. Parking is very limited in the available pullout. The historic site includes gun placements. See **Figure 5.3-6**, **Photos B1** and **B2**.

- ***Conzelman Road and Hawk Hill.*** Similar views to the overlook described above, but slightly more distant and elevated. Conzelman Road has limited parking and turn-around capacity as it ascends to the top of Hawk Hill. Conzelman Road becomes one-way outbound and continues to Point Bonita.

- ***Fort Baker and Cavallo Point.*** East of the Golden Gate Bridge and near water level, Fort Baker occupies a small valley looking directly at the City of San Francisco, but panoramic views of the water are limited by the hillsides. Fort Baker recently was converted from an early 1900s Army post to the upscale Cavallo Lodge of San Francisco. The Children's Discovery Museum is near the shoreline and the Bay Trail passes through on East Road. The United States Coast Guard Station, the Golden Gate and Presidio Yacht Clubs are located at Fort Baker's Horseshoe Cove. The Fort Baker Pier on the western edge of Horseshoe Cove, is at the base of the Golden Gate Bridge and is proposed as an official AC34 viewing venue for private events.

- ***East Road Pullouts.*** East Road is a scenic road with views out to Angel Island and San Francisco across the Bay. The road connects Fort Baker to Sausalito. It has recently been renovated by the Park Service and provides a designated paved (Class II) pathway for the Bay Trail. Pullouts have been paved, park benches and picnic tables installed and vegetation restored. Occasional trail access is provided to non auto-oriented lookouts such as Cavallo Point. Please see **Figure 5.3-6**, **Photos B3** and **B4**.

C. Cities of Sausalito, Belvedere, and Tiburon

The Cities of Sausalito and Tiburon offer waterfront views of the Bay. The proposed AC34 race area would be closest to the Sausalito waterfront. Views from the Sausalito boardwalk are back-dropped by Angel Island and San Francisco. Belvedere is generally private property, and elevated public views needed to see the relatively distant race area are limited by private property. Tiburon is also too distant from the AC34 race area to provide realistic viewing opportunities. Visual quality from all three locations is high, however visual sensitivity to the proposed changes decreases with distance and visual clarity. Please see **Figure 5.3-7**, **Photos C1** and **C2**, for views of the Sausalito waterfront.

C1. Sausalito Waterfront Area with open water to the right

C2. View of San Francisco from the Sausalito Ferry Terminal

D1. Fort Baker and Horseshoe Cove with Angel Island beyond

D2. Angel island provides elevated views of the race course

E1. View from the Presidio Trail above Crissy Field

E2. View from Gas House Cove across Fort Mason to the Golden Gate

SOURCE: ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-7
Secondary Viewpoints C-E

D. Angel Island (California State Park), Treasure Island and Yerba Buena Island

Angel Island State Park is only accessible by boats, and ferries leave regularly from Tiburon. Angel Island is near the center of San Francisco Bay and would provide excellent opportunities to observe the AC34 races. It has visitor services, a restaurant, and bathrooms. A paved road circles the island which provides access for pedestrians and cyclists. Views on the south side are approximately a one-mile walk from the ferry and are elevated above the water. These locations provide the broadest views of San Francisco Bay and the proposed race course. **Figure 5.3-7**, **Photo D1**, shows Angel Island from above Fort Baker and the Golden Gate Bridge overlook, and **Figure 5.3-7**, **Photo D2**, shows the view of the Bay and City from the south side of the island.

Treasure Island and Yerba Buena Island are directly east and across the Bay from San Francisco. The two islands are connected and accessible from the San Francisco-Oakland Bay Bridge. Yerba Buena Island is steep with views of the Bay and City generally constrained by vegetation and is difficult to access by foot. The elevated Causeway Road on the west side of the island provides the best elevated views of the southern end of race course but parking is very limited. On Treasure Island there are excellent ground-level views of the Bay, the proposed AC34 finish line and the San Francisco skyline. Treasure Island also has more capacity to accommodate crowds, but access in and out is highly constrained by Bay Bridge traffic

E. Golden Gate National Recreation Area, Northern San Francisco

The Presidio of San Francisco has a variety of locations from which to view the Bay. The Parade Grounds provide views to the water but panoramic views are constrained by buildings and separated from the Bay by Doyle Drive. There are fleeting views of the Bay and the proposed AC34 race course from cars while driving Doyle Drive. The best views of the Bay, however, are from two small overlooks on Lincoln Boulevard just above Crissy Field as seen in **Figure 5.3-7**, **Photo E1**. These stops are popular among tourists and very little space is available to accommodate a crowd. ***Gas House Cove*** is between Fort Mason and Aquatic Park and is connected by a pedestrian path. The walkway provides views of San Francisco Bay, Fort Mason, and the proposed AC34 race course as seen in **Figure 5.3-7**, **Photo E2**. ***China Beach and Baker Beach*** are to the west of the Golden Gate Bridge and both look out across the Golden Gate towards the Marin Headlands and the Pacific Ocean. Views of the AC34 races from this perspective would be limited to only to a few glimpses of boats as they pass beyond the Golden Gate Bridge.

F. San Francisco Northern Waterfront and Hillside Locations

Coit Tower punctuates the Northern Waterfront of San Francisco. From this hilltop location nearly the entire Bay is visible as would be the proposed AC34 race course. A portion of this view is shown in **Figure 5.3-8**, **Photo F1**. This location however is very popular among tourists and lines of cars and buses await the limited available parking. Various pathways provide pedestrian access.

Hillside Streets of San Francisco often provide views of San Francisco Bay and portions of the AC34 race course. Notable views of the Bay are from streets such as Divisadero, Fillmore, Marina, and Bay. These views are representative of a broader set of similar views from other nearby, though less notable streets. Similar views look north from Russian Hill Park, and nearby areas as shown in

F1. View of Angel Island from the steps of Coit Tower

F2. Typical San Francisco Street view of the Bay

F3-F4. Vista Pier at Pier 43 offers panaoramic views of the Bay, The AC34 race course, Alcatraz and Angel Island

F5-F6. Panoramic views of the Bay Bridge are available along The Embarcardero promenade at Pier 14

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: ESA

Figure 5.3-8
Secondary Viewpoints F1-F6

Figure 5.3-8, **Photo F2,** with quality views of the race course. However these neighborhoods are constrained by limited parking and space to accommodate visitors.

Fisherman's Wharf and Pier 39 provide excellent waterfront views of the Bay. These are typically very busy tourist venues. Pier 43 provides views across the water to Angel Island, Alcatraz and the hills of Marin County as can be seen in **Figure 5.3-8**, P**hotos F3** and **F4**. Pier 39 offers similar views and also provides views of the small boat marina and existing cruise terminal at Pier 35.

Rincon Park and Pier 14. The Eastern Waterfront along The Embarcadero promenade also provides excellent views of the Bay. Rincon Park near Howard Street is an urban waterfront plaza that offers open views across the water with the San Francisco-Oakland Bay Bridge edging the view to Yerba Buena Island and Treasure Island. Just to the north is Pier 14 with similar views of Yerba Buena Island, The Bay Bridge and The Embarcadero promenade as seen in **Figure 5.3-8**, **Photos F5** and **F6**.

5.3.2 Regulatory Framework

5.3.2.1 Federal Regulations

National Park Service

Regulations governing the Golden Gate National Recreation Area, including Alcatraz Island, Presidio and Crissy Field, and San Francisco Maritime Park are promulgated by the National Park Service in accordance with Title 36, Code of Federal Regulations. Specific policies for each area within National Park Service jurisdiction are established in individual general management plans. For National Park Service resources in the study area, the Golden Gate National Recreation Area General Management Plan (1980) identifies maintaining the visual integrity of parkland facilities as an important factor in the placement and design of all new park facilities.[4] In addition, the General Management Plan of the San Francisco Maritime National Historical Park (1997) includes an objective to design high-quality facilities that exemplify visual consistency.

5.3.2.2 Regional and Local Regulations

Chapter 4, Plans and Policies, provides a full overview of BCDC's plans and regulations, including the BCDC Bay Plan. This discussion focuses on issues pertinent to analyzing the proposed project's aesthetic and visual quality effects on the site and surroundings.

San Francisco Bay Conservation and Development Commission (BCDC) Bay Plan[5]

The Bay Plan contains findings and policies concerning appearance, design, and scenic views of development around the Bay. In accordance with these policies, views from vista points and from public roads should be protected. Policies for industrial uses direct port uses to be planned to

[4] The National Park Service is currently updating the general management plan for the GGNRA.
[5] San Francisco Bay Conservation and Development Commission (BCDC), *San Francisco Bay Plan,* Adopted 1968, Selections Amended in 1979, Republished in 2008.

make the sites attractive. Important Bay overlook points, and historic areas and structures that may be located in water-related industrial and port areas should be preserved and incorporated into the site design, if at all feasible. Parking lots and some industrial structures are identified as inappropriate uses because they are not visually complimentary to the Bay setting. Public areas need not be directly accessible by private automobiles with attendant parking lots and driveways; access may be provided by hiking paths or by forms of public transit. Policies applicable to the project area include:

- Physical and visual access corridors between inland public areas, vista points and the shoreline should be created, preserved or enhanced.

- Historic structures and districts listed on the National Register of Historic Places or California Registered Historic Landmarks should be preserved consistent with applicable state and federal Historic Preservation law and should be used consistent with the Bay Plan recreation policies.[6]

The Bay Plan directs shoreline developments be built in clusters, leaving open area around them to permit more frequent views of the Bay. Similarly, the Bay Plan recommends structures near or over the Bay to be designed as landmarks that suggest the location of the waterfront when it is not visible, especially in flat areas, but low enough to assure the continued visual dominance of the hills around the Bay. All bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas, from the Bay itself, and from the opposite shore.

To enhance the maritime atmosphere of the Bay Area, ports should be designed, whenever feasible, to permit public access and viewing of port activities by means of viewpoints (e.g., piers, platforms, or towers), that would not interfere with port operations, and openings between buildings and other site designs that permit views from nearby roads.

San Francisco Waterfront Special Area Plan – BCDC

As discussed more fully in Chapter 4, Plans and Policies, BCDC adopted site-specific policies pertaining to Port of San Francisco properties in the San Francisco Waterfront Special Area Plan (SAP), which is an extension of the Bay Plan. The SAP applies to the San Francisco shoreline from the east side of the Hyde Street Pier to the south side of India Basin, including all Port-owned sites in the AC34 or Pier 27 cruise terminal and Northeast Wharf Plaza projects: Piers 27-29, Piers 23, 19½ and 19, the Rincon Point and Brannan Street Wharf Open Water Basins, Piers 26 and 28, Piers 30-32, Seawall Lot 330, and Pier 80 in the Southern Waterfront.

One of the purposes of the San Francisco Waterfront Special Area Plan is to protect existing views and create new views and vistas of San Francisco Bay from the shoreline. Minor encroachment into the view corridors from level inland streets may be permitted under certain conditions, where the encroaching element has a distinct maritime character, is separated from the shoreline

[6] Regulations specific to historic structures and architecture are addressed in Section 5.5, Cultural Resources.

by water, and adds variety to the views along the waterfront; or where essential maritime facilities cannot reasonably be located and designed to avoid view blockage.

The SAP echoes historic preservation goals and urban design principles as identified in the San Francisco General Plan, which hold that the piers contribute significantly to the cultural identity of San Francisco and, therefore, should be rehabilitated. The SAP directs that historic structures should be showcased as an important amenity in the design of public access areas. Policies for Waterfront Form and Structure require that development take advantage of its location on the Bay and reflect and recognize the unique identity of the waterfront districts established by street pattern, building scale, materials, landscaping, land uses and public access areas. To the maximum practicable extent, development should take advantage of the Bay as a design asset by encouraging transparent buildings and other design treatments. Building height and bulk should generally be low scale in order to preserve views to the Bay, minimize shading of on-pier public access areas and reflect the historic character of the waterfront. Similarly, development must avoid placing mechanical equipment, pipes, or ducts on roof surfaces and shiny or highly polished materials on roof surfaces and facades. Use of reflective glass should be prohibited. To visually emphasize the length of the pier, the design should include a regularly spaced series of architectural treatments (e.g., doors, windows, railing posts, light fixtures or other pier edge improvements).

The SAP also protects diverse views of the Bay, the City, and waterfront and maritime activities along the water's edge. Street rights-of-way that connect with the waterfront should be preserved and improved as view corridors to the Bay, maritime activities, or waterfront structures. Views of the water should be maximized by designing handrails, fences, marina gates, canopies and other shoreline accessory structures with maximum practicable transparency.

The SAP also establishes requirements for maintaining Open Water Basins as focal points along the waterfront. Open Water Basins should provide opportunities for physical access between the Bay and piers and should provide new and substantial Bay views from the boundary piers framing the Open Water Basins.

The SAP indicates four Open Water Basins should either be preserved or created through the removal of certain piers, to enable permanent enjoyment of the Bay; these are designated as "Northeast Wharf Open Water Basin" between Piers 19 and 27, "Rincon Point Open Water Basin" between the Agriculture Building and Pier 22½, and "Brannan Street Wharf Open Water Basin" between Piers 32 and 38. At the "Northeast Wharf Open Water Basin," removal actions would include a portion of the Pier 23 shed to improve Bay views. The removal of the Pier 23 shed should include at least 315 feet of the easternmost portion of the shed. Any additional removal should reflect the historic preservation goals of this plan, and the Port's and City's plan policies. The Pier 23 deck supporting that part of the Pier 23 shed that would be removed, may be removed or may be retained and used for public access purposes, including access to transient and temporary non-commercial recreational boat berthing. The SAP also recommends enhancement of the Brannan Street Wharf Open Water Basin between Piers 32 and 38, including the removal of Piers 34 and 36.

Specific to the Southern Waterfront (including Pier 80 in the project area), the SAP directs development at Warm Water Cove for public access and waterfront recreation in accordance with the WLUP and the Recreation and Open Space Plan of the City of San Francisco. The SAP recognizes cargo and industrial maritime activities as appropriate water-dependent uses.

Public Access Design Guidelines – BCDC

BCDC is charged with maintaining public access, including visual public access (views, to the Bay from other public spaces) within its jurisdiction. Visual access can be achieved through thoughtful site planning and design, including building massing, to enhance Bay sight lines and views. BCDC developed public access objectives in the *Shoreline Space Public Access Design Guidelines*[7] to provide, maintain and enhance visual access and visual quality to the Bay and shoreline by locating buildings, structures, parking lots and landscaping of new shoreline projects such that they enhance and dramatize views of the Bay and the shoreline from public thoroughfares and other public spaces; organizing shoreline development to allow Bay views and access between buildings. The visual quality of any shoreline development proposal should relate directly to a set of site-specific factors. Incorporating design principles such as human scale, architectural diversity, and varied building massing can lead to well-designed waterfront buildings and shoreline access areas. The design character of public access areas should relate to the scale and intensity of the proposed development. The objectives related to visual access and visual quality may be accomplished by providing visual interest and architectural variety in massing and height to new buildings along the shoreline and/or using forms, materials, colors and textures that are compatible with the Bay and adjacent development.

City and County of San Francisco General Plan and Planning Code

The General Plan Elements applicable to the project include the Recreation and Open Space Element (updated in 2009), and Urban Design Element. Policies specific to the analysis of visual resources include the protection of existing character, urban design, landmarks and historic buildings, and scenic vistas.

The Recreation and Open Space Element includes objectives and urban design policies relevant to the project to assure that new development adjacent to the shoreline capitalizes on its unique waterfront location, improves visual and physical access to the water, and conforms with urban design policies, and maximizes direct visual access to the water from more distant inland areas by preserving view corridors and lowering the profile of buildings.

New buildings should be made similar to the prevailing scale, form, and proportion of older development. External details in building facades, entries, stairways, retaining walls, and other features provide visual interest and enrichment, and are consistent with the historic scale and texture of San Francisco. Visually strong buildings which contrast severely with their

[7] San Francisco Bay Conservation and Development Commission (BCD), Shoreline Space, Public Access Design guidelines for the San Francisco Bay, April 2005.

surroundings impair the character of the area. Policy 2.6 requires new development to respect the character of older development nearby in the design of new buildings. New construction can have a positive effect on the area around it if it reflects the character of adjacent older buildings of architectural merit.

Low buildings along the waterfront contribute to the gradual tapering of height from hilltops to water that is characteristic of San Francisco and allows views of the ocean and the Bay. Policy 3.2 requires design of new structures to avoid extreme contrasts in color, shape, and other characteristics which will cause new buildings to stand out in excess of their public importance. Large buildings are most consistent with the visual unity of the city when they are light in color. New buildings should not block significant views of public open spaces, especially large parks and the Bay. Policy 3.5 requires that new development relate the height of buildings to important attributes of the city pattern and to the height and character of existing development, and relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction. Additionally, Policy 1.3, recognizes that buildings, when seen together, produce a total effect that characterizes the City and its districts.

The General Plan expresses guidelines for building bulk.[8] Under normal land use controls, most large development is governed by a "floor area ratio", which permits floor space to be built in each project in proportion to the amount of land area available. The floor area ratio limit tends to be geared to development of sites of small and moderate size, but not to take account of the impact of occasional developments that take up one or more whole blocks of land. To address this issue, the San Francisco Planning Code includes building bulk regulations, applied by setting maximum building dimensions which vary by building height, for buildings that are taller than 40 feet. Except for SWL 330, which allows building height up to 105 feet, all of the sites proposed for AC34 or the Pier 27 cruise terminal are located in 40 foot height districts. As described in Chapter 4, Plans and Policies, SWL 330 is in a 65/105-R Height and Bulk District, which sets specified requirements on building dimensions and spacing between building clusters to avoid an overly massive appearance.

The Urban Design Element of the San Francisco General Plan[9] rates city streets as “excellent,” “good,” or “average” for the quality of their views. Where the intensity of development is high, streets are sometimes necessary to maintain decent levels of light and air flow and quality, and the Urban Design Element designates roads that are important in this regard. In the project area, portions of Bay Street and Marina Boulevard are rated as either excellent or good for the quality of views offered from these streets.

[8] The guidelines do not limit the total floor space that may be built, but help shape it to avoid negative external effects. The precise form of the building or buildings would in large measure be left to the individual developer and his architects under these guidelines. The guidelines of the General Plan are only minimum guidelines, and they are not intended to reduce the necessity for other expressed policies pertaining to height, visual harmony, or other factors. Even with building bulk kept within these guidelines, efforts should be made to articulate and soften building surfaces to reduce the massiveness of appearance to a great degree.

[9] San Francisco General Plan, Urban Design Element, 1998

The Urban Design Element also identifies streets that are important to the "perception" of San Francisco. A majority of San Francisco's streets have pleasing views of the Bay, the ocean, distant hills, or other parts of San Francisco. However, where good views are not available, streets can still function as open space for use by neighborhood residents and for landscaping to bring a sense of nature to the area. In the project area according to the General Plan Map entitled, "Street Areas Important to Urban Design and Views," Marina Boulevard, Bay, and North Point Streets around Fisherman's Wharf are all "Streets that Extend the Effect of Public Open Space." In addition, these streets are part of the 49-mile Scenic Drive, described below.

Policy 2.3 recommends, "avoid encroachments on San Francisco Bay that would be inconsistent with the Bay Plan or the needs of the city's residents" and continues to state, "Access to the Bay should be considered as a total system in which a maximum of communication with the water is made possible consistent with other shoreline uses. Access includes physical contact with the water and the shore at recreation areas, and it includes visual contact through views of the water and of water-related activities.

The General Plan also contains area plans which cover the respective geographic areas of the City, including the Northeastern Waterfront, in more specific detail.

Port of San Francisco Waterfront Land Use Plan

The Port's Waterfront Land Use Plan[10] includes goals to guide the development of waterfront activities to enable the City to reconnect with its waterfront. The following goals are applicable to the discussion of visual resources, and are intended to protect the waterfront's historic and architectural setting and resources:

> ***An Evolving Waterfront, Mindful of its Past and Future*:** Improvements should respect and enhance the waterfront's historic character, while also creating new opportunities for San Franciscans to integrate Port activities into their daily lives. Development must recognize the value of the City's working-maritime historic context, and should ensure that significant bulkhead buildings and other historic architecture of the waterfront, identified in the urban design guidelines called for in this Plan, are preserved in the development process.
>
> ***Urban Design Worthy of the Waterfront Setting*:** The design of new developments should be of exemplary quality and should highlight visual and physical access to and from the Bay, while respecting the waterfront's rich historic context and the character of neighboring development. Design should maintain existing building height and bulk limitations, improve views of the working waterfront from all perspectives, protect near and distant views to and from the Bay, and preserve significant bulkhead and other historic resources. There is a 40-foot height limit on most Port property north of the Ferry Building.

[10] San Francisco Port Commission, Waterfront Land Use Plan, has been amended occasionally and was republished June 2004.

The WLUP is broken down by geographic region and subdivided by "opportunity areas." The Northeast Waterfront Plan, Southern Waterfront Plan, and the South Beach/China Basin Waterfront Plan are applicable to the project area. The Chestnut/Lombard Street Piers Mixed-Use Opportunity Area includes Piers 31 and 27-29. The South Beach/China Basin Waterfront Plan applies from Pier 22½ to Mariposa Street. The Rincon Pier Mixed Use Opportunity Area includes Piers 26 and 28. The Bryant Street Mixed Use Opportunity Area includes Seawall Lot 330 and Piers 30-32.

Northeast Waterfront

The Northeast Waterfront subarea applies to Pier 35 through Pier 7. The Embarcadero is a gateway to the Northeast Waterfront Area and Waterfront Land Use Plan includes policies to protect public views. Several design standards are applicable to all areas, including retention of historic buildings and enclosure (visual screening) of parking areas. The historic bulkhead buildings at Piers 19, 23, 29, and 31, which contribute to the architectural, historic and maritime character of the location, must be retained and reused as part of any new development.

The Northeast Waterfront Plan allows for partial removal of Pier 23 shed to create the Northeast Wharf Open Water Basin. It directs development of a Northeast Wharf public plaza on Pier 27. Development must be arranged onsite to maximize public appreciation and enjoyment of the waterfront setting by offering new viewing opportunities, and to maximize visual connections and physical contact with the water. Other specific design standards require new development on Piers 27-31 to be oriented toward The Embarcadero. Additionally, exterior architectural and design aspects of the new pier should reflect the historic industrial maritime character of significant Port structures along The Embarcadero and the Embarcadero Historic District. Building materials should be transparent (i.e., glass; discourage dark tinted glass; reflective glass prohibited) to enhance connection throughout the site, and/or where possible retain and reuse the historic bulkhead buildings at Piers 29 and 31, as well as the Pier 29½ connector building and the historic Beltline Railroad Office Annex building, consistent with the historic preservation policies and site-specific design criteria in the Waterfront Design and Access Element. Building design must also conceal or otherwise limit views of any mechanical equipment, pipes, ducts and antennas, on roof surfaces, and avoid shiny or highly polished materials on roof surfaces and facades. On-site parking facilities should be located and designed so that they are either enclosed or otherwise screened from view from The Embarcadero and the Bay. The policies also encourage coordinated building designs, particularly for projects that include more than one site, to achieve a cohesive, complementary blend of architectural styles among adjacent sites.

Waterfront Design and Access Element of the Waterfront Land Use Plan

The Design and Access Element includes Port-wide policies to protect historic resources, as well as specific policies and design criteria to direct the Port's preservation efforts. Policies protect bulkhead buildings as notable historic and architectural resources, and encourage efforts to retain, reuse, and adapt the bulkhead buildings into new pier uses and to complement them with high quality design in new pier structures. Similarly, the design of any new development should provide appropriate buffers, setbacks, or other design solutions to mitigate noise impacts from such uses on residential neighbors.

Designated or Eligible Scenic Roads

In 1938, San Francisco's Downtown Association created the 49-mile Scenic Drive to highlight San Francisco's beauty and to promote the city as a tourist destination. This scenic road passes through much of the project area, including portions of The Embarcadero, Jefferson Street through Fisherman's Wharf and along Aquatic Park, Bay Street, and Laguna around Fort Mason, Marina Boulevard along Marina Park and Lincoln Boulevard through the Presidio and overlooking Crissy Field. Although there are no associated plans or policies related to 49-mile Scenic Drive, these streets are recognized for their aesthetic value. The Golden Gate Bridge is one of the scenic destinations of the 49-mile Scenic Drive and Highway 1 which passes over it is considered as an eligible roadway under the Caltrans Scenic Highway program.

5.3.3 Impacts and Mitigation Measures

5.3.3.1 Significance Criteria

The City has not formally adopted significance standards for impacts related to aesthetics, but generally consider that implementation of the project could have a potentially significant impact related to visual quality if it were to:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and other features of the built or natural environment that contribute to a scenic public setting;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area or that would substantially affect other people or properties.

5.3.3.2 Approach to Analysis

This analysis compares existing aesthetic conditions to those at each full build out phase of the projects. The AC34 2012 and AC34 2013 components would include both temporary installations and some permanent improvements. The cruise terminal core building and shell would be built on Pier 27 prior to the AC34 events in 2013. Completion of the cruise terminal, along with the Northeast Wharf Plaza, would occur following the AC34 2013 event, in 2014. Changes in visual character for each of the project sites associated with both the AC34 and the Cruise Terminal project at project build-out are described and assessed according to the significance criteria listed above.

The analysis evaluates the existing visual character of each venue and the project's effect on scenic vistas, and contributing scenic resources of the surrounding natural and built environment. The analysis compares stated planning goals related to views and aesthetic resources at various sites to determine if the project is consistent with those goals. Also considered are the nighttime views of

the projects and if they contribute substantial sources of light or glare to the surrounding areas. This topic is of particular interest along the waterfront because the darker nighttime skies above the Bay offer better views of the stars as compared to similar views from the City and are particularly vulnerable to added sources of bright light.

This aesthetic evaluation uses a three step process:

A. Analysis of existing visual quality conditions at project sites and determination of visual sensitivity to change at these sites (addressed in Setting section, above).

   The Setting section, above, describes the visual characteristics (assembly of natural and cultural features) contributing to each venue and provides an assessment of visual quality. At nearly all sites along the San Francisco waterfront, the visual quality is high because most of the areas have been designed to be visually interesting and to respond to the waterfront locations. There are a few exceptions, such as the industrial areas around Pier 80 and at Seawall Lot 330 which is currently used as a parking lot.

   Visual sensitivity at each of the venues is also considered. Visual sensitivity incorporates the existing visual quality, the number of viewers, the duration of view and the regulatory expectations for the setting, such as BCDC's San Francisco Waterfront Special Area Plan, the Port of San Francisco's Embarcardero Historic District, and the National Park Service's requirements for the San Francisco Maritime National Historical Park, to name a few. Visual sensitivity to change is consistently high along the San Francisco waterfront because of the direct juxtaposition of the City to the Bay. Current planning guidance has been developed to improve the visual quality of the San Francisco waterfront.

B. Characterization of proposed permanent and temporary visible changes associated with implementation of the proposed project.

   Permanent facilities at the cruise terminal and plaza are separated from the temporary facilities and uses proposed for AC34. The visual characteristics of both the temporary and permanent project features proposed are evaluated in light of the regulatory context for the San Francisco waterfront, as summarized below in **Table 5.3-2**.

C. Impact analysis: Evaluation of impact significance of project-related changes in visual characteristics in light of the regulatory context of the waterfront setting in San Francisco.

   The visual characteristics and related graphic images of the primary AC34 facilities and the cruise terminal/wharf plaza are evaluated relative to the existing conditions. Aerial renderings, or bird's eye views, of some of the primary venues proposed for AC34, and computer simulations of the proposed cruise terminal and plaza were developed to aid in evaluating the visual changes, and are included in the impact analysis. Additional relevant graphics used in the evaluation are in Chapter 3, Project Description. Finally, a determination of the impact's significance is made according to the CEQA significance criteria and in consideration of the visual quality and sensitivity of each site.

5.3.3.3 AC34 Events and Cruise Terminal Impacts

America's Cup 2012 and 2013

Impact AE-1: Construction and operation of the AC34 facilities and events would not have a substantial adverse effect on a scenic vista. (Less than Significant)

With respect to scenic vistas, the most visible facilities for AC34 2012 and 2013 would add new activity along the waterfront to support public gathering and viewing of AC34 races, the race vessels and team activities, and associated race support vessels and operations. While visually interesting and appropriate for a waterfront, they would temporarily interrupt scenic bay viewing areas.

Temporary structures at the Marina Green for the 2012 (AC Village) and 2013 (spectator venue), and at Piers 30-32 for the team bases would include multiple large and small tents and other installations. The proposed site plans and temporary tent configurations are shown in renderings in **Figure 5.3-9** (Proposed Team Bases at Piers 30-32) and **Figure 5.3-10** (Proposed AC Village at Marina Green).

At Marina Green, the installations would be constructed beginning about two to four weeks prior to each of the race events in 2012 and 2013, and taken down between the two events. During these events, the temporary structures would block views to the water from certain locations along Marina Boulevard and The Embarcadero, respectively, and reduce usable park space at Marina Green. At Piers 30-32, the team bases would be established for the AC34 2012 event, if construction improvements are completed by then,[11] and would remain in place through the conclusion of the AC34 2013 event, and then taken down.

The AC34 events also include temporary berthing of large spectator boats, Event Authority sponsor boats, race support vessels, and/or AC72 racing yachts in the Brannan Street Wharf Open Water Basin in Piers 32-36 (as shown in Figure 5.3-9) and the Rincon Point Open Water Basin in Piers 14-22½ (as shown in **Figure 5.3-11**). This would temporarily block expansive public views of open waters of San Francisco Bay, contrary to BCDC's Open Water Basin policies.

These temporary impacts on public views of scenic vistas and recreational resources are considered in the context of an important AC34 objective— to provide public viewing opportunities of the America's Cup events at close range from various locations on the waterfront. This objective is a key reason that San Francisco was selected as host city, which is to enable the general public to view this maritime race event from the shoreline. Contrary to previous America's Cup races held in open ocean waters which restricted live spectator viewing to those with access to boats, the appeal of selecting San Francisco for AC34 is the Bay's natural "amphitheatre" that would allow people to watch from land. The various temporary structures are proposed to support the large numbers of spectators and provide a positive experience of the

[11] If Piers 30-32 construction is not completed in time, the 2012 primary team bases would be located at Pier 80, then relocated to Piers 30-32 for the AC33 2013 event.

TABLE 5.3-2
VISUAL CHANGES AND PLANNING OBJECTIVES FOR AC34 VENUES

Facility or Venue	AC34 Proposed Use	Existing Conditions and Overall Visual Sensitivity to Change	New Temporarily Visible Project Features	New Permanent Visible Project Features	Primary Visual Planning Objectives Compared to Expected Visual Changes
Port of San Francisco Facilities					
Pier 80	**Ancillary Team Base** • Boats and Berthing Facilities	• Active industrial area and pier with cranes • Low landside visual quality, limited but good water views • Warm Water Cove – Open space with views increases sensitivity • **Low to Moderate** visual sensitivity	• Multiple team tents up to 40 feet high, and support modules • Mobile or tower cranes up to approximately 200 feet high to hoist boats in/out of water • Sailboats and equipment on deck of Pier 80 • Up to 10 work areas, crews and spectators on pier • Floating dock on southern apron (12 ft width, up to x 1,000 ft length) • Moored sail boats and team support boats in Islais Creek Channel	None	Pier 80 and Warm Water Cove should be developed for public access (visual and recreational) **Port WLUP[2]-Southern Waterfront** • Retain views of open water and working industrial uses at Pier 80 from Warm Water Cove. • AC34 would bring sailboats to Islais Creek Channel in view of Pier 80. **San Francisco General Plan** General policies and design standards apply • Maximize visual access to water from inland areas • AC34 sailboats and team support boats would be added to open water views of Islais Creek Channel with working Pier 80 in the background.
Piers 30-32	**Primary Team Base** • Boats and Berthing facilities in water	• Pier used as a parking lot and some special events • Moderately High visual quality - Embarcadero • Excellent views to the water and Bay Bridge • Red's Java House • **Moderately High to High** visual sensitivity	• Multiple team tents up to 40 feet high, and support modules • Mobile or tower cranes up to approximately 200 feet high to hoist boats in/out of water • Sailboats and equipment on deck of Piers 30-32 • Up to 10 work areas, crews and spectators on pier • Sailboats out-hauled and moored around pier; docking of team support boats • Sponsorship banners and advertising • Floating docks (6 to 12 feet wide) at water level on north and south sides of Piers 30-32. • Wave attenuators on the east side of Piers 30-32	• Elevate depressed deck surface area between Piers 30 and 32, and other deck repairs • Structural/seismic upgrades (not visible) • Long-term development rights (e.g., retail/ commercial/office/ entertainment/assembly/ maritime)	**BCDC SAP-Northeastern Waterfront** General policies and design standards apply: • Preserve and incorporate historic buildings into new development plans • Limit parking lots/structures that are not visually complimentary to Bay setting • Enhance visual access corridors between inland public areas/roads and shoreline • Development should be built in clusters surrounded by open space • Encroachment of Bay views is permitted if encroaching element has a maritime character • Development to reflect prevailing building scale, patterns, materials, and public access. • Encourage transparent building materials • Low building height and bulk • Avoid mechanical equipment; reflective surfaces/roofs and glass. **Port WLUP-So. Beach/China Basin Waterfront, Bryant Street Mixed Use Opportunity Area** General policies and design standards apply: • Make visual access to Bay inviting • Adapt existing architecture and bulkhead buildings into new development • Require high standard of architectural design • New development must incorporate appropriate setbacks, buffers, etc. **San Francisco General Plan** General policies and design standards: • Improve visual and physical access to water, preserve view corridors • Provide significant maritime and public access for uses • Development should reflect prevailing building scale, patterns, materials, public access. • New structure design must avoid extreme color, shape contrasts and respect existing architectural character of area
Piers 32-36 ***Open Water Basin***	• Boats and Berthing Facilities • Dredging to -17 ft. MLLW	• Designated Open Water Basin in BCDC SAP, to provide expansive Bay viewing area • Moderately High visual quality – Unfinished Embarcadero • New Brannan Street Wharf, demolition of Pier 36 (separate project) • Excellent views to the water and Bay Bridge • **High** visual sensitivity	• Wave attenuators across open water area, from end of Pier 32 towards Pier 38 (~700 feet) • Ten 200-foot radius anchored moorings in water	• Long-term development rights for a possible permanent future marina • New Brannan Street Wharf, Demolition of Pier 36 (separate project – provided for information only)	**BCDC SAP-Northeastern Waterfront** General policies and design standards apply **Port WLUP-Northeast Waterfront** General policies and design standards apply **San Francisco General Plan** General policies and design standards apply
Piers 28-30 ***Water Area***	• Boats and Berthing Facilities • Dredging to -12 ft. MLLW	• Narrow basin located between Pier 28 and Pier 30 is 150 feet wide at The Embarcadero widening to 250 feet at the Bay • Pier 26 contributes to Embarcadero Historic District • **High** visual quality and visual sensitivity	• Wave attenuator across open water area, from end of Pier 30 towards Pier 28 (~120 feet) • Floating docks (8-16 feet wide) at water level on either side of Piers 30 and 28 • 10 floating docks across water basin spaced at 80 feet • Accommodate large, medium and small team and spectator boats	• None	**BCDC SAP-Northeastern Waterfront** General policies and design standards apply **Port WLUP-Northeast Waterfront** General policies and design standards apply **San Francisco General Plan** General policies and design standards apply

TABLE 5.3-2 (Continued)
VISUAL CHANGES AND PLANNING OBJECTIVES FOR AC34 VENUES

Facility or Venue	AC34 Proposed Use	Existing Conditions and Overall Visual Sensitivity to Change	New Temporarily Visible Project Features	New Permanent Visible Project Features	Primary Visual Planning Objectives Compared to Expected Visual Changes
Port of San Francisco Facilities (cont.)					
Seawall Lot 330	• Parking	• Parking -high density residential overlooks The Embarcadero • View to underside of the Bay Bridge passing nearly above lot • Limited level views of water, openness of the Bay is apparent • **Moderate** visual quality, **High** visual sensitivity	• Parking	• Long-term development rights (e.g., residential)	**BCDC SAP-Northeastern Waterfront** General policies and design standards apply **Port WLUP-So. Beach/China Basin Waterfront, Bryant Street Mixed Use Opportunity Area** Allow office, residential or hotel use General policies and design standards apply **San Francisco General Plan** General policies and design standards apply
Pier 26 and Pier 28	• Operations and Storage • Parking • Boats and Berthing Facilities	• Contributing features to the Embarcadero Historic District • Highly developed urbanized streetscape on The Embarcadero • Pier 26 under the Bay Bridge • **High** visual sensitivity	• Floating docks at Piers 26 and 28 for spectator boats • All other AC34 activities occur within the Pier 26 and Pier 28 sheds.	• Long-term development rights at Piers 26 and 28 (e.g., retail/commercial/ office/entertainment/ assembly)	**BCDC SAP-Northeastern Waterfront** General policies and design standards apply **Port WLUP-So. Beach/China Basin Waterfront, Rincon Pier Mixed Use Opportunity Area** General policies and design standards apply • Pier 24 removal will enhance views of the Bay from Piers 26 and 28 • Retain and reuse bulkhead and facades • Maintain views of Bay from Harrison Street **San Francisco General Plan** General policies and design standards apply
Rincon Point Open Water Basin	• Dredging to -12', MLLW • Boats and Berthing Facilities	• Open Water Basin designated in BCDC SAP, to provide excellent Bay Bridge view, and panoramic views of the Bay • Located adjacent to Rincon Park • Remnant piles from former Piers 14 - 22½ still remain • **High** visual quality and visual sensitivity to permanent changes	• Floating dock for large spectator yachts	• Long-term development rights for a possible permanent future marina	**BCDC SAP-Northeastern Waterfront** • Limited numbers of mooring dolphins or buoys for non-commercial, transient boating, if they add visual interest and improve Bay views in this Basin • Preserve waterfront streets as view corridors to the Bay and maritime activities. • Provide physical access between the Bay and piers and substantial Bay views.
Piers 19-19½, and Pier 23	• Operations • Parking • Media Center and International Broadcast Center • Boats and Berthing Facilities	• Piers 19, 23 contribute to the Embarcadero Historic District • Very developed urbanized streetscape on The Embarcadero • **High** visual sensitivity	• Satellite dishes on 4,000-square-foot barge set on piles at the east end of Pier 23 • Four 200-square-foot temporary broadcast booths on the Pier 23 apron • Floating docks at Pier 19 and 23 for ACRM, media and Event Authority vessels	• Repair north and south apron decks (not visible) • Fire, safety and access improvements, (not visible) • Dredging north side of Pier 23 (not visible) • Long-term development rights (e.g., retail/ commercial/office/ entertainment/ assembly at Piers 19 and 23; maritime at Pier 19½)	**BCDC SAP-Northeastern Waterfront** Partial removal of Pier 23 **Port WLUP-Northeast Waterfront** Protect bulkhead building at Pier 23 **San Francisco General Plan** General policies and design standards apply
Other Water Areas Piers 29-31	• Pier apron repairs as needed, • Boats and Berthing Facilities	• Some piers are contributing historic resources • Visual quality typically **high** with proximity to water, views of the Bay and surrounding historic structures • Piers and limited access sometimes block views to the Bay • Visual sensitivity to permanent change typically **High**	• Boat Berthing	• Possible apron repairs at one or more of these areas.	**BCDC SAP** General policies and design standards apply **Port WLUP** General policies and design standards apply **San Francisco General Plan** General policies and design standards apply
Piers 27-29 and Belt Line office building Northeast Wharf Open Water Basin	**AC Village 2013** • Existing Pier 27 shed, Pier 27 annex building and east end of Pier 29 shed demolished in advance of AC34.	Port of San Francisco • Pier 29 and the historic Belt Line office building contribute to the Embarcadero Historic District and have **High** visual quality and **High** sensitivity to change. • Pier 27 is a non-contributing resource, has limited detailing, no windows, and is out of character with	• Phase 1 cruise terminal core building and shell permanent work • Numerous temporary installations, including various size tents, stage and spectator seating, exhibits and other installations at Piers 27-29 • Mobile or tower Crane at end of Piers 27-29	• Pier 29 retained, east end of shed demolished and end of shed reconstructed. • Existing Pier 27 shed demolished • Pier 27 Annex building demolished	**BCDC SAP-Northeastern Waterfront** **Port WLUP-Northeast Waterfront, Chestnut/Lombard Street Piers Mixed Use Opportunity Area** • Partial removal of Pier 27 • Protect bulkhead building on Pier 29 and connector building to the Beltline Railroad Annex

TABLE 5.3-2 (Continued)
VISUAL CHANGES AND PLANNING OBJECTIVES FOR AC34 CUP VENUES

Facility or Venue	AC34 Proposed Use	Existing Conditions and Overall Visual Sensitivity to Change	New Temporarily Visible Project Features	New Permanent Visible Project Features	Primary Visual Planning Objectives Compared to Expected Visual Changes
Port of San Francisco Facilities (cont.)					
Piers 27-29 and Belt Line office building Northeast Wharf Open Water Basin (cont.)	• Cruise terminal core building and shell construction for temporary AC34 use • Hospitality • Event Seating • Boats and Berthing Facilities	The Embarcadero in this area. Visual quality and sensitivity to change is **Low.** • Pier 27 annex building is a non contributing resource out of character with The Embarcadero in this area. Visual quality and sensitivity to change is **Low**.	• Water Basin - Floating docks along Pier 27 and Pier 29 for large spectator yachts • Long-term development rights at Pier 29 (e.g., retail/commercial/entertainment/assembly)	• New Cruise Terminal core building and shell • Repair Pier 29 apron and fendering as needed • Relocate shoreside power • Repair Pier surface	• Development must be oriented toward The Embarcadero • Design/building materials • Building height limitations **San Francisco General Plan** General policies and design standards apply Restrict uncovered parking beyond the seawall that is visible from adjacent public areas
Spectator Venues					
Marina Green	**AC Village (2012) and Spectator Venue (2013)** • Event Seating • Hospitality	City of San Francisco Recreation and Parks • Open lawn area at edge of the Bay with open views of water • St. Francis Yacht Club, marina provide nautical atmosphere • Residences line Marina Boulevard overlooking the Marina • Absence of tall vegetation enhances openness of Bay edge • Visual quality and sensitivity to change are **High**.	• 2 large one-level tents (300 feet x 100 feet wide x 42 feet high) • 1 large two-level tent (160 feet by 130 feet wide by 40 feet tall) • Multiple smaller tents and exhibits, and event stage • Bleachers, 10 rows deep for 2,000 spectators • 500 linear feet of 12-foot wide floating docks along water • Crane (2012 only) • Temporary gangways over seawall • Night lighting until 11:00 p.m.	None	**San Francisco General Plan** General policies and design standards apply
Fort Mason	• Hospitality • Potential International Broadcast Center and media operations • Spectator boat berthing at Piers 2 and 3	Golden Gate National Recreation Area (NPS) • Lower Fort Mason – Historic structures on water's edge • Upper Fort Mason – Meadow overlooking Golden Gate Bridge • Activities and City setting generate high pedestrian traffic • Visual quality and sensitivity to change are **High**	• Barge at Pier 2 for media boats • Installation of temporary restrooms • All other activities within the Pier 2 and Pier 3 buildings	None	**NPS GGNRA[4] General Management Plan**
Aquatic Park (SF Maritime Historic Park)	• Hospitality • Boat Exhibition	San Francisco Maritime National Historic Park (NPS) • The museum is an art deco boathouse building on the Bay • Park amphitheater faces the Bay, sandy beach and Hyde Street Pier with historic boat displays. Visitor Center next door. • Arching Municipal Pier encloses Aquatic Park • Visual quality and sensitivity to change are **High**	• Floating screen in the lagoon for race viewing • Installation of small tents for hospitality • Installation of temporary restrooms • Potential installation of small-scale weather monitoring equipment on Municipal Pier	None	**NPS SF Maritime Park General Management Plan**
Crissy Field	• Event Seating • Hospitality	Golden Gate National Recreation Area and Presidio Trust • Large open lawn at edge of the Bay with open views of water • Tidal wetlands restoration area just east of lawn area • Golden Gate Bridge views – Historic structures at Bay edge • Visual quality and sensitivity to change are **High**	• 1 large tent and multiple smaller tents and exhibits, and event stage • Bleachers, 10 rows deep, for 6,200 spectators	None	**NPS GGNRA General Management Plan**
Alcatraz	• Hospitality for corporate and private functions • Media operations	Golden Gate National Recreation Area – Alcatraz Island • In the center of the Bay with views in all directions • Historic lighthouse, fortifications and prison structures • Accessible only by boat, public ferries at Pier 33 • Visual quality and sensitivity to change are **High**	• TV camera and weather monitoring installations • Private/corporate events held within existing buildings.	None	**NPS GGNRA General Management Plan**

TABLE 5.3-2 (Continued)
VISUAL CHANGES AND PLANNING OBJECTIVES FOR AC34 VENUES

Facility or Venue	AC34 Proposed Use	Existing Conditions and Overall Visual Sensitivity to Change	New Temporarily Visible Project Features	New Permanent Visible Project Features	Primary Visual Planning Objectives Compared to Expected Visual Changes
Spectator Venues (cont.)					
Fort Baker Pier at Cavallo Point	• Hospitality for corporate and private functions • Media operations	Golden Gate National Recreation Area – Marin Headlands U. S. Army – Fort Baker Pier • Pier at the base of the Golden Gate Bridge, views of the Bay • Horseshoe Cove looks across the Bay to the City • Lodge at Cavallo Point uses Fort Baker historic resources • Visual quality and sensitivity to change are **High**.	• Tents and or other installations on Fort Baker Pier for private events • TV camera installations at Cavallo Point, Battery Cavallo and/or Battery Wagner	None	**NPS GGNRA General Management Plan**

[1] San Francisco Bay Conservation and Development Commission (BCDC), San Francisco Waterfront Special Area Plan (SAP), April 1975 as amended through February 2010.
[2] San Francisco Port Commission, Waterfront Land Use Plan, republished June 2004.
[3] BCDC, Shoreline Space, Public Access Design guidelines for the San Francisco Bay, April 2005.
[4] National Park Service (NPS), Golden Gate National Recreation Area (GGNRA) General Management Plan, 1985.

race events. As these proposed installations would be in place only during the two-year period of the race events, obstructions of public views of scenic vistas of the Bay would be temporary and replaced with views of AC34 race-related and spectator vessels during the period before, during, and after the race events. Therefore, the AC34 events would not generate a substantial adverse effect on scenic vistas, and this impact would be *less than significant*.

Regarding tenant relocations required for the AC34 events, both Bauer's California Coach Sales and Service and San Francisco Soccer's Telegraph Field would relocate to existing buildings on the waterfront. Although the activation of these spaces with new uses would slightly change their visual character, such a chance would not have a substantial adverse effect on scenic views or vistas.

Teatro Zinanni would relocate from Piers 27-29 to either a site near the intersection of Broadway and The Embarcadero within the Northeast Embarcadero Historic District, a site in Mission Bay bounded by Third Street, Channel Street, Fourth Street, and the China Basin Channel, or another location not on Port property to be determined. The Broadway and Embarcadero and the Third and Channel Street sites are both surface parking lots. Relocation to either of these sites would block some existing views.

At the Embarcadero/Broadway site, the existing views looking eastward from Davis Street, across The Embarcadero, are of Pier 9 and the Waterfront Restaurant. The views of The Embarcadero from the Davis Street side of this triangular site would be blocked, but in this area there are no open views to the Bay that could be affected. The Broadway Pier, that provides public access to open water is offset from this area and would not be affected by the addition of the Teatro Zinzanni tents. Similarly, views in all directions across the Mission Bay site would be obscured by the tent, particularly from the six-story China Basin building located across the channel from the site. Views of the open water from the Mission Bay site would not be affected. At both sites, the existing views are of surface parking lots of low visual quality. The replacement of these surface parking lots with the Teatro Zinzanni tent would not be considered a significant impact on views. Nearby scenic views would not be affected. The impact would be *less than significant*.

Mitigation: Not required

Impact AE-2: Construction and operation of the America's Cup facilities and events would not affect scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project sites and surroundings. (Less than Significant)

While the proposed berthing within the Rincon Point, Brannan Street Wharf and Northeast Wharf Open Water Basins would be temporary, the AC34 events also trigger potential long-term development of marinas in the Rincon Point and Brannan Street Wharf Open Water Basins which could have potential impacts on public views and visual quality. As discussed in Chapter 3, Project Description, and Chapter 4, Plans and Policies, the AC34 Host and Venue Agreement between the City and Event Authority provides for future long-term marina development rights

after conclusion of AC34. Such future marina development in one or both of these Open Water Basins could conflict with BCDC SAP policies, which reserve these areas for public views of open Bay waters. Event Authority and the Port have proposed amendments to the BCDC SAP to allow for temporary use of these Basins during the 2012 and 2013 race events, and similar amendments for long-term uses will be evaluated on a case by case basis. Further discussion of potential impacts related to long-term development rights is provided at the end of this section.

Temporary AC Village 2013 Event Facilities Proposed for Piers 27-29

The newly constructed cruise terminal core and shell building would be the focal point of the proposed AC Village 2013 at Piers 27-29. The site around the new cruise terminal would be considerably more open to the Bay than the current setting. (A more complete discussion of the visual impacts of the proposed cruise terminal is presented in Impacts AE-5 through AE-8 below.) Temporary paving would be installed around the new building to provide a temporary working surface for the AC Village 2013 event facilities. A preliminary site plan for the AC Village at Piers 27-29 is presented in Chapter 3. A conceptual rendering of a bird's eye view of the proposed AC Village facilities at Piers 27-29 from the water side is presented in **Figure 5.3-12**. Renderings from the land side (one from before and after the events, and one from during the events) are depicted in **Figures 5.3-13A** and **Figure 5.3-13B**.

During the AC34 2013 event, the core and shell of the new cruise terminal is proposed to serve as the temporary team and corporate hospitality center; the existing Pier 29 shed is proposed to contain food concessions, merchandising, and ticket sales for the general public; food preparation and other operational activities would likely be in the adjacent Pier 29½ bulkhead; and the historic Belt Line office building is proposed to serve as the AC Village welcome center.

In the proposed BCDC SAP amendments, the Event Authority and the Port propose to trade removal of the end of Pier 23 for removal of the end of Pier 29, contrary to current BCDC SAP policies. Instead, The Event Authority proposes to use the end of Pier 29 as a viewing platform at the race course finish line as a part of the AC Village in 2013. The SAP amendments include a proposal for "later, phased development of public plaza space at the end of Piers 27-29, with provisions to allow cruise ship provisioning on cruise days." This trade eliminates the public benefit of creating more expansive open water views from Sansome and Lombard Streets of the Bay, the Bay Bridge and Yerba Buena Island. Future views of the open water from The Embarcadero, across the Northeast Plaza, would be narrower, exposing less open water and with no direct views of the Bay Bridge, because the end of Pier 23 would block those views as envisioned by the BCDC SAP.

The Port has proposed a package of improvements to address the specific SAP conflicts, and provide public benefits and amenities for the broader Northeast Waterfront area. They include: increased size and accelerated delivery of the Northeast Wharf Plaza; augmenting the Northeast Wharf Open Water Basin with new Open Water Basins at Piers 29-31 and Pier 43½ in Fisherman's Wharf; phased public access at Pier 23 and Pier 29, and along the west side of The Embarcadero. This proposal would undergo public review process led by BCDC.

The open valley of Piers 27-29 would have event seating for live entertainment, exhibitions and interactive display areas, and sponsor displays. A variety of tents would be installed within open areas at the AC Village. The event seating in the valley of Piers 27-29, which would face a stage, would be approximately 44,000 square feet and 40 feet tall, with a seating capacity of 4,000 people. The overall maximum height of accompanying stage set (i.e., top of scaffolding) would be approximately 70 feet.

At the east end of Piers 27-29, amphitheater seating would be installed to provide open bay views of the AC34 2013 races. This would consist of bleacher-style style public seating (up to 15 rows deep and measuring up to 35 feet in height) with a seating capacity of up to 1,000 people. The foredeck club hospitality tent would be another primary facility at the end of Piers 27-29, measuring approximately 5,000 square feet and 30 feet in height.

Temporary assembly of the AC Village 2013 facilities at the new cruise terminal site would serve to activate what would otherwise be a large construction site surrounding Pier 27. The site would be cleared of construction debris, and paving would be installed throughout the site. The stage set scaffolding at about 70 feet high would be taller than the cruise terminal, though considerably smaller in mass. However, as shown in Figures 5.3-12 and 5.3-13, the entire Piers 27-29 site is quite large and able to accommodate a variety of AC Village facilities. The AC Village at Piers 27-29 would be in place for the duration of the 2013 races from July into September, or approximately three months. Construction and operation of the America's Cup facilities and events at Piers 27-29 would be temporary and would not affect scenic resources (vistas, roadways, and designated scenic areas) or the long-term visual character of the project sites and surroundings, and therefore the impact is l*ess than significant.*

Proposed Team Bases at Piers 30-32 and Brannan Street Wharf Open Water Basin

Piers 30-32 would serve as the primary team bases for AC34 and would provide one of the proposed private spectator boat berthing areas. A preliminary site plan for the proposed team bases and other proposed facilities at Piers 30-32 and the adjacent Brannan Street Wharf Open Water Basin is presented in Chapter 3, and a conceptual aerial rendering of the proposed facilities was presented above in Figure 5.3-9. Bases for up to 10 teams would be provided at Piers 30-32, and would include space for boat work, storage and maintenance facilities, as well as office space and ancillary team parking.

The west end of Piers 30-32, along The Embarcadero would be used for team hospitality uses, including team catering facilities. Temporary tents (up to 40 feet in height) would be installed to house team base operations and hospitality uses. Up to two cranes would be located along the south side of Piers 30-32 to lift the racing yachts into and out of the adjacent water basin; these cranes would extend a height of approximately 200 vertical feet above the pier deck to provide adequate clearance while moving the yachts. As shown in Chapter 3, there would be a controlled public access corridor created on Piers 30-32 for viewing a portion of the team base operations. The proposed improvements at Piers 30-32 would not include any changes to Red's Java House, which would remain in place.

A number of temporary features would be installed at Piers 30-32 and the Brannan Street Wharf Open Water Basin to provide protection from waves and increase berthing capacity at this location. Over 1,000 feet of floating wave attenuators would be installed to create a temporary breakwater and reduce wave energy within this water basin, including along the east face of, and extending south from, Piers 30-32 and extending north from Pier 36 (which is to be removed as part of a separate project). Anchored moorings would be installed within the water basin for an anchorage field for AC72 yachts within this water basin. (As described in Chapter 3, it is assumed that the proposed Brannan Street Wharf would be constructed. This proposed project includes demolition and removal of Pier 36 and a portion of the adjacent bulkhead wharf, and development of a new wedge-shaped wharf containing 57,000 square feet of open space, and repair of the adjacent seawall to which the new wharf would connect.)

Temporary floating docks would be installed at Piers 30-32 to increase the available area for boat berthing at Piers 30-32. A floating dock would be installed alongside the pier south apron to provide an additional temporary berthing area for the AC72 race yachts. A system of floating docks would also be installed on the north side of Piers 30-32, creating a marina for berthing of team operations and sponsor boats. This would include a floating dock alongside the pier north apron, and with smaller connecting docks.

Temporary assembly of the AC team base facilities at Piers 30-32 would serve to activate what is now a pier with limited utility. Structural upgrades would not result in noticeable changes. What would be noticeable would be the temporary tents and sailing teams working on their boats, the cranes, boats in the Open Water Basin, the breakwaters and docks. The AC team bases at Piers 30-32 would be in place approximately four months from before the start and until after the finish of the races to allow for set-up and break-down of equipment. The races are scheduled from July into September. Construction and operation of the America's Cup facilities and events at Piers 30-32 would be temporary and would not affect scenic resources (vistas, roadways, and designated scenic areas) or the long-term visual character of the project site and surroundings, and therefore the impact is l*ess than significant.*

Temporary AC Village 2012 Event Facilities Proposed for Marina Green

The AC Village at Marina Green in 2012 would contain facilities and services, including the AC34 operations office, a media center, a hospitality area for corporate and private functions, outdoor amphitheater event seating, and areas of sponsor displays, general merchandise and food and beverage sales. Up to three large tents (two one-level tents measuring approximately 300 feet long, 100 feet wide, and 42 feet high; and one two-level tent measuring 160 feet long, 130 feet wide, and 40 feet tall) would house the operations office and hospitality functions, along with various smaller tents for other uses. Ancillary off-street parking would be dedicated to serve the AC Village.

The proposed outdoor seating would accommodate approximately 2,000 spectators for public viewing of the races. This would consist of bleacher-style style seating, 10 rows deep.

Temporary floating docks and a crane would be installed at Marina Green for AC34 tender boats and race official boats (but could also accommodate private spectator boats). The floating docks would measure in total approximately 500 feet in length and would be 16 feet in width. No modifications to the historic seawall at Marina Green are proposed; temporary gangways would be installed between the proposed floating docks and the top of the seawall for access to/from the floating docks. A conceptual aerial rendering of those temporary facilities at Marina Green in 2012 is shown in **Figure 5.3-10**.

Construction and operation of the America's Cup facilities and events at the Marina Green would be temporary and would not affect scenic resources (vistas, roadways, and designated scenic areas) or the long-term visual character of the project sites and surroundings; therefore, the impact is l*ess than significant.* Temporary facilities for the AC34 at Marina Green would temporarily affect the parkland project site and block views of the Bay, Treasure Island and the Marin Headlands from the 49-mile Scenic Drive that passes along Marina Boulevard. The AC34 Event Sponsor could consider maintaining views of the Bay in the design and placement of facilities and tent structures on the Marina Green during 2012 and 2013 events. The sponsor could remove facilities and tents blocking views of the Bay as soon as possible each year following completion of the AC34 events.

Event Facilities Proposed for Temporary Spectator Venues 2012-2013

Temporary facilities at proposed spectator venues, such as Crissy Field or Aquatic Park, vary depending on the existing facilities at each location. Construction and operation of the America's Cup facilities and events at multiple spectator venues would be temporary and would not affect scenic resources (vistas, roadways, and designated scenic areas) or the long-term visual character of the project site and surroundings, and therefore the impact of temporary spectator venues would be *less than significant.*

Tenant Relocations

Regarding tenant relocations required for the AC34 events, both Bauer's California Coach Sales and Service and San Francisco Soccer's Telegraph Field would relocate to existing buildings on the waterfront. Activation of these spaces with the soccer field and transportation use would not damage scenic resources or character.

The relocation of Teatro Zinanni's tent to either the Mission Bay or Embarcadero/Broadway would change the visual character of both sites. The open expanses of asphalt and parked cars would be replaced by the Teatro Zinzanni tent. The replacement of a surface parking lot with a tent structure would not damage the scenic character of the surrounding areas. The impact would be *less than significant*.

Mitigation: Not required

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: AECOM

Figure 5.3-9
Rendering of Proposed Team Bases at Piers 30-32 -
Bird's Eye View from The Embarcadero

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: AECOM

Figure 5.3-10
Rendering of Proposed AC Village at Marina Green - Bird's Eye View

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: AECOM

Figure 5.3-11
Rendering of Proposed Spectator Berthing Facilities at Piers 14-22 1/2 Open Water Basin - Bird's Eye View

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: AECOM

Figure 5.3-12
Rendering of Proposed AC Village at Piers 27-29 -
Bird's Eye View from the Bay

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: AECOM

Figure 5.3-13A
Rendering of Proposed AC Village at Piers 27-29
Before and After Races - Bird's Eye View from Telegraph Hill

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: AECOM

Figure 5.3-13B
Rendering of Proposed AC Village at
Piers 27-29 During Races - Bird's Eye View from Telegraph Hill

Impact AE-3: Construction and operation of the America's Cup facilities and events would not substantially damage scenic resources or other features of the built environment that contribute to a scenic public setting. (Less than Significant)

As part of the visual context associated with the AC34 events, it is expected that there would be numerous boats—including both race-related and privately-owned boats—on the Bay, many of which would likely moor at the proposed Port facilities. These water-based spectators would generally use three types of boats: recreational, commercial charter, and large private yachts. Large private yachts are generally defined as yachts of more than 100 feet in length, and can reach lengths over 250 feet; see **Figure 5.3-14**. As described in Chapter 3, on peak weekend race days in 2013 (i.e., the five highest attendance days in the event), approximately 2,200 recreational boats, 20 commercial charter boats, and 60 large private yachts are estimated to view the AC34 races.

Figure 5.3-14
244' Katana (the most likely large yacht to visit the AC34, is owned by Larry Ellison, owner of the Oracle Racing Team)

Proposed water based uses such as yachting, sailing, docking and mooring boats are consistent with intended waterfront uses and would temporarily add to the character of the San Francisco waterfront. Sailing boats and large private yachts would become considerably more numerous on the Bay and views of the race course from the waterfront could become blocked by large yachts. While some large yachts may be visually interesting, many large yachts in the same area may effectively block direct views to the water and the race area from land, particularly at lower elevations. Also, with enough density on the Bay, large yacht traffic could contribute to the appearance of congestion on the Bay and would temporarily alter the visual character of the Bay which generally appears to be open water with occasional ship and boat traffic. However, due to

the temporary nature of these changes as well as the unique, maritime character of the race-related and spectator boats, this impact would be *less than significant.*

Regarding tenant relocations required for the AC34 events, both Bauer's California Coach Sales and Service and San Francisco Soccer's Telegraph Field would relocate to existing buildings on the waterfront, which would not affect the scenic public setting.

The relocation of Teatro Zinanni's tent to either the Mission Bay or Embarcadero/Broadway site would displace existing surface parking lots. These lots are not scenic resources and do not contribute to the scenic public character. The impact would be *less than significant*.

Mitigation: Not required

Impact AE-4: Construction and operation of the America's Cup facilities and events would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. (Less than Significant)

The AC34 2012 and 2013 events would occur in the long daylight hours of summer. The AC Village venues at Marina Green in 2012 and at Pier 27 in 2013 could, however, remain open as late as 11 p.m. in which case night lighting would be required. There are also proposals to light certain buildings in the City skyline, similar to present day holiday displays. The Bay and large portions of the waterfront are typically without lighting, particularly as associated with stages, large television monitors, and illuminated food service and merchandising operations inside translucent tents. Bright lighting along the waterfront would limit nighttime views of the stars, and/or ground fog would reflect the light such that the fog would appear illuminated. High levels of illumination would be distracting in the Marina, South Beach and Telegraph Hill neighborhoods. This impact however would be temporary for a limited number of days during 2012 and 2013, and therefore would be *less than significant*. The AC34 Event Sponsor could limit temporary light and glare impacts along the waterfront by directing lighting down to the ground, focused on pedestrian areas. Light sources would be screened from direct views by surrounding neighbors and overall ambient lighting should be kept as low as safety would allow.

Regarding tenant relocations required for the AC34 events, both Bauer's California Coach Sales and Service and San Francisco Soccer's Telegraph Field would relocate to existing buildings on the waterfront. Although the activation of these spaces with new uses could increase localized light and glare, particularly from vehicle headlights, such light and glare would be consistent with typical urban light and glare in the City.

The relocation of Teatro Zinanni's tent to either the Mission Bay or Embarcadero/Broadway would change local light and glare. In both cases, lighting typical of surface parking lots—particularly vehicle headlights—would be replaced by the structure and tent lighting. This lighting would be a relocation from existing conditions at Piers 27 – 29 and typical of urban areas. The impact would be *less than significant*.

Mitigation: Not required

Justin R. Herman Cruise Terminal and Northeast Wharf Plaza

Overview of Permanent Visible Changes at Piers 27-29

This overview presents the basis for the analysis used in Impacts AE-5 through AE-8. The cruise terminal project would convert the parking, storage, office, sporting and theatrical uses at Piers 27-29 into the primary cruise terminal facility for San Francisco. The phased development of the cruise terminal would be coordinated with AC34 such that Phase 1 work would be complete in time to support the needs of the AC Village 2013 proposed for the site. Phase 1 would demolish the existing Pier 27 shed in its entirety,[12] along with a portion of the Pier 29 shed,[13] which would create an area for a proposed expansive temporary public viewing platform at the east end of Piers 27-29. A new east end for the Pier 29 shed would be constructed to enclose the shed and meet historic compatibility standards. The Pier 27 Annex office building would also be demolished. Existing facilities associated with tenants on Piers 27-29, including the Teatro Zinzanni tent facility and the soccer field, would be removed. Existing buildings to remain would include the balance of the Pier 29 shed and the historic Belt Line office building. Chapter 3 includes graphics showing the relative locations of buildings on Piers 27-29 site that would be removed or retained.

A summary of the permanent building characteristics of the proposed cruise terminal is presented, including proposed plans and elevations for the completed cruise terminal and wharf plaza are presented in Chapter 3, Project Description. The cruise terminal building would be sited within the larger footprint of the demolished Pier 27 shed. The approximately 2½-acre Northeast Wharf Plaza would be constructed in the western end of the existing Pier 27 footprint, fronting The Embarcadero promenade. Visible security fencing between Piers 27 and 29 at the east end of the pier, and along the Pier 27 apron would extend south to near The Embarcadero. With security fencing in place when cruise ships are in port, no public access would be allowed along the length of Pier 27 apron. When there is no cruise ship on the dock, the fence would be collapsed to allow free passage by the public from the plaza to the edge of the dock.

Selection of Key Observation Points for the Cruise Terminal. To understand how the proposed changes would look, 'before and after' simulations from several key observation points (KOPs) were created to portray permanent changes to public views where visual sensitivity to change is high, such as along The Embarcadero promenade at Piers 27-29. KOPs were selected to represent the broader set of public views of the project and typically incorporate the closest publicly accessible locations. Multiple locations and panoramic photography were used to consider the changing context from which the project can be seen.

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[12] The Pier 27 loading dock that abuts the Pier 27 shed, however, would be retained. In addition, two railroad track remnants located in the vicinity of this loading dock would be retained.

[13] From a point approximately where the Pier 27 shed connects to the Pier 29 shed to the east end of the Pier 29 shed.

Simulated views of the proposed cruise terminal were created from viewing three-dimensional design models of the proposed structure from locations that match the same relative position from which the existing conditions photographs were taken. Images of the design model were then digitally inserted into the existing conditions photographs.

Table 5.3-3 shows the key observation points used to portray the cruise terminal and describes the location and type of view from each key observation point. **Figures 5.3-15** through **5.3-20** provide "before" and "after" images of the cruise terminal from these locations.

TABLE 5.3-3
CRUISE TERMINAL - KEY OBSERVATION POINTS (KOP)

KOP#	View / Type of View	Photo Location (Figure Number)	Direction of View
1	View from Pier 23 to Pier 27 Context – Embarcadero Historic District	Near Front Street at The Embarcadero (Figure 5.3-15)	Northwest
2	View of Piers 27-29 from The Embarcadero Panoramic View	Lombard Street at The Embarcadero (Figure 5.3-16)	Northeast
3	View from Pier 29 Context – Embarcadero Historic District	Chestnut Street at The Embarcadero (Figure 5.3-17)	Southeast
4	View from Ground Transportation Area Internal View – Architect's Design Model	Piers 27-29 Valley (Figure 5.3-18)	Southwest
5	View from the Bay towards the City Context - Distant elevated view from Bay	End of Piers 27-29 (Figure 5.3-19)	Southwest
6	View from Telegraph Hill Elevated view from above	Lombard at Kearney Street (Figure 5.3-20)	East

In some cases, the existing conditions photographs show Pier 23 and Pier 31 which are both historic structures on either side of the project. These structures contribute to the surrounding Embarcadero Historic District and provide the context to aid in the evaluation of the proposed structure's compatibility with the Embarcadero Historic District, as described in the Cultural Resource's section (see Section 5.5).

Many of the KOPs are presented as panoramas to provide the viewer with the maximum information about the surrounding context of the project. In the figures that follow, the panoramic key observation points are presented with three images per page: the top image shows the existing condition, the middle image is a visual simulation depicting the proposed cruise terminal in the context provided by the photo. The bottom image zooms into the cruise terminal itself to show more detail of the building and less of the context. This bottom view is a more typical view that corresponds to normal human vision. The evaluation of potential visual impacts associated with the cruise terminal project includes these 'before and after' comparisons of visual conditions that would result from the project.

Summary of Permanent Visual Changes at Piers 27-29

KOP 1, View from The Embarcadero at Pier 23. Removal of the monolithic Pier 27 warehouse that currently imposes on The Embarcadero would reveal the new cruise terminal, smaller and set back behind the Northeast Wharf Plaza. Removal of the Pier 27 Annex building opens views of the Beltline office building and the Pier 29 shed structure. The horizontal lines and the mixed use of glass and opaque materials on the western façade can clearly be seen (although a small ancillary commercial building would obscure some views of the terminal from this perspective). Removal of the existing buildings is positive, as is the design of the new structure.

KOP 2, View from The Embarcadero at Lombard. Non-contributing warehouses and offices are removed from the view, replaced by the smaller cruise terminal and greenery offered by the new Northeast Wharf Plaza, and the spaciousness of the urban plaza is evident. The cruise ship in port (estimated to occur 40-80 times each year) provides a strong backdrop and views to the Bay Bridge are revealed. The Beltline office building stands on its own. Undefined future commercial structures partially screen the ground transportation area behind. A third future structure to the right, by the end of Pier 23, partially blocks views to the Northeast Wharf Open Water Basin. When ships are not in port, views of the Basin, the Bay and Yerba Buena beyond are limited by Pier 23.

The character of the Northeast Wharf Plaza open space is not fully defined, and is undergoing design development with the Port and BCDC, but would incorporate a combination of lawn areas, a "piazza," and hardscape plaza spaces that flow along the axes of the terminal building, and provide grade transitions to meet The Embarcadero promenade. The piazza, located at the northern end of the plaza area provides an open space frontage along the Promenade which would screen the Ground Transportation Area in the Piers 27-29 valley.

KOP 3, View from The Embarcadero at Pier 29. Pier 29 bulkhead remains as a strong defining edge for The Embarcadero with the Beltline office building playing a supporting role. Elimination of the Teatro Zinzani tents reveals the new cruise terminal structure, sometimes backed up and overshadowed by a large cruise ship. The Ground Transportation Area consumes most of the foreground in the enlarged image and would be filled with cars and busses when a ship comes to port. When a ship is in port, it provides massive backdrop to the terminal and the Northeast Wharf Plaza. When ships are not in port, views of the Basin, the Bay and Yerba Buena beyond are limited by Pier 23.

KOP 4, View from the Ground Transportation Area. Removal of the buildings along The Embarcadero opens views back to the City and reveals the architecture of the adjacent buildings. The design of the cruise terminal is most visible from this perspective, with its wavy roof line, the solid ground floor and the glassy upper deck. The Ground Transportation Area is a vast paved parking area delineated by stripes and bollards with some trees on the far side. No trees and limited pedestrian areas away from the base of the terminal are apparent, and the Pier 29 shed appears untreated.

Existing Conditions - 120° Panorama

Proposed Conditions - View of cruise terminal before construction of Northeast Wharf Plaza and related ancillary commercial building

Enlargement of Proposed Cruise Terminal

SOURCE: ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-15
KOP 1: Cruise Terminal and Northeast Wharf Plaza
from The Embarcadero at Pier 23

Existing Conditions - 180° Panorama

Proposed Conditions - 180° Panorama

Enlargement of Proposed Cruise Terminal

SOURCE: ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-16

KOP 2: Cruise Terminal and Northeast Wharf Plaza from The Embarcadero at Lombard

Existing Conditions - 120° Panorama

Proposed Conditions - 120° Panorama

Enlargement of Proposed Cruise Terminal

SOURCE: ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-17

KOP 3: Cruise Terminal from The Embarcadero at Pier 29

Existing Conditions - 120° Panorama

Proposed Conditions - 120° Panorama

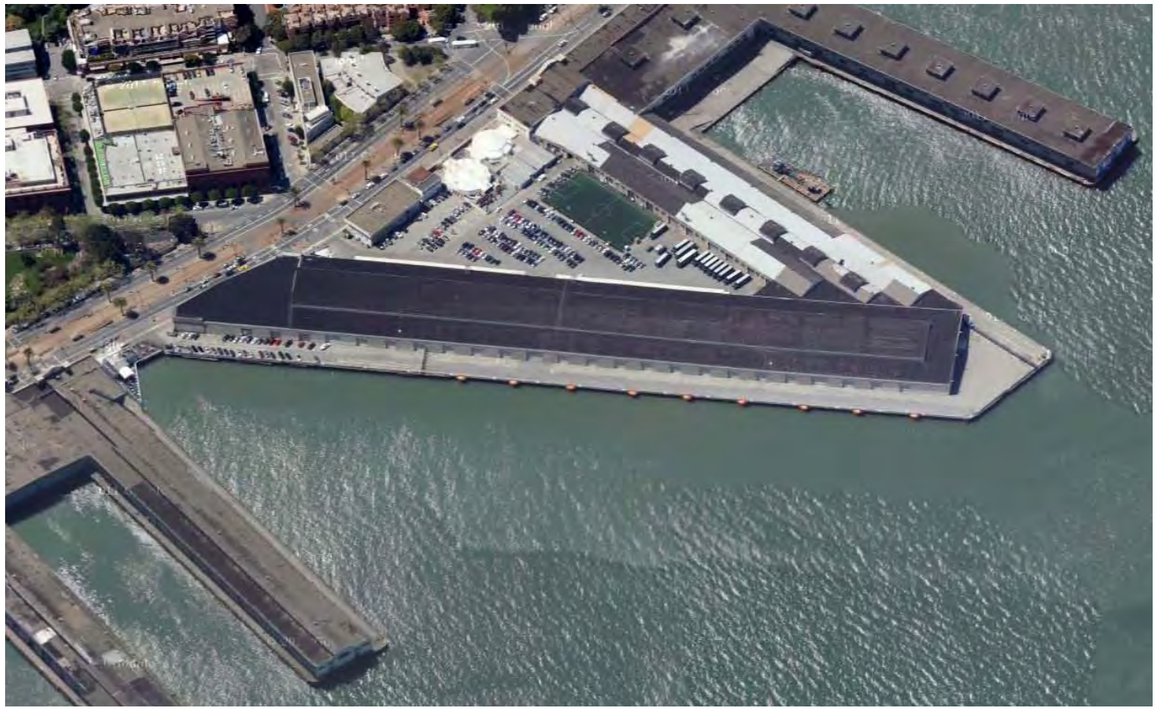
Enlargement of Proposed Cruise Terminal

SOURCE: ESA

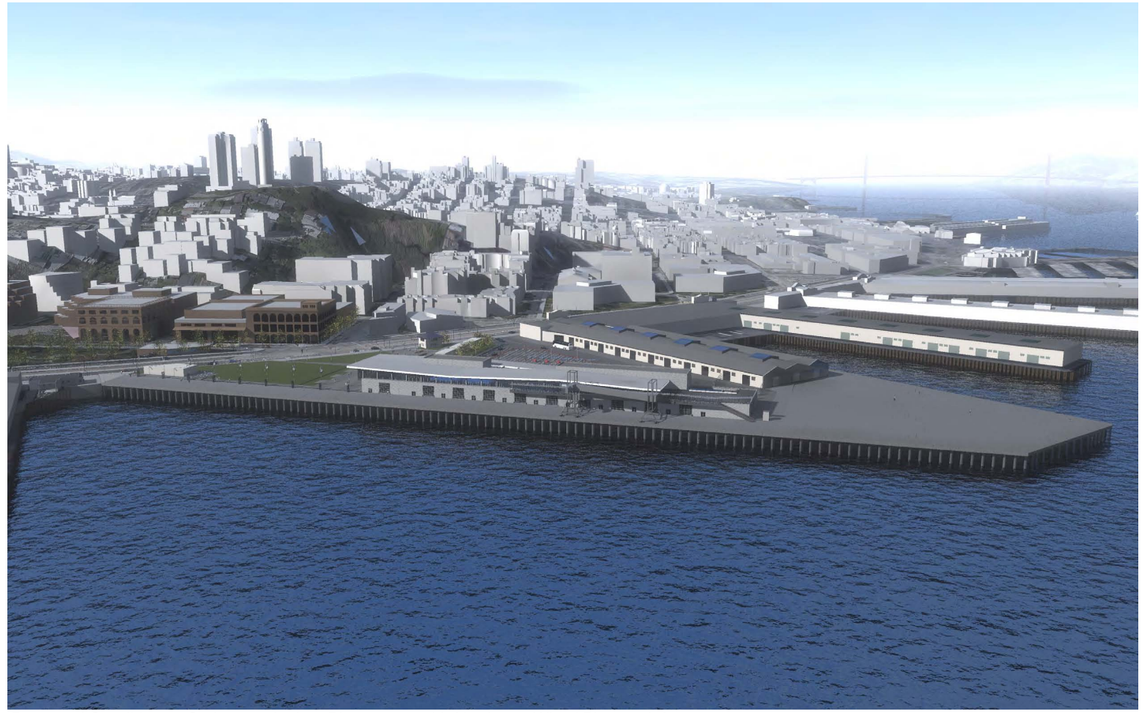
Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-18

KOP 4: Cruise Terminal from Ground Transportation Area



Existing Conditions - Elevated aerial showing Piers 23, 27, 29 and 31 (L to R)



Proposed Conditions - Cruise terminal on Piers 27-29 with Northeast Wharf Plaza to left

Enlarged Proposed Conditions - Northeast Wharf Plaza, cruise terminal and open viewing area (L to R)

SOURCE: ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-19

KOP 5: Cruise Terminal and Northeast Wharf Plaza from the Bay

Existing Conditions

Proposed Conditions

Enlargement of Proposed Cruise Terminal and Northeast Wharf Plaza

SOURCE: ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.3-20

KOP 6: Cruise Terminal and Northeast Wharf Plaza from above Telegraph Hill

KOP 5, View from above the Bay. From this perspective, the cruise terminal architecture is responsive to the shed architecture of Pier 29. The gangway supporting structures appear similar to pier cranes in industrial areas and extend above the cruise terminal roof. Removal of the end of the Pier 29 shed increases the scale of the large undefined area at the end of the pier. During cruise ship calls, portions of the open deck area would be in use for ship provisioning operations. When ships are not in port, this open area provides opportunities for expansive bay views but its character is not defined.

KOP 6, View from Telegraph Hill. Telegraph Hill residents look down upon the piers and across the Bay to Yerba Buena Island and the Bay Bridge from varying perspectives. The existing Pier 27 is a very long and strong linear edge between the City and Bay. The proposed cruise terminal and Northeast Wharf Plaza would soften this edge. The dark neutral grey tones offer minimal contrast with the water and also blend with the paved Ground Transportation Area. The Ground Transportation Area is visible, and the scale is slightly larger than the terminal itself.

Impact AE-5: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza would not have a substantial adverse effect on a scenic vista. (Less than Significant)

Construction and operation of the cruise terminal at Piers 27-29 would improve views of the waterfront and the Bay. The Northeast Wharf Plaza would provide views to the Bay Bridge and enlarged views of the Northeast Wharf Open Water Basin between Piers 23 and 27. Aesthetic impacts on scenic vistas would be positive compared to existing conditions, and impacts would be considered *less than significant*.

Mitigation: Not required

Impact AE-6: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza would not affect scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project sites and surroundings. (Less than Significant)

Cruise Terminal - Permanent Visual Changes

Demolition of the Pier 27 shed and the Pier 27 Annex buildings would open up dramatic new views to the Bay, Yerba Buena Island, and Treasure Island. Demolition of the Bay end of Pier 29 would further open views to the Central Bay and Angel Island. Opening of these views is generally a positive change for scenic resources along the waterfront.

The defining edge of The Embarcadero created by the existing Pier 27 structures, however, would mostly be eliminated. The remaining structure in the 900-foot long space would be the small Beltline office building between Piers 23 and 29. The generally solid edge of The Embarcadero would be replaced by open access to the large eleven-acre site with views of the Bay.

The cruise terminal and Northeast Wharf site is visible from above, particularly from Telegraph Hill and Coit Tower. As shown in KOP 6, **Figure 5.3-20**, the cruise terminal is directly adjacent to the Bay. The roof would be constructed to accommodate the potential for installation of solar panels in the future, although these are not currently proposed as part of the project. The broad expanses of the proposed roofing of the cruise terminal adjacent to the water could create a contrast directly adjacent to the Bay, however, such contrast would be considerably less than the existing larger Pier 27 shed roof. Consequently, this contrast would be a *less than significant* impact.

The Ground Transportation Area is designated for cars, taxis, trucks and buses, and would provide areas for staging and parking. The Ground Transportation Area is designed for organized, maximum traffic flow, parking and staging. This concentration of vehicles in the valley of Piers 27-29 would be visible from all angles: from the cruise terminal, from The Embarcadero, from the new Northeast Wharf Plaza, and from Telegraph Hill. Uncovered vehicular parking is typically limited along The Embarcadero and generally discouraged along the waterfront. However, parking and ground transportation are important elements of the cruise terminal program for managing arriving and departing passengers. The proposed GTA would provide an off-street location for these functions and would improve conditions over present practices where much of the passenger loading activity occurs in The Embarcadero roadway adjacent to the existing Pier 35 cruise terminal. There would be a *less than significant* impact on the visual character of the pier and surrounding area.

Northeast Wharf Plaza

The Northeast Wharf Plaza is a BCDC requirement described in the San Francisco Waterfront Special Area Plan. As described above, the concept plan for Northeast Wharf Plaza includes soft (lawn) area and hard-scape plaza spaces. The design is subject to further review by the BCDC Design Review Board and the City's Waterfront Design Advisory Committee, in coordination with review by preservation planning staff of the San Francisco Planning Department and the Port and consulting historic architects, for consistency with the Embarcadero Historic District. The visual character of the Plaza would ultimately be defined by the design that is approved by the Port Commission and BCDC Commission. As part of this design approval process, the Port would continue with public workshops to engage community ideas to further develop the designs for the Northeast Wharf Plaza.

As described in Chapter 3, Project Description, the Port's proposed cruise terminal use of Pier 27 and proposed preservation of the entirety of Pier 23 conflicts with existing BCDC SAP policies for the Northeast Wharf Open Water Basin. The Port has proposed a package of improvements to address the specific SAP conflicts, and provide public benefits and amenities for the broader Northeast Waterfront area. They include: increased size and accelerated delivery of the Northeast Wharf Plaza; augmenting the Northeast Wharf Open Water Basin with new Open Water Basins at Piers 29-31 and Pier 43.5 in Fisherman's Wharf; phased public access at Pier 23 and Pier 29, and along the west side of The Embarcadero. This proposal will undergo public review process led by BCDC.

Cruise Terminal and Northeast Wharf Plaza Long-term Operations

Observers of the completed, operational cruise terminal would see multiple operations over the long-term including periods when ships are in port and longer periods when other activities or events are at the facility. When a cruise ship is in port, provisions would be staged and loaded while the terminal becomes periodically filled with passengers. Provisioning trucks would pass by the Ground Transportation Area and unload at the far eastern end of the terminal building. Security fences would be put into place between Piers 27 and 29 and along the Pier 27 waterfront in advance. The Ground Transportation Area would become active with cars, taxis and busses for the period it takes to process the four to five thousands passengers through the terminal. The cruise ships are highly dominant features on the waterfront, though typically designed to be sleek and visually interesting.

Cruise ships currently visit Pier 27 when Pier 35 is already occupied with a cruise ship. Under the project, the proposed cruise terminal at Piers 27-29 would become the primary cruise terminal, with Pier 35 as backup. Consequently, the number of cruise ship calls experienced at Pier 27 would increase, and number of cruise ship calls at Pier 35 would decrease, compared to existing conditions. Assuming the maximum number of ship calls per year (80), and assuming half the ships stay for one day and the other half stay for two days for approximately one third of the year, the cruise terminal and the Ground Transportation Area could be occupied by the comings and goings of ship travelers.

Programming for shared uses and events (up to 100 per year) are proposed at the cruise terminal when ships are not in port. Activities would activate the spaces, both inside and outside the building. The Ground Transportation Area and surrounding areas could become filled with activity, cars, busses and people. Consistent scheduling of events is an important part of cruise terminal operations, because it is the high level of activity that will keep the very large spaces there occupied and safe. The visual character of the project site and surroundings could become compromised in the absence of programmed activities when a ship is not in port. To maintain the visual character of the site during non-cruise ship days, the Port would identify and schedule shared uses in the large spaces surrounding the cruise terminal, specifically the Northeast Wharf Plaza, the Ground Transportation Area, and the end of the pier. The shared use program would identify activities compatible with the cruise terminal that would keep the site active and engaging. The shared use program will also address appropriate uses for the ancillary commercial / recreation buildings that occupy the Northeast Wharf Plaza.

Impacts would be considered *less than significant*.

Mitigation: Not required

Impact AE-7: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza at Piers 27–29 would not substantially damage scenic resources or other features of the built environment that contribute to a scenic public setting. (Less than Significant)

As described above in Impact AE-5, the proposed project would create better opportunities to see the existing scenic resources of the San Francisco waterfront, and therefore the impact is *less than significant*, and no mitigation is required.

Mitigation: Not required

Impact AE-8: Construction and operation of the Cruise Terminal and Northeast Wharf Plaza at Piers 27–29 would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. (Less than Significant)

Currently, some ships visit Pier 27 when Pier 35 is occupied so the presence of light from those ships has been experienced at this site and is part of the existing condition. Teatro Zinzani also currently produced nighttime light from within the tents. Other current uses at Piers 27-29 include cars parking in the valley area, and car lights may be visible as cars drive to and from the site. Otherwise, the Piers 27-29 site would remain fairly dark at night.

With up to 80 cruise ship visits a year, the new cruise terminal could be active approximately with cruise terminal operations up to one third of the year, (one to two nights per visit), and consequently, there would be an increase in the amount of light emanating from the site compare to existing conditions, although levels are expected to be low. No direct sources of bright light are expected beyond current levels, and therefore the impact would be *less than significant*.

Mitigation: Not required

5.3.3.4 Future Long-Term Development Impacts

Impact LT-AE: Long-term development on Port properties could result in impacts on visual quality. (Less than Significant)

As described in Chapter 3, the AC34 Host and Venue Agreement (Host Agreement) provides the Event Authority with certain long-term development rights under specified conditions. Although no site-specific development projects or programs have been developed, this EIR analyzes at a conceptual level an assumed type and level of development based on current land use policies and guidelines. Future development at Piers 26, 28, 30-32, 19, 19-1/2, 23, and 29 and Seawall Lot 330 could include a combination of residential, retail/commercial, office (maritime or general), entertainment and assembly/commercial, and maritime uses.

As discussed above under Impact AE-1, the proposed dredging and temporary berthing of large spectator boats or AC34 racing yachts in the Rincon Point Open Water Basin in Piers 14-22½, and Brannan Street Wharf Open Water Basin in Piers 32-36 would conflict with BCDC Special Area Plan policies regarding Open Water Basins, which reserve these areas for public views of open Bay waters. The project sponsors have proposed amendments to the BCDC SAP to allow for temporary use of these basins during the 2012 and/or 2013 race events (analyzed in this EIR as part of AC34 event impacts), and amendments would also be required for potential long-term marina development (to be analyzed as part of CEQA review of future marina development proposals).

At this time, in the absence of specific development proposals, it is assumed that design of future long-term development would be designed and constructed in conformance with applicable design guidelines and policies, which include the following:

BCDC Special Area Plan – Northeastern Waterfront

General policies and design standards apply:

- Preserve and incorporate historic buildings into new development plans
- Limit parking lots/structures that are not visually complimentary to Bay setting
- Enhance visual access corridors between inland public areas/roads and shoreline
- Development should be built in clusters surrounded by open space
- Encroachment of Bay views is permitted if encroaching element has a maritime character
- Development should reflect prevailing building scale, patterns, materials, and public access.
- Encourage transparent building materials
- Low building height and bulk
- Avoid mechanical equipment; reflective surfaces/roofs and glass.

Port Waterfront Land Use Plan – South Beach/China Basin Waterfront, Bryant Street Mixed Use Opportunity Area

General policies and design standards apply:

- Make visual access to Bay inviting
- Adapt existing architecture and bulkhead buildings into new development
- Require high standard of architectural design
- New development must incorporate appropriate setbacks, buffers, etc.

San Francisco General Plan – Recreation and Open Space Element

General policies and design standards:

- Maximize visual access to water from inland areas

- Development should reflect prevailing building scale, patterns, materials, and public access.
- New structure design must avoid extreme color, shape contrasts and respect existing architectural character of area
- Limit building height and bulk.

The above standards, together with the referenced design guidelines and policies, would provide appropriate guidance for future architectural proposals for the waterfront and design review of those projects. Given the assumption that future developments would conform to the above design guidelines and policies—including design of future marinas—the future long-term development impact on visual quality would be *less than significant*. When site-specific development proposals are available, those development proposals will be subject to subsequent, project-specific CEQA review to confirm whether or not future developments are consistent with applicable design guidelines, and if not, to identify appropriate mitigation measures.

Such future review would address the inclusion of new rooftop materials and treatments to respond to increased energy efficiency building requirements which may include installation of solar and photovoltaic panels and lighter colored roofing materials. Without clear guidance on how to balance the needs of energy efficiency with design standards, future long-term developments could create contrasts with the water and surrounding Port of San Francisco Embarcadero Historic District and may affect the waterfront's visual quality of the site and its surrounding. Thus, the following Improvement Measure is identified to provide focused attention to this issue during future long-term development design considerations:

Improvement Measure I-LT-AE: Rooftop Design

Rooftop energy conservation installations on pier sheds, including flat-mounted solar installations shall incorporate darker coloring such as grey, while balancing the need to meet sustainability and energy efficiency standards, and consistency with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

5.3.3.5 Cumulative Impacts

Impact C-AE: There would not be cumulative impacts on visual quality. (No Impact)

No residual effects from this project or adjacent projects are expected to occur. The projects that could potentially result in cumulative impacts to aesthetic resources would be the other development projects along the San Francisco waterfront as indicated in Section 5.1, Table 5.1-1. Port projects would be subject to applicable City and Port plans and policies (which include the Port's *Waterfront Land Use Plan* and the City's *General Plan* and *Planning Code*).

As described in Impacts AE-1 through AE-8, visual impacts of the proposed project would be less than significant. Impacts associated with the AC34 would be temporary, and permanent impacts

of the Cruise Terminal and Northeast Wharf Plaza would generally be less than significant. Therefore, regardless of cumulative development along the waterfront, the project would not contribute to a cumulative adverse impact on scenic vistas, scenic resources, visual character, or light and glare. Based on the above analysis, the project would not have a significant project-specific or cumulative impact on aesthetics, and therefore there is *no impact.*

Mitigation: Not required

5.4 Population and Housing

This section discusses the potential for the proposed project to induce substantial population growth, displace housing, create a substantial demand for additional housing in the project area, or necessitate the construction of housing outside the project area. The growth-inducing effects of the project within the context of the overall region as well as the indirect effects of the growth are discussed in Chapter 6, Section 6.1, Growth Inducement, of this EIR.

5.4.1 Setting

5.4.1.1 Regional Setting

The City and County of San Francisco (CCSF or City) would be the primary area affected directly by project-related population, employment, and housing effects. However, given the nature and scale of the project, as well as the existing diverse transportation links with the surrounding counties, project-related population, employment, and housing impacts may extend beyond the city to affect the neighboring Alameda, Contra Costa, Marin, and San Mateo Counties. Therefore, the discussion below provides information on the City and County of San Francisco with additional information on Alameda, Contra Costa, Marin, and San Mateo Counties. For purposes of this analysis, the regional setting is defined as including these five counties.

Population

In 2000, there were 777,000 people living in San Francisco. The household population in the City totaled 757,000; others living in group quarters such as shelters, group homes, nursing homes, dormitories, and correctional facilities numbered about 20,000 residents, or 2.5 percent of the total living in the City. There were 329,700 households in San Francisco, and the average household size was 2.3 persons per household.[1]

The number of people living in the City has increased by about 4 percent since 2000. The 2010 census shows 805,000 people living in San Francisco—an increase of approximately 28,000 people from April 2000 through April 1, 2010.[2] During this period, the City's population exceeded its prior peak of 780,000 residents recorded in 1951.

In 2000, the five-county region's population was approximately 4.124 million. The population grew by approximately 211,000 to total 4.34 million in 2010.[3] This increase represents approximately 5.1-percent growth over the 10-year period.

1 State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State 2001-2010, with 2000 Benchmark.
2 State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State 2010-2011, with 2010 Benchmark.
3 Ibid.

Housing

Since 2000, there has been marked housing growth in San Francisco. The City's official housing inventory counts more than 368,000 housing units in 2010–an increase of 23,600 units between April 2000 and 2010.[4] Census data reported by the State of California Department of Finance show almost 377,000 housing units in the City as of April 1, 2010 with an estimated vacancy rate of 8.3 percent.[5] This vacancy rate represents approximately 31,100 available housing units.

During the 1980s and 1990s, the growth of the City's population was not matched by an increase in housing supply. Therefore, population growth resulted in increases in the number of people living in existing housing. By contrast, average household size in 2000 and 2010 has remained relatively constant at about 2.3 persons per household.[6]

The five-county region contains a total of approximately1,742,000 housing units (as of April 2010) with an average vacancy rate of 6.6 percent. The estimated household size for the region overall is 2.61 persons per household.[7] San Francisco's population accounts for about 19 percent of the five-county region's total population. With its housing growth and consistent gains in population over the last 15 years, the City has generally maintained its share of regional population, which represents a marked change from the historic trend of declining regional share.

Employment

Approximately 576,000 people worked in San Francisco in 2009, and this was a considerable decrease from the recent high in 2008 of 605,000 workers.[8] This estimate measures workers by place of work and includes full-time and part-time wage and salary employment, as well as the self-employed.[9] Wage and salary jobs in San Francisco totaled about 524,000 in 2009. The self-employed (and a relatively small number of unpaid family workers) account for about 9 percent of total jobs in the City.

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4 San Francisco Planning Department, *San Francisco Housing Inventory*, April 2011.

5 State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State 2010-2011, with 2010 Benchmark.

6 2010 census data currently available do not provide a breakdown of population living in households and population living in group quarters. This estimate of 2010 household size assumes the same percentage of the total population living in households (as opposed to group quarters) in 2010 as in 2000 (97.46 percent)

7 As with the estimate of 2010 San Francisco household size, this estimate assumes the same percentage of the total population of the five-county area living in households in 2010 as in 2000 (98.04 percent).

8 These estimates of employment by place of work count part-time and full-time jobs equally. People who hold more than one job may be counted more than once.

9 The estimate of total employment by place of work including the self-employed is based on data from the United States Census Bureau, American Community Survey (ACS). That data source provides estimates of the percentage of workers, by place of work, who are private and nonprofit wage and salary workers (including the self-employed in their own incorporated businesses), government workers (local, state, and federal), self-employed not incorporated workers, and unpaid family workers. The latter two categories are not covered in employment estimates from the State of California Employment Development Department (EDD). The state data measure wage and salary employment by place of work and do not include the self-employed, a considerable number in San Francisco, or unpaid family workers or private household workers. The more complete estimate of jobs by place of work combines the EDD data with estimates derived from the percentages in the ACS for San Francisco (2007-2009 3-year estimates and 2009 1-year estimates).

As shown in **Figure 5.4-1**, employment in San Francisco has fluctuated substantially since the mid-1990s. Both the Bay Area and San Francisco economies experienced strong growth through 2000, fueled by the boom in the high technology and internet sectors; employment levels peaked in San Francisco at almost 600,000. By 2004, however, job losses following downturns in the national economy soon reduced employment to lower than mid-1990s levels. San Francisco's job losses were more severe than elsewhere within the Bay Area, with the exception of Santa Clara County. Over the 10-year period 1995 to 2004, San Francisco gained about 85,000 jobs and subsequently lost about 92,000 jobs. More recently, the City saw a net gain of 45,000 jobs between 2004 and 2008, although employment remained substantially below the 2000 peak. The recent job growth ended in 2009, with a year-over-year loss of 26,000 wage and salary jobs within the City from 2008 through 2009.[10]

SOURCE: State of California, Employment Development Department, Annual Average Average Industry Employment, March 2010 Benchmark, April 15, 2011

Figure 5.4-1
Changes in Wage and Salary Employment in San Francisco (1995-2009)

The boom and bust economic conditions of the last decade have exacerbated long-term trends of decline in manufacturing, wholesale trade, transportation, and warehousing employment in San Francisco. Jobs losses have been concentrated in the information sector, financial activities, and professional and business services. Overall employment within retail, hospitality, government, education, and health care sectors has been relatively stable. The Planning Department's *Commerce & Industry Inventory 2010* shows an 11-percent decrease in office employment from 2001 to 2009; the net loss of 25,000 office jobs was second to the loss of 31,000 production, distribution, and repair (PDR; generally, light industrial and heavy service in nature) jobs, a 30-percent decrease, over this period. During the same period, retail employment (including food and beverage services) declined from 101,505 to 98,278 jobs, a loss of 3,227 jobs (representing a

[10] State of California, Employment Development Department, San Francisco County: Industry Employment and Labor Force by Annual Average, March 2010 Benchmark, April 15, 2011. www.labormarketinfo.edd.ca.gov/?pageid=166.

3-percent decrease) and hotel employment declined from 17,962 to 17,828 jobs in 2009, a decrease of approximately 1 percent from 2001 levels.[11]

Employment losses occurred across the five-county region over this period. Total employment within the five counties was approximately 2.285 million in 2000 but dropped by 145,000 as of 2010. Manufacturing, retail, and professional services sectors accounted for most of the region's job losses, with 60,000, 36,000, and 35,000 fewer workers employed in these sectors, respectively.[12]

Labor Force

The current recession has resulted in persistent high unemployment in the San Francisco, where the annual unemployment rate has been 9 and 10 percent through 2009 and 2010. The City's unemployment rate is now more than double its mid-decade levels. In January 2011, the unemployment rate for San Francisco was 9.5 percent, with 43,200 unemployed residents of a total labor force of 458,000.[13,14] Across the five-county region, the unemployment rate averaged nearly 10.2 percent, with approximately 225,000 people looking for employment.[15]

The unemployment rate measures unemployed individuals as a percentage of people who are working or actively looking for work. As a result of the "internet bubble," the year 2000 represented a peak for labor force participation and employment of City residents; about 457,000 of the people living in San Francisco were employed in 2000, according to the California Employment Development Department. That number stood at 414,400 employed residents in 2010. During a period of population growth between 2000 and 2010, the number of San Francisco residents in the labor force decreased by14,800, while the number of employed residents decreased by about 42,300 and the number of unemployed residents increased by 27,500.[16]

San Francisco's employed residents work not only in the City but also elsewhere in the regional labor market. Decentralization of regional employment beginning in about 1960 resulted in erosion of the share of the City's employed population working in San Francisco. In 1960, almost all (94 percent) employed residents worked in the City. By comparison, the 2007-2009 American Community Survey indicates the percentage of employed residents working in San Francisco holding steady at 76 to 78 percent. The proportion of the City's residents commuting to jobs outside San Francisco has increased from 6 percent in 1960 to 22 percent in 2009.

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11 San Francisco Planning Department, *Commerce & Industry Inventory*, October 2010, Table 3.1.
12 Association of Bay Area Governments, *Projections 2009*, August 2009.
13 The labor force is defined generally as the sum of individuals who are working or actively seeking work (i.e., employed and unemployed individuals). Unemployed individuals are those who do not have a job and are actively seeking, and available for, work (or were temporarily laid off and are waiting to be recalled to a job) (California Labor Market Review, April 2010 www.calmis.ca.gov/file/lfmonth/calmr.pdf, via www.labormarketinfo.edd.ca.gov/?pageid=164; site accessed June 2011).
14 State of California, Employment Development Department, Labor Force and Unemployment Data, available at http://www.labormarketinfo.edd.ca.gov/?pageid=164. Website accessed June 10, 2011.
15 Ibid.
16 Ibid; 2000 and 2010 figures are annual averages.

Employed residents living and working in San Francisco hold 56 percent of the jobs located in the City. Commuters from other Bay Area counties hold about 43 percent of San Francisco jobs, as other commuters account for about 1 percent of San Francisco jobs. As with the percentage of City residents working in the City, the proportion of San Francisco jobs held by people also living in the City has declined over time. In 1960, San Francisco residents held almost three-quarters of the jobs in the City. The percentage declined to about 56 percent through 1980 and has remained at about that level ever since.

Table 5.4-1 shows the most recently available data on commuting patterns to San Francisco from Alameda, Contra Costa, Marin, and San Mateo Counties. The table shows that a large number of commuters travel to work in San Francisco; in 2000, approximately 44 percent of the City's jobs were filled by workers commuting into San Francisco. These trends and the stabilization of intra-regional commute patterns are illustrative of the growth of Bay Area suburbs, the de-concentration of business location options leading to the diminution of San Francisco's position as regional employment center that has been partly offset by the development of regional transportation systems designed to bring commuters to central city jobs.

TABLE 5.4-1
BAY AREA COMMUTING PATTERNS
(Workers Commuting to San Francisco in 2000)

Origin	Number of Employees	Percent of Total
Alameda County	72,035	27.2%
Contra Costa County	49,525	18.7%
Marin County	30,894	11.6%
San Mateo County	71,702	27.0%
Total	***224,156***	***84.5%***
Other Counties	41,135	15.5%
GRAND TOTAL	**265,291**	**100%**

SOURCE: State of California, Employment Development Department, *County to County Commute Patterns*, April 2011.

5.4.1.2 Local Setting

The local setting relevant to the population and housing analysis is predominantly limited to landside sites where the proposed project would permanently or temporarily displace the current occupants. The population and housing impacts are most appropriately assessed on a citywide or five-county region basis, since San Francisco's comparatively small size and its efficient and diverse transportation system ensure that workers or residents can readily (and have traditionally) commuted to and within San Francisco for work.

Population and Housing

No housing is located on any of the project sites, and consequently there is no on-site residential population. All facilities on the project sites are used for commercial and other non-residential uses. Recently, a portion of the Seawall Lot 330 property has been developed as the Watermark residential tower. However, the 136-unit 22-story high-rise building is outside the project site boundary.

Employment

Currently, there are 77 tenants and 81 lease and property agreements for businesses at seven major pier sites. In addition there are two single- or limited-use sites that the Port also leases for tenant use: in the Piers 27-29 "valley" area for San Francisco Soccer and at Pier 30 for Red's Java House. The majority (60) are month-to-month leases and agreements; 21 are for defined terms with provisions that allow the Port to terminate upon 30 days notice.

The size and types of the current Port tenants vary greatly. Of all the current tenants at the pier sites, Metro Ports, which has cargo terminal management contract with the Port to manage terminal operations at Pier 80, is the largest, with business operations dependent on bay access. Other major tenants include Bauer's California Coach Sales and Service, the San Francisco's Chinese New Year Festival and Parade organization, and Teatro Zinzanni. In addition, several parking lot operators use the Port properties to provide public parking. Although the number of parking spaces provided varies depending on when Port facilities are in use for secondary ship berthing, the total parking capacity that would be potentially affected by the project is estimated to be approximately 650 spaces. Together, these major tenants account for the greatest portion of business activity at Port facilities within the project sites.

In addition, there are many small businesses that also currently occupy Port facilities within the project sites. Most of these businesses use the pier facilities as warehouse storage or occupy the smaller office building facilities located near The Embarcadero. The restaurant, Red's Java House, also operates in Port-owned buildings in the project area at Piers 30-32, but would not be affected by the AC34 event or expected to be displaced by any of the potential long-term development under the Host Agreement.

Table 5.4-2 shows the location and square footage of the Port facilities where current tenants would be relocated to accommodate the AC34 events and/or potential long-term development under the Host Agreement. Overall, approximately 326,000 square feet of currently leased Port facilities (not including the parking areas) would need to be vacated for the AC34 events. The majority of the facilities (252,800 square feet) are currently used for warehouse storage. Teatro Zinzanni and the soccer field (in the Piers 27-29 valley) together account for another 45,000 square feet of leased area. Nearly 26,000 square feet of office space would also be displaced. The current Pier 80 cargo operations would continue to operate throughout the AC34 events.

TABLE 5.4-2
EXISTING TENANT USE OF PORT FACILITIES
WITHIN THE PROJECT AREA THAT WOULD REQUIRE RELOCATION

Location	Facility Use (Square Feet)				Major Tenants
	Storage	Office	Unimproved Land	Total	
Pier 19	34,241	1,620		35,860	Dee Vine Wines, Bock Vines & Wines, Liquid Assets
Pier 23	36,986	2,186		39,172	Power Engineering Construction, Z Collection Inc.
Pier 26	56,521	4,658		61,179	City Building, Inc., Land and Sea Restaurants, Underwater Resources
Pier 27 shed, and offices in Pier 27 Annex and Beltline Buildings	54,321	8,659	2,596	65,576	Bauer's California Coach Sales and Service, San Francisco's Chinese New Year Festival and Parade organization e
Piers 27-29 Valley		162	21,230	21,392	San Francisco Soccer
Pier 28	26,528	8,523		35,051	Sasco, Bay Cities Painters, Harrison Drywall
Pier 29	44,182		23,943	68,125	Waterfront Container Leasing, SF Public Library, Teatro Zinzanni
Total - Piers	**252,779**	**25,808**	**47,769**	**326,355**	

SOURCE: Port of San Francisco 2011.

The Port of San Francisco does not know the total employment for current tenants within the project area. Based on typical employment density factors, however, it is conservatively estimated that the approximately 25,800 square feet of office space employs approximately 75 workers and that the three restaurants employ approximately 60 workers. Of these approximately 40 are employed by Teatro Zinzanni, and these employees could be potentially displaced.[17]

Warehouse and storage uses would generally have relatively low employment densities, since most of their facilities are occupied by equipment and merchandise storage. Similarly, parking facilities employ relatively few individuals to operate their businesses. The project sites contain approximately 250,000 square feet of usable tenanted warehouse space, and it is estimated that approximately 250 workers are currently employed by the businesses using these port facilities.[18]

[17] Lozovoy, Mark, Port of San Francisco, telephone communication, April 2010.
[18] Assuming 1,000 square feet per employee for warehouse operations based on adjusted City and County of San Francisco employment density factors of industry estimates (Lzovoy, Mark, Port of San Francisco 2011).

The Pier 80 cargo activity varies when loading and off-loading occurs, but average employment is estimated at approximately 35 workers.

Consequently, the total employment within the project area at Port facilities that would be occupied for the AC34 2012 and AC34 2013 events, the James R. Herman Cruise Terminal, and future long-term development under the Host Agreement is estimated to be approximately 365 workers.

5.4.1.3 Regional and Citywide Population and Housing Trends

The Association of Bay Area Governments (ABAG) provides projections of the Bay Area future population, housing, and employment. **Table 5.4-3** shows the past and projected future population, housing, and employment growth trends for San Francisco and the five-county region.

Between 2010 and 2035, the City's population is expected to increase by 159,000 new residents which would represent a 19.6-percent increase over its 2010 population levels. Over the same 25-year period, the five-county region's population is expected to increase by 22.2 percent, or by nearly 986,000 new residents. ABAG projects that the number of households in both San Francisco and the five-county region will increase at a comparable rate between 2010 and 2035.

The rate of future job growth in both San Francisco and the five-county region is expected to be nearly double the rate of population growth. Between 2010 and 2035, San Francisco is expected to add 238,100 new jobs, which would represent nearly a 42-percent increase over its 2010 employment levels. Over the same 25-year period, the five-county region's employment is expected to increase by 43.3 percent, or by nearly 926,000 new jobs.

5.4.2 Regulatory Framework

There are no federal or state regulations on population, housing or employment that are applicable to the proposed project. Therefore, this section focuses on local regulations.

5.4.2.1 San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and contains policies that relate to environmental issues. The General Plan contains 10 elements (Commerce and Industry, Recreation and Open Space, Housing, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that set forth goals, policies, and objectives for future city development.

The General Plan's Commerce and Industry Element and Housing Element include policies and objectives relevant to the project's population and housing issues. In addition, the Northeastern Waterfront Area Plan contains specific objectives and policies to guide land use decisions for the Northeastern waterfront area of San Francisco within which the project area is located.

TABLE 5.4-3
POPULATION, HOUSEHOLD AND EMPLOYMENT PROJECTIONS FOR SAN FRANCISCO AND THE FIVE COUNTY REGION (2000 - 2035)

Factor	2000	2005	2010	2020	2010 to 2020		2035	2010 to 2035	
					Increase	Percent		Increase	Percent
Population									
San Francisco	776,733	795,800	810,000	867,100	57,100	7.0%	969,000	159,000	19.6%
Alameda	1,443,741	1,505,300	1,549,800	1,705,900	156,100	10.1%	1,966,300	416,500	26.9%
Contra Costa	948,816	1,023,400	1,090,300	1,177,400	87,100	8.0%	1,322,900	232,600	21.3%
Marin	247,289	252,600	256,500	264,000	7,500	2.9%	274,300	17,800	6.9%
San Mateo	707,163	721,900	733,300	801,300	68,000	9.3%	893,000	159,700	21.8%
Five County Region	4,123,742	4,299,000	4,439,900	4,815,700	375,800	8.5%	5,425,500	985,600	22.2%
Households									
San Francisco	329,700	338,920	346,680	372,750	26,070	7.5%	415,000	68,320	19.7%
Alameda	523,366	543,790	557,270	615,470	58,200	10.4%	707,960	150,690	27.0%
Contra Costa	344,129	368,310	392,680	424,340	31,660	8.1%	480,480	87,800	22.4%
Marin	100,650	103,180	104,550	107,420	2,870	2.7%	112,170	7,620	7.3%
San Mateo	696,713	711,500	721,500	788,800	67,300	9.3%	880,500	159,000	22.0%
Five County Region	1,994,558	2,065,700	2,122,680	2,308,780	186,100	8.8%	2,596,110	473,430	22.3%
Employment									
San Francisco	642,500	553,090	568,730	647,190	78,460	13.8%	806,830	238,100	41.9%
Alameda	750,160	730,270	712,850	825,070	112,220	15.7%	1,039,680	326,830	45.8%
Contra Costa	371,310	379,030	376,820	445,550	68,730	18.2%	555,650	178,830	47.5%
Marin	134,180	135,470	135,600	143,780	8,180	6.0%	158,280	22,680	16.7%
San Mateo	386,590	337,350	346,320	404,400	58,080	16.8%	505,860	159,540	46.1%
Five County Region	2,284,740	2,135,210	2,140,320	2,465,990	325,670	15.2%	3,066,300	925,980	43.3%

SOURCE: ABAG, 2009.

The objectives and policies relevant to project in both the Northeastern Waterfront Area Plan and Commerce and Industry Element are identified and analyzed in Chapter 4, Plans and Policies. The Housing Element's key objectives, policies, and related provisions relevant to the proposed project are discussed below.

The Housing Element describes the City's future housing needs and identifies its capacity for new housing based on its land supply and development capacity. The Housing Element also specifically focuses on the City's affordable housing needs. The Housing Element establishes goals for housing production and policies related to mitigating the impacts of growth on the housing market. These goals and policies are relevant primarily to the AC34 project's future long-term development sites.

Housing Needs Allocation

San Francisco's official quantified targets for addressing housing needs are provided by ABAG, in coordination with the California State Department of Housing and Community Development (HCD) as part of the Regional Housing Needs Plan (RHNP). The RHNP is required by state law to promote the state's interest in increasing housing supply, increasing the mix of housing types and affordability in all jurisdictions, facilitating infill development and efficient development patterns, protecting environmental resources, and reducing inter-regional commuting.

The needs are defined in terms of housing market factors: accommodating projected demand (due to household growth, employment growth, and the need to turn commuters into residents), increasing the vacancy rate to provide more choice and less upward pressure on prices and rents, and increasing the supply of affordable housing options. ABAG allocates regional total housing needs among jurisdictions based on factors that consider existing employment, employment growth, household growth, and the availability of transit. Regionwide income distributions complete the allocation by household income category.

The Regional Housing Needs Plan for the 2007-2014 period was published in June 2008, and San Francisco's allocation is incorporated into the City's Housing Element (adopted June 2011). The housing allocation is expressed not only as an overall housing production target to alleviate tight housing market conditions and reduce long-distance commuting, but, more importantly, as separate targets for production of housing affordable to various household income categories. As shown in **Table 5.4-4**, San Francisco's 2007-2014 goal is just over 31,000 units, which represents almost 15 percent of the regional total. This allocation amounts to housing production of about 4,160 units per year. This overall production goal is almost two times what was actually achieved during the last decade of strong housing production in the City. A substantial component of the City's housing needs allocation is for affordable housing. ABAG estimates that 60 percent of the production should be affordable to moderate-, low-, and very-low-income households.

TABLE 5.4-4
HOUSING NEEDS ALLOCATION FOR SAN FRANCISCO, 2007-JUNE 2014

	ABAG/HCD Regional Housing Needs Allocation Production Goals by Income Category 2007-June 2014	
Income Category	**Number of Units**	**Percent of Total**
Extremely Low (less than 30% of AMI)	3,294	10.6%
Very Low (31% to 50% of AMI)	3,295	10.6%
Low (51% to 80% of AMI)	5,535	17.7%
Moderate (81% to 120% of AMI)	6,754	21.7%
Above Moderate (over 120% of AMI)	12,315	39.5%
Totals	**31,193**	**100.0%**

NOTE: AMI = area median income

SOURCE: San Francisco Planning Department, *Housing Element*, June 2011.

Land Supply for Housing

Analysis presented in the Housing Element 2011 identifies capacity (under existing zoning) for 62,600 new housing units on vacant or underdeveloped sites throughout the City. In addition, there is remaining capacity for another 11,100 units in programmed redevelopment areas: Mission Bay, Hunters Point Shipyard Phase I, and Treasure Island (before counting additional capacity that would be added under proposed rezoning in the latter two areas). This development capacity estimate for 73,700 new housing units under existing zoning does not include proposed residential development. This proposed development, including 6,800 units under construction, amounted to another 50,200 units as of the fourth quarter of 2008.

Ongoing community planning efforts in San Francisco aim to expand this residential development potential, and some of the projects under review are in anticipation of rezoning. The Housing Element estimates another 28,800 units could be provided under rezoning proposed in such areas as Executive Park, Western SoMa, India Basin, and Treasure Island. Finally, housing could be added on some surplus sites owned by public agencies; the Housing Element describes planning efforts that could add another 4,000 units to the City's residential development capacity.

Residential Inclusionary Affordable Housing Program/Affordable Housing Fee

Contributing to the production of housing affordable to low- and moderate-income households as a function of producing new market-rate housing is a zoning requirement in San Francisco. The program is one of several local resources applied in San Francisco to increase the supply of affordable housing, as called for in Policy 7.1 of the Housing Element ("Expand the financial resources available for permanently affordable housing, especially permanent sources").

In 2006, the City's inclusionary housing program was reviewed and substantially expanded and then further clarified in 2010 to require developers of market-rate housing to pay an Affordable Housing Fee to mitigate the impacts of demand for affordable housing. The program applies to projects that develop five or more units of market-rate housing. The fee amount is the difference between the affordable sales price and the cost of developing a comparable housing unit (the "affordability gap" established annually by the Mayor's Office of Housing) multiplied by (generally) 20 percent of the number of market-rate units proposed. The Residential Inclusionary Affordable Housing Program is codified in Section 415 et seq. of the San Francisco Planning Code.

Recent changes to the inclusionary housing program limit the ability of project applicants to satisfy the requirement by providing onsite or offsite affordable units. To qualify for compliance through the construction of onsite or offsite units, developers must develop permanently affordable ownership units, or show direct public financial contribution, zoning changes or density bonus assistance, or the provisions of a development agreement.

Jobs-Housing Linkage Program

The Jobs-Housing Linkage Program was first imposed in 1985 as the Office Affordable Housing Production Program (OAHPP), under which the impacts of office employment growth in downtown San Francisco were managed and mitigated. The original exaction was limited to downtown (C-3 zoning district) office development. The program was updated and expanded in 1997. The updated nexus analysis demonstrated the relationship between all types of new commercial development and the need for affordable housing and expanded the geographic scope to the entire City of San Francisco.

Carrying forward current Housing Element policy, Policy 1.9 of the 2011 Housing Element calls for enforcement and monitoring of the Jobs-Housing Linkage Program requiring that new commercial development in the City provide affordable housing or pay an in-lieu fee to meet the housing need attributable to employment growth and new commercial development, particularly the demand for new housing affordable to low- and moderate-income households.

The current Jobs-Housing Linkage Program applies to the following types of nonresidential development: office, research and development, retail, entertainment, and hotel. The Jobs-Housing Linkage Program is codified in Section 413 et seq. of the San Francisco Planning Code.

FOCUS Initiative

FOCUS is led by ABAG and the Metropolitan Transportation Commission (MTC), with support from the Bay Area Air Quality Management District (BAAQMD) and the Bay Conservation and Development Commission (BCDC) and in partnership with congestion management agencies, transit providers, and local governments throughout the Bay Area.

FOCUS is a regional development and conservation strategy that promotes a more compact land use pattern for the Bay Area. It unites the efforts of four regional agencies into a single program that links land use and transportation by encouraging development of complete, livable communities in

areas served by transit, and promotes conservation of the region's most significant resource lands. The FOCUS initiative does not regulate future development but instead provides guidance and assistance to foster housing and mixed use, infill development near transit and job centers. The program designates Priority Development Areas (PDAs) to direct local and regional agencies where incentives and assistance are needed to support local redevelopment efforts.

The project area is located within the Port of San Francisco Potential PDA.[19] Development in the area is therefore eligible for planning grants and technical assistance. Unlike a Planned PDA,[20] however, a Potential PDA is not eligible for capital infrastructure funds.

Local Hiring Requirements

Chapter 6.22 and Chapter 83 of the San Francisco Administrative Code contain requirements for local hiring. As indicated in the Host Agreement, the Authority, in consultation with the City's Office of Economic and Workforce Development, would develop a local hiring plan consistent with these code provisions. The Workforce Development Plan would include local hiring opportunities for San Francisco residents in certain required AC34-related infrastructure improvements, AC34 event staging, and other AC34 event-related activities.

5.4.3 Impacts and Mitigation Measures

5.4.3.1 Significance Criteria

The City has not formally adopted significance standards for impacts related to population and housing, but generally considers that implementation of the project could have a potentially significant impact related to population and housing if it were to:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

5.4.3.2 Approach to Analysis

The impact analysis for population, housing, and employment evaluates the change to these resources associated with the proposed project in the context of project area and citywide growth expectations.

[19] The full Port of San Francisco PDA consists of 600 acres of public waterfront lands from the area near Pier 39 extending southeast to Hunters Point (http://www.bayareavision.org/pda/san-francisco/port/).

[20] A Planned PDA has both an adopted land use plan and a resolution of support from its city council or county board.

The analysis estimates the amount of population, employment, and any related housing needs associated with the project's construction activities, and presents them in the following sequence: 1) the AC34 event races, 2) the subsequent development of the new James T. Herman Cruise Terminal and Northeast Wharf Plaza, 3) the possible long-term development rights under the Host Agreement, and 4) cumulative impacts. To evaluate the relative magnitude of the increases in population, employment, and related housing needs (and therefore whether or not the population or employment growth would be substantial), the analysis compares the estimated project-related population, employment and housing changes with those developed for the City as a whole by San Francisco and regional agencies as the basis for long-term regional transportation and other infrastructure planning. "Substantial" growth is defined as increases in population that are unplanned, i.e., without consideration of or planning for the infrastructure, services, and housing need to support the proposed new residents and/or employees.

For potential impacts associated with the long term development rights, the analysis has a long-term perspective and analyzes the development impacts for the year 2035.

The project's potential contribution to cumulative population, housing and employment impacts are evaluated in the context of existing, planned, and reasonably foreseeable future development expected in the City.

5.4.3.3 AC34 Events and Cruise Terminal Impact Analysis

America's Cup Race Events

Impact PH-1: Construction and operation of the America's Cup facilities and events would not induce substantial population growth in the area, either directly (for example, by constructing new homes) or indirectly (for example, by establishing substantial new employment opportunities that attract employees to an area or through extension of roads or other infrastructure). (Less than Significant)

The AC34 project would not include development of new housing as part of the AC34 2012 and 2013 events. Therefore, the AC34 race events would not directly induce population growth at any of the project sites.

The project would make permanent infrastructure improvements and develop temporary facilities to host AC34 in 2012 and 2013. After the end of the AC34 events, the temporary facilities would be removed, most of the Port facilities would be vacated, and most locations would become available again for re-tenanting and reuse. As a result, no new businesses are proposed associated with the AC34 events that would directly result in any permanent employment or population growth within the project area.

As discussed in the Project Description and shown in Tables 3-7 and 3-8 of Chapter 3, upgrades and repairs are proposed for several Port facilities. Specifically, substantial construction and infrastructure improvements would occur at Piers 27-29 for the AC34 events. The population impacts of these improvements combined with the subsequent Phase 2 completion of the

proposed new Pier 27 cruise terminal are evaluated as direct population and housing impacts under the James R. Herman Cruise Terminal and Northeast Wharf Plaza analysis below. The Piers 27-29 infrastructure improvements proposed by the project sponsor are those needed to create the America's Cup Village (AC Village) in 2013. As a temporary event, this use would not induce any substantial new population growth.

The proposed seismic upgrades and repair to Piers 30-32 are initial improvements that would support the AC34 team bases in 2013 and, if completed in time, for the 2012 race events. The AC34 event infrastructure improvements at Piers 30-32 would not induce any indirect substantial new population growth elsewhere. The potential population and housing impacts associated with future long-term development of Piers 30-32 after the AC34 events are discussed under the Section 5.4.3.5, Future Long-Term Development Impacts analysis below.

The project would also result in other minor (and in some cases optional) improvements to the fire, safety, utilities, and access facilities at Piers 19, 23, 26 and 28. The scale and nature of these improvements are limited to their location and incidental; they would not in and of themselves result in future increased use of these sites. Consequently, these improvements would not indirectly induce any substantial new population growth at these locations or elsewhere.

Therefore, overall construction and operation of the America's Cup facilities and events would not directly or indirectly induce any substantial new population growth at the project site or elsewhere. Consequently, the impact is *less than significant*. See also Chapter 6, Other CEQA Issues, for further discussion of growth-inducing effects of the project.

Mitigation: Not required

Impact PH-2: Construction and operation of the America's Cup facilities and events would not displace existing housing units or create substantial demand for additional housing. (Less than Significant)

No existing housing is located at any of the project sites. Consequently, construction and operation of the America's Cup facilities and events would not displace any existing housing units.

The project's future employment requirements could potentially result in new housing demand if the type and magnitude of the employment were to exceed the capacity of the available labor force. The potential for such project-related housing demand impacts is discussed below.

AC 34 2012 Facilities and Events

Construction. In addition to the temporary installations proposed, major construction of infrastructure improvements could occur for the America's Cup 2012 facilities as described in Chapter 3, Project Description and summarized in Table 3-7. The Event Authority has proposed

seismic upgrades and repairs to Piers 30-32 as the location of AC34 team bases. If the Piers 30-32 improvements could be completed in time for the 2012 events, the construction and operation employment would occur in 2012. The construction work is expected to employ between 25 to 200 construction workers daily, depending on intensity of construction activities, during the period of construction. The high end of this estimated range is conservatively assumed for purposes of this analysis.

Operation. The AC34 2012 event would require short-term employment of staff for the installation, operation, and removal of the temporary spectator venue facilities and equipment. One or two World Series events would occur in San Francisco Bay in summer-fall 2012. For the purposes of environmental review, the EIR assumes that two 9-day AC34 World Series events would be held in San Francisco in 2012, with up to 17 race days. Given the temporary nature of the facilities for visitors (e.g., bleacher seating, fencing, audio-visual equipment), installation and removal would be performed by several construction crews working before and after the event. The duration for the set-up of installations at any one site is expected to be 1 to 2 weeks. The subsequent tear-down of the installations would be expected to take 1 week or less. The set-up and tear-down staffing requirements are not known but would be expected to be substantially smaller that the event's daily staffing needs.

Table 5.4-5 shows the estimated 2012 AC34 event maximum daily staffing requirements. Total staff for the event is estimated to be approximately 4,000 people, half of whom would be needed for spectator venues. These jobs would be predominantly limited to event days and would generally consist of retail sales, food service, crowd and traffic management as well as security personnel. Volunteer staff are anticipated to meet a major proportion of the event's support staff needs.

TABLE 5.4-5
AC34 2012 EVENT MAXIMUM DAILY STAFFING

Location	Number of Staff
Operations and Competitors Facilities	
Pier 80 and/or Piers 30-32, 26 and 28	2,000
Spectator Venues	
Crissy Field	1,000
Marina Green	500
Fort Mason	300
Alcatraz	100
Cavallo Point	50
Union Square	25
Justin Herman Plaza	25
Total Public Sites	*2,000*
AC34 2012 TOTAL	**4,000**

SOURCE: AECOM, 2011.

Staffing for race operations and team base facilities would account for the other half (roughly 2,000) of the jobs associated with 2012 staff requirements. These jobs would include both "on the water" support staff positions (e.g., for race set-up and operations) and staff on land associated with both the event organizers and the competitors' teams. In addition to team support staff, team base employment would also include local support contractors such as fork lift operators and caterers. The event operations and competitors' staffs would be employed for a longer period than would staff for venue preparation described above, including before the event to prepare for the competition. The competitors are expected to begin practice after the 2011-2012 winter season is over, although some members of the teams and team support staffs may arrive earlier, e.g., to work on boat development. While of longer duration than jobs associated with facility set up or event day staffing, local team support jobs would also be temporary. A substantial proportion of the competitor team staffs would likely be non-locals who temporarily relocate to the Bay Area. Consequently, it is assumed that only a portion of the competitor's team staff positions would be available to San Francisco or other Bay Area residents.

Given the very short duration of the employment and the nature of the employment opportunities, the temporary "event day" only employment would result in no increased housing demand because these jobs would be very attractive as a temporary second job or casual work suitable for existing San Francisco or other Bay Area residents (whether employed or unemployed) and therefore are expected to be filled by the local or bay area regional labor force.

Similarly, many of the event operations and competitors' job positions may also be available and attractive as a temporary second job or casual work opportunities. Furthermore, given the region's currently high unemployment rate (currently San Francisco alone has an estimated 43,200 unemployed residents), there are more than enough unemployed individuals currently living within San Francisco and the rest of the Bay Area to meet the longer term AC34 employment needs. It is therefore reasonable to expect that positions not filled by existing competitor team personnel who temporarily relocate to the Bay Area would readily be filled by San Francisco or other Bay Area residents.

While some of the competitors' staffs would relocate to San Francisco to prepare for and work at the event, these individuals would not be expected to remain after the competition. There is sufficient housing in San Francisco's estimated 31,100 available housing units to meet any project-related short-term housing demands. Consequently, the AC34 2012 event is expected to result in a *less than significant* increase in demand for additional housing in San Francisco.

AC34 2013 Facilities and Events

Construction. Major construction of infrastructure improvements would be necessary for the America's Cup 2013 facilities as described in Chapter 3, Project Description and summarized in Table 3-8 in the Project Description. Construction work at the piers would last from 1 to 4 months and would occur in 2012 or 2013 depending on the specific pier location. The longest duration of construction would be at Piers 30-32 (if such work was not completed in time for AC34 2012) and Piers 27-29 (site of AC Village). The construction work is expected to employ between 25 to 200 construction workers daily, depending on intensity of construction activities, during the period

of construction. The high end of this estimated range is conservatively assumed for purposes of this analysis.

The Event Authority would also construct additional temporary facilities at the Port sites for Event Authority operations and sponsor hosting. In addition, the competing syndicates are expected to construct additional short-term facilities at Pier 80 for their event preparations. Based on construction employment requirements to support the construction work of the permanent pier substructure and repairs; the proposed demolition and initial building phase at Piers 27-29 for AC Village; and temporary facilities, it is estimated that there would be approximately 600 construction jobs generated to support these 2013 AC34 improvements.[21]

As discussed in Section 5.4.1, Setting, San Francisco and the five-county region have experienced persistent high unemployment in recent years. The construction sector has been particularly affected by the 2008 mortgage crisis and subsequent recession. Between August 2006 and May 2010, the three-county subregion of San Francisco, San Mateo, and Marin Counties saw construction employment decrease by a third from 45,100 jobs to 31,200 jobs – a loss of nearly 14,000 jobs.[22] The project's total construction employment estimate of 600 jobs for AC34 would represent only about 4.3 percent of the construction jobs that have been lost in the three counties over the past four years. AC34 construction employment would represent a 0.4-percent reduction in the total unemployed population of the five-county region.

Consequently, given the very large population of unemployed construction workers as well as the project's Workforce Development Plan requiring hiring of local workers, AC34 construction labor needs would readily be met by current residents of San Francisco and the rest of the five-county region. Thus, AC34 construction would not create substantial demand for new housing, and the impact would be *less than significant*.

Operation. Similar to the AC34 2012 event, the AC34 2013 event would require short-term employment of staff for the installation, operation, and removal of the temporary spectator venue facilities. For the purposes of environmental review, the EIR assumes up to 55 race days for the AC34 2013 events.

Table 5.4-6 shows the estimated AC34 maximum daily staffing needs for the 2013 event. Total staff for the event is estimated to be approximately 9,200 people, of whom about 3,300 would be needed for the spectator venues. The other 5,900 workers would be associated with event operations and competitor team support.

[21] This estimate assumes the relationship of construction costs to construction jobs identified in the economic analysis prepared by Bay Area Council Economic Institute (BACEI) and Beacon Economics, *The America's Cup: Economic Impacts a Match on San Francisco Bay* (2010) and the assumption that the scale of spending on this aspect of AC34 spending would be reduced from the original BACEI and Beacon Economics commensurate with the reduction in infrastructure cost estimates subsequently determined to be needed (included in the Host Agreement). The estimate of 600 jobs assumes approximately $129 million in construction costs for these temporary facilities for Event Authority operations and the competitors' facilities.

[22] Luster & Associates, *Labor Market Analysis–San Francisco Construction Industry*, October 2010.

TABLE 5.4-6
AC34 2013 EVENT MAXIMUM DAILY STAFFING

Location	Number of Staff
Operations and Competitors Facilities	
Pier 19	1,250
Pier 19½	200
Pier 23	1,250
Pier 26	300
Pier 28	200
Pier 29½	200
Piers 30-32	1,500
Pier 80	1,000
Total	*5,900*
Spectator Venues	
Piers 27-29	1,000
Crissy Field	1,000
Marina Green	500
Fort Mason	500
Alcatraz	100
Cavallo Point	50
Lives Sites	150
Total Public Sites	*3,300*
AC34 2013 TOTAL	9,200

SOURCE: AECOM, 2011.

Staffing for the spectator venues would be predominantly limited to the event days, with an additional 2 to 3 weeks of installation set-up and tear-down for the installation crews. The spectator venue jobs would generally consist of retail sales, food service, crowd and traffic management as well as security personnel. Volunteer staff are anticipated to provide a major proportion of the event's support staff needs.

Given the nature and relative short duration of these employment opportunities, the temporary "event day" only employment at spectator venues would result in no increased housing demand. Because these AC34 jobs would be very attractive as temporary second jobs or casual work suitable for existing residents of San Francisco or the rest of the Bay Area (whether employed or unemployed) and are expected to be filled by the local or bay area regional labor force.

The AC34 2013 event operations and competitor teams staffs would mostly be located within the Port facilities. These personnel would include both "on the water" support staff (e.g. for race set-up and operations) and on-land staff for both the event organizers and the competitors' teams. Employment at Port facilities would also include support contractors such as fork lift operators and caterers for the competing teams. The event operations and competitor team staffs would be employed for a longer period than would spectator venue staff described above, including before the event to prepare for the competition.

Most of the AC34 2013 event operations staff job positions would be expected to be filled by local or regional residents, as few of the job requirements require specialized skills, knowledge, or experience that cannot be provided by individuals within the local or regional labor force. Positions requiring specialized skills that could not be filled by local employees would likely be filled by professionals already associated with the Event Authority (or other sailing-related entities) who would relocate to the Bay Area temporarily.

Most of the employment at Pier 80 and Piers 30-32 shown in Table 5.4-6 represents the competing syndicates' staffs. Total employment at these two event locations would be 2,500 people. Unlike the event operations staff, a substantial proportion of the competitor team staffs would likely be non-locals who relocate temporarily to the Bay Area.

Economic analysis of the competing syndicates' spending at the previous America's Cup in Valencia and future economic projections for the AC34 identify spending on accommodations as a major cost category. Accommodations account for roughly 35 percent of the competitors' projected total spending of $219 million. (As discussed under AC34 2012 Facilities and Events above, some members of the competitor team crews and staffs may be relocating to the area as soon as possible to work on boat development, while other would be relocating to the ara to begin practice after the 2011-2012 winter season is over; in either case these team crews and staff members would be residing in the area for well over a year by the time the 2013 races are held.) By comparison, total spending for construction, the marine sector, media, and other non-hospitality services is projected to be account for approximately 61 percent of the syndicates' total spending.[23] The relative size of accommodation spending suggests that a substantial portion of the competitor team staffs would likely relocate to San Francisco for the duration of the challenge effort. For the purposes of the EIR analysis, it is conservatively assumed that up to half the competing syndicates' staffs (i.e., 1,250 projected related staff of those shown at Piers 30-32 and 80 in Table 5.4-6) would be non-local employees who temporarily relocate to the area.

Consequently, it is assumed that most of the event operations and competitors' staff positions (approximately 4,650 of the estimated 5,900 jobs) would be available to San Francisco or other Bay Area residents.

While some of the support staff positions for the competitor teams could be of substantial duration for short-term jobs, other event operations and competitors 'team jobs could be available and attractive as temporary second jobs or casual work opportunities. Given the current high level of local and regional unemployment (as noted above San Francisco alone currently has an estimated 43,200 unemployed residents), there would be more than enough capacity in the local labor force to meet AC34 employment needs. The 4,650 operations and competitor team staff jobs that would be generated by AC34 2013 events (i.e., event staffing minus half the competitors' team staff positions) would result in a short-term 11-percent reduction in the total number of unemployed San Francisco residents. Furthermore, as discussed in Section 5.4.1.1, Regional Setting, above, given the region's extensive transportation system, the potential labor force for the project could readily extend to the

[23] Spending estimates from BACEI and Beacon Economics, *The America's Cup: Economic Impacts of a Match on San Francisco Bay*, 2010.

five-county region, which has an estimated 225,000 unemployed residents. The total project-related employment of 4,650 would represent a short-term 2-percent reduction in the total number of unemployed Bay Area residents. The availability of unemployed residents in the City and region suggests that AC34 jobs could be filled by current residents of the City and 5-county region; therefore the availability of AC34 jobs would not create new demand for housing.

As discussed above, while it is assumed that up to 1,250 of the competing syndicates' staff would temporarily relocate to San Francisco for the AC 34 events, these individuals would not be expected to remain after the competition. San Francisco's estimated 31,100 available housing units would be sufficient to absorb any project-related short-term housing demands for these staff. Furthermore, some of these workers may find accommodations elsewhere within the five-county region, which would further reduce housing demand impacts on San Francisco. Consequently, the project is expected to result in a *less–than-significant* increase in demand for additional housing in San Francisco.

Mitigation: Not required

Impact PH-3: Construction and operation of the America's Cup facilities and events would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. (Less than Significant)

Currently, there are approximately 80 tenants leasing facilities for their businesses at seven major site port locations that would be used for the AC34 events. The type and location of the current tenants are summarized in Section 5.4.1.2 above. The size and types of these port tenants vary greatly. Metro Ports, with cargo terminal operations at Pier 80, is the only business operation that depends on Bay access. Other major tenants include Bauer's California Coach and Sales and Service, the San Francisco's Chinese New Year Festival and Parade organization, and Teatro Zinzanni. Several parking lot operators also use the Port properties to provide approximately 650 public parking spaces.[24] Together, these major tenants account for the greatest portion of business activity on the Port's facilities within the project sites. In addition, there are many small businesses that currently occupy Port facilities within the project sites. Most of these businesses use the pier facilities for warehouse storage or occupy small office spaces. The total employment of the existing tenants is not known but estimated to be approximately 365 workers.

Most of these businesses would have to relocate in preparation for the AC34 events.[25] Metro Ports is expected to be able to continue its operations at Pier 80 throughout the AC34 events and may benefit from additional business from the competing teams that would also use the Pier 80 facility. The tenants at the piers that would have major seismic and infrastructure improvements (e.g., Piers 30-32 and Piers 27-29) would need to move by early 2012. As addressed further below, Pier 27

[24] The number of available parking spaces varies depending on secondary ship berthing use of the Port facilities.
[25] Red's Java House also operates within the project area at Pier 30-32. This business would not be required to vacate its location, however.

is the proposed cruise terminal and plaza project site, and Piers 30-32 is a possible long-term development site following conclusion of AC34. Accordingly, current tenants at these two sites are assumed to be permanently displaced by the projects.

After completion of AC34, the pier facilities might be available again for reuse and re-tenanting. However, considering practical considerations associated with relocation, it is assumed that relocation would be permanent.

Potentially significant displacement impacts would only occur if the current businesses are forced to relocate to other locations resulting in new demand for local housing elsewhere (at the businesses' new location). The Port of San Francisco has considerable warehouse facilities and expects to be able to relocate some of the affected business at other nearby port facilities. As discussed in Section 3.4.6 of the Project Description, three of the Ports' tenants are recognized to have unique businesses recognized to have special requirements that could limit their relocation options – Teatro Zinzanni dinner theater, Bauer's California Coach Sales and Service, and San Francisco Soccer's Telegraph Field. As described in the Project Description the City and the Port are working with these tenants to identify possible relocation sites. Bauer's California Coach and Sales and Service is expected to relocate approximately 2½ miles to the south at Pier 50. Teatro Zinzanni would relocate to either a site located at the intersection of Broadway and The Embarcadero or a site about 2½ miles south of Piers 27-29 in Mission Bay, bounded by Third Street, Channel Street, Fourth Street, and the China Basin Channel. San Francisco Soccer's Telegraph Field would relocate approximately 0.2 miles south of Piers 27-29 to the Pier 17 shed at Piers 15-17.[26] Consequently, although these businesses would be displaced from the AC34 venue sites, it is expected that these three businesses having unique requirements would be adequately accommodated.

As noted above, most of the current tenants are not water-dependent businesses that require a Bay-side location, and may be expected to readily find similar warehouse or office for lease elsewhere in the City. Vacancy rates for office space in San Francisco are fairly high. The average occupancy rates for office space within the North Waterfront and Mission Bay/SOMA areas were 14 and 17 percent, respectively, at the end of 2009.[27] Although the vacancy rate had declined to 11 and 15 percent, respectively, by the end of the first quarter of 2011,[28] these rates continue to indicate substantial availability of office space in these neighborhoods. Office vacancy rates for the city business districts overall is approximately 14 percent.[29] Vacancy rates for industrial space in different parts of the City from to 2.8 percent in the South of Market/CalTrain/Ball Park and Showcase Square/ Upper Mission areas to 10.3 percent in the Mission/Potrero Hill area in the first quarter of 2011.[30] The overall vacancy rate for industrial land in San Francisco is estimated to be 5.4 percent based on

[26] The possible relocation of the San Francisco Soccer's Telegraph Field approximately 0.2 mile south to the Pier 17 shed is discussed in Section 5.11, Recreation.
[27] BT Commercial "Corporate Real Estate Letter," January 2010, available atwww.naibtcommercial.com/ agent_links/fudem_newsletter/fudem_newsletter_09_Q4.pdf.
[28] Cassidy Turley/BT Commercial, The Corporate Real Estate Letter, June 2011, available at www.naibtcommercial.com/agent_links/fudem_newsletter/fudem_newsletter_11_Q1.pdf.
[29] Ibid.
[30] Cassidy Turley, Industrial Market Snapshot, First Quarter 2011.

total inventory of 20,213,531 square feet and vacant stock of 1,081,880 square feet.[31] Therefore, given the current availability of vacant office and industrial space in the City, any displaced businesses should be able to relocate within San Francisco, and therefore, their relocation would not affect local housing demand.

While it may be unlikely that most displaced businesses would be willing to only temporarily relocate their businesses and is not assumed in the analysis, the possible re-availability of the Port facilities at Piers 19, 23, 26, and 28 could offset the impacts that the displaced occupants might have on the local commercial real estate availability.

Therefore, the local housing impacts of the temporary businesses displacement from those Port facilities would be *less than significant*.

The potential housing impacts from the permanent business displacement occurring at Piers 27–29 are discussed below under the corresponding housing analysis for the proposed Pier 27 cruise terminal and Northeast Wharf Plaza. The potential housing impacts from the permanent business displacement occurring as a result of the proposed future redevelopment of Piers 30-32 and Seawall Lot 330 are discussed below under the corresponding analysis of future long-term development impacts.

Mitigation: Not required

James R. Herman Cruise Terminal and Northeast Wharf Plaza

Impact PH-4: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not induce substantial population growth in the area, either directly (for example, by constructing new homes) or indirectly (for example, by establishing substantial new employment opportunities that attract employees to an area through extension of roads or other infrastructure). (Less than Significant)

Phase 1 Construction

The potential construction job and population growth impacts associated with the Phase 1 construction of the proposed cruise terminal are discussed previously under Impact PH-2, which evaluates the impact of the proposed demolition of the Pier 27 shed, portion of the Pier 29 shed, and Pier 27 Annex office building; and new construction of facilities to support AC34 2013 events at Piers 27-29.

Phase 2 Construction

Phase 2 of the cruise terminal construction would begin after the completion of the AC34 race events and removal of all temporary facilities at Piers 27-29 associated with AC34. The Phase 2 construction work would predominantly consist of completion of interior spaces (e.g., passenger

[31] Ibid.

terminal areas, U.S. Customs offices) and installation of equipment such as security screening facilities, as well as the exterior maritime equipment (e.g., gangways) required for the cruise terminal operations, and finishing of the GTA (e.g., groundmarkings, signage, landscaping). The Northeast Wharf Plaza would also be constructed, including hardscape and landscape improvements, and proposed ancillary structures for commercial and recreational services.

As noted above in the discussion of Impact PH-2, buildout of Phase 1 together with the AC34 and competing team additional short-term facilities would cost $129 million and produce 600 construction jobs. Assuming the same proportion of construction cost to construction employment identified in the economic analysis prepared for AC34 and discussed in PH-2, the Phase 2 construction activities (with roughly 20 percent of the construction costs of the Phase 1 and AC34 improvements addressed in PH-2) would be expected to result in approximately 110 construction jobs.

Given that the cruise terminal construction would be substantially smaller than the construction involved for the AC34 2013 event, it is expected that any potential local housing demand impact from the Phase 2 construction employment would similarly be smaller than that determined for Phase 1 and the Event Authority and competing team facility construction employment.

Given the temporary nature of the Phase 2 construction work and the region's large population of unemployed construction workers, Phase 2 construction labor needs are expected to be readily met by existing residents of San Francisco and the rest of the five-county region. The City's local hire policy, described under Section 5.4.2, Regulatory Framework, above, would further ensure that much of the demand for Phase 2 construction labor would be met by the local labor force. Consequently, the Phase 2 cruise terminal and wharf plaza construction would not create substantial demand for new housing, and the impact would be *less than significant*.

Long-Term Operations

Cruise terminal operations are projected to require a total of 220 employees (see Project Description). Only a small proportion of these jobs would represent new employment, however, since most of the positions would have been relocated from the existing Pier 35 cruise facility. Based on the sizes of the cruise ships to be served at the new, larger cruise terminal, the future visitor service capacity would increase by approximately 50 percent.[32] This suggests that approximately 70 new cruise terminal jobs may occur in the future at the new Pier 27 cruise terminal.

Development of the Northeast Wharf Plaza would create approximately 5,000 square feet of new retail space. Based on a typical employment density of 349 square feet per employee for retail/entertainment businesses,[33] an additional 14 new jobs would be associated with development of the Northeast Wharf Plaza.

[32] Currently mostly Panamax cruise ships (2,000 to 2,600 passenger loads) can berth at Pier 35. The proposed new Pier 27 cruise terminal would be able to handle larger Post Panamex cruise ships (3,000 to 4,000 passengers).

[33] City and County of San Francisco, "Transportation Impact Analysis Guidelines for Environmental Review," October 2002.

As described in the Project Description, the cruise terminal would include approximately 60,000 square feet of interior space that could be used, between cruise ship calls, for events such as conferences, public or private gatherings, or maritime-oriented events such as fleet week and diplomatic visits by foreign government vessels. It is estimated that up to 100 such shared use events could occur at the cruise terminal site per year. Jobs associated with such events would typically include event planners, caterers, entertainers, and security personnel. While the cruise terminal would provide an additional venue for special events, such events are unlikely to generate permanent new employment at the cruise terminal site, as the regular places of business of those planning or working at such events would be elsewhere (e.g., the offices of the event planners, caterers, and security services). Therefore, while the availability of this space for special events could incrementally increase employment related to event planning and production, such an increase would be minor. Even if all employment associated with this event space were (conservatively) assumed to be new employment, the number of new jobs would not be substantial. Based on the City's employment density factor for retail entertainment of 349 square feet per employee for retail/entertainment uses, and the use of the space for roughly one third of the year (based on 100 days per year), the full-time equivalent employment for the interior event space would be 58 jobs.

Therefore, the future operations of the cruise terminal and wharf plaza together (including new jobs associated with the cruise terminal event space) would likely employ up to 142 new workers. As discussed in Section 5.4.1, Setting, above, San Francisco and the rest of the five-county region are experiencing high levels of unemployment. Consequently, it is expected that all new employment associated with the cruise terminal and wharf plaza operations would readily be filled by existing San Francisco or other Bay Area residents. Therefore, there would be a *less-than-significant* direct increase in housing demand from the cruise terminal and wharf plaza operations.

Piers 27-29 and the surrounding properties are already well-served by nearby utilities and other infrastructure. Nearby, Pier 39 is a major tourist destination, and Pier 35 (and Pier 27) already serves a major population for cruise ship passenger arrivals and departures. Thus, the indirect impacts on population growth from development of the new Pier 27 cruise terminal and wharf plaza would be *less than significant*.

Mitigation: Not required

Impact PH-5: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not displace existing housing units or create demand for additional housing. (Less than Significant)

No existing housing is located at the project site. Consequently, construction and operation of the cruise Terminal and wharf plaza would not displace any existing housing units.

The project's future employment requirements could potentially result in new housing demand if the type and magnitude of the employment exceeds the available labor force. The potential for such project-related housing demand impacts is discussed below.

Phase 1 Construction

The potential housing inducement impacts associated with the Phase 1 construction employment of the proposed cruise terminal are discussed previously under Impact PH-2, which evaluates impacts of the AC34 2013 events at Piers 27-29.

Phase 2 Construction

The potential housing demand impacts associated with the Phase 2 construction of the proposed cruise terminal are discussed previously under Impacts PH-4, which evaluates the construction employment impacts of Phase 2. The analysis of construction employment for Phase 2 determined that the project's future construction labor needs would be expected to be met by existing residents of San Francisco and the rest of the five-county region due to the large population of unemployed construction workers. The City's local hire policy, described under Section 5.4.2, Regulatory Framework, above, would further ensure that much of the demand for Phase 2 construction labor would be met by the local labor force. Consequently, the increase in demand for new housing due to Phase 2 construction would represent a *less-than-significant* impact.

Long-Term Operations

As discussed in the analysis of Impact PH-4, cruise terminal and wharf plaza operations would likely employ up to 127 new workers.[34] As discussed in Section 5.4.1, Setting, above, San Francisco and the rest of the five-county region have major unemployment. Consequently, it is expected that all the new jobs associated with cruise terminal and wharf plaza operations would likely be filled by existing San Francisco or other Bay Area residents. Therefore, there would be a *less-than-significant* increase in housing demand from the cruise terminal and wharf plaza operations.

Mitigation: Not required

Impact PH-6: Construction and operation of the James R. Herman Cruise Terminal and Northeast Wharf Plaza would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. (Less than Significant)

Phase 1 Construction

The potential population displacement impacts associated with Phase 1 construction of the proposed cruise terminal are discussed previously under Impact PH-3, which evaluates the impact of the AC34 2013 events at Piers 27-29. This construction would displace the artificial turf soccer

[34] The effects on local housing demand from workers displaced by the proposed cruise terminal and wharf plaza are analyzed in Impact PH-6.

field and Teatro Zinzanni that are located in the Piers 27-29 valley, Bauer's California Coach Sales and Service, storage for the Chinese New Year Festival and Parade organization, and office tenants of the Pier 27 Annex and Beltline buildings.

Phase 2 Construction

As discussed in Section 5.4.1.2, Local Setting, numerous businesses that currently lease space at Piers 27-29 and Pier 29½ would be displaced by the construction and future redevelopment of those locations. More specifically, while Pier 27 is currently used as a secondary cruise ship berth, it also has approximately 220,000 square feet of warehouse space. Approximately 44,500 square feet of the space is used as storage by the San Francisco Chinese New Year's Festival and Parade organization and by Bauer's California Coach Sales and Service, while the rest of the pier is used as parking. As discussed in Chapter 3, Project Description, the remaining warehouse and office space within the Pier 29 shed may undergo long-term development following conclusion of AC34. If realized, the existing warehouse and office space would not be available for lease of these uses.

As shown in Table 5.4-2, approximately 54,300 square feet of warehouse and 8,700 square feet of office space are currently leased at Pier 27 (including the Pier 27 Annex and Beltline office buildings). Except for the Beltline office building which would be preserved, these facilities would be permanently lost due to redevelopment of the pier (initially for use as the AC Village and then subsequently for the cruise terminal). The current businesses located at Piers 27-29 that would be permanently displaced for development of the cruise terminal are estimated to provide approximately 80 jobs. Another 44 jobs may be expected from businesses that may re-tenant the remaining 44,000 square feet of leasable warehouse space within Pier 29 that are unused in the Pier 27 cruise terminal development.

As described in Chapter 3, Project Description, and under Impact PH-3 above, the City and the Port are working with three businesses located at Piers 27-29 to identify possible relocation sites. Teatro Zinzanni dinner theater is in discussions with the City regarding relocation to a site at the intersection of Broadway and The Embarcadero and is also considering a possible site bounded by Third, Channel, and Fourth Streets and the China Basin Channel about 2½ miles south of Piers 27-29. Bauer's California Coach Sales and Service is expected to relocate to Pier 50, and San Francisco Soccer's Telegraph Field is in discussions regarding possible relocation to the Pier 17 shed. In light of the position of San Francisco's warehouse and office vacancy rates, the real estate market has the capacity to absorb business relocations associated with the projects. It is expected that most businesses would be able to relocate and that few if any businesses would move to outside the City or close as a result of their lease termination. Therefore, the displacement of these businesses would not be expected to result in any new housing demand elsewhere, since their employees would not have to relocate outside of San Francisco. Consequently, the housing impacts resulting from business displacement for construction of the cruise terminal and wharf plaza would be *less than significant*.

Long-Term Operations

The potential population displacement impacts associated with cruise terminal and wharf plaza long-term operations would be the same as those described for Phase 2 construction of the cruise terminal and wharf plaza. Consequently, operation of the cruise terminal and wharf plaza would have a *less-than-significant* impact on population and housing.

Mitigation: Not required

5.4.3.4 Future Long-Term Development Impacts

Impact LT-PH: Future long-term development under the Host Agreement would not result in significant adverse population and housing impacts. (Less than Significant)

In addition to its provisions for the AC34 events, the Host Agreement provides the Event Authority with long-term development rights as a means of recovering its investment in infrastructure work at the Port's pier and seawall lot facilities. Subject to various contingencies, the City may agree to lease to the Event Authority Piers 30-32 for a term of 66 years and Seawall Lot 330 for a term of 75 years.

In addition, as described in Chapter 3, Project Description, the Host Agreement identified other Port facilities that could be proposed for long-term development depending on a number of factors, including minimum capital investment thresholds. The facilities identified are Piers 26, 28, 19, 23, and 29, as well as the Rincon Point and Brannan Street Wharf Open Water Basins.

Any such future development plans and uses would be required to undergo separate environmental review to comply with CEQA, when site-specific development program details are proposed. At this time, there is no specific development proposal under consideration, nor has it been decided which of the sites would be proposed for long-term development. However, **Table 5.4-7** provides a summary description of reasonable development scenarios and associated employment or population levels for each of the long-term development sites assumed for the purposes of this EIR.

For the purposes of this conceptual analysis, full buildout of the long term development under the Host Agreement is assumed to occur by 2035. For the purposes of the EIR analysis, it is conservatively assumed that all eight sites would be fully developed, and that there would be a total of 583 new residents and up to 3,071 new jobs at the Port facilities.

As discussed above, there is currently no housing at any of the Port sites, and consequently no housing or existing residents would be displaced by future development of the long term development sites. In addition, the sites and the surrounding urban area are already served with basic utilities and infrastructure. As a result, no population growth would be indirectly induced.

TABLE 5.4-7
PROJECTED FUTURE EMPLOYMENT AT POTENTIAL LONG-TERM DEVELOPMENT SITES

Site	Residential		Retail / Commercial		Office		Entertainment & Assembly / Commercial		Maritime		Total	
	Housing (sf)	Est. Residents (2.33 people / unit)	Area (sf)	Est. Jobs (349 sf / job)	Area (sf)	Est. Jobs (332 sf / job)	Area (sf)	Est. Jobs (349 sf / job)	Area (sf)	Est. Jobs	Area (sf)	Est. Jobs
Pier 26			15,000	43			60,000	172			75,000	215
Pier 28			6,700	19	76,000	229	37,000	106			119,700	354
Piers 30-32			220,000	559	370,000	1,114	20,000	29[b]			610,000	1,702
SWL 330	250,000[a]	583									250 Units	583 residents
Pier 19			6,700	19			73,000	209			79,700	228
Pier 19 1/2									50,000	35[c]	50,000	35
Pier 23			6,700	19	87,000	262	37,000	106			130,700	387
Pier 29			6,700	19			37,000	106			43,700	125
Brannan Street Wharf Open Water									Marina	12[d]		12
Rincon Point Open Water Basin									Marina	12[d]		12
Total	**250**	**583**	**261,800**	**679**	**533,000**	**1,605**	**284,000**	**728**	**50,000**	**59**	**1,108,800**	**3,071**

NOTES: Areas are shown in GSF (Gross Square Feet).

[a] Housing is assumed to be on average 1,000 sf per unit.
[b] Future employment at the facility will be reduced given its periodic use for assembly events. Analysis for a similar facility at Pier 27 projected use 91 days per year (25 percent).For the impact analysis A conservative utilization of 50% of the event facility is assumed for the purposes of projecting the future employment.
[c] Employment based on current Ferry Operations at Pier 33.
[d] Future marina employment assumed to be comparable to current employment at San Francisco Marina.

SOURCES: Port of San Francisco, 2011; Wyman, 2011. AECOM, 2010.

Future development of the long term development under the Host Agreement would result in a net population increase of 583 people. However, as shown in Table 5.4-3, this project-related housing growth would represent less than about 0.4 percent of the projected citywide population increase of 159,000 by 2035. Consequently, given the small magnitude of this future residential growth, the housing growth impact of the long-term development rights would be *less than significant*.

Redevelopment of the Port facilities would result in an increase in the area's employment. A total of 3,071 new jobs could be generated by full buildout. While current employment at the Port facilities is not known, it is estimated that approximately up 365 jobs exist within the entire project area. Of this total, the approximately 154,300 square feet of currently leased warehouse storage space at Piers 19, 23, 26, and 28 likely employ approximately 154 workers, while the nearly 17,000 square feet of office space at these piers employ approximately 49 workers. Including the additional 44 warehouse workers that could be re-tenanted to at the remaining warehouse space in Pier 29, redevelopment of the long term development under the Host Agreement might be expected to displace a total of approximately 247 workers.[35]

Future redevelopment of all long term development under the Host Agreement is estimated to produce up to 3,071 new jobs resulting in net job growth of approximately 2,824 new jobs in San Francisco. This project-related job growth would represent approximately 1.2 percent of the projected citywide job increase of 238,100 by 2035.

Consequently, future job growth associated with the long-term development rights would not significantly increase the city's population or demand for housing, and the impact would be *less than significant.*

Mitigation: Not required

5.4.3.5 Cumulative Impacts

Impact C-PH: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on population and housing. (Less than Significant)

The geographic context for analysis of potential cumulative population and housing impacts is the City and County of San Francisco. Past and present population, housing, and employment conditions are represented by the 2010 estimates presented in Section 5.4.1, Setting, above. Forecasts of reasonably foreseeable future development are based on the City and County of San Francisco's most recent Pipeline Report.[36] The Pipeline Report describes the development projects that would add residential units or commercial space, applications for which have been formally submitted to the Planning Department or the Department of Building Inspection. Pipeline

[35] Note that Piers 30-35 and the Seawall Lot site are currently vacant or used solely for parking and consequently have few jobs associated with their current uses. Neither Pier 23 Café nor Red's Java house would be displaced.
[36] San Francisco Planning Department, *San Francisco Pipeline Report Quarter 3, 2010*, November 2010.

projects encompass various stages of proposed development, from applications filed to entitlements secured, building permits issued to projects under construction.[37]

The cumulative impact analysis assesses the potential impact of the proposed cruise terminal/wharf plaza and long term development under the Host Agreement as these are the permanent components of the project that may be expected to affect the City's population and housing conditions. As discussed earlier, the AC34 event is a temporary event that would occur in 2012 and 2013. Consequently, the AC34 event would be over long before most of the future development identified in the Pipeline Report would begin construction, let alone be completed and occupied. As a result, for the purposes of the EIR analysis, the City's current population, housing, and employment conditions adequately represent the 2012 and 2013 cumulative conditions. Furthermore, since only limited interim residential and commercial development would occur, the magnitude of the development would not be great enough to change the cumulative impact findings as they apply to the project.

ABAG provides longer-term population and employment projections for San Francisco.[38] The ABAG model simulates the Bay Area regional economy and then determines regional employment and population projections for counties and cities based on a land use allocation method that considers "Smart Growth" policy assumptions and land availability data collected from local governments. Table 5.4-3 presents ABAG's estimates of total population, housing, and employment expected within San Francisco and the five-county region by 2035, when full buildout of the project is assumed to be completed.

As shown in Table 5.4-3, San Francisco's population is projected to increase by 159,000 residents by 2035, while employment is expected to increase by 238,100 jobs. According to most recent available data from the Pipeline Report for the City, 44,100 housing units are reasonably foreseeable for future construction. These units would house an estimated 103,635 new residents (based on an average 2.35 people per household) if fully built out. Combined with the project's estimated 583 new residents, the cumulative population increase would be 104,218. This would represent approximately 65.5 percent of the City's 2035 population growth. Given that the combined population impact would not exceed the City's currently planned residential growth for 2035, future residential development associated with the project would not contribute considerably to cumulative population or housing impacts.

Future buildout of the cruise terminal and long-term development sites would add new employment opportunities. As discussed in the analysis of Impact PH-4, relocation of the existing cruise terminal operations from Pier 35 to the new Pier 27 cruise terminal and the current trend for larger cruise ships would result in a net increase of approximately 70 jobs. In addition, the development of the Northeast Wharf Plaza is projected to add another 57 new jobs, resulting in a total employment increase of 127 jobs for the Pier 27 cruise terminal and wharf plaza development.

[37] However, the Pipeline Report does not include projects undergoing preliminary Planning Department review or projections based on area plan analysis.
[38] ABAG, *Projections 2009*, August 2009.

As shown in Table 5.4-7 and discussed in the analysis for Impact P-PH, full development of the long-term development sites is estimated to result in a net employment increase of 2,824 new jobs. Consequently the combined net employment from future redevelopment of the project sites would result in 2,951 new jobs.

As shown in Table 5.4-2, employment in San Francisco is expected to increase by 238,100 jobs by 2035. According to most recent available data from the Pipeline Report for the City, an estimated 15,699,000 square feet of net new commercial development is reasonably foreseeable for future construction. This development would add up to approximately 46,800 net new jobs (based on an average City employee density estimates). If fully built out, combined with the project's estimated 2,951 new jobs, the cumulative employment increase would be 49,751 jobs. This would represent approximately 20.9 percent of the City's estimated 2035 employment growth. Given that the combined population impact would not exceed the City's currently planned employment growth for 2035, future commercial development associated with the project would not contribute considerably to cumulative impacts on the City's population and housing resources.

Mitigation: Not required

5.5 Cultural and Paleontological Resources

This section provides an assessment of potential impacts of the proposed 34th America's Cup (AC34) and the James R. Herman Cruise Terminal and Northeast Wharf Plaza (Cruise Terminal) projects on cultural resources that might be present in the vicinity of the proposed projects. Mitigation measures to reduce impacts to a less-than-significant level are identified, where feasible. This section addresses the visual quality impacts on historic architectural resources with respect to the visual continuity of the resource and its overall appearance within a historic district, but the overall impact analysis of visual resources is presented in Section 5.3, Aesthetics. Impacts associated with groundborne vibration from pile driving activities during construction is analyzed in detail in Section 5.7, Noise and Vibration, which is cross-referenced in this section with respect to potential impacts on historic structures.

Cultural resources include historic architectural resources, archeological resources, paleontological resources, and human remains. Key definitions are as follows.

Historic architectural resources include buildings, structures, objects, sites, and historic districts. Military-related cultural features include earthen batteries, concrete foundations, rock alignments, water-conveyance features, and other artifact concentrations.

Archeological resources consist of prehistoric or historic-period archaeological resources. Prehistoric archeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs). Historic-period materials (not associated with military installations or activities) might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.

Paleontological resources – fossils – are the fossilized evidence of past life found in the geologic record. Fossils are preserved in sedimentary rocks, which are the most abundant rock type exposed at the surface of the earth. Despite the abundance of these rocks, and the vast numbers of organisms that have lived through time, preservation of plant or animal remains as fossils can be a rare occurrence. In many cases, fossils of animals and plants occur only in limited areas and in small numbers relative to the distribution of the living organisms they represent. In particular, fossils of vertebrates – animals with backbones – are sufficiently rare to be considered nonrenewable resources.

5.5.1 Setting

5.5.1.1 CEQA Area of Potential Effects

For the purpose of environmental review under the California Environmental Quality Act (CEQA), the definition of the CEQA Area of Potential Effects (C-APE) is modeled after that of the federal Area of Potential Effects (APE) described in the Code of Federal Regulations (36 CFR 800.16[d]).

> The C-APE is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historical resources (i.e., California Register-eligible resources), if any such properties exist. The C-APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.[1]

As described in Chapter 3, Project Description, implementation of the proposed project is subject to the Clean Water Act, Section 404 permit from the U.S. Army Corps of Engineers, and under this permit the project is also required to comply with federal environmental laws, including Section 106 of the National Historic Preservation Act, as amended. It is anticipated that the C-APE will be identical to the federal APE. The C-APE includes all geographic areas that could contain archeological, architectural, or paleontological resources that would be subject to impacts from the proposed project. This includes a below-ground vertical component in those areas that would undergo subsurface physical changes as a result of the proposed project.

The C-APE for the proposed project includes areas proposed for the AC34 event facilities and developed spectator venues, including certain piers along the San Francisco Waterfront (Pier 19, Pier 19½, Pier 23, Piers 27-29½, Pier 26, Pier 28, Piers 30-32, and Pier 80), water basins/open water areas at Piers 19-23, Northeast Wharf (Piers 23-27), Piers 29-31, Rincon Point (Piers 14-22½), Piers 26-28, and Brannan Street Wharf (Piers 32-36), and Seawall Lot 330. Other venues include Crissy Field, Marina Green, Fort Mason, Aquatic Park, Alcatraz Island, Fort Baker Pier at Cavallo Point (near Sausalito), Civic Center, Union Square, and Justin Herman Plaza.

See Chapter 3, Project Description, for a detailed outline of project components for AC34 2012 and 2013 events. The AC34 event includes locations proposed for operations, hospitality, and spectator areas throughout the San Francisco Bay waterfront. No permanent installations or construction would accommodate the AC34 event, except for the shell of the cruise ship terminal at Pier 27 and some permanent seismic improvements to various piers and bulkhead sections along certain portions of the San Francisco Embarcadero; all event installations would be removed following the event. Ground-disturbing activities would be limited to the shallow ground surface, with some minor anchoring of tents and other facilities primarily on artificial fills or bay mud deposits. No grading would occur.

Improvements proposed for certain venue facilities for the AC34 event would involve substantial construction, most of which would be temporary improvements that would be removed after the event concludes in 2013, such as in-water temporary installations including floating docks and wave attenuators. Some improvements would be permanent and would remain in place after AC34 2013 activities. Permanent improvements include dredging, seismic upgrades and repairs to piers, potential long-term development of piers and Seawall Lot 330, and construction of Pier 27 Cruise Terminal and Northeast Wharf Plaza. All of these primary event sites as well as all planned improvements to Pier 27 for the proposed cruise terminal are included in the C-APE.

[1] San Francisco Planning Department, *Archaeological Guidance Memorandum*, June 2008.

Additionally, there are other public areas where spectators might watch the AC34 races (referred to as "secondary viewing areas"). The secondary viewing areas would include other public areas along the San Francisco waterfront, other GGNRA lands (e.g., within the Presidio or Marin Headlands), the Golden Gate Bridge, the Sausalito waterfront, Angel Island, and Treasure Island/Yerba Buena Island. Many of the secondary viewing areas are partially or completely paved and developed, and no ground disturbance, facilities construction, or any temporary or permanent improvements are proposed as part of the proposed project. Any impacts to cultural resources in the secondary viewing areas would result from increased use of these areas by spectators viewing the AC 34 events; these impacts, although not necessarily less severe than those within the areas proposed for event facilities and developed spectator venues, would not be a direct consequence of the physical improvements proposed in support of the AC 34 events and the James R. Herman Cruise Terminal.

5.5.1.2 Environmental Setting

The project area is located within the northern Coast Ranges physiographic province. The C-APE includes the northern end of the San Francisco Peninsula, the southern Marin headlands, and major islands within San Francisco Bay, as well as the Central Bay itself. The Bay is thought to have formed by a down-warping of the earth's crust between the seismically active Hayward and San Andreas Faults. The topography is slightly hilly in the west-central portion of the study area in and around Fort Mason, and primarily flat with a gentle slope in other portions of the C-APE along the northern San Francisco shoreline. The portion of the C-APE within Marin County slopes moderately to the south, with secondary viewing areas on Alcatraz and Angel Island providing elevated slopes toward the Bay. Ground surface elevations of the C-APE range from approximately 20 feet below mean sea level to approximately 100 feet above mean sea level.

According to mapping compiled by the United States Geological Survey (USGS), the underlying surficial sediments in the C-APE consist of Quaternary alluvial sediments, beach/dune sands, and artificial fill, with occasional protrusions of the underlying Franciscan Complex bedrock[2]. Areas of engineered fill are present along the entire northeastern waterfront, from south of Pier 80 north and west to Crissy Field, as well as along developed portions of the Marin County coastline. Prior to leveling and filling beginning in the early-American period (c.1850), many portions of the C-APE on the peninsula were located adjacent to or in the marshlands and tidally inundated embayments that bordered the Bay.[3,4] Primary among these were Yerba Buena Cove, which was the focus of early development and encompassed an area that was eventually filled to become the Financial District and Central Embarcadero, and Mission Bay, which occupied a more southerly position along the bayfront near present-day China Basin. Most of what is now Crissy Field was

[2] United States Department of Agriculture Natural Resource Conservation Service, formerly the United States Geological Survey (USGS), *Geologic Map of the San Francisco Bay Region, W. Graymer1, B.C. Moring1, G.J. Saucedo2, C.M. Wentworth1, E.E. Brabb1, and K.L. Knudsen,* also available at http://pubs.usgs.gov/sim/2006/2918/sim2918_geolposter-hires.pdf, 2006.

[3] United States Coast Survey, *City of San Francisco & Vicinity, California.* Survey completed in February 1852; maps published 1853.

[4] United States Coast Survey, *City of San Francisco & Vicinity, California.* Topography completed in 1857-1858; hydrography completed in 1857; maps published 1859.

tidal marsh, with a strip of mostly dry land (called Strawberry Island) essentially severed from the peninsula mainland by a sizeable creek.

The following is largely adapted from Ziesing[5] and Praetzellis[6] syntheses of the geoenvironmental history of the San Francisco Peninsula that was produced for the SF-80 Bayshore Viaduct Seismic Retrofit Project, and Ziesing et al.[7] Archeological Research Design and Treatment Plan for the San Francisco Central Freeway Replacement Project.

Historically, all components of the project area have been at some point submerged within San Francisco Bay. Since the late Pleistocene, the region has undergone significant environmental changes as a result of global climate fluctuations including rising sea levels and changes in the distribution and availability of natural resources. Beginning around 11,000 years ago the colder Pleistocene geological era gave way to the warmer Holocene era. As a result, the broad inland valley that now forms San Francisco Bay became progressively inundated.

Between approximately 7,000 and 6,000 years ago, there was a decline in the rate of sea level rise worldwide, and flooding of the new Bay continued more gradually. This more gradual rising permitted the development of extensive tidal marshes during the middle Holocene. Large alluvial floodplains formed at this time as a result of accumulated material deposition from the lower reaches of streams and river channels onto existing fans and floodplains. Studies within the Bay region confirm that several late Pleistocene and early Holocene land surfaces were covered by alluvium that was generally deposited within the last 6,000 years. These deposits average 2 to 3 meters (~ 6 to 10 feet) in thickness but can exceed 10 meters (~ 33 feet) in a few areas.

Large-scale environmental changes may have influenced the distribution and abundance of various plant and animal communities. For example, the extinction of large prehistoric oyster beds that flourished in the southern portion of the Bay was related to changes in salinity and discharge levels within the Bay. These, and similar changes to the environment, would have had an effect on prehistoric human subsistence strategies.

Prior to the cutting and filling associated with the early urban development of San Francisco, large portions of the San Francisco Peninsula were covered by aeolian sand dunes. They were formed by westerly winds, which blew loose sand from Ocean Beach across the almost level, poorly vegetated landforms to the east. The dune field extended from Ocean Beach to the Bay margins. Studies conducted to the east of the Civic Center indicated that the overlying dune sands were deposited less than 2,000 years ago. It has also been suggested that fires set by humans within the last 2,000 years resulted in devegetation of the dunes and subsequent dune sand movement.

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5 Ziesing, Grace H., *Replacement of the West Approach to the San Francisco-Oakland Bay Bridge: Archaeological Research Design and Treatment Plan*. Prepared for Toll Bridge Program, CALTRANS, District 4, 2000

6 Praetzellis, Mary (editor), *SF-80 Bayshore Viaduct Seismic Retrofit Projects Report on Construction Monitoring, Geoarchaeology, and Technical and Interpretive Studies for Historical Archaeology*, unpublished report online at http://www.sonoma.edu/asc/publications/sf80bayshore/, 2004.

7 Ziesing, Grace H., Roger Olmsted, Adrian Praetzellis, Mary Praetzellis, Jack McIlroy, Jack Meyer, Elaine-Maryse Solari, Greg White, and Susan Alvarez, *The San Francisco Central Freeway Replacement Project: Archaeological Research Design and Treatment Plan, 04-SF-101 PM 4.7/5.1, in the City and County of San Francisco, California, EA No. 04-0211-291000 (S-022493)*, 1998.

5.5.1.3 Cultural Setting

Prehistoric Context

Since the late Pleistocene, when Indigenous peoples may have first arrived in the Bay Area, the region has undergone significant environmental changes (discussed above). The oldest evidence for humans in the City of San Francisco was found approximately 75 feet below the modern ground surface, during the construction of the Bay Area Rapid Transit (BART) tunnel near the Civic Center Station, at the western end of the Downtown District. A human skeleton estimated to have been buried more than 5,000 years ago was found in a clay matrix that was once part of marshlands associated with an inland creek (CA-SFR-28). The majority of known prehistoric era sites in the City of San Francisco are no more than 2,000 years old, and are found buried at depths of approximately 10 to 20 feet below ground surface. They were originally deposited within the dune sands that were blown eastward from the Pacific coast, across the peninsula. Other counties surrounding the Bay also contain evidence of occupation from the Early Holocene to the time of historic contact.

Prehistoric resources and sites that have survived to be discovered during historic times represent only a portion of the past. The early growth of San Francisco was characterized by filling of the shallow Bay waters and other low-lying lands, removal of hills of sand and rock, and the obscuring of original ground surfaces by fill, roadways, buildings and structures. Nels C. Nelson conducted a systematic survey around the perimeter of the entire San Francisco Bay between 1906 and 1909, focusing on mounds of shell partially submerged or adjacent to the Bay waters. He recorded 425 shellmounds, and yet his survey occurred well after Yerba Buena Cove had been filled and the area heavily developed and covered by the built environment[8]. It is likely that the filling of the Cove, and subsequent development obscured any prehistoric occupations that may have existed there. The majority of western San Francisco has not yet yielded archeological resources from prehistory, but it is not clear whether this is a reflection of past settlement preferences, lack of systematic archeological investigation, or a combination of changes of landscape over time that have buried or otherwise obscured resources, together with a lack of construction to depths likely to reveal any such buried resources.

Terminal Pleistocene (11,500 - 9600 B.C.)

No prehistoric sites dating from this period have as yet been discovered in the San Francisco Bay Area. The nearest Terminal Pleistocene site is the Borax Lake site in Lake County (CA-LAK-36). It is generally assumed that populations at this time were small and highly mobile. The archeological signature of such groups would be faint, geographically sparse, and easily disturbed by geological processes such as erosion, rising sea level, and burial by alluvial sediments.

[8] Nelson, Nels C., Shellmounds of the San Francisco Bay area, *University of California Publications in American Archaeology and Ethnology* 7 (4):310-356, Berkeley, 1909.

Early Holocene (9600 - 5700 B.C.)

Early Holocene human populations are known from a few Bay Area sites, such as at Los Vaqueros reservoir in Contra Costa County (CA-CCO-696) and Santa Clara Valley (CA-SCL-178). Communities from this period were semi-mobile hunter-gatherers who, in addition to easily portable tools, used some "site furniture" such as manos and milling slabs. Human burials from this period have also been investigated. There are no documented Early Holocene sites in the City of San Francisco.

Middle Holocene (5700 - 1800 B.C.)

Middle Holocene sites are more widespread in the Bay Area and are evidenced by substantial settlements, isolated burials, distinct cemeteries, milling slabs, mortars and pestles, and the earliest known fabrication and use of shell beads and other ornaments. Differences in burial treatment, such as differential distribution of shell beads and ornaments, are interpreted as evidence of possible social stratification. The expansion of San Francisco Bay's estuaries and tidal wetlands seems to have resulted in a shift toward coastal and maritime resource exploitation. San Francisco has one recognized Middle Holocene site (CA-SFR-28), the remains of a young woman found in marsh deposits 75 feet below the current ground surface.

Late Holocene (1800 B.C. – A.D. 1780)

The Late Holocene has left the strongest archeological record of prehistoric populations in the Bay Area. This period is marked by the establishment of large shellmounds such as those recorded by Nelson in the early 1900s. Artifact assemblages are characterized by bone awls (indicating the manufacture of coiled basketry), net sinkers, mortars (probably indicating greater consumption of acorns), Olivella shell beads, the appearance of the bow and arrow, and diverse beads and ornaments, such as incised bird bone tubes. There is some indication of a greater exploitation of deer, sea otter, mussels, and clams. There is a growing indication that shellmounds were planned, constructed landscapes on sites of ancestral, or at least mortuary, importance.

Archaeologists have also developed individual cultural chronological sequences tailored to the archaeology and material culture of each subregion of California. Each of these sequences is based principally on the presence of distinctive cultural traits and stratigraphic separation of deposits. A framework for the interpretation of the San Francisco Bay Area is provided by Milliken et al.,[9] who have divided human history in California into three broad periods: the Early Period, the Middle Period, and the Late Period. Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

[9] Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottfield, Donna Gillette, Vaviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson, "Punctuated Culture Change in the San Francisco Bay Area," in *Prehistoric California: Colonization, Culture, and Complexity,* edited by T.L. Jones and K.A. Klar, pp. 99–124, AltaMira Press, 2007.

The *Paleoindian Period* (13,500 to 10,000 before present [B.P.]) was characterized by big-game hunters occupying broad geographic areas. Evidence of human habitation during *Paleoindian Period* has not yet been discovered in the San Francisco Bay Area. During the *Lower Archaic* (10,000 to 5500 B.P.), geographic mobility continued from the *Paleoindian Period* and is characterized by the millingslab and handstone as well as large wide-stemmed and leaf-shaped projectile points. The first cut shell beads and the mortar and pestle are first documented in burials during the *Early Period* (*Middle Archaic*; 5500 to 2500 B.P.), indicating the beginning of a shift to sedentism. During the *Middle Period*, which includes the *Lower Middle Period* (*Initial Upper Archaic*; 2500 to 1570 B.P.), and *Upper Middle Period* (*Late Upper Archaic*; 1570 to 950 B.P.), geographic mobility may have continued, although groups began to establish longer-term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian and chert concave-base projectile points, and the occurrence of sites in a wider range of environments suggest that the economic base was more diverse. By the *Upper Middle Period*, mobility was being replaced by the development of numerous small villages. Around 1570 B.P. a "dramatic cultural disruption" occurred evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the *Initial Late Period* (*Lower Emergent*; 950 to 450 B.P.), social complexity developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.[10]

Within the past 30 years or so, the body of work on the prehistoric northern San Francisco peninsula has expanded, as archeological sites are uncovered during construction or development activities within the City. Approximately 50 prehistoric archeological sites have been documented within the northern San Francisco peninsula and Yerba Buena Island; the majority of these were within ½ mile or less from the historic margins of San Francisco Bay. The great majority of prehistoric sites are shell midden sites, which have their greatest concentrations in the South of Market (SoMa) District and the Hunters Point-Bayview-Candlestick Point-Visitacion Valley area. One of the well-researched shellmounds in San Francisco is CA-SFR-4 on Yerba Buena Island, which has demonstrated a discontinuous occupation by multiple culture groups over a span of more than 3,000 years.[11]

Prehistoric sites documented along the northern bayshore appear to be smaller occupation sites or food processing camps. At least ten prehistoric sites have been recorded along or near the northern Bay shoreline, including three sites in the Presidio (CA-SFR-6, -26, and -129) containing human burials and a sizeable shell midden. An additional four sites (CA-SFR-23, -29, -30, and -31) have been documented along the bluff bordering the Bay between Fisherman's Wharf and Fort Mason. All four sites are shell middens and generally have contained artifactual and ecofactual material (e.g., worked obsidian, *Haliotis* disk beads, fire cracked rock) and features such as hearths. Human burials were present in the Fisherman's Wharf site (CA-SFR-23) which was curio-hunted during the 1850s. The Fort Mason sites have been dated to approximately between 1350 and 1050 B.P., and are known to have substantially undisturbed deposits covered by at least several feet of sterile soils.

[10] Ibid.
[11] Morgan, Sally, and Sean Dexter, *Archaeological Analysis of CA-SFR-4/H, Yerba Buena Island*. Submitted to Caltrans District 4, 2007.

Ethnographic Context

San Francisco Peninsula

By circa 2,500 B.P., Ohlone/Costanoan peoples occupied essentially the same territory that they would until Euro-American contact.[12] This territory extended from the Carquinez Strait southward to the Sur River and from the Pacific coast eastward to the Diablo Range.[13] The San Francisco Peninsula was occupied by speakers of Ramaytush or San Francisco Costanoan, one of eight Ohlone/Costanoan Indian languages spoken in California. Costanoan is derived from the Spanish term Costanos for "coast people;" however, it does not represent a cohesive ethnic group, and is no longer widely used to refer to the people of the region, who generally prefer the name Ohlone. Instead, Costanoan is a linguistic division, grouping eight languages together due to their phonological similarities. Together with the Miwokan languages, Costanoan comprises the Utian Family of languages. In turn, the Utian Family is part of the larger Penutian Linguistic Stock.[14]

Prehistorians differ as to the precise linguistic affiliation and date of arrival of the first Penutian-speakers in the Bay Area. There is a near-universal belief today that the ancestors of the Ohlone arrived in the Bay region much earlier than formerly thought. Based on historical linguistics and archeological evidence, these populations are thought to have introduced a language, cultural patterns, and mortuary practices quite distinct from that of the earlier indigenous Hokan-speaking populations into the eastern part of the Bay region approximately 4,000 B.P. Some archaeologists have conjectured that evidence of Hokan material culture at archeological sites after 4,000 B.P. may represent either the adoption of some Hokan characteristics, or the survival of remnant Hokan-speaking communities at sites like CA-SFR-4 on Yerba Buena Island or at CA-SFR-112 in the San Francisco SoMa neighborhood, well after Penutian-speaking communities dominated the Central Bay region.

Ohlone territory was significantly affected by Spanish colonialism in California. Between 1769 and 1776, seven Spanish expeditions entered the Ohlone lands and, by the close of the eighteenth century, seven missions had been established. At the time of these early contacts approximately 10,000 Ohlone Indians existed, comprising roughly 50 politically autonomous community groups.[15]

The Ohlone, like most aboriginal Californians, possessed no larger socio-political organization than small local tribes comprised of 50-500 people.[16] Groups were generally composed of one or

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12 Moratto, Michael J., California Archaeology, Academic Press, Orlando, FL, 1984, 279.

13 Ibid., 225; Kroeber, Alfred L., *Handbook of the Indians of California.* Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C., reprinted 1976 by Dover, New York, 1925, 462.

14 Ibid.; Levy, Richard, Costanoan In *California,* edited by Robert F. Heizer, pp. 485–495, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978; Milliken, Randall, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769–1810*. Ballena Press, Menlo Park, California, 1995.

15 Cook, Sherburne F., The Conflict Between the California Indian and White Civilization, I: The Indian Versus the Spanish Mission, *Ibero-Americana* 21, Berkeley, 1943; Cook, Sherburne F., The Conflict Between the California Indian and White Civilization, II: The Physical and Demographic Reaction of the Non-mission Indian in Colonial and Provincial California, *Ibero-Americana* 22, Berkeley, 1943.

16 Kroeber, Alfred L., *Handbook of the Indians of California.* Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C., reprinted 1976 by Dover, New York, 1925, 462; Levy, Richard, Costanoan In *California,* edited by Robert F. Heizer, pp. 485–495, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

more loosely affiliated villages and associated logistical camps situated within a recognized territory. Leadership was inherited patrilineally, generally passing from father to son, although women could also hold the office.[17]

The subsistence strategy of the Ohlone peoples revolved around the procuring of wild vegetal and animal foodstuffs. Vegetal products were gathered as they became seasonally available, and then were either consumed or stored for future use. Acorns, if regularly available, were the staple plant food. If a particular group inhabited an area devoid of oaks (e.g., the coast), then seed procurement predominated.[18]

Fish and mollusks were a significant component of the diet. Salmonids (i.e., steelhead and salmon) were captured during their spawning migrations by hook and line or seine nets. Mussels and abalone were simply pried from the coastal rocks. Kroeber stated that the shellmounds situated around San Francisco Bay are the richest in California, "except perhaps the Santa Barbara Islands," attesting to the importance of mollusks to aboriginal sustenance in this vicinity. He further noted that it is probable that "the upper layers of nearly all" of the shellmounds (within Ohlone territory) "must accordingly be ascribed to the Costanoans."[19]

Marin County and Angel Island

Marin County and Angel Island are located within the ethnographic territory of the Coast Miwok.[20] The Coast Miwok language, a member of the Miwokan subfamily of the Penutian family, is divided into two dialects: Western, or Bodega, and Southern, or Marin, which in turn is subdivided into valley and coast. *Miwok* refers to the entire language family that was spoken by Coast Miwok, as well as Lake, Valley, and Sierra Miwok. Coast Miwok territory encompassed all of present-day Marin County and parts of Sonoma County, from Duncan's Point on the coast east to between the Sonoma and Napa Rivers. Each large village had a tribal leader but there does not appear to have been defined larger organization.[21]

Much of the information about post-contact Coast Miwok material cultural and lifestyles was gathered from two informants, Tom Smith (Bodega dialect) and María Copa (Marin dialect) (based on Kelly's field notes from 1931 to 1932). Settlements focused on bays and estuaries, or along perennial interior watercourses. The economy was based on fishing, hunting, and

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17 Levy, Richard, Costanoan In *California,* edited by Robert F. Heizer, pp. 485–495, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978, 487.

18 Kroeber, Alfred L., *Handbook of the Indians of California.* Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C., reprinted 1976 by Dover, New York, 1925, 467; Levy, Richard, Costanoan In *California,* edited by Robert F. Heizer, pp. 485–495, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978, 491.

19 Kroeber, Alfred L., *Handbook of the Indians of California.* Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C., reprinted 1976 by Dover, New York, 1925, 466.

20 Barrett, Samuel A., The Ethno-Geography of the Pomo and Neighboring Indians, *University of California Publications in American Archaeology and Ethnology* Vol. 6, No. 1, 1908; Kelly, Isabel, Coast Miwok. In *California*, edited by Robert F. Heizer, pp.414–425. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978; Kroeber, Alfred L., *Handbook of the Indians of California.* Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C., reprinted 1976 by Dover, New York, 1925.

21 Kelly, Isabel, Coast Miwok. In *California*, edited by Robert F. Heizer, pp.414–425. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978, 414.

gathering, revolving around a seasonal cycle during which people traveled throughout their territory to make use of resources as they became available. Marine foods, including kelp, clams, crabs, and especially fish, were a year-round staple. Acorns were gathered in season and stored for use throughout the year. Tobacco was generously used by most men.

One construction style of dwellings used were conical in shape and grass-covered. Each large village had a circular, dug-out sweathouse. Basketry techniques included both coiled and twined forms often with the use of multicolored motifs and patterns. Beginning as early as A.D. 1600 the Coast Miwok began to produce and use clamshell disk beads as money.[22] The obsidian trading network was established in the Early Holocene period. Coast Miwok had a powerful sense for the value of property. Some Coast Miwok villages defended their territory against trespassers. Although land was not considered privately owned certain food-producing trees as well as hunting, fishing, and clam-digging locations were.[23]

Members of the *Huimen* Coast Miwok tribal group, based in Sausalito, were the first Marin peninsula native people to go to the Mission San Francisco de Asís, beginning in 1783.[24] By the mid-1800s Spanish missionization, diseases, raids by Mexican slave traders, and dense immigrant settlement had disrupted Coast Miwok culture, dramatically reducing the population, and displacing the native people from their villages and land-based resources. By the time of California's initial integration into the United States in the late 1840s, the Coast Miwok population had dwindled from approximately 2,000 individuals to one-eighth of its size before European contact.[25]

In 1920 the Bureau of Indian Affairs purchased a 15.45-acre tract of land in Graton for the Marshall, Bodega, Tomales, and Sebastopol Indians. This land was put into a federal trust and these neighboring peoples that included both Coast Miwok and Southern Pomo were consolidated into one recognized group called the Graton Rancheria. In 1958 the U.S. government enacted the Rancheria Act of 1958, transferring tribal property into private ownership. Forty-four Rancherias in California were affected, including the Graton Rancheria.

Throughout the remaining century, tribal members continued to protect their cultural heritage and identity despite being essentially landless. On December 27, 2000 President Clinton signed into law the legislation restoring federal recognition to the Federated Indians of Graton Rancheria. The tribe currently has approximately 1,100 members.

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22 Stewart, Suzanne, and Adrian Praetzellis (editors), *Archaeological Research Issues for the Point Reyes National Seashore Golden Gate National Recreation Area for Geoarchaeology Indigenous Archaeology, Historical Archaeology, Maritime Archaeology,* Anthropological Studies Center, Sonoma State University, Rohnert Park, California, 2003, 177.

23 Kelly, Isabel, Coast Miwok. In *California*, edited by Robert F. Heizer, pp.414–425. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978, 418.

24 National Park Service, Cultural Landscape Report for Fort Baker Golden Gate National Recreation Area, Fort Baker, Barry, and Cronkhite Historic District, Marin County, California, NPS Pacific West Region, Seattle and Oakland Offices, and GGNRA. 2005.

25 Kelly, Isabel, Coast Miwok. In *California*, edited by Robert F. Heizer, pp.414–425. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978, 414.

Spanish and Mexican Periods 1769-1848

As a result of the Cabrillo expedition of 1542–1543, the southbound passage of the Manila Galleon along the coast after 1565, and subsequent voyages of exploration by Cermmenho in 1597 and Vizcaino in 1602, the California coastline was familiar to navigators by the end of the sixteenth century.[26] Conversely, the interior remained unknown until the eighteenth century. Initial European exploration of the project vicinity began in 1769 and lasted until 1810. During this period, a number of Spanish expeditions penetrated the territory occupied by the Costanoan peoples. Between 1769 and 1776, forays led by Portola, Ortega, Fages, Fages and Crespi, Anza (two expeditions), Rivera, and Moraga were carried out. Favorable reports led to the founding of seven missions in the region between 1770 and 1797.

In the spring of 1776, the site of San Francisco was chosen by Juan Batista Anza for the establishment of a mission and military post. Later that same year, the Mission San Francisco de Asís (also known as Mission Dolores) and Presidio de San Francisco were officially dedicated and Jose Joaquin Moraga (Anza's lieutenant) took formal possession in the name of King Carlos III.[27]

Several local tribes of the San Francisco bayshore moved to Mission Dolores in their entirety. The Yelamu local tribe, no more than 160 individuals, held the tip of the San Francisco Peninsula north of San Bruno Mountain. The greater part of the Peninsula lands currently managed by the GGNRA, including the Presidio, Fort Funston, Fort Mason, Fort Miley, Lands End, Ocean Beach, and Alcatraz Island, were within their territory. Most Yelamu people were baptized between 1777 and 1784 at Mission Dolores.[28]

The Spanish annexation and colonization of Alta California, as manifested in the religious-military mission system, produced profound changes in the cultures of the indigenous population. The missions resettled and concentrated the aboriginal hunter-gatherer population into agricultural communities. The concentration of population, coupled with the indigenous people's lack of immunity to European diseases, caused the tribes to be decimated by common diseases which were generally not fatal to Europeans. It has been estimated that the Ohlone population declined from 10,000 or more in 1770 to less than 2,000 in 1832.[29]

Jurisdiction over Alta California was established by Mexico in April of 1822. During the Mexican Period (1822–1848), control over this remote area by the central and local Mexican authorities was never strong.

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[26] Donley, Michael W., Stuart Allan, Patricia Caro and Clyde P. Patton, *Atlas of California*, Pacific Book Center, Culver City, California, 1979.

[27] Hoover, Mildred B., Hero E. Rensch, and Ethal G. Rensch. *Historic Spots in California*. Fourth Edition Revised by Douglas E. Kyle. Stanford University Press. Stanford, California, 1990, 331-334.

[28] Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottfield, Donna Gillette, Vaviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson, Punctuated Culture Change in the San Francisco Bay Area, In *Prehistoric California: Colonization, Culture, and Complexity,* edited by T.L. Jones and K.A. Klar, pp. 99–124, AltaMira Press, 2007.

[29] Levy, Richard, Costanoan In *California,* edited by Robert F. Heizer, pp. 485–495, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978, 486.

A major factor leading to the disintegration of Mexican control of California was pressure from the United States. Initial contacts were made by private citizens, such as the November 1826 visit by Jedediah Smith to the San Gabriel Mission and the 1832 stop by Ewing Young at Los Angeles. These and other sojourners brought the news of California back to the United States, helping trigger the immigration of U.S. citizens into California. The continued friction between Mexico and the United States ultimately led to the Mexican War of 1846–1847. On July 9, 1846, a crew from the sloop-of-war USS *Portsmouth* came ashore and raised the first American flag over San Francisco.[30] However, as Mexico had ceased stationing regular troops in San Francisco following secularization,[31] the raising of the flag was a symbolic gesture rather than a result of heroic exuberance.

American Period, 1848-Present

California became part of the United States as a consequence of the U.S. victory over Mexico in the war. The territory was formally ceded in the treaty of Guadalupe Hidalgo in 1848, and was admitted as a state in 1850.[32]

Prior to the discovery of gold at Sutter's Mill on January 24, 1848, development in San Francisco consisted of the Spanish/Mexican facilities (i.e., the Presidio and Mission) and a small settlement known as Yerba Buena situated on the shores of the cove by the same name. The inhabitants of Yerba Buena were predominantly non-Spanish, English-speaking immigrants (e.g., U.S. or British citizens). Sometime before the gold rush, the inhabitants of Yerba Buena officially changed the name of their settlement to San Francisco. Following the discovery of gold, San Francisco transformed rather quickly from an isolated hamlet into a bustling center of commerce.[33] According to historic accounts cited by Hupman and Chavez (1995:56), after the discovery of gold, the population of San Francisco grew from 375 people in 1847 to 2,000 by February 1849, and by the end of 1849, there may have been as many as 20,000 people living in the City.

America's Cup Primary Event Sites

The following provides a brief history of each of the project sites located along the San Francisco Bay that would be directly affected by the proposed project, and are within the C-APE. Generally moving counterclockwise from the most southerly project location to the most northerly, these areas include the Port of San Francisco, Aquatic Park, Fort Mason, Marina Green, Crissy Field, Fort Baker Pier at Cavallo Point, and Alcatraz. Also included in this section are brief histories of the Civic Center, Union Square, and Justin Herman Plaza (AC 34 Live Sites).

***Brief History of the Port of San Francisco*.** The following summary of the history of the San Francisco waterfront was prepared in 2006 by Page and Turnbull for the Exploratorium Relocation Project Environmental Impact Report and provides a general overview of the history

[30] Beck, Warren A. and Ynez D. Haase, *Historical Atlas of California*. University of Oklahoma Press, 1974, 47; Hoover, Mildred B., Hero E. Rensch, and Ethal G. Rensch. *Historic Spots in California*. Fourth Edition Revised by Douglas E. Kyle. Stanford University Press. Stanford, California, 1990, 336.
[31] Hoover, Mildred B., Hero E. Rensch, and Ethal G. Rensch. *Historic Spots in California*. Fourth Edition Revised by Douglas E. Kyle. Stanford University Press. Stanford, California, 1990, 331.
[32] Beck, Warren A. and Ynez D. Haase, *Historical Atlas of California*. University of Oklahoma Press, 1974.
[33] Hoover, Mildred B., Hero E. Rensch, and Ethal G. Rensch. *Historic Spots in California*. Fourth Edition Revised by Douglas E. Kyle. Stanford University Press. Stanford, California, 1990, 334-336; Kemble 1957:7

of the waterfront, which is helpful in understanding the historic context and significance of the Port of San Francisco Embarcadero Historic District (henceforth called the Embarcadero Historic District), the related resources, and Port-owned properties that are proposed to accommodate the AC34 and Cruise Terminal projects.[34]

The 1849 Gold Rush sparked the development of a large-scale port in San Francisco. Until 1863, the City of San Francisco managed the Port, and private interests built the piers and facilities that handled 83 percent of the cargo shipped out of the Pacific coast. In 1863, the State assumed control and created the Board of State Harbor Commissioners (BSHC) to bring consistency to the administration, development, and maintenance of the Port. The BSHC followed a policy of financing Port improvements through Port revenue, which supported incremental development. Permanent development of the Port began in 1878 with the construction of the "new" seawall along the waterfront, which was completed in 1915 and resulted in the gently curving form of the waterfront. The "new" seawall replaced the zig zag pattern "old" seawall which was constructed between 1867 and 1869. By 1868, the Board was politically controlled by the Southern Pacific Railroad (SPRR), which appointed political supporters as harbor employees. In 1910, Hiram Johnson was elected governor of California and set to the task of replacing the SPRR appointees to create a more independent BSHC.

Increased shipping activity and the shift towards larger ships and mechanized cargo handling spurred plans for modernization in 1900. The implementation of these plans began in 1908. The impending opening of the Panama Canal in 1914 added urgency to the improvements program. The BSHC was determined that the Port of San Francisco would benefit from the "explosion assured by the development of trade on the Pacific." To increase efficiency, an effort was made to organize the location of shipping companies by type of business, with inland service housed in piers next to the Ferry Building and Market Street and coastal, inter-coastal, and foreign service housed in more distant piers. The Panama Canal did increase shipping activity as anticipated, but its effects were curtailed by the beginning of World War I. The war limited commercial use of the Panama Canal and led to decreased shipping activity, as many steamships were drafted for military-type trade.

Following a post-1906 Earthquake and Fire policy of reconstructing piers with materials more resistant to fire, new piers were constructed with concrete. The San Francisco Belt Railroad served the waterfront piers from the mainline connections to the south, especially Pier 36, which accommodated freight rail car ferry functions, allowing cargo to be transported on rail cars loaded on and off ferries that traveled to and from transcontinental rail service located in the East Bay. Around 1914, the BSHC began to make provisions for automobile and truck traffic along the waterfront and Embarcadero. New pier aprons were designed to support heavier loads and the Embarcadero was paved with asphalt.

[34] The Exploratorium Relocation Project Environmental Impact Report, Case File No. 2006.1073E, is available for public review at the City and County of San Francisco Planning Department, 1650 Mission Street, Suite 400.

The Port rebounded in the 1920s; Port staff grew and in 1928, over 41 million tons of cargo was processed. San Francisco was unusual as a break-bulk port that handled mostly general cargo. Bulk commodities like grain and oil were not dominant commodities of Port trade.

The 1934 Big Strike, an 83-day Pacific Coast maritime strike over hiring and working conditions, marked a critical labor juncture at the Port. The Big Strike involved 12,000 longshoremen and many other maritime unions, the deployment of the National Guard, and a three-day, 100,000-person general strike in San Francisco and the West Coast. After the Big Strike, President Franklin Roosevelt intervened and appointed an arbitration board that ruled favorably for the longshoremen's unions. The Big Strike contributed to the labor-friendly tone of the National Labor Relations Act of 1935 and, more locally, the revival and extension of unionism in San Francisco and the Pacific Coast.

The 1940s were dominated by wartime activity. Before World War II, more than 50 major steamship companies operated in the Port. During the war, the Port was largely occupied by the military as the largest part of the San Francisco Port of Embarkation. The Port of Embarkation, which included other Bay Area ports as well as San Francisco, was the second largest military port in the U.S. during World War II, eventually moving a total of 1.65 million people and 23.6 million tons of supplies. Shipping activity declined sharply at the Port after the war ended in 1946.

In the post-war period of the 1950s, revenue shortfalls for three consecutive years slowed improvement efforts as other west coast ports—especially Oakland—were modernizing facilities and intensifying competition for Pacific coast shipping. These conditions made it clear that the structure of the BSHC, formed one hundred years earlier, was no longer effective. In 1965, the three-member Board was increased to the five-member San Francisco Port Authority. In 1969, State control over the Port was transferred to the San Francisco Port Commission, a new City agency.

As late as the mid-1960s, nearly 12 percent of San Francisco's workforce, about 23,000 people, had jobs directly or indirectly associated with the Port. The rapid adoption of containerized shipping in the late 1960s doubled the tonnage handled by Bay Area ports. However, the chief beneficiaries were container-friendly ports like Oakland. San Francisco struggled to compete, and many piers were left vacant, demolished or burned down, or reused for other types of maritime business. Tourist attractions such as Pier 39 were constructed beginning in the late 1970s. The Embarcadero Freeway, built in the 1950s, was demolished after the 1989 Loma Prieta earthquake and replaced by an urban boulevard with streetcars, limited traffic, and a waterside pedestrian promenade. Development along the waterfront has continued to the present and includes a mix of maritime, recreation, commercial, light industrial, storage and other uses. Herb Caen Way (i.e., Embarcadero Promenade) is a public promenade that provides pedestrian and bicycle access along the waterfront.

In 1997 the Port adopted a Waterfront Land Use Plan that established local land use policies for the San Francisco waterfront. In 2000 the Port and the San Francisco Bay Conservation and Development Commission (BCDC) embarked on a planning process to amend the BCDC San Francisco Bay Special Area Plan and align the land use policies called for in the respective

plans of the waterfront. This process resulted in a negotiated agreement that addressed fill removal, creation of new public open spaces and public access and required the Port to nominate the Northeastern waterfront as a historic district for listing in the National Register of Historic Places. The Port worked with historic preservation, environmental stakeholders, Port tenants and BCDC for approximately six years to prepare a National Register nomination. In 2006 the National Park Service listed the Embarcadero Historic District in the National Register of Historic Places. The contributing resources (the seawall, bulkhead wharf, piers and waterfront buildings within the Embarcadero Historic District) are discussed in Section 5.5.1.6, Research Methods and Results, below.

Brief History of the Northeast Waterfront Historic District. The following summary of Northeast Waterfront Historic District's history is condensed from the statement of significance contained within Article 10 of the San Francisco Municipal Code.[35] The Northeast Waterfront District contains commercial warehouse buildings from nearly every decade of San Francisco's history. The district is bounded by the Embarcadero on the east, Sansome Street on the west, Broadway on the south, and Union Street on the north. The area reflects the waterfront storage and maritime activities which, until recently, were an important aspect of San Francisco business history. These buildings range in age from the early clipper ship warehouses of Scotsman Daniel Gibb in the 1850's to the properties owned by the General Engineering and Drydock Co., a company crucial to the shipbuilding effort that made San Francisco Bay the major Pacific maritime support facility during World War II. The area is architecturally significant as a representation of warehouse and industrial buildings from the brick structures of the Gold Rush era to the reinforced concrete buildings introduced after the turn of the century. Some of the present buildings date from well before the turn of the century, though they were rebuilt after the 1906 fire. Since the 1970s, these warehouse buildings have been rehabilitated and converted to primarily office use. The buildings generally range from four to six stories in height, constructed of brick masonry and reinforced concrete, which convey a solid and industrial form and presence, with simple yet classical and distinctive architectural features incorporated into window, entrance and cornice treatments.

Brief History of Aquatic Park. The following summary of Aquatic Park's history is largely condensed from the Cultural Landscape Report completed by NPS in 2010.[36]

Although no prehistoric archeological sites have been excavated within Aquatic Park, nearby sites in Fort Mason demonstrate that the original shoreline of the Bay was used by Ohlone groups for many years. One reported site, CA-SFR-23, is believed to exist in the vicinity of the intersection of Hyde and Beach Streets, most likely buried underneath several meters of imported fill. No specific Spanish or Mexican-Period uses of this area are known. Prior to the Gold Rush, a portion of the APE was completely submerged beneath the waters of San Francisco Bay, since the original shoreline was south of Jefferson Street. The two most prominent features along the shore were

[35] City and County of San Francisco, San Francisco Municipal Code, Article 10, *Northeast Waterfront Historic District*, Ord. 171-83, Approved April 8, 1983.
[36] National Park Service, Cultural Landscape Report, Aquatic Park. San Francisco Maritime National Historical Park, NPS Pacific West Region, 2010.

Tonquin Point, a tall, sandy dune jutting out into the bay roughly along the line of present-day Hyde Street, and the natural headland at Black Point (now Fort Mason). Between the two was a large curving cove, portions of which were later developed as Aquatic Park. To the east of Black Point, the water depths were considered too shallow for general shipping, but the location did prove attractive for commercial enterprises requiring large volumes of water. Beginning in the 1850s, several businesses located industrial facilities here, notably the Selby Lead and Smelting Company, and the Pioneer Woolen Mills—later purchased by D. Ghirardelli & Company and converted for use as a chocolate factory.

Several of the industries along the northern shoreline developed their own private wharves for shipping. The bulkhead wharf built by the Selby Lead & Smelting Company was continually expanded and refurbished by dumping post-smelting wastes (slag) into the Bay. Andrew Hallidie, the designer of suspension bridges and later of the cable car, established the *California Wire Works* in 1883. The company designed and manufactured heavy-duty metal cable for large-scale or innovative engineering projects. The plant occupied the entire block bounded by Mason, North Point, Powell, and Bay Streets. It is unclear if the wire works depended on access to coastal or bay transport but an unusually broad wharf adjoined the company yard opposite Mason Street until at least the 1890s. Many of the industries that located along the north shoreline depended on Chinese labor, and tenements sprang up close to these industries to house the workers.[37]

It was during this time that local businessman Henry Meiggs attempted to transform North Beach, the cove between Tonquin Point and North Point, into a maritime port superior to that on Yerba Buena Cove. To this end, Meiggs heavily invested in the construction of a substantial 1,600-foot long pile-and-platform timber wharf (Meiggs' Wharf) projecting from the shoreline along Francisco Street between today's Powell and Mason Streets. Meiggs' principal purpose for construction of the wharf was for lumber shipments from Meiggs' timber interests along the northern coast. Construction of Meiggs' Wharf was completed in 1853 and remained operative at least until the 1870s or early 1880s. Meiggs' great maritime plan for North Beach was never realized, since Meiggs fled to Chile in 1855 to avoid exposure for embezzlement of city funds.

Also during the Gold Rush period, the *Tonquin*, sailing from New York, was wrecked on Whaleman's Reef (subsequently named "Tonquin Shoal") on November 19, 1849. The shipwreck location is within the vicinity of the C-APE.

Development intensified in the early years of the 20th century. In 1900, San Francisco's fishing fleet was relocated from the Union Street Wharf near downtown to its present location. This development coincided with widespread filling activities in the Bay, especially after the 1906 Earthquake and Fire, when thousands of truckloads of rubble and debris were hauled over from Chinatown and North Beach and used to fill areas near Fisherman's Wharf and Aquatic Park.

[37] City and County of San Francisco Planning Department, *Fisherman's Wharf Public Realm Plan Preliminary Mitigated Negative Declaration*. April 20, 2011.

For the first half of the 20th century, the area east of Fort Mason continued to be dominated by fishing and industrial production. In the 1930s, Fisherman's Wharf was divided into three basins, followed closely by the development of the Aquatic Park Bathhouse and associated facilities. Municipal Pier was the first of the proposed Aquatic Park facilities to be completed, with construction beginning in 1931. The Pier was constructed using small amounts of City funds, State Emergency Relief Administration labor, and privately donated or salvaged equipment and materials. After construction of the Pier was completed, work on the rest of Aquatic Park came to a halt for lack of funds until the creation of the Works Progress Administration (WPA) in 1935. Aquatic Park was one of the largest WPA projects, and was largely completed between 1936 and 1939. Aquatic Park, a formal designed landscape, encompassed several buildings and structures including: the Bathhouse with flanking amphitheater structures, two speaker towers, Convenience Stations (one with a concessions stand), a Seawall, the Promenade, and Municipal Pier. The most notable building on the site, the Bathhouse, is a Streamline Moderne masterpiece with highly significant interior spaces. This building marked a long tradition of water recreation in the area. At least as early as the 1880s, bathers congregated in the cove to enjoy its warm waters—the result of heated industrial discharge from nearby facilities such as the Pioneer Woolen Mills. Aquatic Park eventually became known for several accomplishments, including: the first formal Senior Citizens Center; its many WPA projects which incorporated significant architectural styling and artwork in the various buildings and structures; its extensive and noteworthy social work programs developed in California during the Depression; the headquarters of the Anti- Aircraft Defense of the Pacific Coast; and as a locally-significant example of community planning. In the late 1940s, the military uses of Aquatic Park departed for a nearby site, thus relegating Aquatic Park to its recreational uses. In 1951 the Aquatic Park Bathhouse Building, already home to the San Francisco Senior Center, became home to the San Francisco Maritime Museum.[38]

The Hyde Street ferry terminal became the site of a maritime state park in the late 1950s, and then, along with Aquatic Park, became the heart of the San Francisco Maritime National Historical Park (NHP) in 1988. The resources of San Francisco Maritime NHP include six National Historic Landmark vessels: 1886 square-rigger *Balclutha*, 1890 steam ferryboat *Eureka*, 1891 scow schooner *Alma*, 1895 schooner *C.A. Thayer*, 1907 steam tug *Hercules* and 1915 steam schooner *Wapama*. These vessels, along with several historic smaller craft, dock along the Hyde Street Pier at the eastern end of the San Francisco Maritime NHP. The Aquatic Park National Historic Landmark District encompasses much of the San Francisco Maritime NHP, including 10 acres of land with three buildings and five contributing structures. This same geographical area is also listed as a National Register Historic District, with the same number of contributing elements as the National Landmark District described above.

[38] National Park Service, Cultural Landscape Report, Aquatic Park, San Francisco Maritime National Historical Park, NPS Pacific West Region, 2010.

Brief History of Fort Mason. The following discussion of Fort Mason is generally condensed from the GGNRA's Cultural Landscape Report, prepared in 2004 by NPS Pacific West Region and the Olmsted Center for Landscape Preservation.[39]

At least three Late Holocene archeological sites have been identified within Fort Mason (CA-SFR-29, -30, and -31). Investigations at these sites show that indigenous inhabitants were drawn to the bluffs overlooking the natural shoreline, using the area as a base for food procurement/processing and possibly seasonal or intermittent habitation. The Fort Mason area served as a strategic Spanish (1794–1821), then Mexican (1821–1848) military post until California was ceded to the United States in 1848. Black Point was recognized early on for its military potential, and was reserved for use of the military almost immediately after California achieved statehood. Feeling threatened by the settlement boom of the Gold Rush, the U.S. government issued an executive order in 1850, setting aside 10,000 acres of land for military use on the San Francisco peninsula. After nearly 20 years of inconsistent military use of the original installation, the size was dramatically reduced to its current state. Civil War-era gun batteries were constructed over earlier Spanish fortifications in the northern point of the upland plateau. Honoring Colonel Richard Barnes Mason, the post was renamed "Fort Mason" in 1882.[40]

Following 1850, Fort Mason undertook various military and civil duties over the next eighty years. In the 1890s, upgrading to new weapon technologies, the military installed a series of high-powered artillery (Battery Burnham) at the mouth of the Bay. However, Fort Mason's more easterly position rendered it less important for this type of defense and its posts were some of the first to be abandoned. After the 1906 earthquake, the grounds of Fort Mason were used to temporarily house some of the city's displaced inhabitants. Nearly ten years later, these same grounds were adopted by the Panama Pacific International Exposition, which left behind various components of site infrastructure, including an electric streetcar line. World War I and World War II saw some military activity at the Fort; however, with the advent of new transportation technologies, the military importance of the Fort waned. In 1972, Fort Mason was transferred to the National Park Service (NPS), and continues to be run by the NPS today.[41]

Fort Mason includes a National Register Historic District and a National Historic Landmark District (San Francisco Port of Embarkation, U.S. Army Historic Landmark District). The National Register District encompasses 68.5 acres of Upper and Lower Fort Mason, including 45 buildings, ten structures, and two objects as contributing elements. The San Francisco Port of Embarkation, U.S. Army Historic Landmark District is a discontiguous district that encompasses 21 acres within Upper and Lower Fort Mason, including 13 contributing buildings and five contributing structures.

[39] National Park Service, Cultural Landscape Report for Fort Mason Golden Gate National Recreation Area, Volume I: Site History, Existing Conditions, and Analysis, NPS Pacific West Region and Olmsted Center for Landscape Preservation, 2004.
[40] Ibid.
[41] Ibid.

Brief History of the Marina Green. The Marina Green is bounded by Marina Boulevard on the south, Marina Green Drive and the San Francisco Bay on the north, Scott Street on the west, and Webster Street on the east. The setting for the Marina Green has been summarized from the San Francisco Marina Renovation Project Historic Resource Evaluation Report.[42]

Historically, the Marina Green was within the irregular, marshy shoreline margins of San Francisco Bay. The current land mass occupied by the Marina Green was created by artificial fill dating from 1895 to 1906, and then by hydraulic fill deposited from 1912 to 1917. To retain the artificial fill, a seawall was built by dumping rock from a pile-supported trestle along the approximately 1,900-foot northern border of the future Marina Green. This manmade land mass formed the northern portion of the 635-acre setting for the 1915 Panama-Pacific International Exposition. Portions of this seawall exist today, while other parts were expanded later to form what is referred to as the Fair's Seawall. Constructed for the fair, the present-day Marina Green was called the "North Gardens," and portions of what is now the inner basin of the West Harbor was called the "Boat Harbor," as shown on Exposition maps from 1915. The maps also show ferry slips at the outer edge of Gashouse Cove, the future site of the East Harbor. The area inland from the cove was occupied by the San Francisco Gas Light Company and was excluded from the fairgrounds. After the fair, the exhibition halls were torn down (with the exception of the Palace of Fine Arts), and the area south of Marina Boulevard was subdivided for residential construction, which continued into the 1920s and 1930s. The Marina Green became a public park after a brief stint as a landing strip for transcontinental airmail service in 1920 and 1921. In 1925, the Board of Park Commissioners approved plans to enlarge the area of the West Harbor, then called the "Yacht Harbor," including an outer breakwater extending from the St. Francis Spit, an extended seawall, a new riprap seawall on the inside harbor, and harbor dredging. The San Francisco Yacht Club built its clubhouse on the St. Francis Spit in 1927, and the construction of improvements in this area, including restrooms and a concession stand, continued until 1928. In 1931, construction of a miniature stone lighthouse to the east of the yacht club was completed to mark the former entrance of the harbor.

Despite the Depression, San Francisco witnessed a growing interest in boating during the early 1930s. With local groups encouraging the Park Commissioners and with the creation of the federal WPA in April 1935, the Board planned to expand the West Harbor (yacht harbor) yet again, including the construction of new seawall along the northern edge of Marina Boulevard, between Scott and Baker Streets. In February 1936, the WPA approved San Francisco's proposal to expand and replace portions of the Fair's Seawall along the Marina Green, construct a Harbor Office, construct an underground "convenience station" (i.e., restroom/changing room), and pave the driveways that surround the Marina Green. All WPA improvements were completed by 1938. In 1943, the Department of the Navy built the Degaussing Station adjacent to the Marina Green.

During the 1950s, the San Francisco Recreation and Parks Department completed the first approved master plan for the development and enlargement of the yacht harbor and saw the construction to completion with financial assistance from a 1955 bond issue. In 1958, construction was started to provide a new 100-foot-wide entrance channel for the (west) harbor by cutting into the

42 Carey & Company, Inc., *San Francisco Marina and Yacht Harbor Historic Resource Evaluation Report*, 2004.

embankment at the foot of Scott Street and building a rubble-filled, 1,100-foot-long breakwater (now called the outer jetty or north jetty) extending east from the former harbor entrance.

In 1963, the state legislature approved the conveyance of three parcels of state-owned land to the City and County of San Francisco, generally encompassing the land and water north of Marina Boulevard from Laguna to Lyon Streets, including the entire West Harbor, East Harbor, and the Marina Green. Between 1964 and 1966, the San Francisco Recreation and Park Department completed an extensive enlargement of the marina by constructing a new harbor at Gashouse Cove, now called the East Harbor, and by carrying out major repairs and improvements to the seawall and piers at the West Harbor. Construction was completed by March 1966, at which time the number of docking berths were more than doubled. The 1970s saw the addition of the East Harbor restrooms, a par course, and public-access improvements. In the mid-1980s, the Degaussing Station was reconstructed by the Navy in the same location and was later decommissioned. The wave organ, an art installation at the end of the outer jetty, was constructed in 1986 by the Exploratorium.

The Marina Seawall, Marina Green, and the Concessionaire Stand have been recommended eligible for listing in the NRHP and the CRHR.[43] The West Harbor Lighthouse also possesses historic significance and has been recommended eligible for listing in the CRHR and for designation as a City Landmark.[44]

Brief History of Crissy Field. The following historic background is condensed from Stephen A. Haller's 1994 historic study of Crissy Field.[45]

Originally a brackish tidal marsh, the area that is now Crissy Field was once used by local Ohlone inhabitants as an important locale for gathering many types of seafood, tule reeds used in construction of boats, and other key resources. In the middle of the marsh was a stabilized sand dune called Strawberry Island, where a large midden site (CA-SFR-129) has been investigated. The early Spanish and Mexican colonists generally avoided the marshes, so it was not until the American Period that any permanent settlement or development was attempted.[46]

As part of the larger Presidio of San Francisco, a road was completed through the area sometime between 1863 and 1865, and the U.S. Army began to develop the area with wharves and roads by 1870. This development continued with the construction of several warehouses and corrals, but the major redesign and development of the area began with the infilling of the tidal marsh in preparation for the 1915 San Francisco Panama Pacific International Exposition. Suction dredges pulled sand and mud from the floor of San Francisco Bay, depositing it along the shoreline to create a more stable base for the Exposition's facilities.

43 Ibid.
44 Ibid.
45 Haller, Stephen A., *The Last Word in Airfields: A Special History Study of Crissy Field, Presidio of San Francisco, California,* NPS GGNRA, 1994.
46 Rothenburg, David, *Writing on Water*, MIT Press, 2002, 28.

Following the Exposition, the U.S. Army continued to use the now-level field, this time for its air operations. In 1919, a Board of Officers determined that the site met all requirements for a permanent air field. The Crissy Field Air Service Coast Defense Air Station was completed in 1921, and continued to be expanded until 1928. The first paving of the formerly grass runways was completed in 1934. Crissy Field was the only military airfield on the west coast specifically built as a coast defense air station, and it was the only Army air base in the eight western states which comprised the Ninth Corps Area that was active on a continuous basis from 1919–1936. Many long-distance flight records were set by pilots departing from or arriving at Crissy Field during this important time in the expansion and technological advancements in aviation.

After the Air Corps closed Crissy Field in 1936, the 30th U.S. Infantry Regiment moved its headquarters to the administration building, and the landing field was increasingly used for a troop assembly area. With the involvement of the U.S. in World War II, temporary mobilization barracks were erected at either end of the air field. The former air mail hangar was used as barracks and classrooms for the top-secret Military Intelligence Language School, a precursor to the Defense Language Institute.

In the post-War years, the Sixth Army Flight Detachment operated light airplanes and helicopters from the paved strip, now called Crissy Army Airfield. Major improvements were undertaken in 1959, including the repaving of the landing mat to its present configuration. Light planes continued to use the field until 1974, when it was closed to fixed-wing aircraft. The west end of the field continues to be used as an Army and emergency services helipad, while the east end of the field was restored to wetland habitat in a 1999-2000 GGNRA project. Crissy Field as a whole, and most of its remaining buildings and structures, are listed as contributing elements of the National Historic Landmark District of the Presidio of San Francisco.[47]

Brief History of Fort Baker (Cavallo Point). The following historic background is primarily condensed from the Fort Baker Cultural Landscape Report published in 2005.[48]

Although evidence of prehistoric occupation of the immediate Cavallo Point area has not been identified, sites have been investigated approximately one mile to the north in and around Sausalito. A 1775 Spanish account of a mapping expedition of the Bay mentions a Miwok village ("Anamás") that could be near Horseshoe Cove, although archeological evidence of such a village has not yet been confirmed.[49] Spanish colonists did not settle on the north shore of the Golden Gate, although a Mexican land grant including this region, was deeded to English-born William Richardson in 1838. In the 1850s, President Millard Fillmore designated 1,899 acres on the north side of San Francisco Bay as the Lime Point Military Reservation. After 16 years of ownership disputes with Richardson's successors, the federal government acquired the land and began constructing several batteries along the shoreline and low bluffs including Ridge Battery,

47 Haller, Stephen A., *The Last Word in Airfields: A Special History Study of Crissy Field, Presidio of San Francisco, California,* NPS GGNRA, 1994.
48 National Park Service, *Cultural Landscape Report for Fort Baker Golden Gate National Recreation Area, Fort Baker, Barry, and Cronkhite Historic District, Marin County, California,* NPS Pacific West Region, Seattle and Oakland Offices, and GGNRA, 2005.
49 Ibid.

Gravelly Beach Battery, and Battery Cavallo. Beginning in the 1890s, the Army began a major program to reconstruct all major coastal fortifications, including those in San Francisco Bay. Massive reinforced concrete batteries were constructed along both sides of the Golden Gate. In 1897, the Army completed Battery Spencer on the ridge above Lime Point, and by 1905, Batteries Kirby, Duncan, Orlando Wagner, and Yates had been completed. During the Spanish-American War of 1898, soldiers manning the guns at Fort Baker lived in tents on the parade ground. Shortly after the turn of the century, and over the next ten years, a major construction effort was undertaken at the site. Circulation systems and utilities were established or supplemented, permanent buildings were constructed to house and support the troops, and the grounds were modified to meet the needs of an active military post.

Most of the guns were removed during World War I and the post reverted to caretaker status in the interwar years. During World War II, the facilities at Fort Baker served as a mine depot, storage buildings, and ammo bunkers for coastal defense. Also during World War II, new structures and facilities were developed along the waterfront of Horseshoe Cove and the site was also used as a temporary hospital.

Coastal defense activities at Fort Baker ended in 1949. In 1959, 21 additional military family housing units (known as Capehart housing) were constructed for use by the 91st (Reserve) Infantry Division and by various antiaircraft missile units under the 6th Regional Army Air Defense Command stationed at the post.

In 1972, Congress established the Golden Gate National Recreation Area. Included within the authorized boundaries of this newly designated park were all of Fort Baker, and all of the former Lime Point Military Reservation. The following year, Fort Baker was listed in the National Register of Historic Places as part of the "Forts Baker, Barry and Cronkhite Historic District" (1973). The National Park Service took over management of the open space throughout the Marin Headlands while the Army maintained and administered the developed area of Fort Baker. Beginning in 1985, and in phases over the next fifteen years, the Army transferred jurisdiction of portions of the Fort Baker Military Reservation to the National Park Service. In 1986, the Army transferred 258 acres of open space at the east end of the Baker-Barry Tunnel to the National Park Service. In 1988, the U.S. Coast Guard constructed new facilities for its Station Golden Gate at Horseshoe Cove. Also during this period, the Bay Area Discovery Museum opened, occupying several historic buildings in the former warehouse area of the post. In August 2002, the Army relinquished its remaining holdings at Fort Baker to the National Park Service. Today, in addition to the Coast Guard and the Bay Area Discovery Museum, the site encompasses 335 acres and contains over 100 historic elements including 47 significant military residential and administrative buildings, historic roads, landscape resources, numerous utilitarian structures, and seven fortification batteries from the turn of the century development of the site. Many of the historic buildings were recently restored and rehabilitated to become Cavallo Point, a resort hotel, restaurant, and conference center managed by a concessionaire for the NPS.[50]

[50] National Park Service, Cultural Landscape Report for Fort Baker Golden Gate National Recreation Area, Fort Baker, Barry, and Cronkhite Historic District, Marin County, Californiam, NPS Pacific West Region, Seattle and Oakland Offices, and GGNRA, 2005.

Brief History of Alcatraz Island. The following summary of the history of Alcatraz is condensed from the GGNRA's Cultural Landscapes Inventory.[51]

The windy, fog-shrouded island of Alcatraz appears to have been used little, if at all, by Ohlone and Coast Miwok peoples prior to European exploration of the San Francisco Bay. The island was initially regarded as of little value by Spanish and subsequent Mexican leaders. Following the signing of the Treaty of Guadeloupe Hidalgo in 1848, the United States government declared the island federal property.

During the height of the Gold Rush, the vast numbers of ships arriving in San Francisco Bay emphasized the need for navigation aids, and the first lighthouse on the west coast was placed into operation on the south side of the island on 1 June 1854. Military defensive fortifications were planned for Alcatraz starting as early as 1850, but construction delays due to the Civil War meant that the designs for those fortifications that were completed were already technologically obsolete by 1870. A federal military prison was first established on the island in 1861, and prisoner labor was used to construct large portions of the redesigned batteries and accompanying support buildings. Work on the redesigned batteries was halted in 1876 due to cuts in military spending, and Alcatraz's utility as a seacoast fortification ended.

Following the Civil War, the Army's investment in and need for the prison increased. The Upper Prison, a collection of wood-frame buildings constructed on the new parade ground area on the south side of the island, was built in 1900 and expanded in 1904, to handle the exploding prison population from the Spanish-American War. However, this complex and the collection of buildings of the Lower Prison were considered "temporary" buildings. The Army needed a modern, permanent military prison and by 1903 was considering sites, including Alcatraz, in the Bay Area.[52] On 21 March 1907, Alcatraz was redesignated the Pacific Branch, U.S. Military Prison, Alcatraz Island. Old wood frame residences and support buildings (including the Citadel, much of the Lower Prison complex, Upper Prison, 1854 Alcatraz Lighthouse, the carriage shed and stable) were replaced by "concrete structures of a harmonious architectural style."[53] New buildings included the new lighthouse (1909), new cellhouse (1912), Post Exchange (1910), Quartermaster Waterhouse and Powerhouse (1912), Commandant's House (1921), Model Industry's Building (early 1920s). Work on the new prison began in 1908 and was completed by 1912. When it was completed, the building was the largest reinforced concrete building in the world.

By the early 1930s, the Army began reevaluating its need for a prison at Alcatraz. In May 1933, the Army began negotiations to transfer Alcatraz to the Department of Justice. This transfer satisfied the Army's desire to rid itself of the costly operations at Alcatraz and the Justice Department's need for a new maximum security prison. On 13 October 1933, Alcatraz was transferred, in an initial five-year lease, to the Federal Bureau of Prisons. As a Federal prison, it

[51] National Park Service. Cultural Landscapes Inventory, Alcatraz Island, Golden Gate National Recreation Area, no date.
[52] Thompson, Erwin N. *Historic Resource Study: Forts Baker, Barry, Cronkhite of Golden Gate National Recreation Area, California,* National Park Service, 1979, 200; Martini 1990: 90-91.
[53] Martini 1990: 96.

housed some of America's most dangerous criminals, those whom it was believed were too unmanageable for incarceration in other Federal prisons. Its location in the Bay rendered Alcatraz nearly escape-proof.[54]

During its 30 years at Alcatraz, the Bureau of Prisons faced the same problems and costs related to maintaining and operating Alcatraz as had the Army. Then in 1961, an engineering survey of the island's facilities found that the buildings "were dangerously deteriorated and that $5,000,000 would be required to repair and rebuild them."[55] The federal prison operations at Alcatraz were closed on 21 March 1963.[56]

For the five years following the closure of the federal prison on Alcatraz in March 1963, the island was vacant except for federal security personnel. During this period, a group of Native Americans were pursuing claims to the island that would evolve into the 19-month Indian Occupation from 1970 to 1971.[57]

In May 1971, GSA announced that it planned to transfer Alcatraz to the Department of the Interior.[58] In 1972, GGNRA was created, and Alcatraz was added to the properties included in the park. The island was opened by the NPS for public tours beginning in October 1973. Alcatraz Island was listed in the National Register of Historic Places in 1976 and was designated a National Historic Landmark in 1986. Because of its isolation and strictly controlled access, the built environment on Alcatraz retains excellent integrity. There are 18 individual buildings and 28 structures listed as contributing elements of the Alcatraz Island Historic District; this includes virtually all built elements on the island. Only the minor post-1973 NPS-installed visitor facilities (restrooms, signs, fences, etc.) do not contribute to the historic district.

Brief History of Civic Center, Union Square, and Justin Herman Plaza (AC 34 Live Sites). The following historic background is condensed from the Civic Center NRHP nomination form,[59] the online listing of California Historical Landmarks,[60] and other online resources.[61]

The Civic Center is an area of a few blocks north of the intersection of Market Street and Van Ness Avenue that contains many of the city's largest government and cultural institutions. Roughly bounded by Golden Gate Avenue, 7th, Franklin, Hayes, and Market Streets, it has two large plazas (Civic Center Plaza and United Nations Plaza) and a number of buildings in the classical Beaux Arts architectural style.

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54 Haller, Stephen A., National Register of Historic Places Nomination Form, Alcatraz Island, 1985.
55 Thompson, Erwin N., *Historic Resource Study: Forts Baker, Barry, Cronkhite of Golden Gate National Recreation Area, California*, National Park Service, 1979, 413.
56 Thompson, Erwin N., *Historic Resource Study: Forts Baker, Barry, Cronkhite of Golden Gate National Recreation Area, California*, National Park Service, 1979, 414.
57 Johnson, Troy J., *We Hold the Rock: The Indian Occupation of Alcatraz, 1969 to 1971,* San Francisco, Golden Gate National Parks Association, 1997.
58 Thompson, Erwin N., *Historic Resource Study: Forts Baker, Barry, Cronkhite of Golden Gate National Recreation Area, California*, National Park Service, 1979, 471.
59 Charleton, James H., National Register of Historic Places Nomination Form, San Francisco Civic Center Historic District, National Park Service, 1984.
60 California Office of Historic Preservation, online listing of California Historical Landmarks, San Francisco County, http://ohp.parks.ca.gov/?page_id=21482, accessed April 3, 2011.
61 http://sf.wikispot.org/Justin_Herman_Plaza

The earliest known evidence of human habitation on the northern San Francisco peninsula comes from a single interment discovered during construction of the Civic Center BART station. The depth of this burial (approximately 75 feet below the modern ground surface) suggests that additional cultural remains, if they exist, will only be encountered with substantial excavation. No Spanish or Mexican Period settlements are documented from this area, although an early American cemetery, Yerba Buena Cemetery, once covered an area bounded by Larkin, McAlister, and Market Streets. Of the 5,000 to 9,000 burials believed to have been interred at the Yerba Buena Cemetery between 1850 and 1871, only approximately 2,000 were documented as having been moved to the Golden Gate Cemetery starting in 1866 in preparation for the construction of a new City Hall and other civic buildings.[62] The massive City Hall and Hall of Records were barely completed when they were destroyed in the 1906 earthquake. Civic Center was planned and rebuilt in its current layout by noted architect and urban planner Daniel Burnham, whose plans for a neo-classical Civic Center was to serve as the centerpiece of a similar theme for the rest of the rebuilt city as part of the "City Beautiful" movement. However, the Civic Center was the only part of his plans actually to be constructed. The current City Hall and the Exposition Auditorium were completed in 1915, in time for the Panama-Pacific Exposition. The War Memorial Opera House and its neighboring twin, the War Memorial Veterans Building (which together were the nucleus of the San Francisco War Memorial and Performing Arts Center), the Main Library, and the State and Old Federal buildings would be built later, during the 1920s and 1930s. During World War II, Army barracks and Victory gardens were constructed in the main plaza in front of City Hall and the Library. The United Nations Charter was signed in the War Memorial Veterans Building in 1945, leading to the creation of the United Nations. It is also where the 1951 Treaty of San Francisco (the peace treaty that officially ended the Pacific War with the Empire of Japan, which had surrendered in 1945) was signed. The 1950s through the 1970s and 1980s saw tall post-modernist Federal and State buildings constructed in the area. The San Francisco Civic Center was listed in the National Register of Historic Places in 1978 and was designated a National Historic Landmark District in 1987. There are approximately 10 buildings and structures within the Civic Center which contribute to the District, many of which are also designated San Francisco Landmarks, such as City Hall, the War Memorial Opera House, and the War Memorial Veterans Building.

Union Square is a plaza of 2.6 acres bordered by Geary, Powell, Post and Stockton Streets. Built and dedicated by San Francisco's first American mayor John Geary in 1850, the area got its name because it was once used for rallies and support for the Union Army during the Civil War. Since then, the plaza underwent many notable changes, including the 1903 dedication of a 97-foot-tall monument to Admiral George Dewey's victory at the Battle of Manila Bay during the Spanish American War. The world's first underground parking garage was constructed between 1939-1941 underneath the square, thereby relocating the plaza's lawns, shrubs and the Dewey monument to the garage "roof." Union Square is California Historical Landmark No. 623, and is listed in the California Register of Historical Resources.

Justin Herman Plaza is an open plaza located along San Francisco's waterfront Embarcadero, between the Ferry Building and the foot of Market Street. It was named for the controversial head

[62] Blackett, John W, *San Francisco Cemeteries*, online compilation of historic cemetery information, accessed at www.sanfranciscocemeteries.com, copyright 1995.

of the City's Redevelopment Agency during the 1960s. At the time of European contact and until the late 19th century, this area was underwater in Yerba Buena Cove. During the Gold Rush, rapid and haphazard development of private wharves and piers dramatically changed the waterfront.[63] Ships were frequently wrecked on hidden hazards in the Cove, or abandoned at the wharf with the departure of the entire crew to the goldfields. The *Rome* (or *Roma)*, a former Gold Rush period storeship, was scuttled near the end of what was the Market Street wharf, and was covered with fill during later development.[64] The Board of State Harbor Commissioners was formed in 1863 to plan and direct development of the Port of San Francisco. This commission was responsible for completing the filling of Yerba Buena Cove and constructing the original seawall to allow for regulated development of a cohesive waterfront The Embarcadero Freeway was an elevated freeway bordering the waterfront that was built beginning in the late 1950s; it passed over the area that is now Justin Herman Plaza. The plaza was reconstructed following the demolition of the Embarcadero Freeway in 1991 after it suffered severe damage in 1989's Loma Prieta earthquake. Justin Hermann Plaza is an important public gathering place but is not considered a historic resource.

America's Cup Secondary Viewing Areas

The following provides a brief history of each of the secondary viewing areas along the San Francisco Bay that could be affected by the proposed project, and are within the C-APE; any impacts to cultural resources in the secondary viewing areas would result from increased use of these areas by spectators viewing the AC34 events. These areas are described generally from north to south in a counterclockwise manner around the Bay, and include the Presidio of San Francisco, Fort Point, Golden Gate Bridge, Marin Headlands, Angel Island, and Treasure Island/Yerba Buena Island.

***Brief History of the Presidio of San Francisco*.** The following brief history of the San Francisco Presidio has been excerpted from Erwin Thompson's definitive history of the Presidio, *Defender of the Gate: The Presidio of San Francisco, a History from 1846 to 1995*.[65]

The three prehistoric sites known in the Presidio (CA-SFR-6, -26, and -129) include a sizable shell midden and human burials, indicating that indigenous peoples used this part of the San Francisco peninsula for extended periods of time.[66] The Presidio of San Francisco is one of the two earliest Euroamerican settlements in the City's history (the other being the original Mission Dolores). The site was founded in 1776 when Capt. Juan Agustin Bautista de Anza formally took possession of the San Francisco headlands, constructed a military camp, and named it the Presidio of San Francisco in honor of St. Francis of Assisi. At the time, this small fortification marked the northernmost extent of Spain's empire in the New World. Mostly ignored by the Spanish crown and the viceroy of New Spain, the small adobe compound suffered through earthquakes and storms, with repairs and maintenance conducted by the garrison and local

[63] Port of San Francisco, National Register of Historic Places Nomination Form, Embarcadero Historic District, Section 8: Statement of Significance, 2006.
[64] Filion, Ron, Map of Buried Shipwrecks on the Northeastern San Francisco Waterfront, 2000.
[65] Thompson, Erwin N., *Defender of the Gate: The Presidio of San Francisco, A History from 1846-1995*, NPS, 1997.
[66] City and County of San Francisco Planning Department, *Fisherman's Wharf Public Realm Plan Preliminary Mitigated Negative Declaration*, April 20, 2011.

Indian laborers as funds allowed. The independence of Mexico in 1821 had little practical effect at the Presidio; the outpost continued largely ignored by the new government as before. In 1835, the garrison was dispatched to the new northern frontier at Sonoma, and the Presidio was left in the hands of a small caretaking detachment. Following the annexation of California into the United States, the U.S. Army set up a garrison in the old Spanish fort. Progress in defining the boundaries of the military reservation and constructing the required buildings and infrastructure to support it was a slow process in those early years, given that large numbers of enlisted men assigned to the post deserted for the gold fields of the Sierra Nevada. A masonry fort was constructed in 1853-1854, excavated out of the northernmost promontory of the peninsula; evidence of this defensive wall was likely destroyed by construction of the Golden Gate Bridge in the 1930s. By 1859, the surveyed boundaries of the Presidio were fenced to keep out squatters, legitimizing and codifying the size and shape of the reserve.[67]

Initially the number of soldiers stationed at the Presidio was small, but during the Civil War an additional 1,500 troops were brought in to man the harbor defenses, subdue secessionists, and keep the peace among the growing Bay Area populations. Presidio troops fought in the Indian Wars of the 1870s, and were key to the defenses of the west coast during the Spanish-American War, World War I, and World War II. Numerous coastal batteries were established on Presidio land and other nearby defensive positions key to protecting the Golden Gate, manned and maintained by the Coast Artillery Corps. The Presidio was also a staging area for troops heading to various overseas conflicts, and for those appointed to homeland guard duty in National Parks. During the 1870s and 1880s, the Presidio served as the headquarters of the Military Division of the Pacific and the Department of California. By the 1920s, this designation as the central command for western U.S. Army forces had become permanent, with the Western Defense Command taking responsibility for the defense of the west coast during World War II.[68]

In addition to supporting active military maneuvers, the Presidio has played a role in various other missions of the U.S. Army since the mid-nineteenth century. The San Francisco National Cemetery is located within the heart of the Presidio, and several military hospitals have been constructed over the years, including the U.S. Army's Letterman General Hospital and the U.S. Marine Hospital. Water from the Presidio's Lobos Creek supplied citizens of San Francisco through a wooden flume that stretched from the Pacific side of the Presidio, along the bluffs across Fort Point and eastward to Crissy Field. Extensive landscaping efforts beginning in the 1880s have resulted in the forested aspect of the reserve. The approximately 1,400-acre Presidio was designated the San Francisco Presidio National Historic Landmark District in 1966.[69]

Although the original nomination form did not enumerate each contributing and non-contributing building, structure, site, and object within the District, a 1993 update was completed in preparation for the NPS assuming management responsibilities for the Presidio. In this update, twelve distinct sub-districts were identified, each relating to a specific period or use of the military reservation. In total, the National Landmark Historic District at that time contained

[67] Thompson, Erwin N., *Defender of the Gate: The Presidio of San Francisco, A History from 1846-1995*, NPS, 1997.
[68] Ibid.
[69] Ibid.

477 buildings, 166 structures, 11 sites, and 8 objects that contributed to the significance of the District. A more recent update to the NHL nomination form has been prepared, but is still in a draft stage and has not yet been adopted.[70] This update focuses on those elements of the District that have reached significance since the previous update, thereby extending the Period of Significance of the District to include the period between 1946--1994. The revised numbers of contributing elements from the 2008 update include 582 buildings, 177 structures, 11 sites, and 8 objects. There are also 303 non-contributing elements within the Presidio Historic District boundaries.[71]

Brief History of Fort Point and the Fort Point Lifesaving Station. The following historic background is condensed from a history of early Fort Point prepared by NPS historian John Martini,[72] and the Cultural Landscape Inventory for the U.S. Coast Guard Fort Point Station Historic District.[73]

Located within the Presidio of San Francisco, Fort Point served as one of the original military stations for defending San Francisco Bay. As early as 1794, Spanish colonizers erected a small adobe gun battery on the point[74]. Abandoned not long after Mexican independence, the tiny fort was empty when John C. Fremont and his band of "Bear Flaggers" sabotaged the rusty cannons in 1846 in a gesture symbolizing California's liberation from Mexican control. With U.S. annexation of California and the boom of the Gold Rush, Fort Point quickly became important as a defensive position on the southern side of the narrowest point of the Golden Gate. A U.S. Army fort was quickly commissioned at Fort Point, with a second fort proposed one mile north on the Marin County side of the Golden Gate, at Lime Point. Together, the batteries of these two forts would be able to direct a devastating crossfire toward any enemy ships that attempted to enter the Bay.[75]

Construction of the multi-story fort required the blasting and excavation of the entire point down to a flat platform not far above sea level, an effort that took a year to complete. Within the granite and brick fort were included cisterns for 200,000 gallons of water, powder magazines, storerooms for a supply of food to withstand a six-month siege, a tiny jail, kitchens, and barracks for the officers and enlisted men, as well as more than 140 positions for mounted guns and large-caliber cannons that were the primary reason for the fort. Nearing completion in 1859, the fort was a masterpiece of engineering and workmanship, although funding at that point was running so low that most of the cannons had yet to be delivered. The start of the Civil War in 1861 added urgency to the mission of the fort, and a garrison was quickly dispatched to occupy the unfortified building. When the guns began to arrive three months after the soldiers, they were directed to the south to fend off a suspected landward attack from secessionists. This attack never

[70] Page & Turnbull, Inc., *National Historic Landmark District Update: Presidio of San Francisco, San Francisco, California*, Preliminary Draft- Subject to Revision, prepared for the Presidio Trust, 2008.
[71] Ibid.
[72] Martini, John, *Fort Point: Sentry at Golden Gate*, no date.
[73] National Park Service, Cultural Landscape Inventory, U.S. Coast Guard Fort Point Station Historic District, Golden Gate National Recreation Area, no date.
[74] Martini, John, *Fort Point: Sentry at Golden Gate*, no date.
[75] Ibid.

materialized, and no Confederate ships ever tried to run the gauntlet of defenses that sprang up around San Francisco Bay during the Civil War. The artillerymen-over 500 in June 1865-occupied the fort mainly as an armed deterrent at the Golden Gate. Soldiers were frequently moved in and out of the fort, and during the presidential election of 1864 the troops were sent into San Francisco to provide additional security against possible rioting.[76]

The guns of Fort Point were never fired in hostility, and after the artillerymen left in 1868 it fell into disrepair as masonry forts were being replaced by newer military technology. Earthen batteries were constructed on either side of the fort in an attempt to modernize the defenses, but even these were never completed as funding was withdrawn in 1876. The fort was occasionally used thereafter to provide barracks for artillery and infantry companies, but gradually became more known as a tourist attraction than as an active military establishment. The obsolete cannons were removed beginning in 1885, with the last guns removed just after the turn of the twentieth century.[77]

In 1959, a group of retired military officers and civilian engineers banded together to form the Fort Point Museum Association. Operating with the blessing of the U.S. Army, the Association spent the next eleven years raising funds for the preservation of the fort and lobbying for its creation as a National Historic Site. On October 16, 1970, a bill for the creation of the Fort Point National Historic Site was signed into law by former President Richard Nixon. Today, the Fort is open to the public and administered by the GGNRA.

The original Fort Point Lifeboat Station was constructed in 1890 as a lifeboat station of the U.S. Life-Saving Service, prior to the creation of the U.S. Coast Guard. It was one of several similar stations built along the approach to San Francisco Bay during the late nineteenth century for the purpose of assisting mariners in these treacherous waters. The Life-Saving Service built nearly 300 stations throughout the country.[78]

The original Station, as it appeared in 1890, contained only two buildings, a boathouse and the keeper's quarters. Both of the original buildings are still extant, though they have been modified. The original keeper's quarters functioned as the main dormitory and headquarters for the entire lifeboat station. During the active season it had to house a complement of at least seven surfmen in addition to the keeper himself. The extended kitchen would no longer be required when the building ceased being used as a dormitory after 1915, following the completion of a new boathouse and dormitory. The extension was eventually removed and the building transformed into a single-family residence for the keeper alone.[79]

In 1915, the U.S. Life-Saving Service was absorbed by the Coast Guard. During the same year, the Fort Point Station was moved from its original location and shifted about 700- feet further west in order to make room for an auto racetrack. The new location was the site of the current facility, and the present configuration of buildings, structures and landscaping was more or less

76 Ibid.
77 Ibid.
78 National Park Service, Cultural Landscape Inventory, U.S. Coast Guard Fort Point Station Historic District, Golden Gate National Recreation Area, no date.
79 Ibid.

established at that time. The racetrack was one of the features of the Panama-Pacific International Exposition (PPIE), which would open in February. The exposition was conceived as a celebration of the Panama Canal, which was scheduled to open in 1915, and was intended to be an enthusiastic tribute to technological progress and the promise of the dawning twentieth century. Six-hundred thirty-five acres of beach and wetlands along the city's northern shore were chosen as the site of the event. More than a third of this land lay within the eastern boundaries of the Army's Presidio reservation, including the windy beachfront on which the Fort Point Lifeboat Station sat. The Army agreed to make a temporary lease of this land, as well as eighteen acres at Fort Mason, in return for the right to retain any improvements which the Exposition Company might make. Since much of the land lay under water at the time and had to be reclaimed to be of any use, the Army rightly assumed that it would benefit from this arrangement, which would inevitably result in an increase in the usable acreage of its property. Beginning in 1912, contractors for the Exposition began the task of pumping more than 360,000 cubic yards of sand from the bay floor into the coastal wetlands and lagoons. By the time they had finished, some 184 acres had been filled and leveled. The Fort Point Lifeboat Station, which once sat on a narrow strip of beach called Strawberry Island, separated from the mainland by a lagoon and adjacent wetlands, was now on the edge of a broad plateau.[80]

Throughout much of the twentieth century, lifeboat stations such as Fort Point continued to provide assistance to mariners in distress. With time, however, new technologies and changing mission priorities greatly altered the nature of these stations and the type of equipment they used, until modern conditions eventually made most of them obsolete. The Coast Guard closed the Fort Point station in 1990 and transferred all motor lifeboat operations to a new facility on the north side of the bay at East Fort Baker. Ownership of the Fort Point facility passed to the National Park Service in 1995 when the Army deactivated its Presidio reservation on which the Coast Guard station was located. Fort Point was listed in the National Register of Historic Places in 1970.

Brief History of the Golden Gate Bridge. The following historic background is condensed from information on the Golden Gate Bridge, Highway, and Transportation Department's website.[81]

Although private ferry service across the Golden Gate was available as early as 1850, a bridge connecting the San Francisco peninsula with Marin County was envisioned for nearly a century before construction of such a bridge actually began. In 1923, the State Legislature passed the Golden Gate Bridge and Highway District Act, setting in motion the funding, design and construction of what would become perhaps the most famous symbol of San Francisco.

The Golden Gate Bridge and Highway District (later expanded with the word "Transportation" to include public transit and ferry service) was officially established as a public agency in December of 1928, and construction of the bridge began more than four years later on January 5, 1933. Stretching from Fort Point across the narrows of the Golden Gate to Lime Point, the bridge took more than four years to complete, at a cost of approximately 35 million dollars. Ten different

[80] Ibid.
[81] Golden Gate Bridge, Highway, and Transportation District, online facts about the Golden Gate Bridge History and Construction, accessed at http://www.goldengatebridge.org/research/facts.php, April 13, 2011.

primary contractors and dozens of subcontractors worked on the footings, towers, decking, and cables of what was at the time the longest suspension bridge in the world. Use of hard hats, a safety net, and other construction innovations kept the accident rate relatively low for a project of the bridge's magnitude at that time; the safety net is credited with saving 19 lives. However, a scaffolding collapse a few months before bridge completion killed ten men, and one earlier fatality brought the total number of workers killed during construction to 11. Painted "International Orange" for better visibility in the area's frequent fog, the bridge opened to pedestrians on May 27, 1937, and to vehicle traffic the next day[82]. The American Society of Civil Engineers declared the bridge a California Historic Civil Engineering Landmark in 1976, and a National Historic Civil Engineering Landmark in 1984. The Golden Gate Bridge is California Historical Landmark No. 974 and San Francisco Landmark No. 222.

Brief History of Marin Headlands. The following historic background is primarily condensed from the Historic Resource Study for Forts Baker, Barry, and Cronkhite.[83]

At the time of Spanish contact, the Marin County bayshore was in the territory of the *Huimen* tribal group of Coast Miwok. At least three *Huimen* villages were mentioned by a 1775 Spanish mapping expedition, although the location of only one of these has been confirmed,[84] much of the south coast of what would become Marin County was granted by the Mexican government to a naturalized citizen, Mr. William Richardson, in 1838. Upon the admission of California as a state in 1850, the U.S. government began planning a military installation on the north side of the narrowest point of entry to San Francisco Bay, despite the acknowledged private ownership of the land. As soon as word of the government's intent got out, the land was purchased from Mr. Richardson by Samuel R. Throckmorton, a San Francisco land speculator. Thus began 16 years of wrangling over the government's purchase of the land before any fortifications could be built. Finally, after the end of the Civil War and the advancement of military technology to the point where masonry forts such as the ones built at Fort Point and proposed for Lime Point were essentially obsolete, the sale of nearly 1900 acres was completed for $125,000.[85] The 1867 revised plans for Lime Point still included a three-tiered masonry fort with 109 guns, but Major George Mendell, the construction foreman for the project, recognized that the design would likely change, and began building only preliminary infrastructure such as a breakwater and wharf, workshops and housing for laborers, and roads. Massive amounts of gunpowder were used to blast away the cliff face to form a nearly sea-level foundation platform for the proposed fort. Between 1868 and 1869, nearly one million cubic yards of rock were removed from the high scarp overlooking the Golden Gate. By the time this was completed, however, it had finally been accepted by the Pacific Board of Engineers that a masonry fort was not the best use of the site,

82 Ibid.
83 Thompson, Erwin N., *Historic Resource Study: Forts Baker, Barry, Cronkhite of Golden Gate National Recreation Area, California*, National Park Service, 1979.
84 National Park Service, Cultural Landscape Report for Fort Baker Golden Gate National Recreation Area, Fort Baker, Barry, and Cronkhite Historic District, Marin County, California, NPS Pacific West Region, Seattle and Oakland Offices, and GGNRA, 2005.
85 Ibid.

and no construction took place on the excavated platform. Instead, a series of batteries was proposed along the headlands from Point Bonita to Cavallo Point.[86]

In 1870, Mendell began the task of constructing roads between the proposed batteries, some of which are still in use within the GGNRA as hiking and bicycle trails. Those batteries that were completed by Mendell included Gravelly Beach Battery (replaced by Battery Kirby in the 1890s), Ridge Battery at Lime Point, Cliff Battery at Lime Point (later replaced by Battery Spencer), and Cavallo Battery. All work on these batteries and supporting infrastructure halted in 1876, when funding for coastal defenses was withdrawn by Congress.[87]

By 1890, renewed interest in defensive fortifications around San Francisco Bay resulted in proposals for new batteries along the Marin Headlands. Under these plans, batteries were constructed from Lime Point east to Cavallo Point (Batteries Spencer, Kirby, Duncan, Orlando Wagner, and George Yates) and from Lime Point west to Point Bonita (Batteries Mendell, Alexander, Edwin Guthrie, Patrick O'Rorke, and Samuel Rathbone). Construction on these new fortifications began in 1893, and soon it became apparent that a permanent garrison would be needed to maintain and man the Marin County batteries. Fort Baker was established for this purpose in 1898, with a small contingent sent to Point Bonita at what would become Fort Barry in 1903. Over the next decade or so, military prisoners from Alcatraz provided much of the labor for constructing permanent facilities at these forts.[88]

A steam-powered fog signal station was constructed in 1883 at the base of Lime Point, with a signal light added in 1900. Operation of this station was taken over by the U.S. Coast Guard in 1939, and automated in 1961. Additions to the batteries of the Lime Point Military Reservation were made during the first half of the twentieth century, in accordance with the changing technology of the era. Searchlight shelters, fire control stations, signal towers, and even a balloon hanger were constructed along the coast in the vicinity of Fort Barry, although the fort itself was without a permanent garrison from 1921-1939. A Civilian Conservation Corps camp was established in 1935 on the eastern edge of the fort, and several WPA projects were undertaken between 1936 and 1941. The bombing of Pearl Harbor in December of 1942 caused a renewed interest in the Marin Headlands forts, and new searchlights, surveillance radar and antiaircraft guns were quickly emplaced. By the end of the 1940s, however, most of the batteries had been disarmed and abandoned as obsolete. In the 1950s, an Air Defense Missile (Nike) Site was established at Fort Barry. When the Army abandoned the missile site (and two disarmed missiles), the NPS took over management of much of Fort Barry, recognizing the historic significance of the multiple batteries and other fortifications and buildings. Forts Barry and Baker are both listed in the National Register of Historic Places, along with the various batteries along the southern headlands, as part of the "Forts Baker, Barry and Cronkhite Historic District."[89]

86 Ibid.
87 Ibid.
88 Ibid.
89 Ibid.

Brief History of Angel Island. The following historic background is condensed from the California State Parks online history of the island.[90]

Used by Coast Miwok peoples as a habitation site and a spot for hunting and fishing, at least seven prehistoric sites have been discovered on Angel Island. These include two middens with deeply buried deposits (CA-MRN-42 and -43, the latter with known human burials) and other areas that were used for resource procurement/processing and possibly for ceremonial activities (CA-MRN-455), but not for long-term settlement. No active settlements were noted on Angel Island in 1775 by Juan Manuel de Alaya, the first European explorer of San Francisco Bay. Russian-American Company Aleutian sea otter hunters established a storehouse on the island in 1808, although visits were infrequent. During the Mexican period until after U.S. annexation of California, the island was primarily used for cattle ranching. In 1863, the U.S. Army established Camp Reynolds (West Garrison) on the island as an infantry garrison for soldiers in the Civil War and the ongoing Indian Wars. Artillery batteries were built near the camp and at Points Stuart, Knox, and Blunt. In 1886, a report critical of Pacific Coast harbor defenses led to development of more gun batteries on the southwest side of the island facing the Golden Gate. By 1899 the entire island was claimed by the Army and dubbed Fort McDowell. A second garrison (East Garrison) was established, and hospital and quarantine facilities were set up for troops returning from the Spanish-American War and Philippine Insurrection. During and after World War I, more than 40,000 troops per year were processed through the facilities on Angel Island.[91]

The most well-known historical use of the island, however, was as the primary entry station for hopeful American immigrants, primarily from Asia. Between 1910 and 1940, the Angel Island Immigration Station—commonly called the "Ellis Island of the West"— processed approximately one million Chinese immigrants, as well as substantial numbers of arrivals from Japan, Korea, India, Russia, the Philippines, Indonesia, Australia, New Zealand, Mexico, and other countries. Because of the restrictions imposed by the Chinese Exclusion Act of 1882, many Chinese immigrants spent years in detention on the island while awaiting entry approval. In 1940, a fire at the Administration Building closed the center, and subsequent immigration processing was conducted in San Francisco. During World War II, the army facilities were expanded to accommodate the larger numbers of troops destined for the Pacific. Japanese and German POWs were held on the island in the former immigration detention facilities. The Army decommissioned the island base in 1946, but returned to the southern point in the 1950s and 1960s to establish a Nike missile site. The missile base was decommissioned in 1962, and that same year the Chinese American community successfully lobbied the State of California to designate the immigration station as a State Landmark. Today, the Angel Island Immigration Station is administered by California State Parks and is a federally designated National Historic Landmark.[92]

[90] California State Parks, online history of Angel Island State Park, accessed at http://www.parks.ca.gov/?page_id=468, April 3, 2011.
[91] Ibid.
[92] Ibid.

Brief History of Yerba Buena Island/Treasure Island. The following historic background is condensed from historic information posted online by Caltrans,[93] and from the Treasure Island/Yerba Buena Island Redevelopment Plan Draft EIR.[94]

Yerba Buena Island was used extensively by indigenous populations from both sides of the Bay prior to Spanish arrival. As a result of recent investigations for the replacement of the east span of the Bay Bridge,[95] shellmound CA-SFR-4 on Yerba Buena Island has yielded data that may challenge some conventional wisdom about Bay Area settlement patterns. The site was apparently first used exclusively as a cemetery for around three hundred years, possibly by Hokan-speaking populations, during the Early Period. Seven radiocarbon dates from this earliest occupation have been calibrated to ca. 3400-3105 B.P. After a lapse of approximately 1,400 years, the site hosted a more intensive and diverse occupation spanning the period between approximately 1685 B.P. until Spanish contact, resulting in a 1-1.5 meter thick multi-component shellmound over the earlier burials. Based on contact-era observations of interaction and travel between the mainland and the island, there may have been some relationship between CA-SFR-4 on the island, and CA-SFR-112 on the San Francisco peninsula.

Granted to Gorham Nye by the Mexican government in 1833, the island was known as "Goat Island" for many years due to its principal inhabitants. It changed hands several times during the early Gold Rush days, when supplies of wood and meat were sold from the island to the many ships arriving and departing San Francisco Bay. The idea of a military post on Yerba Buena Island originated during the Civil War, when it was feared a raiding Confederate warship could slip past Fort Point and Alcatraz during a foggy night. However, it was not until the 1870s that Camp Yerba Buena Island was completed, including a fog signal and octagonal lighthouse (1875) that remain today. Just before the turn of the 20th century, the first U.S. Naval Training Station on the Pacific Coast was established on the north east side of the island. Quarters One, also known as the Nimitz House, was built about 1900 as the commandant's residence. In 1891, the Army began construction of a facility to assemble and store floating mines, which they called torpedoes. These would be placed into the Bay via cable if needed for defense. The training station closed after World War I. The Torpedo Station was abandoned in the 1930s.[96]

During World War II, Yerba Buena Island fell under the jurisdiction of Treasure Island Naval Station, headquarters of the 12th Naval District. Built on the shoals of Yerba Buena Island, the 403-acre Treasure Island was a WPA project in the 1930s. After hosting the 1939 Golden Gate International Exposition, the United States Navy deemed Treasure Island an ideal location for transporting people and machines to the Pacific theater, and on April 1, 1941, established Treasure Island Naval Station which also included a portion of Yerba Buena Island. Quarters One became the residence of the Commander of the Naval Base. Several other buildings used by the

93 Caltrans, The History and Archaeology of Yerba Buena Island, accessed at http://www.dot.ca.gov/dist4/yerbabuena/. April 3, 2011.
94 City and County of San Francisco Planning Department, *Treasure Island/Yerba Buena Island Redevelopment Project*, Draft Environmental Impact Report, 2010.
95 Morgan and Dexter 2007.
96 Caltrans, The History and Archaeology of Yerba Buena Island, accessed at http://www.dot.ca.gov/dist4/yerbabuena/. April 3, 2011.

Naval Station during World War II also remain on the island, including numerous senior officers' quarters and Buildings 83, 205 and 230.[97]

In 1996, the naval base was decommissioned and opened to public control, under stipulations. Treasure Island and the portion of Yerba Buena Island north of the Bay Bridge tunnel are in the process of being transferred by the Navy to the non-profit Treasure Island Development Authority, while the southeastern portion of Yerba Buena Island remains under the control of the U.S. Coast Guard[98]. Four of the buildings on Yerba Buena Island (some with contributing features) have been individually listed on the NRHP, and a group of 10 buildings and related landscaping features has been listed as the Senior Officers' Quarters Historic District.[99] Three of the buildings on Treasure Island are also listed on the National Register, and all of Treasure Island is listed as California Historical Landmark No. 987. This designation automatically places the island on the California Register.[100]

5.5.1.4 Paleontological Setting and Assessment

Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, ammonites, and marine coral), and fossils of microscopic plants and animals (microfossils). The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found. Fossil discoveries not only provide a historical record of past plant and animal life but can assist geologists in dating rock formations. Fossil discoveries can expand our understanding of the time periods and the geographic range of existing and extinct flora or fauna.

Paleontological Assessment Standards

The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources.[101] Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists. Many federal, state, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for the mitigation of adverse construction-related impacts on paleontological resources. The SVP has helped define the value of paleontological resources and, in particular, indicates that geologic units of *high* paleontological potential are those from which vertebrate or significant invertebrate or plant fossils have been recovered in the past (i.e., are represented in institutional collections). Only invertebrate fossils that provide new information on existing flora or fauna or on the age of a rock unit would be considered

97 Ibid.
98 Treasure Island Development Authority (TIDA), online description of the TIDA and up-to-date redevelopment news, accessed at http://www.sftreasureisland.org/index.aspx?page=5, April 12, 2011.
99 City and County of San Francisco Planning Department, *Treasure Island/Yerba Buena Island Redevelopment Project*, Draft Environmental Impact Report, 2010.
100 Ibid.
101 Society of Vertebrate Paleontology (SVP), *Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines*, Society of Vertebrate Paleontology News Bulletin, Vol. 163, pp. 22–27, 1995.

significant. Geologic units of *low* paleontological potential are those that are not known to have produced a substantial body of significant paleontological material. As such, the sensitivity of an area with respect to paleontological resources hinges on its geologic setting and whether significant fossils have been discovered in the area or in similar geologic units.

Geologic and Paleontological Setting

The regional bedrock underlying the entire project area, including all project facilities and public viewing areas, is the Franciscan Complex. This bedrock unit originated as a chaotic mix of deep-ocean sediments and volcanic rocks that were tectonically uplifted millions of years ago to form the mountainous spine of the San Francisco peninsula and the Marin Headlands. The Franciscan Complex is often referred to as the "basement" rock because it occurs at great depths beneath the flatlands of the San Francisco Bay, including much of San Francisco's eastern and northern waterfronts. However, the Franciscan Complex exists closer to the surface or in outcrop in the region's hills and mountains, such as Telegraph Hill, Rincon Hill, Alcatraz, the Marin Headlands, and the northern shoreline of the Presidio.

The bedrock's deep-ocean origin and its long history of shearing, metamorphism[102] and deformation make vertebrate fossils an extremely rare occurrence.[103] A search of the fossil collections database at the University of California Museum of Paleontology (UCMP) reveals no vertebrate fossil localities within the Franciscan Complex in San Francisco or Marin Counties.[104] However, there have been a few invertebrate fossils (e.g. mollusks, ammonites and gastropods) reported in the literature within low-grade metamorphic rocks[105] of the Franciscan Complex (i.e., shale, sandstone, chert and limestone). Since fossils are so uncommon, these have been instrumental in dating the rocks, and establishing age-relationships.[106] Schlocker (1974) reported a Cretaceous ammonite found in shales in northwestern San Francisco; and Elder, W.P. (undated) describes several invertebrate fossils recovered from sandstones and shales on Alcatraz Island. Other fossils reported elsewhere within the Franciscan Complex include a large marine reptilian piscivore,[107] the ichthyosaur,[108] and microfossils (which frequently provide clearer indication of the age of a unit than do the vertebrate fossils). On the whole, however, the Franciscan Complex has yielded very few macrofossils despite its widespread presence throughout the California Coast Ranges. As such, it is often considered to have low paleontological potential. However, because fossils have been discovered in the project vicinity, and because any additional fossil

[102] The mineral, chemical, and structural adjustment of solid rocks to physical and chemical conditions which have generally been imposed at depth below the surface zones of weathering and cementation, and which differ from the conditions which the rock in question originated.
[103] Schlocker, J., *Geology of the San Francisco North Quadrangle, California,* U.S. Geological Survey Professional Paper 782, 109 p., scale 1:24,000, 1974.
[104] University of California Museum of Paleontology (UCMP), collections database, accessed online at http://www.ucmp.berkeley.edu/science/collections.php, April 5, 2011.
[105] Low-grade metamorphic rock refers to rocks that have had a low degree of mineral, chemical, and structural alteration and as such more closely resemble their original form or "parent" rock.
[106] Elder, W.P., *Mesozoic Molluscan Fossils from the Golden Gate National Recreation Area and Their Significance to Franciscan Complex Terrane Reconstructions, San Francisco Bay Area, California,* National Park Service Technical Report NPS/NRGRD/GRDTR-98/01, accessed online at http://www.nature.nps.gov/geology/paleontology/pub/grd3_3/goga1.htm, undated.
[107] A carnivorous animal which primarily eats fish.
[108] Giant marine reptiles that resembled fish and dolphins.

discoveries are likely to be scientifically important, the Franciscan Complex on Alcatraz, the Marin Headlands, the Presidio coastline, and northeastern San Francisco is considered as having a high paleontological potential per SVP (1995) criteria.

The Franciscan Complex basement is overlain by more recent stream deposits of clay, silt, sand and gravel that interfinger with estuarine deposits of mud and silt (i.e. "bay mud") at the margin of the San Francisco Bay. San Francisco's northern and eastern shoreline has been extensively modified by urban and industrial development, infilling, and dredging. Consequently, all AC34 event facility areas and spectator viewing areas along the city's eastern and northern edges, as well as the area surrounding the proposed cruise ship terminal, are underlain by artificial fill over bay mud.[109] A few areas of dune and beach sands are locally mapped along the San Francisco shoreline between Fort Mason and the Golden Gate Bridge.[110] These loose sedimentary deposits and fills are unlikely to contain significant paleontological resources due to their young age. While bay muds and estuarine deposits are known to contain some invertebrate remains such as gastropods and bivalves,[111] these are typically not yet fossilized, not yet extinct, and are likely to occur throughout similar deposits around the bay. Such remains are therefore not considered a significant paleontological resource, and bay muds and fills are considered as having a low paleontological potential per SVP (1995) criteria.

5.5.1.5 Research Methods and Results

Research Methods

A records search was conducted for the project at the Northwest Information Center (NWIC) of the California Historical Resources Information System on March 16, 2011 (File No. 10-0881) by Heidi Koenig, Registered Professional Archaeologist with ESA. The purpose of the records search was to (1) determine whether known cultural resources have been recorded within or adjacent to the C-APE; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources. The records search consisted of an examination of the following documents:

- ***NWIC base maps*** (USGS San Quentin, Point Bonita, San Francisco North, and Oakland West 7.5-minute topographic maps), to identify recorded archeological sites within a ½-mile radius of the C-APE and historic architectural resources within the C-APE.

- ***Resource Inventories*****:** California Department of Parks and Recreation (1976 and updates), *California Inventory of Historical Resources.* California Department of Parks and Recreation, Sacramento; California Office of Historic Preservation (2008), *Historic Properties Directory*

[109] United States Geological Survey (USGS), *Preliminary Maps of Quaternary Deposits and Liquefaction Susceptibility, Nine-County San Francisco Bay Region, California: A Digital Database*, geology by Keith L. Knudsen, Janet M. Sowers, Robert C. Witter, Carl M. Wentworth, and Edward J. Helley, digital database by Carl M. Wentworth, Robert S. Nicholson, Heather M. Wright, and Katherine H. Brown, USGS Open File Report 00-444, version 1, 2000.

[110] Ibid.

[111] University of California Museum of Paleontology (UCMP), collections database, accessed online at http://www.ucmp.berkeley.edu/science/collections.php, April 5, 2011.

Listing by City (through October 2010); City and County of San Francisco Landmarks (through 2011).

- ***Prehistoric Archaeology*:** Stewart, Suzanne (2003), an Overview of Research Issues for Indigenous Archaeology. In *Archaeological Research Issues for the Point Reyes National Seashore - Golden Gate National Recreation Area*, edited by Suzanne Stewart and Adrian Praetzellis. Prepared for the National Park Service; T.L. Jones and K.A. Klar (2007) *Prehistoric California: Colonization, Culture, and Complexity.* pp. 99–124, AltaMira Press; MEA Prehistoric Site GIS Project provided by MEA Archaeologist Randall Dean; Moratto, Michael J. (1984), *California Archaeology*, Academic Press, Orlando, FL; Nelson, Nels (1909), "Shellmounds of the San Francisco Bay Region." In: *American Archaeology and Ethnology*, Vol. 7, No. 4, University of California Publications, Berkeley, CA; Rudo, Mark Ogden (1982), The Prehistory of San Francisco. Unpublished Master's thesis, Department of Anthropology, San Francisco State University. On file (S-6160), California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.

- ***Ethnographic Sources*:** Isabel Kelly (1978), Coast Miwok. In *California, Handbook of North American Indians, Vol. 8*, edited by Robert F. Heizer, pp. 414–425; William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.; Richard Levy (1978), Costanoan. In *California, Handbook of North American Indians, Vol. 8*, edited by Robert F. Heizer, pp. 485–495; William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.; A. L. Kroeber (1925) *Handbook of the Indians of California.* Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C.; Barrett, Samuel A. (1908), The Ethno-Geography of the Pomo and Neighboring Indians, *University of California Publications in American Archaeology and Ethnology* Vol. 6, No. 1; Cook, Sherburne F. (1943a), The Conflict Between the California Indian and White Civilization, I: The Indian Versus the Spanish Mission. *Ibero-Americana* 21. Berkeley; Cook, Sherburne F. (1943b), The Conflict Between the California Indian and White Civilization, II: The Physical and Demographic Reaction of the Non-mission Indian in Colonial and Provincial California. *Ibero-Americana* 22. Berkeley; Milliken, Randall (1995), *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769–1810*. Ballena Press, Menlo Park, California; Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottfield, Donna Gillette, Vaviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson (2007). Punctuated Culture Change in the San Francisco Bay Area, In *Prehistoric California: Colonization, Culture, and Complexity.* Edited by T.L. Jones and K.A. Klar, pp. 99–124, AltaMira Press.

- ***Historic Background Sources*:** Olmsted, Nancy (1991), *Guide to Historic Research in San Francisco*. Prepared for Caltrans District 4, Oakland; Hendry and Bowman, *The Spanish and Mexican Adobe and Buildings in the Nine San Francisco Counties, 1776 to about 1850*; Martini, John (no date). *Fort Point: Sentry at Golden Gate;* National Park Service (no date, a), Cultural Landscapes Inventory, Alcatraz Island. Golden Gate National Recreation Area; National Park Service (no date, b), Cultural Landscape Inventory, U.S. Coast Guard Fort Point Station Historic District. Golden Gate National Recreation Area; National Park Service (2004), Cultural Landscape Report for Fort Mason Golden Gate National Recreation Area. Volume I: Site History, Existing Conditions, and Analysis. NPS Pacific West Region and Olmsted Center for Landscape Preservation; National Park Service (2010), Cultural Landscape Report, Aquatic Park. San Francisco Maritime National Historical Park. NPS Pacific West Region;

Thompson, Erwin N (1979), *Historic Resource Study: Forts Baker, Barry, Cronkhite of Golden Gate National Recreation Area, California*. National Park Service; Thompson, Erwin N. (1997), *Defender of the Gate: The Presidio of San Francisco, A History from 1846-1995*.

- ***Recent EIRs/EISs*:** A number of recently certified environmental documents for various projects around the San Francisco waterfront were also reviewed. These include the San Francisco Marina Renovation Project EIR, the Extension of F-Line Streetcar Service to Fort Mason Center Draft EIS, the Pier 36/Brannan Street Wharf Project Draft EIR, the Treasure Island/Yerba Buena Island Redevelopment Plan Draft EIR, and the GGNRA Dog Management Plan Draft EIS.

- ***Historic Maps*:** An extensive on-line historic map collection with over 300 maps and views of San Francisco Bay Area is available online at http://davidrumsey.com.

- ***Environment*:** Keith L. Knudsen, Janet M. Sowers, Robert C. Witter, Carl M. Wentworth, and Edward J. Helley (2000), *Preliminary Maps of Quaternary Deposits and Liquefaction Susceptibility, Nine-County San Francisco Bay Region, California: A Digital Database*. US Geological Survey Open-File Report 00-444, Online Version 1.0, Menlo Park, California, available online at http://pubs.usgs.gov/of/2000/of00-444/; U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) (2008), Web Soil Survey, available online at http://websoilsurvey.nrcs.usda.gov; Jack Meyer (2002), An Overview of Geoarchaeological Research Issues. In *Archaeological Research Issues for the Point Reyes National Seashore - Golden Gate National Recreation Area*, edited by Suzanne Stewart and Adrian Praetzellis. Prepared for National Park Service; Jack Meyer and Jeffery Rosenthal (2007), *Geoarchaeological Overview of the Nine Bay Area Counties*, Prepared for Caltrans District 4, Oakland.

Historic Architectural Resources Recorded in the C-APE

Overview of Records Search Results

The records search identified numerous designated historic districts and individual resources within the C-APE (**Table 5.5-1**). Within each historic district are varying numbers of buildings, structures, and objects that contribute to the historical significance of the district. Non-contributing elements may also be present within the district boundaries. The records search also identified approximately 40 historic-period military-related archeological resources, most of which are concrete foundations and other artifacts and structural features found on Angel Island, Yerba Buena Island, Fort Baker and Fort Point. Not all of these archeological resources have been formally evaluated for National Register or California Register eligibility; however, for management purposes, all unevaluated resources are treated as historic resources.

Embarcadero Historic District

The records search review identified numerous contributing resources to the Embarcadero Historic District. Much of the following resource description, history and assessment of integrity have been provided by the Embarcadero Historic District nomination.[112] This section provides a summary description of each contributing resource that could be affected by the proposed project

[112] Corbett, Michael, Marjorie Dobkin, and William Kostura (principal authors), *Port of San Francisco Embarcadero Historic District National Register of Historic Places Registration Form*, May 2006, available at www.sfport.com.

TABLE 5.5-1
HISTORIC RESOURCES IN THE DIRECT AND INDIRECT C-APE

Name	Acres	Period of Significance	CEQA Historical Resource	Contributing Elements	Primary or Secondary Site
Fort Mason					
San Francisco Port of Embarkation, U.S. Army Historic Landmark District	1120	1750–1949	Yes	45 buildings, 10 structures, 2 objects	Primary
Fort Mason Historic District	21	1750-1949	Yes	13 buildings, 5 structures	Primary
Alcatraz Historic District / Alcatraz National Historic Landmark	470	1824–1974	Yes	18 buildings, 28 structures	Primary
Port of San Francisco Embarcadero Historic District	N/A	1878–1946	Yes	24 buildings, 26 structures	Primary
Northeast Waterfront Historic District	20	1850-1960	Yes	~ 12 buildings bounded by Embarcadero, Sansome, Broadway, and Union Streets.	Primary
Fort Point National Historic Site	290	1850–1949	Yes	7 buildings, 5 structures	Secondary
Presidio National Historic Landmark District	1,400	1750–1949	Yes	~778 buildings, structures, sites, and objects	Primary
Forts Baker, Barry and Cronkhite Historic District	335	1825–1949	Yes	~100 buildings and structures plus numerous related archeological resources and landscape features	Primary
Aquatic Park National Historic Landmark District	10	1900–1949	Yes	3 buildings, 5 structures	Primary
Marina Green, Seawall, and Concessionaire Stand	20	1915-1943	Yes	1 object, 2 structures	Primary
San Francisco Civic Center Historic District	456	1900–1974	Yes	9 buildings, 1 object	Secondary
State Historical Landmark No. 623, Union Square	2.6	1850-1941	Yes	1 building, 1 object	Secondary
Golden Gate Bridge	N/A	1937	Yes	1 structure	Secondary
Angel Island Immigration Station National Historic Landmark	1	1910-1940	Yes	1 building	Secondary
Yerba Buena Island Resources	27	1875–1949	Yes	4 buildings, 1 structure, 1 NRHP district	Secondary
State Historical Landmark No. 987, Treasure Island	404	1936-1946	Yes	3 buildings	Secondary

SOURCE: NPS 2011, CCSF 2011

(either the AC34 event, the proposed new cruise ship terminal, or both), along with a brief history, list of character-defining features, and a brief assessment of integrity.

The proposed AC34 event would include venues at multiple sites within the Embarcadero Historic District. The District consists of over 20 piers and remnants of piers, a bulkhead wharf in 21 sections, a seawall, the Ferry Building, the Agriculture Building, and a collection of smaller buildings (**Figure 5.5-1** – Port of San Francisco Embarcadero Historic District Boundary Map). These features are located along a three-mile stretch of San Francisco's waterfront. The waterfront piers are numbered non-sequentially, with even-numbered piers from 14 to 80 extending southward from the Ferry Building, and odd-numbered piers from 1 to 45 extending north and west from the Ferry Building. The discussion below continues the geographic pattern of the C-APE setting discussion by beginning at the southernmost pier (Pier 80) and continuing around the waterfront in a counterclockwise direction to the northwest. As shown in **Table 5.5-2**, the following contributing, non-contributing, eligible and ineligible Port-owned properties comprise the C-APE within the Port of San Francisco.

TABLE 5.5-2
PORT OF SAN FRANCISCO AFFECTED PROPERTIES WITHIN THE C-APE
(from South to North)

Resource	Year Built	Historic District Status	CEQA Resource
Pier 80	1967–1970	Outside District Boundary	No
Piers 30-32	1912, 1926 & 1952	Outside District boundary	No
Red's Java House (Pier 30)	Circa 1930	Outside District boundary	Yes
Bulkhead Wharf Section 10	1911	Contributing	Yes
Pier 28	1912–1913	Contributing	Yes
Pier 26	1912--1913	Contributing	Yes
Pier 19	1931–1932	Contributing	Yes
Pier 23	1931-1932	Contributing	Yes
Bulkhead Wharf Section 4	1920 & 1922	Contributing	Yes
Pier 27	1965	Non-contributing	No
Pier 27 Office Building	1962	Non-contributing	No
Pier 29	1915–1918	Contributing	Yes
Belt Railroad Office Building	1909	Contributing	Yes
Bulkhead Wharf Section 3	1915–1919	Contributing	Yes
Seawall Lot 330	NA	Outside District Boundary	No

SOURCE: ESA, Port of San Francisco.

The Embarcadero Historic District nomination contains extensive research and analysis not only about the physical development of the Port's historic maritime facilities, but also of the people, technological changes and events that affected Port operations and its governance. The District was listed in the National Register of Historic Places in 2006 for its historical significance under Criterion A (Event), Criterion B (Person), and under Criterion C (Design/Construction) at the

local and national level of significance. Criteria A and C include multiple areas of significance for the Embarcadero Historic District including: government, commerce, transportation, engineering, labor, architecture, and community planning and development. The period of significance is defined as 1878 through 1946, which coincides with the construction of the "new" Seawall (hereinafter Seawall) to the end of World War II.

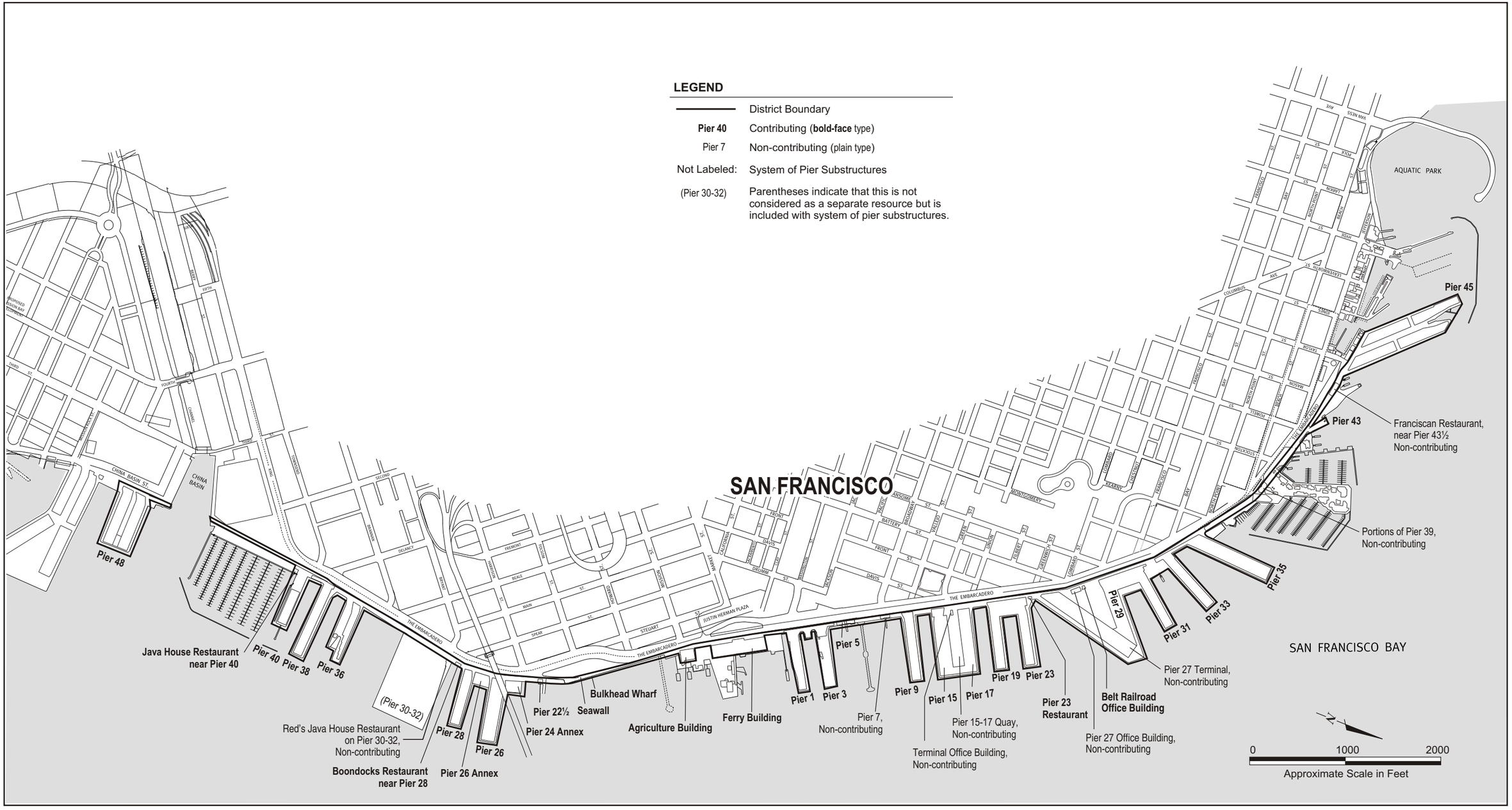
The District is also listed in the California Register of Historical Resources under Criteria 1 (Events), 2 (Person), and 3 (Architecture) because of its listing in the National Register of Historic Places. The California Register by definition includes all National Register listed properties in California although they were not the subject of a California Register listing process.

The Seawall and the bulkhead wharf, the Pier 28½ Restaurant, Pier 28, Piers 26, 26 Annex, Piers 19, 23, 29, and the Belt Railroad Office Building all contribute to the history and significance of the Embarcadero Historic District, and are contributing resources within the district boundaries. The character-defining features and integrity of each affected resource that contributes to the District, as well as the District as a whole, are described below.

Character-Defining Features. The character-defining features of the Embarcadero Historic District include, but are not limited to, the following:

- Three miles of waterfront;
- The Seawall and gently curving form;
- The bulkhead wharf in 21 sections;
- Over 20 piers and remnants of piers representing late 19th and early 20th century maritime industrial engineering, as well as planning and design that is an expression of the City Beautiful Movement;
- Bulkhead buildings and ornamental transit shed façades in the "modified Mission," Neo-classical, and Gothic Revival architectural styles;
- The Ferry Building and Agriculture Building; and
- A collection of smaller accessory buildings including waterfront cafes and offices.

Integrity. The Embarcadero Historic District retains a substantial degree of integrity in all aspects despite numerous losses and changes that have occurred since 1946 when the District's period of significance ended. The numerous contributing resources within the Embarcadero Historic District maintain a high level of integrity and convey the district's significance. These resources provide a concentration and continuity of contributing resources and integrity of location, design, setting, materials, workmanship, feeling and association. Despite having experienced the loss of pier and wharf resources, since the end of the Period of Significance in 1946, the State Historic Resources Commission and National Park Service determined that the Embarcadero Historic District possesses sufficient integrity to be listed in the National Register of Historic Places at the national level of significance. The Embarcadero Historic District's integrity is due to the remaining concentration of contributing resources including the presence of the seawall, bulkhead wharf and remaining pier structures.



SOURCE: Port of San Francisco

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.5-1

Port of San Francisco Embarcadero Historic District

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The Seawall. The seawall is the foundation upon which the waterfront was constructed and consists of a linear embankment of stone, concrete, and wood. It was constructed between 1878 and 1915, in 21 sections that join end to end and is integrated with the bulkhead wharf to form a continuous, unifying structure throughout the District. The seawall is recognized as two contributing resources, one north of China Basin and a 500-foot section south of China Basin associated with Pier 48, also a contributing resource. Although these two resources are physically divided by China Basin Channel, the seawall plays such a strong defining role for the Embarcadero Historic District that the section south of China Basin was included in the district as a discontinuous resource.[113]

Character-Defining Features. The character-defining features of the seawall include the following:

- A three mile long, gently curving, linear embankment engineered of stone, concrete and wood, that defines San Francisco's northern waterfront and which was constructed from 1878 to 1915
- An attached cantilevered pile supported bulkhead wharf constructed in 21 sections
- Over 20 piers and remnants of piers connected to the seawall by the bulkhead wharf
- Containment of bay fill along the Embarcadero Roadway and seawall lots to the immediate west
- Surface improvements, including bulkhead buildings, public access via a public promenade, open space areas with landscape and/or hardscape, smaller accessory buildings including cafes and offices, vehicular access and parking areas

Integrity. The seawall structure maintains a high degree of integrity and remains largely intact. Although the seawall is mostly invisible, it remains intact at most places beneath The Embarcadero. It continues to define the overall form of the waterfront and serves its original function of retaining landfill and acting as an abutment against which piers and wharves were built. According to Port Engineering staff, the seawall has been little altered since it was completed in 1915. Portions were raised in 1932 due to settlement, and it has been repaired as needed over the years to maintain its original function.

The Bulkhead Wharf. The bulkhead wharf is a linear structure comprised of numerous separately built structures that for the most part connect end-to-end and are the most visible expression of the underlying seawall to which they are attached. The bulkhead wharf is a linear feature parallel to the shoreline and on top of the seawall. Until about 1912, the bulkhead wharf was built in sections corresponding to the 21 sections of the original seawall. Since then it has been rebuilt in a changing pattern tied more closely to the construction of piers than to the sections of the seawall. The bulkhead wharf covers an area that roughly corresponds to the space between the center of the seawall and the outer toe of the seawall (also referred to as the "waterfront line"); its design and dimensions depend on the design of the seawall below it. There are as many as six individual segments of bulkhead wharf corresponding to a section of seawall. Within the Embarcadero

[113] Ibid.

Historic District, the numbering system for bulkhead wharf segments generally corresponds to the numbering used for the seawall sections, starting from north to south.

Each bulkhead wharf section has an asphalt surface. Most sections are furnished with mooring bitts for the berthing of vessels. In some places, buildings were built on these wharves, often called "bulkhead buildings."

Character-Defining Features. Character-defining features of the bulkhead wharves include:

- Arranged parallel to the seawall projecting outward forming the Bay edge
- Variable width, length and elevation. The dimensions of the bulkhead wharf generally correspond to the dimensions of the underlying section of the seawall to which it is attached.
- A cantilevered pile supported deck which extends outward into the Bay from the top of the seawall. Portions of the bulkhead wharf act as the foundation for bulkhead buildings and other structures or provide open air access to and in between pier facilities, berthed vessels, railroad spurs, and The Embarcadero.
- Generally concrete and steel construction with decking and an asphalt surface treatment
- Industrial maritime use, public access, commercial/recreation uses, connects piers to the seawall

Integrity. In addition to evaluating the integrity of the individual sections of wharf potentially affected by the proposed project (see discussions below), it is also necessary to evaluate the integrity of the bulkhead wharf in its totality as a system of linking structures. In some instances the original dimensions of the bulkhead wharf are no longer discernable because of the construction of connecting wharves or extensions after the period of significance.

In addition, other areas of the bulkhead wharf have been altered in character and function by surface changes to accommodate public access, open space, and recreational uses, such as between Pier 41 and Pier 35 in the Fisherman's Wharf area, in front of the new Pier 7, and from Pier 40 to China Basin adjacent to South Beach Marina.

While the parts of the bulkhead wharf were built over the course of a 35-year period, under many different configurations (i.e., with a pier, without a pier, within a seawall section), and many different designs, they were tied together end to end and form a conceptually unified feature.

Despite some non-contributing sections, the bulkhead wharf is located within the Embarcadero Historic District and provides a continuous unifying system of structures that shape the waterfront and express the form and location of the seawall.

Pier 80. Pier 80, located in the southern waterfront, was constructed in 1967 and 1970 and financed by the Port's issuance of bonds in 1958. Originally known as the Army Street Terminal, the Pier 80 Cargo Terminal was created by the filling of the Bay between Twenty-Fifth Street and Islais Creek. Pier 80 is a large quay-type terminal on landfill with transit sheds on the perimeter

and a large space for rail and trucks at the center.[114] Pier 80 was evaluated in 1997 as a part of a historic resources survey of the waterfront conducted in preparation for the Waterfront Land Use Plan. The evaluation found the Cargo Terminal ineligible as a historic resource because it was less than 50 years of age and appeared to lack historic or architectural significance.[115]

Pier 80 was re-evaluated by the Port of San Francisco in 2011 for this project and determined to lack historic significance and is therefore not a resource.[116]

Piers 30-32. The substructure at Piers 30-32 was built in four phases. The original substructure, designed in 1912, consisted of two piers and a bulkhead wharf. The substructure is of reinforced concrete including reinforced concrete piles. Pier 30 was originally 719.67 feet long, Pier 32 was 807 feet long, and both piers were 200 feet wide. The bulkhead wharf was approximately 627 feet along The Embarcadero and extended 203 feet east of the seawall. The two piers were extended in 1926 by 125 feet at their outboard ends. These are reinforced concrete structures that appear to remain in place. The extension consists of concrete piles, pre-cast pile caps, and paved concrete slab decks. In 1952 the two piers were joined by the construction of a connecting wharf — a reinforced concrete deck over the slip that originally separated the piers. This deck was depressed below the adjoining piers to create loading docks for trucks and rail cars. Trucks entered the depressed area on inclined ramps at both ends, and rail spurs ran along each side.

Piers 30-32 lacked sufficient integrity to qualify as a contributing resource to the Embarcadero Historic District. Construction of an outboard extension in 1926 and the construction of a connecting wharf in the 1950s, which effectively merged Piers 30 and 32 into one large pier complex, as well as a fire that destroyed the transit sheds and bulkhead building in 1984 have compromised the piers' ability to convey the period of significance. Although Piers 30-32 is physically connected to the seawall and bulkhead wharf, it is not within the boundary of the Embarcadero Historic District.

Red's Java House (Pier 30). Red's Java House is a one-story, wood-frame restaurant built in the 1930s at the northwest corner of Pier 30 at The Embarcadero. A rear addition was constructed in 1949. The use of this building as a waterfront restaurant dates back to a time when restaurant life flourished on the waterfront. After the 1934 strike resulted in the establishment of a hiring hall, waterfront workers gathered in restaurants like Red's Java House in the morning instead of waiting for work at the "shape up," where men gathered every morning in front of the Ferry Building and were selected by a shipping company foreman for the day's work.

Character-defining features of the Red's Java House (Pier 30) include:

- A hip roof with two low-pitched, slightly gable roofed extensions to the rear
- Simple architectural design without moldings or ornamentation

[114] Corbett, Michael R., "Port City, The History and Transformation of the Port of San Francisco, 1848-2010."
[115] Port of San Francisco, Port of San Francisco Historic Resources Data Base, prepared by Architectural Resources Group, November 1996.
[116] Port of San Francisco, Primary Record and Building, Structure, and Object Form, *Pier 80 Cargo Terminal,* DPR form 523 A and B, June 15, 2011.

- Clad in flush wood siding
- Wood windows, paired, metal-clad wood front doors with upper lights
- Exterior signage reading "Red's Java House" mounted on the building facing The Embarcadero

Red's Java House is outside the Embarcadero Historic District boundaries because it is located on Piers 30-32, which lacks sufficient integrity to be included in the district. Red's Java House is nonetheless a potential non-contiguous contributor to the Embarcadero Historic District, is eligible for listing on the California Register, and is considered a historic resource for CEQA purposes. It not a designated San Francisco Landmark.

Bulkhead Wharf Section 10. Section 10 of the bulkhead wharf is located on The Embarcadero between Bryant and Brannan Streets, connecting the Piers 30-32 complex to the seawall and Embarcadero. Section 10 stretches 537 feet along The Embarcadero and was built in 1911 together with Piers 30-32. Section 10 was constructed of reinforced concrete piles and decks with a paved asphalt surface. Built for access to Piers 30-32, Section 10 supported a bulkhead building until 1984 when it was destroyed by fire. Section 10 of the bulkhead wharf was joined to a wharf that partially filled in the wet basin between Piers 30 and 32. In 1952 the remaining wet basin was filled with a connecting wharf that merged Piers 30 and 32 into one facility. This section of bulkhead wharf was never developed with a bulkhead building.

An aspect of the Embarcadero Historic District's significance derives from its relationship to the 1934 strike. Documented strike confrontations between striking laborers and shipping company representatives took place in front of Pier 32 on Section 10 of the bulkhead wharf.[117]

Integrity. Section 10 of the bulkhead wharf contributes to the Embarcadero Historic District and maintains a high level of integrity as it remains largely unchanged from the period of significance with the exception of the removal of Belt Railroad tracks and periodic replacement of the asphalt paving. However, in 2006, the structural integrity of Section 10 of the bulkhead wharf was evaluated and found to be significantly deteriorated. Section 10 was "yellow tagged" by the Port's Chief Harbor Engineer, limiting use because of its compromised structural integrity and load bearing capacity.

Pier 28½ Restaurant. This small, one-story, wood-frame restaurant building is a contributing resource located on a connecting section of the bulkhead wharf (Section 9) between Pier 28 and Piers 30-32. The building has two parts: the older, stucco-clad, flat-roofed square original building to the south constructed by 1935, and a larger, gabled rectangular addition to the north built between 1935 and 1949. The addition is clad in plywood. Both parts have fixed wood windows. The roof on the original building has projecting eaves that cast shadows on the tops of the walls. The southwest corner of the restaurant has an angled entrance. The interior has been remodeled and consists of a bar, dining room with a continuous band of windows facing the Bay, and a kitchen.

[117] Corbett, Michael, Marjorie Dobkin, and William Kostura (principal authors), *Port of San Francisco Embarcadero Historic District National Register of Historic Places Registration Form*, May 2006, available at www.sfport.com.

The use of this building as a waterfront restaurant dates back to a time when restaurant life flourished on the waterfront. After the 1934 strike resulted in the establishment of a hiring hall, waterfront workers gathered in restaurants like Pier 28½ in the morning instead of waiting for work at the shape up.

Character-Defining Features. Character-defining features of the Pier 28½ restaurant include:

- Small rectangular one-story building comprised of two distinct parts
- Gable roof with eaves
- Simple architectural design without moldings or ornamentation
- Stucco exterior
- Windows facing The Embarcadero
- Corner entrance, entry door with porthole window
- Painted wall signage facing The Embarcadero.

Integrity. Despite having experienced alterations since its original construction in the 1930s, the Pier 28½ restaurant building maintains sufficient integrity to convey its significance as a typical waterfront café from the period of significance that served an important role in the history of the waterfront as a gathering place for longshoremen.

Pier 28. Pier 28 was built in 1912–1913 and consists of a pier substructure and transit shed with a façade designed in the Mission Revival architectural style facing The Embarcadero. The bulkhead wharf in front of Pier 28 is visible as a large paved area because the pier does not have a bulkhead building. Portions of the west end of the transit shed were developed as offices that are finished in rustic wood siding and have wood sash windows typical of the period of significance.

The pier is built on reinforced concrete piles and the transit shed has a structural system of steel columns and timber trusses. The transit walls, roof, and monitor are constructed of reinforced concrete and the transit shed façade is reinforced concrete. The steel columns were built to support traveling cranes, one on either side of the single row of interior columns.

The exterior is distinguished by its largely intact Mission Revival front, its unaltered east end facing the bay, and the design of its north and south façades with repeating cargo openings with steel roll-up doors and small steel sash windows. Pier 26 is flanked on its north side by Pier 26 Annex, built in 1930 as a bulkhead connector building between Pier 26 and Pier 28. The pier has a grade-level rail spur on the north apron, and a below grade depressed rail spur on the south apron.

Pier 28 is one of a group of four piers that was planned for the waterfront between Harrison and Brannan Streets, approximately halfway between the Ferry Building and China Basin. This group, consisting of Piers 26, 28, 30, and 32, was built as seawall and bulkhead wharf Sections 9 and 10 were constructed. All of these piers had façades designed in the Mission Revival architectural style facing The Embarcadero.

Character-Defining Features. Character-defining features of the Pier 28 include:

- Embarcadero façade designed in the Mission Revival architectural style
- Maritime Industrial designed transit shed with an expansive open interior volume
- Pile supported deck and aprons constructed of reinforced concrete and steel
- Aprons with wood fender piles on the perimeter, and mooring bitts and cleats as well as rail spurs on the north and south
- Rectangular plan oriented perpendicular to The Embarcadero, attached to the seawall and bulkhead wharf
- Central roof monitor with steel sash windows extending the entire of the transit shed
- Portions of the north and south walls are finished in wood siding
- North and south façades with repeating cargo openings with steel roll-up doors and steel sash windows
- Interior offices from the period of significance

Integrity. Pier 28 maintains a significant degree of integrity as a contributor to the Embarcadero Historic District. Pier 28 has experienced very little in the way of alteration since the period of significance. More notable alterations include the installation of a steel roll-up door in the central arch opening on The Embarcadero and chain-link fencing at the Embarcadero ends of the south apron where the depressed rail spur is accessed. The interior office spaces have experienced some interior and exterior modernization, but significant amounts of historic material remains. The depressed rail spur on the south apron was rebuilt and raised at an unknown time to be flush with the deck. Only a portion of the rebuilt south apron rail spur survives.

Pier 26. Pier 26 was built in 1912–1913 and consists of a pier substructure and a transit shed with a façade designed in the Mission Revival architectural style fronting on the Embarcadero. The bulkhead wharf in front of Pier 26 is visible as a large paved area because the pier does not have a bulkhead building and the façade of the transit shed is outboard of the bulkhead wharf. Portions of the west end of the interior of the transit shed are enclosed as office space that date from the period of significance. A small office building built in the 1920s or 1930s and designed in the Mission Revival architectural style is attached to the south side of the shed and faces The Embarcadero. This later addition to the transit shed is a contributing feature of Pier 26.

The pier is built on concrete piles and the transit shed has a structural system of steel columns and timber trusses. The building is clad in rustic siding, with stucco cladding on the front. The steel columns were built to support traveling cranes, one on either side of the single row of interior columns. The exterior is distinguished by its largely intact Mission Revival front, its unaltered east end facing the bay with Pier No. 26 identification signage and sliding wood cargo doors. The north and south façades of the transit shed have continuous rows of steel roll-up doors maximizing access to the aprons. The San Francisco Oakland Bay Bridge was built above the west end of the pier in the 1930s. Pier 26 is flanked on its north side by Pier 24 Annex, built in

1936 as a bulkhead connector building between Pier 24 and Pier 26. On its south side is Pier 26 Annex, built in 1927 as a bulkhead connector building between Pier 26 and Pier 28. The pier has a depressed rail spur runs along the north apron, and a grade-level rail spur on the south apron.

On the interior, at the west end of the shed, there are office spaces on either side of the central drive aisle connected by an elevated catwalk. At the east end of the transit shed there are restrooms. The offices in the southwest corner of the shed were part of the original 1912 construction. Likewise, the offices in the northwest corner of the transit shed date to 1914 and accommodated passenger steamship operations including ticket sales, passenger waiting, and baggage.

Pier 26 is one of a group of four piers that was planned for the waterfront between Harrison and Brannan Streets, approximately halfway between the Ferry Building and China Basin. This group, consisting of Piers 26, 28, 30, and 32, was built as seawall and bulkhead wharf Sections 9 and 10 were constructed. All of these piers had façades designed in the Mission Revival architectural style facing the Embarcadero.

Character-Defining Features. Character-defining features of Pier 26 include:

- Embarcadero façade designed in the Mission Revival architectural style
- Maritime Industrial designed transit shed with an expansive open interior volume
- Pile supported deck and aprons constructed of reinforced concrete and steel
- Aprons with mooring bitts and cleats, rail spurs and wood piles on the perimeter
- Rectangular plan oriented perpendicular to The Embarcadero, attached to the seawall and bulkhead wharf
- Central roof monitor extending the length of the transit shed
- Portions of the north and south transit shed walls are finished in wood siding
- North and south transit shed walls are have steel columns and steel roll up doors
- Interior offices and restrooms from the period of significance
- Small Mission Revival style addition attached to the south façade at The Embarcadero

Integrity. Pier 26 maintains a significant degree of integrity as a contributor to the Embarcadero Historic District. Pier 26 has experienced very little in the way of alteration since the period of significance. More notable alterations include the installation of a steel roll-up door in the central arch opening on The Embarcadero and a chain-link fence and gate in the northernmost archway which served as access to a depressed rail spur. The interiors and exteriors of the office spaces within the transit shed have experienced some modernization, but significant amounts of historic material remains.

Pier 26 Annex. Pier 26 Annex is located between Piers 26 and 28 and was constructed in 1928–1930. Pier 26 Annex is one of two wharf shed buildings along with Pier 24 Annex that were

originally designed with aprons on either side for jitneys (from adjacent piers) that were too low to use the truck docks facing The Embarcadero. From the apron, jitneys could enter the rear of the building through doors on either side and travel up ramps to the main floor. These aprons were constructed for the handling of package freight. Pier 26 Annex is located on a connecting wharf supported by reinforced concrete-jacketed wood piles, wood caps, and wood stringers. The building has a stucco façade with flat, unadorned pilasters and a simple cornice. The building features wood-frame construction, with a wood roof supported by wood rafters, trusses, and posts. The sides of the building are finished with original v-groove siding. Steel roll-up doors elevated from the street above a loading dock occupy most of the lower front of the building. Bands of steel sash windows stretch across the top of the front and can also be found in the side and rear walls and in the roof monitor. A steel frame and wood marquee, or canopy, is suspended by steel ties over the loading dock.

Character-Defining Features. Character-defining features of Pier 26 Annex include:

- One story rectangular industrial building
- Stucco exterior with minimal architectural detailing
- Use of wood siding on the north, south and east façades as well as steel sash windows throughout the building
- Loading dock with a canopy and roll-up doors facing The Embarcadero
- Large open interior volume with exposed structural system

Integrity. Pier 26 Annex maintains a significant degree of integrity as a contributor to the Embarcadero Historic District. Although the building has been adapted to support office uses on the interior, its exterior appearance has changed little since its original construction.

Fire Station 35 (Pier 22½). Fire Station 35 located at Pier 22½ was built in 1915 and is a functioning firehouse. The two-story building is wood-frame in construction clad in stucco. It is built on a bulkhead wharf of reinforced concrete. The building is Renaissance Revival in form and proportions and Mission Revival in detail. The roof is hipped, with overhanging eaves and carved rafter ends, and is covered with Spanish clay tiles. Windows are casements, most paired, of eight lights per casement in the second story; and fixed windows of sixteen lights, with hopper transoms, in the first story. The centrally placed front truck doors are paired, and made of wood, with upper lights divided by muntins. Wood-panel doors with upper lights can also be found in the south and east walls.

Fire Station 35 was designated a City Landmark Site (No. 225) in 1999.

Character Defining Features. Character-defining of Fire Station 35 include:

- Continuous fire-house use
- Highly symmetrical two-story rectangular building with prominent fire truck doors
- Stucco exterior with Renaissance Revival form and Mission Revival architectural detailing

- Hipped roof with overhanging eaves and Spanish clay tiles
- Wood casement windows throughout
- Interior in original "as-built" condition including two brass fire poles and an iron spiral staircase

Integrity. Fire Station 35 maintains a high level of integrity as a contributor to the Embarcadero Historic District and as City Landmark No. 225, having experienced little no alteration over the course of its 96 year life.

Pier 19. Pier 19 was constructed in 1931–1932. The pier and substructure were constructed of reinforced concrete. The bulkhead building and transit shed were constructed in 1936–1938. The bulkhead building is located on Section 4 of the bulkhead wharf and was designed in the Neo-classical architectural style. This building has timber framing and a stucco exterior, while the transit shed has steel framing and structural systems with pre-cast reinforced concrete walls. The framing of the transit shed and bulkhead building is of timber construction. The substructure and aprons are supported by wood pilings jacketed with concrete. In 1961 a connecting wharf and shed was constructed between Piers 19 and 23, linking the two bulkhead buildings into a continuous functioning space. These modifications obscured the north wall of Pier 19 and the south wall of Pier 23 and resulted in the loss of portions of these transit shed walls. Mooring bitts and cleats are mounted on the aprons and wooden fender piles are attached to their perimeter.

In 1961 the western 80 feet of the north wall of the transit shed was removed to create an opening into the new connector shed between Piers 19 and 23. The new connector shed also obscured, but did not alter, the north façade of the bulkhead building.

Character-Defining Features. Character-defining features of Pier 19 include:

- Rectangular pier attached to the bulkhead wharf and seawall
- Bulkhead building designed in the Neo-classical architectural style
- Maritime Industrial transit shed with an expansive open interior volume of three aisles, a wooden roof with steel trusses and I-beams
- North and south transit shed walls with regularly spaced windows and steel sash windows and cargo openings with steel roll-up doors
- Roof monitor with steel sash windows with fire glass extends the entire length of the transit shed
- Aprons with wood fender piles and mooring bitts and cleats
- Raised metal lettering and back-lit sheet metal nautical themed signage

Integrity. Pier 19 retains a significant degree of integrity as a contributing resource within the Embarcadero Historic District. The Embarcadero end of the pier experienced modifications in the 1960s when a connecting shed effectively linked Piers 19 and 23 into one resource complex. While these modifications were substantial, they were limited in scope and have not significantly

diminished the overall architectural integrity of the resource and its significance. This addition is less than 50 years of age, was constructed after the period of significance and lacks sufficient architectural distinction; therefore, the 1960s addition is not historically or architecturally significant and is considered a non-historic element of Piers 19 and 23. The north wall of the bulkhead building remains unaltered within the connecting shed. However, a portion of the north wall of the transit shed was removed in the 1960s when the bulkhead buildings were joined by the construction of the connecting shed effectively creating one large open interior consisting of the two transit sheds and the connecting shed. The transit shed has also experienced a variety of alterations that are typical of other pier resources in the Embarcadero Historic District such as the construction of office spaces in the bulkhead building, alteration of windows and the enlargement of existing doors and cargo openings.

Pier 23. Pier 23 was constructed in 1931–1932. The pier and substructure were constructed of reinforced concrete. The Pier 23 bulkhead building is located on Section 4 of the bulkhead wharf. The framing of the transit shed and bulkhead building is of timber construction. The substructure and aprons are supported by wood pilings jacketed with concrete. In 1961 a connecting wharf and shed were constructed between Piers 19 and 23, linking the two bulkhead buildings into a continuous functioning space. These modifications obscured the north wall of Pier 19 and the south wall of Pier 23 and resulted in the loss of portions of the transit walls of these two piers. The south apron has a flush rail spur that passes through the connecting shed between Piers 19 and 23. In 1970 the north apron rail spur, originally depressed below the level of the apron and pier deck, was widened, and raised to be flush with the deck. This rail spur enters the pier through the central arch and passes through the bulkhead building to the north apron. Mooring bitts and cleats are mounted on the aprons, and wood fender piles are attached to the perimeter.

Character-Defining Features. Character-defining features of Pier 23 include:

- Rectangular pier attached to the bulkhead wharf and seawall
- Bulkhead building designed in the Neo-classical architectural style
- Maritime Industrial transit shed with an expansive open interior volume of three aisles, a wooden roof with steel trusses and I-beams
- North and south transit shed walls of concrete with regularly spaced steel sash windows and cargo openings with steel roll-up doors
- Roof monitor with steel sash windows and fire glass extends the entire length of the transit shed
- Aprons with wood fender piles and mooring bitts and cleats
- Raised metal lettering and back-lit sheet metal nautical motif signage
- Offices constructed on the interior of the bulkhead on the south side of the central arch opening

Integrity. Pier 23 retains a significant degree of integrity as a contributing resource within the Embarcadero Historic District. The Embarcadero end of the pier experienced modifications in the

1960s when a connecting shed effectively linked Piers 19 and 23 into one resource complex. While these modifications were substantial, they were limited in scope and have not significantly diminished the overall architectural integrity of the resource and its significance. This addition is less than 50 years of age, was constructed after the period of significance and lacks sufficient architectural distinction; therefore, the 1960s addition is not historically or architecturally significant and is considered a non-historic element of Piers 19 and 23. The south wall of the bulkhead building remains within the connecting shed. The transit shed has also experienced a variety of alterations that are typical of other pier resources in the Embarcadero Historic District such as the construction of interior office spaces in the bulkhead building, windows alterations and the enlargement of existing doors and cargo openings.

Pier 23 Restaurant. The Pier 23 restaurant, located between Piers 23 and 27 on The Embarcadero, was constructed in 1937. This restaurant (now known as the Pier 23 Café) is a one-story, rectangular, wood-framed building with a hipped roof. Pier 23 Café is located on Section 4 of the bulkhead wharf, which is approximately 1,000 feet in length and extends from Union to Filbert Streets. The front of the building is clad in wood siding and has double-hung wood sash windows with plain board trim and wood sills. The front door is metal-clad wood, with glazing. A round sheet metal/neon Pier 23 identification sign is cantilevered from the roof near the entrance. The style of the lettering and a three-banded motif at the edge of the sign are characteristic of the Streamline Moderne style of the 1930s. The interior is finished in plaster. There is a non-historic wood frame addition at the north end of the building. The simplicity of this building and its finishes are characteristic of the working-class restaurants on the waterfront in the 1930s to 1950s.

Pier 23 restaurant was built at a time when restaurant life was flourishing on the waterfront. After the 1934 strike resulted in establishment of the hiring hall, waterfront workers gathered in restaurants like this in the morning instead of waiting for work at the shape up.

Character-Defining Features. Character-defining features of Pier 23 Restaurant include:

- Modest scale rectangular one-story building
- Hip roof with overhang
- Simple plain architectural design without moldings or ornamentation
- Exterior clad in horizontal wood siding
- Double hung wood sash windows
- Round sheet metal identification sign with neon lettering mounted on the roof
- Double wood entry doors clad in metal

Integrity. Although original Pier 25 (constructed in 1909 and 1927) and Pier 27 (constructed in 1906 and 1914) were demolished in 1965 to make way for the new Pier 27 Terminal which intersects The Embarcadero at a forty-five degree angle, the Pier 23 restaurant survived. This building has been altered by the construction of a small addition on the west façade but maintains significant integrity as a contributor to the Embarcadero Historic District and conveys its significance as a typical waterfront café from the period of significance.

Bulkhead Wharf Section 4. Section 4 of the bulkhead wharf was built two parts in 1921–1922 and extends approximately 1,000 feet in length between Union and Filbert Streets. This section of the bulkhead wharf was constructed of reinforced concrete to serve old wood Piers 21, 23, 25, and part of 27 all of which were replaced with a newer generation of concrete piers. The Pier 23 restaurant was built on this section of bulkhead wharf in 1937.

Integrity. Section 4 of the bulkhead wharf retains integrity as a contributor to the Embarcadero Historic District, although Piers 27 and 25 to which it was attached were removed and the Pier 27 terminal and its triangular "quay" or truck valley was built in 1965. The bulkhead wharf itself appears to be substantially intact.

Pier 27. Pier 27 is a large triangular terminal complex that was constructed in 1965 with one side formed by Pier 29. Its substructure consists of concrete pilings and a reinforced concrete deck. It includes a large open trucking "valley," a covered loading dock for handling cargo, and a transit shed and wharf 1,340 feet in length on a diagonal axis to The Embarcadero that spans from Pier 23 to the outer end of Pier 29. The transit shed is a steel and concrete building of 210,000 square feet. Pier 27 is a non-contributor to the Embarcadero Historic District because it was constructed after the district's Period of Significance. It is physically connected to Pier 29, a contributing resource, at the outboard terminus of the two piers.[118]

Pier 29. Pier 29 was built in 1915–1918 and consists of a substructure, transit shed and bulkhead building built in conjunction with Pier 31's bulkhead building in 1918 forming a complex of two piers both designed in the Neo-classical architectural style.

Character-Defining Features. Character-defining features of Pier 29 include:

- Bulkhead building designed in the Neo-classical architectural style
- Maritime Industrial transit shed with a three part gable roof with central repeating monitors for the entire length of the pier
- Pile supported pier deck and aprons with rail tracks
- Large open interior volume with exposed wood and steel roof trusses and structural system
- Interior office spaces located at The Embarcadero end of the pier
- Transit shed walls constructed of board formed concrete punctuated at regular intervals with cargo openings with steel roll-up doors and clerestory industrial steel sash windows
- Mooring bitts and cleats mounted on the north and east aprons and wood fender piles attached to the perimeter
- Raised metal letters and nautical motif back-lit identification signage

[118] Corbett, Michael, Marjorie Dobkin, and William Kostura (principal authors), Port of San Francisco Embarcadero Historic District National Register of Historic Places Registration Form, May 2006, available at www.sfport.com.

Integrity. Pier 29 maintains a significant degree of integrity as a contributing resource to the Embarcadero Historic District despite having experienced substantial modification in 1965 with the construction of the Pier 27 Terminal. This modification included removal of a portion of the east wall and several bays at the east end of the south wall opening the transit shed into the new Pier 27. At the same time, Pier 29's transit shed was lengthened by approximately 75 feet to meet the end of Pier 27. The construction of Pier 27 and the triangular "quay" known as the "valley" resulted in the loss of the south apron.

Rail tracks on the north apron have been paved over, and are no longer visible. The rails on the north apron were depressed relative to the deck and were replaced with two sets of flush rails when that apron was widened. These rails are partially covered with asphalt.

Windows in the concrete walls of the shed are steel sash, while those in the roof monitors are wood. The door openings onto the apron measure 16 feet in width by 18 feet in height and have steel roll-up doors. Three doors in the north wall and three in the south wall were enlarged in the 1960s from 16 to 25 feet in width.

The pier has also experienced a number of alterations. For example, cargo masts were removed from the south apron at an unknown date; wood sash windows in the upper portion of the monumental arch in the pier-entry pavilion have been replaced with a steel roll-up door; and a storage shed approximately 150 feet in depth has been constructed on the interior, adjacent to the office space on the east side of the center drive aisle. Two bays at the center of the façade of the Piers 29-31 bulkhead buildings were altered in 1962. The northernmost of these bays was originally a large rectangular opening for a rail spur. In 1965, when Pier 27 was built, the end of the new pier was joined to the end of Pier 29 and the Pier 29 substructure was extended to the east. Finally, in the 1980s the cornice on the bulkhead building was simplified as a result of partial reconstruction.

Pier 27 Office Building. This building was constructed circa 1962 between the Belt Railroad Office Building and the Pier 27 Terminal on Section 3 of the bulkhead wharf. The two-story building was designed in the International style with a flat roof and overhanging eaves with a broad valence. Its Embarcadero frontage is symmetrical in composition with a central recessed entry and continuous bands of windows on each floor. This office building was built or remodeled after the period of significance and is not a contributor to the Embarcadero Historic District.

Belt Railroad Office Building. This small office building was one of two wharfinger offices built in 1909 near the present day location of Pier 3 immediately north of the Ferry Building.[119] The building exhibits a mixture of Mission Revival and Prairie architectural styles and was moved to its present-day location in 1918. The building was reoriented ninety degrees so that its side façade now faces The Embarcadero. The Belt Railroad Office Building is located on Section 3 of the bulkhead wharf.

[119] Historically the Port Wharfinger controlled shipping and collected fees for the use of Port facilities.

This building was built at a time before bulkhead buildings were provided at the inboard ends of piers, in large part to provide offices for the shipping companies that used those piers. When this building was constructed, small offices for shipping companies were commonly built on the bulkhead wharf. This building and its twin were unusual among freestanding bulkhead office buildings of the time in that they were built of permanent materials and were given a decorative architectural treatment. At its original location, this building served bay and river traffic.

The building survived because it was re-purposed in 1918 as an office for the Belt Railroad Round House Complex, a maintenance facility located directly across The Embarcadero. It is believed that the twin to this building remained on its original site until construction began on Pier 1 in 1929. The building served the as the offices for the state-owned Beltline Railroad for approximately 65 years and its relocation illustrates an important part of the historical development of the waterfront.

Character-Defining Features. Character-defining features of the Belt Railroad Office Building include:

- Embarcadero location
- A two-story reinforced concrete building with stucco exterior
- A hipped roof with Spanish clay tiles, overhanging eaves, and carved wooden rafter tails. The building is clad in stucco
- Architectural elements including wooden colonnettes that frame second-story windows, brick diamond patterns between the first and second stories, inlaid green tile, and pointed arch window and door openings on the north and south sides of the first story
- Double-hung wood sash windows on the first story and wood casement windows on the second story
- The first story has some original interior features, including wood wainscoting, wood panel doors, and a terrazzo staircase
- A later rear two-story addition expanded the building in 1914

Integrity. The Belt Railroad Office Building maintains a significant degree of integrity. Although the building was relocated on the waterfront, this relocation occurred within the Embarcadero Historic District and before the end of the period of significance and does not diminish the integrity and significance of this resource. Further, the building in its new location largely maintains its original historic context because of its siting with an Embarcadero frontage. The rear addition, although of a lesser architectural quality, may have acquired significance in its own right because it was constructed within the period of significance.

Bulkhead Wharf Section 3. Section 3 of the bulkhead wharf was built of reinforced concrete in three parts between 1915 and 1919 and extends approximately 1,000 feet between Francisco and Lombard Streets. This section of the bulkhead wharf supports the bulkhead buildings of Piers 29 and 31, the Belt Railroad Office Building, and the Pier 27 Office Building.

Integrity. Section 3 of the bulkhead wharf retains integrity as a contributing resource to the Embarcadero Historic District. Since the period of significance it has been altered by the removal of the Belt Railroad tracks, repaving of its original asphalt surface and the construction of the Pier 27 Office Building in 1962. Likewise, the original width of this section of wharf has been obscured by the construction of the Pier 29 "quay" or truck valley.

Archeological Resources Recorded in the Primary Event Sites

The records search identified six previously recorded prehistoric cultural resources in the vicinity of the Primary Event Sites (CA-SFR-6, CA-SFR-23, CA-SFR-29, CA-SFR-30, CA-SFR-31, and CA-SFR-129). These resources are described below in relation to the proposed AC34 event spectator venue locations. All resources are prehistoric shell middens recorded along the northern San Francisco shoreline that primarily date to the Middle period or earlier.[120]

Aquatic Park

One prehistoric archeological resource (CA-SFR-23) has been previously recorded in the vicinity of the Aquatic Park C-APE. This resource has not been investigated to current professional standards, but is believed to have been covered in the late 1800s by the placement of an extensive layer of fill across the northern waterfront.

In March 1860, the *Daily Alta California* reported remains of a prehistoric habitation site (CA-SFR-23), including human burials, eroding out of a cliff face at Hyde and Beach Streets.[121] The site record for CA-SFR-23 was compiled by J. Davis in 1954 from additional information taken from "The Indianology of California" by Alex S. Taylor (in California Farmer May 31, 1861). The site is described as a "circular fire-burnt spot on the bare place at the summit (of a sandy cliff 40-feet high) with quantity of decayed fish bones and crushed shells mixed with sand." A pedestrian survey of the reported site location was conducted in 2009.[122] No evidence of CA-SFR-23 or any other prehistoric cultural material was found as a result of this investigation, but since the area documented as the potential location of SFR-23 is covered by historic fill deposits and built-over, the pedestrian survey was an inappropriate identification technique that could not reveal any evidence of a primary shell midden deposit associated with SFR-23. Intact subsurface cultural deposits likely exist below the depth of excavations for typical buildings and utilities in this area.

Fort Mason

Three prehistoric shell midden sites (CA-SFR-29, CA-SFR-30, CA-SFR-31) are located within the boundaries of Fort Mason. Reported features suggest these sites were semi-permanent habitation areas, rather than seasonal collection or food processing locations. All three sites contain

120 Stewart, Suzanne, and Adrian Praetzellis (editors), *Archaeological Research Issues for the Point Reyes National Seashore Golden Gate National Recreation Area for Geoarchaeology Indigenous Archaeology, Historical Archaeology, Maritime Archaeology,* Anthropological Studies Center, Sonoma State University, Rohnert Park, California, 2003.

121 Rudo, Mark Ogden, *The Prehistory of San Francisco*, unpublished Master's thesis, Department of Anthropology, San Francisco State University, on file (S-6160), California Archaeological Inventory, Northwest Information Center, Rohnert Park, California, 1982, 11–12.

122 URS, Site Record Update for CA-SFR-29. On file with the Northwest Information Center, Rohnert Park, California, 2009.

artifactual and ecofactual material (e.g., worked obsidian, *Haliotis* disk beads, fire cracked rock) and features such as hearths. A 1978 limited excavation at CA-SFR-29 also yielded baked clay objects, *Olivella* shell beads, bone tools, and a variety of dietary shell (primarily bent-nose clam) and bone, from both terrestrial and marine animals.[123] Human burials have not been identified at these sites, but may exist in undisturbed deposits below the prehistoric ground surface. The Fort Mason sites have been radiocarbon dated to approximately between 1350 and 1050 B.P. In 2010, a limited auger exploration project was conducted by Holman & Associates in an attempt to locate CA-SFR-29. One of the auger borings placed in Fort Mason's Great Meadow encountered fragments of bent-nose clam shell between 95 and 108 cm below the ground surface.[124] This location, and the plotted locations of CA-SFR-30 and CA-SFR-31, are outside of the C-APE proposed for spectator venues. Additionally, the proposed spectator venue locations in Fort Mason are all paved and/or built upon.

Marina Green

No prehistoric archeological resources have been previously recorded in the vicinity of Marina Green C-APE.

Crissy Field

Historically, Crissy Field was part of an extensive 127-acre backdune marsh or lagoon that drained the Tennessee Hollow watershed to San Francisco Bay. A sand spit (Strawberry Island) was located to the north; the mouth of the 150-foot-wide entrance channel was located close to the Marina Green, which was sheltered from the predominant northwesterly waves. The marsh was filled for the Panama-Pacific International Exposition of 1915. Both CA-SFR-6 and CA-SFR-129 are located adjacent to the C-APE in areas that were once former shoreline of the lagoon.

CA-SFR-6. This prehistoric site is located to the southeast of the proposed western Crissy Field spectator venue C-APE. CA-SFR-6, or the "Presidio Mound," was originally recorded and excavated (in part) by Llewellyn Loud of U.C. Berkeley in 1912. Loud's 1912 notes from CA-SFR-6 describe a "deposit 3 feet thick resting on a sort of quicksand at the time of excavation Sep 30-Oct 3, 1912. Dredgers for the Panama Exhibition had raised the water level of the lagoon 64 cm [2.1 feet] above high tide level." Loud excavated five 6-to 10-foot squares to a depth of 2.5 feet (76 centimeters) in the center of the mound, which was 8 feet (240 centimeters) higher than the water level. Most of the animal bone and shell material occurred at a depth of 1 to 2 feet (30 to 60 centimeters); bones recovered at a depth of .5 feet (15 centimeters) were saved (Loud, 1912a). Immediately following Loud's excavation the site was buried in preparation for the Panama Pacific International Exposition.

[123] Baker, Suzanne, Archaeological Site Inventory Form: CA-SFR-29, on file, Northwest Information Center, Rohnert Park, 1978.
[124] Holman & Associates Archaeological Consultants, Postfield Memo of Field Results for F Line Auger Investigations, on file, NPS, July 29, 2010.

In 1972, portions of a human skeleton were uncovered north of CA-SFR-6 beneath 2.5 meters of fill.[125] A bird-bone whistle was uncovered with the human remains. Analysis of the skeleton determined it to be that of a Native American female, aged 25–30, with an estimated age of A.D. 740. The burial was designated CA-SFR-26.

In November 2002, CA-SFR-6 was rediscovered during exploratory trenching for the reconstruction of Doyle Drive.[126] The mound surface was buried 1.7 meters below the surface but appeared largely intact. Site constituents included dense quantities of marine shell and faunal remains, as well as some lithic debitage, shell beads, heat affected rock, and charcoal. Site boundaries appeared to conform to Loud's description, measuring about 30 x 75 meters in size. For management purposes however, site boundaries were extended to the south to include the location of CA-SFR-26.

CA-SFR-129. This prehistoric site is located to the southwest of the proposed eastern Crissy Field spectator venue C-APE. CA-SFR-129, or the "Crissy Field Site," was discovered during the 1999–2000 Crissy Field Restoration Project. The top of the midden was uncovered beneath between 1 to 1.5 meters of historic-period fill and sand. Site constituents indicated a food-processing site, including marine shell, heat-affected rock, and charcoal. Obsidian and chert debitage and tools, hammerstones, and a mortar fragment were also uncovered. The site measures approximately 40 x 84 meters and was subject to a large-scale, systematic investigation[127] to ensure the site's preservation and stabilization prior to the restoration project. Radiocarbon dates from this site range from A.D. 1375 to 1700 and indicating a Late Period occupation. [128] The site may be a seasonal occupation site of the *Petlenuc* subgroup of the *Yelamu* tribe.[129]

Cavallo Point

No prehistoric archeological resources have been previously recorded in the vicinity of the Cavallo Point C-APE in Marin County.

Alcatraz Island

No prehistoric archeological resources have been previously recorded in the vicinity of the Alcatraz Island C-APE.

[125] Heglar and Moratto, Site Record for CA-SFR-6, on file, Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California, 1973.
[126] Jones and Stokes, et al., Site Record for CA-SFR-6, on file, Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California, 2002.
[127] Clark, Matthew, Site Record for CA-SFR-129, on file, Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California, 2000.
[128] Clark, Matthew, *Crissy Field Restoration Project; Final Report of Archaeological Investigations at the Crissy Field Prehistoric Site, CA-SFR-129, Presidio of San Francisco, Golden Gate National Recreation Area*, 2001.
[129] Milliken, Randall, Laurence H. Shoup, and Beverly R. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and their Neighbors, Yesterday and Today,* prepared by Archaeological and Historical Consultants, Oakland, California, prepared for National Park Service, Golden Gate National Recreation Area, San Francisco, California, June 2009, 291.

Archeological Resources Recorded in the Secondary Viewing Areas

Sixteen prehistoric archeological resources have been previously recorded in the vicinity of the secondary viewing areas, including on Angel Island as well as along the coast in Marin County. These resources are listed in **Table 5.5-3**. The majority of these resources are located in areas that are currently paved and/or built upon.

TABLE 5.5-3
ARCHEOLOGICAL RESOURCES IN THE VICINITY OF THE SECONDARY VIEWING AREAS

Primary #	Trinomial	Location	Features	Size (meters)	Approx. Depth (meters)	Current Environment
P-21-000002	CA-MRN-3	Sausalito	10+ human burials	100 x 200	1.5	Paved / Built
P-21-000034	CA-MRN-1	Sausalito	1+ human burials	100 x 200	unknown	Paved / Built
P-21-000071	CA-MRN-40	Belvedere	None noted	100 x 100	1.5	Landscaped / Built
P-21-000072	CA-MRN-42	Angel Island	None noted	60 x 60	1.5-2	Paved / Built
P-21-000073	CA-MRN-43	Angel Island	3+ human burials	50 x 125	unknown	Partial Paved / Built
P-21-000407	CA-MRN-453	Angel Island	None noted	25 x 40	unknown	Partial Paved / Built
P-21-000408	CA-MRN-454	Angel Island	None noted	30 x 30	shallow	Landscaped / Built
P-21-000409	CA-MRN-455	Angel Island	Ceremonial?	25 x 70	shallow	Partial Paved / Built
P-21-000530	CA-MRN-604	Angel Island	None noted	50 x 50	shallow	Isolated
P-21-000531	CA-MRN-605	Angel Island	None noted	20 x 50	shallow	Isolated
P-21-000563	CA-MRN-2	Sausalito	None noted	< 10 x 10	unknown	Landscaped / Built
P-21-000564	CA-MRN-41	Belvedere	3+ human burials	< 10 x 10	unknown	Paved / Built
P-21-000595	CA-MRN-627	Tiburon	None noted	12 x 40	1	Landscaped / Built
P-21-000683	CA-MRN-649	Belvedere	1 human burial	30 x 40	1.2	Landscaped / Built
P-21-002670	None	Sausalito	Disturbed fill	unknown	unknown	Disturbed fill
P-38-000004	CA-SFR-4	Yerba Buena Island	31 human burials	60 x 80	9	Partial Paved / Built

SOURCE: NWIC 2001

Shipwrecks Recorded in the Vicinity of the C-APE

The San Francisco Bay forms a vast natural harbor; however, its seaward entrance has proven extremely hazardous. Heavy surf, thick fog, onshore northwesterly winds, and the rocky coast have been disastrous for many vessels and their cargo, crew, and passengers. Most maritime resources consist of submerged shipwrecks as well as beached ship remnants that can be exposed following severe storm events.

At least fourteen known shipwrecks have occurred in the vicinity of the primary event sites, according to the California State Lands Commission (CSLC), which has jurisdiction over shipwrecks in State waters. The CSLC cautions that most of the shipwrecks included in their

database are reported from historic archival or anecdotal evidence, and that modern confirmation of the locations of submerged ship remains is rare. **Table 5.5-4** lists these wrecks and the potential for encountering substantial intact remains.

TABLE 5.5-4
SHIPWRECKS IN THE VICINITY OF THE PRIMARY EVENT SITES

Vessel	Date	Location Wrecked	Current Location/Condition	Potential for Existing Remnants
Aloha	1901	Between Marin headlands and Angel Island	Burned	Unlikely
Bob	1893	"Near Sausalito"	Unknown	Possible
Carlota	1850	Vicinity Ft. Mason	Salvaged	No
Caroline	1917	Near Sausalito	Burned	Unlikely
Galilee	1935	Foot of Napa Street, Sausalito	Unknown	Possible
Hartley	1914	Vicinity Ft. Mason	Likely salvaged	Unlikely
Lydia	1907	Vicinity Piers 26-32	Foot of King Street near Pier 4 excavated in 1980	No
New England	Unknown	Angel Island	Unknown	Possible
Reliance	1945	Pier 23	Unknown	Possible
Samoset	1852	Vicinity Ft. Mason or Ft. Point	Unknown	Unknown
San Carlos	1797	"Near intersection of Broadway and Front Street"	Unknown	Unlikely
Service	1934	Near Sausalito	Burned	Unlikely
Thomas H. Benton	1849	Angel Island	Unknown	Unknown
Tonquin	1849	Vicinity Ft. Mason (Tonquin Shoal)	Cargo salvaged	Unlikely

SOURCE: CSLC 2011

In addition to the wrecks named above, the Submerged Cultural Resources Assessment completed for the National Oceanic and Atmospheric Association and the National Park Service in 1989[130] reports an additional 13 wrecks offshore in the vicinity of the secondary viewing areas. Information on these shipwrecks is provided in **Table 5.5-5** below. None of these shipwrecks are in the vicinity of locations proposed for in-water construction work for dredging or pile driving, or at locations where spectators may anchor private vessels (see Chapter 3, Project Description, for details).

[130] Delgado, James, and Stephen Haller, *Submerged Cultural Resource Assessment, Golden Gate National Recreation Area, Gulf of the Farallones National Marine Sanctuary, and Point Reyes National Seashore,* prepared for the National Oceanic and Atmospheric Administration and the National Park Service, 1989.

TABLE 5.5-5
SHIPWRECKS IN THE VICINITY OF THE SECONDARY VIEWING AREAS

Vessel	Date	Location Wrecked	Current Location/Condition	Potential for Existing Remnants
Aberdeen	1852	Fort Point	Salvaged	No
Chateau Palmer	1856	Fort Point	Unknown	Unknown
City of Chester	1888	Golden Gate	In Golden Gate channel	Unknown
City of Rio de Janeiro	1901	Golden Gate	In Golden Gate channel	Possible
General Cushing	1858	Fort Point	Partially salvaged	No
Golden Fleece	1854	Fort Point	Partially salvaged	No
Granada	1860	Fort Point	Partially salvaged	No
Isaac Jeanes	1876	Fort Point	Partially salvaged	No
Oliver Cutts	1868	Alcatraz	Unknown	Possible
Samoset	1852	Fort Point	Unknown	Unknown
H.L. Tiernan	1882	Lime Point	Possibly destroyed during construction of GG Bridge	Unlikely
Lime Point	1878	Lime Point	Unknown	Unknown
Pathfinder	1900	Between Lime Point and Point Diablo	Unknown	Possible

SOURCE: Delgado and Haller 1989

5.5.2 Regulatory Framework

5.5.2.1 Federal Regulations

National Historic Preservation Act

Historic properties are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (16 United States Code § 470f), and its implementing regulations. Under the NHPA, a historic property is considered significant if it meets the National Register of Historic Places (NRHP) listing criteria at 36 CFR 60.4, as stated below:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
>
> a) That are associated with events that have made a significant contribution to the broad patterns of our history, or
>
> b) That are associated with the lives of persons significant in our past, or
>
> c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic

values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or

d) That have yielded, or may be likely to yield, information important in prehistory or history.

Section 106 of the NHPA requires that a federal agency with direct or indirect jurisdiction over a proposed federal or federally-assisted undertaking, or issuing licenses or permits, must consider the effect of the proposed undertaking on historical properties. A historical property may include a prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the NRHP maintained by the U.S. Secretary of the Interior. Federal agencies must also allow the Advisory Council on Historic Preservation (ACHP) to comment on the proposed undertaking and its potential effects on historical properties.

The implementing regulations for Section 106 of the NHPA (36 CFR 800) require consultation with the State Historic Preservation Officer (SHPO), the ACHP, federally recognized Indian tribes and other Native Americans, and interested members of the public throughout the compliance process. The four principal steps are:

- Initiate the Section 106 process (36 CFR 800.3);
- Identify historical properties, i.e., resources eligible for inclusion in the NRHP (36 CFR 800.4);
- Assess the effects of the undertaking on historical properties within the area of potential effect (36 CFR 800.5); and
- Resolve adverse effects (36 CFR 800.6).

Adverse effects on historical properties are often resolved through preparation of a memorandum of agreement or programmatic agreement developed in consultation between the federal agency, the SHPO, Indian tribes, and interested members of the public. The ACHP is also invited to participate. The agreement describes stipulations to mitigate adverse effects on historical properties listed in or eligible for the NRHP (36 CFR 60). The proposed project will undergo Section 106 as part of the NEPA process, which will be completed separately from, but concurrently with, the CEQA process, and under the joint direction of the two federal agencies with jurisdiction in the project area: NPS and the U.S. Coast Guard.

National Park Service Management Policies[131]

The 2006 edition of NPS Management Policies provides both general and specific policies related to management of different types of cultural resources, including the Service's methodology for compliance with Section 106 of the NHPA and other applicable federal legislation. In summary, "The National Park Service will protect, preserve, and foster appreciation of the cultural resources in its custody and demonstrate its respect for the peoples traditionally associated with those

[131] National Park Service, Management Policies, 2006.

resources through appropriate programs of research, planning, and stewardship."[132] Specific policies that are most likely to be applicable to the proposed project are summarized below.

*Policy 5.3.5: Treatment of Cultural Resources***.** The Park Service will provide for the long-term preservation of, public access to, and appreciation of the features, materials, and qualities contributing to the significance of cultural resources. With some differences by type, cultural resources are subject to several basic treatments, including (1) preservation in their existing states; (2) rehabilitation to serve contemporary uses, consistent with their integrity and character; and (3) restoration to earlier appearances by the removal of later additions and replacement of missing elements.

*Policy 5.3.5.1: Archaeological Resources***.** Archaeological resources will be managed in situ, unless the removal of artifacts or physical disturbance is justified by research, consultation, preservation, protection, or interpretive requirements. Preservation treatments will include proactive measures that protect resources from vandalism and looting, and will maintain or improve their condition by limiting damage due to natural and human agents.

Policy 5.3.5.1.7: Submerged Cultural Resources. Historic shipwrecks and other submerged cultural resources will be protected, to the extent permitted by law, in the same manner as terrestrial archaeological resources. Protection activities involve inventory, evaluation, monitoring, interpretation, and establishing partnerships to provide for the management of historic shipwrecks and other submerged cultural resources in units of the National Park system.

Policy 5.3.5.2: Cultural Landscapes. Treatment decisions will be based on a cultural landscape's historic significance over time, existing conditions, and use. Treatment decisions will consider both the natural and built characteristics and features of a landscape, the dynamics inherent in natural processes and continued use, and the concerns of traditionally associated peoples. The treatment implemented will be based on sound preservation practices to enable long-term preservation of a resource's historic features, qualities, and materials. There are three types of treatment for extant cultural landscapes: preservation, rehabilitation, and restoration.

Policy 5.3.5.4: Historic and Prehistoric Structures. The treatment of historic and prehistoric structures will be based on sound preservation practice to enable the long-term preservation of a structure's historic features, materials, and qualities. There are three types of treatment for extant structures: preservation, rehabilitation, and restoration [as per the Secretary of the Interior's Standards for the Treatment of Historic Properties].

Policy 5.3.5.4.10: Historic and Prehistoric Ruins. The stabilization of historic and prehistoric ruins will be preceded by studies leading to the recovery of any data that would be affected by stabilization work. Ruins and related features on unexcavated archeological sites will be stabilized only to the extent necessary to preserve research values or to arrest structural deterioration, recognizing that it is preferable to preserve archeological sites in situ than to excavate them.

[132] Ibid., 59.

Secretary of the Interior's Standards for the Treatment of Historic Properties

The *Secretary of the Interior's Standards for the Treatment of Historic Properties* (Secretary's Standards) are the criteria by which federal agencies and many local government bodies evaluate rehabilitative work on historic properties. The Secretary's Standards are a useful analytic tool for understanding and describing the potential adverse effects to historic properties. Compliance with the Secretary's Standards does not determine whether a project would cause a substantial adverse change to the significance of a historic property. Rather, projects that comply with the Secretary's Standards benefit from a regulatory presumption that they would have not have an adverse effect on a historic property. Projects that do not comply with the Secretary's Standards may or may not have an adverse effect on the significance of a historic property.

5.5.2.2 State Regulations

The State of California implements those aspects of the NHPA pertinent to state and local governments through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historical Resources Inventory. The State Historic Preservation Officer is an appointed official who implements historic preservation programs within the State's jurisdictions.

California Environmental Quality Act

CEQA, as codified in California Public Resources Code (PRC) Sections 21000 et seq., is the principal statute governing the environmental review of projects in the state. The CEQA Guidelines define a historical resource as: (1) a resource in the California Register of Historic Resource (CRHR); (2) a resource included in a local register of historic resources, as defined in PRC Section 5020.1(k) or identified as significant in a historic resource survey meeting the requirements of PRC § 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

The CRHR is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC § 5024.1[a]). The criteria for eligibility to the CRHR are based on NRHP criteria (PRC § 5024.1[b]). Certain resources are determined by the statute to be automatically eligible for inclusion in the CRHR, including California properties formally eligible for or listed in the NRHP.

To be eligible for the CRHR as a historical resource, a prehistoric or historic-period resource must be significant at the local, state, and/or federal level under one or more of the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2) Is associated with the lives of persons important in our past;

3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4) Has yielded, or may be likely to yield, information important in prehistory or history. [Title 14, CFR 4852(b)]

For a resource to be eligible for the CRHR, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the NRHP criteria may still be eligible for listing in the CRHR.

CEQA Section 15164.5(3) notes that, "Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties shall be considered as mitigated to a level of less than significant impact on the historical resource."

CEQA and Archeological Resources

CEQA considers archeological resources as an intrinsic part of the physical environment and, thus, requires for any project that the potential of the project to adversely affect archeological resources be analyzed (*CEQA* § 21083.2). For a project that may have an adverse effect on a significant archeological resource, CEQA requires preparation of an environmental impact report (*CEQA and Guidelines*, §§ 21083.2, 15065). CEQA recognizes two different categories of significant archeological resources: "unique" archeological resource (*CEQA* § 21083.2) and an archeological resource that qualifies as a "historical resource" under CEQA (*CEQA and Guidelines,* §§ 21084.1, 15064.5).

Significance of Archeological Resources

An archeological resource can be significant as both or either a "unique" archeological resource and as an "historical resource" but the process by which the resource is identified, under CEQA, as either one or the other is distinct (*CEQA and Guidelines* §§ 21083.2(g), 15064.5(a)(2)).

An archeological resource is a "*historical resource*" under CEQA if the resource is:

1) listed on or determined eligible for listing on the California Register (CEQA Guidelines § 15064.5). This includes National Register-listed or –eligible archeological properties.

2) listed in a "local register of historical resources"133

3) listed in a "historical resource survey." [CEQA Guidelines § 15064.5(a)(2)]

133 A "local register of historical resources" is a list of historical or archeological properties officially adopted by ordinance or resolution by a local government (Public Resources Code 5020.1[k]).

Generally, an archeological resource is determined to be an "historical resource" due to its eligibility for listing to the California Register/National Register because of the potential scientific value of the resource, that is, "has yielded, or may be likely to yield, information important in prehistory or history" (*CEQA and Guidelines* § 15064.5 (a)(3)). An archeological resource may be California Register-eligible under other Evaluation Criteria, such as Criterion A, association with events that have made a significant contribution to the broad patterns of history; Criterion B, association with the lives of historically important persons; or Criterion C, association with the distinctive characteristics of a type, period, region, or method of construction. Appropriate treatment for archeological properties that are California Register-eligible under Criteria other than Criterion D may be different than that for a resource that is significant exclusively for its scientific value.

Failure of an archeological resource to be listed in any of these historical inventories, is not sufficient to conclude that the archeological resource is not an "historical resource." When the lead agency believes there may be grounds for a determination that an archeological resource is a "historical resource," then the lead agency should evaluate the resource for eligibility for listing to the California Register (*CEQA and Guidelines* § 15064.5(a)(4)).

A "*unique archaeological resource*" is a category of archeological resources created by the CEQA statutes [*CEQA* § 21083.2(g)]. An archeological resource is a unique archeological resource if it meets any of one of three criteria:

1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

2) Has a special and particular quality such as being the oldest of its type or the best available example of its type;

3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Under CEQA, evaluation of an archeological resource as an "historical resource" is prioritized over the evaluation of the resource as a "unique archeological resource", in that, CEQA requires that "when a project will impact an archeological site, a lead agency shall first determine whether the site is an historical resource" (*CEQA and Guidelines* § 15064.5 (c)(1).

Evaluation of an Archeological Resource as Scientifically Significant

In requiring that a potentially affected archeological resource be evaluated as "an historical resource," that is as an archeological site of sufficient scientific value to be California Register-eligible, CEQA presupposes that the published guidance of the California Office of Historic Preservation (OHP) for CEQA providers is to serve as the methodological standard by which the scientific, and thus, the California Register-eligibility, of an archeological resource is to be evaluated. As guidance for the evaluation of the scientific value of an archeological resource, the OHP has issued two guidelines: *Archaeological Resource Management Reports* (1989) and the *Guidelines for Archaeological Research Designs* (1991).

Integrity of an Archeological Resource

Integrity is an essential criterion in determining if a potential resource, including an archeological resource, is a historic resource. In terms of CEQA "integrity" can, in part, be expressed in the requirement that a historic resource must retain "the physical characteristics that convey its historical significance" (*CEQA Guidelines* Section 15064.5 (b)).

For an archeological resource that is evaluated for California Register-eligibility under Evaluation Criterion D, "has yielded or may be likely to yield information important to prehistory or history", integrity is conceptually different than how it is usually applied to the built environment. For a historic building, possessing integrity means that the building retains the defining characteristics from the period of significance of the building. In archeology, an archeological deposit or feature may have undergone substantial physical change from the time of its deposition but it may yet have sufficient integrity to qualify as a historical resource. The integrity test for an archeological resource is whether the resource can yield sufficient data (in type, quantity, quality, diagnosticity) to address significant research questions. Thus, in archeology "integrity" is often closely associated with the development of a research design that identifies the types of physical characteristics ("data needs") that must be present in the archeological resource and its physical context to adequately address research questions appropriate to the archeological resource.

Significant Adverse Effect on an Archeological Resource

The determination of whether an effect on an archeological resource is significant depends on the effect of the project on those characteristics of the archeological resource that make the archeological resource significant. For an archeological resource that is a historic resource because of its prehistoric or historic information value, that is, its scientific data, a significant effect is impairment of the potential information value of the resource.

The depositional context of an archeological resource, especially soils stratigraphy can be informationally important to the resource in terms of data and reconstructing characteristics of the resource at time of deposition and interpreting the impacts of later deposition events on the resource. Thus, for an archeological resource eligible to the California Register under Criterion 4, a significant adverse effect to its significance may not be limited to impacts on the artifactual material but may include effects on the soils matrix in which the artifactual matrix is situated.

Mitigation of an Adverse Effect to an Archeological Resource

Preservation in place is the preferred treatment of an archeological resource (*CEQA Statute* Section 21083.2(b); *CEQA Guidelines* Section 15126.4 (b)(3)(a)). When preservation in place of an archeological resource is not feasible, data recovery, in accord with a data recovery plan prepared and adopted by the lead agency prior to any soils disturbance, is the appropriate mitigation (*CEQA Guidelines* Section 15126.4 (b)(3)(C)). In addition to data recovery, under CEQA, the mitigation of effects to an archeological resource that is significant for its scientific value, requires curation of the recovered scientifically significant data in an appropriate curation facility (*CEQA Guidelines* Section 15126.4(b)(3)(C), that is a curation facility compliant with the *Guidelines for the*

Curation of Archaeological Collections (California Office of Historic Preservation, 1993). Final studies reporting the interpretation, results, and analysis of data recovered from the archeological site are to be deposited in the California Historical Resources Regional Information Center (*CEQA Guidelines* Section 15126.4(b)(3)(C).

California Public Resources Code

Provisions for Paleontological Resource Protection

Several sections of the Public Resources Code (PRC) protect paleontological resources. Section 5097.5 prohibits "knowing and willful" excavation, removal, destruction, injury, and defacement of any paleontological feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted permission.

Effects on Human Remains

Under State law, human remains and associated burial items may be significant resources in two ways: they may be significant to descendent communities for patrimonial, cultural, lineage, and religious reasons and human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendent groups in ancestral burials is a matter of law for some groups, such as Native Americans (*CEQA Guidelines* Section 15064.5 (d), PRC Section 5097.98). In other cases, the concerns of the associated descendent group regarding appropriate treatment and disposition of discovered human burials may become known only through outreach. Beliefs concerning appropriate treatment, study, and disposition of human remains and associated burial items may be inconsistent and even conflictual between descendent and scientific communities. CEQA and other State regulations concerning Native American human remains provide the following procedural requirements to assist in avoiding potential adverse effects to human remains within the contexts of their value to both descendents communities and the scientific community:

- When an initial study identifies the existence or probable likelihood that a project would impact Native American human remains, the lead agency is to contact and work with the appropriate Native American representatives identified through the Native American Heritage Commission (NAHC) to develop an agreement for the treatment and disposal of the human remains and any associated burial items (*CEQA Guidelines* Section 15064.5 (d), PRC Section 5097.98).

- If human remains are accidentally discovered, the county coroner must be contacted. If the county coroner determines that the human remains are Native American, the coroner must contact the NAHC within 24 hours. The NAHC must identify the most likely descendant (MLD) to provide for the opportunity to make recommendations for the treatment and disposal of the human remains and associated burial items. If the MLD fails to make recommendations within 48 hours of notification or the project applicant rejects the recommendations of the MLD, the Native American human remains and associated burial items must be reburied in a location not subject to future disturbance within the project site (PRC Section 5097.98).

- If potentially affected human remains/burial may have scientific significance, whether or not having significance to Native Americans or other descendent communities, then under CEQA, the appropriate mitigation of effect may require the recovery of the scientific information of the remains/burial through identification, evaluation, data recovery, analysis, and interpretation (CEQA *Guidelines* Section 15064.5(c)(2)).

5.5.2.3 Local Regulations

San Francisco Historic Preservation Commission and Planning Code Articles 10 and 11

The OHP has included the City and County of San Francisco (CCSF) on its list of Certified Local Governments, which means that San Francisco has an approved historic preservation ordinance, Historic Preservation Commission, and other formal processes related to historic preservation and cultural resources management. The CCSF reviews the historical resources designated under Articles 10 and 11 of the San Francisco Planning Code when it evaluates impacts on historical resources (see Section 5.5.3.1, Significance Criteria). Article 10 describes procedures regarding the preservation of sites and areas of special character or special historical, architectural, or aesthetic interest or value, designated as City Landmarks and included within locally designated historic districts. Article 11 of the Planning Code designated six downtown conservation districts. Fire Station No. 35 at Pier 22½, the Ferry Building, and the Northeast Waterfront Historic District, are the only Port of San Francisco properties within the C-APE that are designated landmarks pursuant to Article 10 of the Planning Code.

City and County of San Francisco Planning Department CEQA Review Procedures for Historic Resources

San Francisco Preservation Bulletin No. 16 provides guidance for the CEQA review process for historic resources. As a certified local government under the NHPA, and the lead agency in CEQA determinations, the CCSF has instituted guidelines and a system for initiating CEQA review of historical resources. The San Francisco Planning Department's "CEQA Review Procedures for Historical Resources" incorporates the State's CEQA guidelines into the City's existing regulatory framework. To facilitate the review process, the Planning Department has established categories to determine the significance of historic properties based on their inclusion within cultural resources surveys and/or historic districts. These categories include:

- *Category A.1* – Resources listed on or formally determined to be eligible for the CRHR
- *Category A.2* – Adopted local registers, and properties that have been determined to appear or may become eligible for the CRHR
- *Category B* – Properties requiring further consultation and review
- *Category C* – Properties determined not to be historical resources or properties for which the City has no information indicating that the property is a historical resource.

Port of San Francisco Review Procedures for Alterations to Historic Resources

Port Commission Resolution No. 04-89.

Port Commission Resolution No. 04-89 requires that projects uphold the historic character of the Embarcadero Historic District, consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (Secretary's Standards). In evaluating projects in the Embarcadero Historic District, qualified preservation staff and consultants generally reviews projects according to the following approach.

Minor projects (ordinary maintenance and repair, limited alterations including such things as re-roofing, interior tenant improvements, tenant signage consistent with the Port's adopted Signage Policy, window repair and as needed replacement, wireless telecommunication facilities). Preservation staff provides project review guidance to project sponsors and reviews Port building permit applications for consistency with the Secretary's Standards. Frequently staff critiques proposals and may include consultation with fellow Port architecture and urban design professionals as well as structural engineers and building code officials. If the project is determined consistent with the Secretary's Standards, the findings are documented, CEQA review completed, and the permit authorized. If the project is determined to be inconsistent, Port staff contacts the project sponsor and provides preliminary recommendations on how to achieve consistency. If there is a disagreement or the sponsor is unwilling to consider alternative approaches, the staff will treat the proposal as a major project.

Major projects (demolition, new construction, seismic repair and strengthening, rehabilitation and significant alteration of existing facilities). Port preservation staff requires the project sponsor to submit a Historic Resources Evaluation Report prepared by a qualified historic preservation professional. Staff reviews the report and makes recommendations on the document identifying necessary revisions and alternative design approaches if necessary to achieve consistency with the Secretary's Standards. Preservation staff may consult with fellow Port architecture and urban design staff as well as structural engineers and building code officials. Because the Port is the property owner, it also includes provisions in each of its tenant leases that require the alteration of properties within the Embarcadero Historic District to be consistent with the Secretary's Standards. Major projects within the Embarcadero Historic District are often subject to state and federal environmental review which includes the involvement and consultation with state and federal agencies, interested parties, and in the case of CEQA, public hearings. This review process provides additional evaluation of the consistency of the proposed alterations with the Secretary's Standards or applicable mitigation measures or Historic Property Treatment Plan.

Additionally, some major projects within the Embarcadero Historic District are subject to review by the California Office of Historic Preservation and the National Park Service as part of the Federal Historic Rehabilitation Tax Credit Program. These agencies certify that the proposed rehabilitation project conforms to the Secretary's Standards.

Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures

In 2004, as part of the adoption of the Embarcadero Historic District nomination, the Port worked with the California Office of Historic Preservation to develop a set of *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*.[134] The Guidelines provide guidance on the various treatments that the Port and its tenants utilize in the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function of these historic structures and address the consistency of these treatment methods with the Secretary's Standards. The Guidelines recognize the repair and in-kind replacement of portions of the bulkhead wharf as consistent with the Secretary's Standards, but require more rigorous case-by-case review of substructure alteration and replacement proposals to determine consistency with the Secretary's Standards. The case-by-case review required for more invasive projects involving significant alteration, demolition, and reconstruction analyzes the specific conditions of the substructure and the details of each project including the overall compatibility of each proposal with the aesthetic quality, public access, and active use of the pier and bulkhead wharf substructures.[135]

5.5.3 Impacts and Mitigation Measures

5.5.3.1 Significance Criteria

The City has not formally adopted significance standards for impacts related to cultural resources, but generally considers that implementation of the project could have a potentially significant impact on cultural resources if the project were to:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code;
- Cause a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Impacts related to the following significance criteria are not discussed for the reasons described below:

> *Directly or indirectly destroy a unique geologic feature.* This portion of this criterion does not apply to the proposed project because there will be no excavation of exposed rock outcrops that would destroy a unique geologic feature.

[134] Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, 2004.
[135] Port Commission, City and County of San Francisco, Resolution No. 04-89, Adopted October 26, 2004.

5.5.3.2 Approach to Analysis

Architectural/Structural Resources

Potential impacts on architectural resources are assessed by identifying any project activities such as new construction, demolition, or substantial alteration within identified historic districts that could affect resources that have been identified as historic resources for the purposes of CEQA. Properties identified as historic resources under CEQA include those that are significant because of their association with important events, people, or architectural styles or master architects, or for their informational value (NRHP and CRHR Criteria A/1, B/2, C/3, and D/4) and that retain sufficient historic integrity to convey their significance. Criterion D/4, however, is typically applied to the evaluation of historic-period archeological resources and not to architectural resources, as described below. Once a resource has been identified as significant, it must be determined whether the impacts of the project would "cause a substantial adverse change in the significance" of the resource (*CEQA Guidelines* § 15064.5[b]). A substantial adverse change in the significance of a historic resource means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historic resource would be materially impaired" (*CEQA Guidelines* § 15064[b][1]). A historic resource is materially impaired through the demolition or alteration of the resource's physical characteristics that convey its historical significance and that justify its inclusion in the CRHR (*CEQA Guidelines* § 15064.5[b][2][A]).

Archeological Resources

The significance of most prehistoric and historic-period archeological sites is usually assessed under NRHP and CRHR Criterion D/4. This criterion stresses the importance of the information potential contained within the site, rather than its significance as a surviving example of a type or its association with an important person or event. Archeological resources may also be assessed under CEQA as unique archeological resources, defined as archeological artifacts, objects, or sites that contain information needed to answer important scientific research questions.

Paleontological Resources

The paleontological analysis identifies the potential to encounter paleontological resources (i.e., plant, animal, or invertebrate fossils or microfossils) during excavations associated with the project. The paleontological potential of the units to be disturbed was determined, and the potential to encounter paleontological resources at each site was evaluated. A potentially significant impact on paleontological resources would occur if: (1) construction of the project component would move or excavate previously undisturbed geologic bedrock (native rock); and (2) the bedrock to be disturbed has a high paleontological potential.

Human Remains

Human remains, including those buried outside of formal cemeteries, are protected under several state laws, including PRC Section 5097.98 and Health and Safety Code Section 7050.5. These laws are

identified above in Section 5.5.2.2, State Regulations. This analysis considers impacts including intentional disturbance, mutilation, or removal of interred human remains.

5.5.3.3 AC34 Event and Cruise Terminal Impacts and Mitigation Measures

America's Cup

Architectural/Structural Resources

Impact CP-1: Construction and operation of the proposed AC34 project could cause a substantial adverse change in the significance of a historic resource. (Less than Significant with Mitigation)

Alterations to numerous waterfront piers, buildings, and other structures that contribute to the historic significance of the Embarcadero Historic District would occur as a result of both temporary and permanent improvements for the AC34 events. They are described below for each facility. The exact design of many of the temporary and permanent improvements is unknown at this point because the designs are not final. Such installations could permanently damage historic architectural resources if not completed in a proper manner. These impacts can be avoided by applying Port Commission Resolution 04-89, which requires all major projects within the Embarcadero Historic District comply with the Secretary's Standards and establishes a review process to confirm such compliance, thereby mitigating any potentially significant impacts to a less-than-significant level. Implementation of mitigation measures that incorporate design-based performance criteria that are intended to ensure compliance with the Secretary's Standards, including performance measures/criteria developed by the Port of San Francisco specifically for the proposed project, would also mitigate potentially significant impacts on historic resources to a less-than-significant level.

Increased visitation by event spectators in both the primary and secondary viewing areas could cause a substantial adverse change in the significance of historic resources. For example, as discussed in more detail below, numerous historic earthen fortifications in or near the primary event venues and within the secondary viewing areas would be at risk from erosion due to increase visitation. Most of these impacts would occur on lands managed by the GGNRA unit of the NPS. Although the NPS has a fencing and pedestrian traffic control plan in place for the GGNRA to prevent visitors from walking on and eroding sensitive historic structural resources such as historic earthen fortifications, these plans were not designed for the high volume of visitors expected at the AC34 events. Other land management agencies such as California State Parks or the Presidio Trust may not have such plans in place, or may lack the means to enforce such plans given the expected high attendance at race events. Erosion of historic earthen fortifications or other historic resources due to increased event visitation is a potentially significant impact of the proposed AC34 project. These impacts can be reduced to a less-than-significant level with implementation of mitigation measures designed specifically for this project to protect sensitive historic resources throughout all viewing areas.

The impact evaluation below is divided into two primary project components: AC34 venues and secondary viewing areas. The evaluation follows a geographical path from south to north around the Bay in a counter-clockwise manner, beginning with Pier 80 on the south, and ending with Alcatraz Island.

America's Cup Venues

Pier 80. Pier 80 would be the back-up location of team bases for the 2012 and 2013 AC race events. These bases would include space for boat work, storage and maintenance facilities, office space, and ancillary team parking. Temporary tents would be used for storage and operational offices, and mobile cranes would be used along the south side of the pier to lift the racing yachts in and out of the water. A temporary floating dock would also provide berthing for team boats. Additional area at Pier 80 would be used for team catering facilities. A public access corridor would be created on Pier 80 adjacent to the team bases for viewing of team base operations. The temporary uses would be in place for approximately 18 months, and would serve both the 2012 and 2013 events.

Built in 1967 and 1970, Pier 80 was previously determined ineligible for listing as a historic resource and is not a contributor to the Embarcadero Historic District. Port staff completed a survey and evaluation of Pier 80 in June 2011, and recorded the property on DPR 523 forms. The evaluation found that Pier 80 is not individually eligible for listing on the federal, state, or local registers, and not a contributor to an existing or potential historic district.[136]

The proposed event activities at Pier 80 would have no impact on historic resources in this portion of the C-APE.

Piers 30-32 and Bulkhead Wharves. The proposed project includes a number of temporary and permanent improvements to Piers 30-32. Although Piers 30-32 are outside the Embarcadero Historic District, any permanent changes to the piers could indirectly affect the historic setting of the district because it is physically connected to the bulkhead wharf and adjacent to Embarcadero Historic District resources. As such, an evaluation of effects of the project on the setting of the district is provided here. To accommodate the AC34 team bases operations on Piers 30-32, the following temporary and permanent improvements are proposed:

Temporary Improvements

- Installation of tents for team hospitality and catering facilities
- Floating wave attenuators on the outboard end and south of the pier
- Installation of floating docks and gangways connected to the north and south aprons
- Installation of up to two mobile cranes to lift racing yachts into and out of the Bay

[136] Port of San Francisco, Primary Record and Building, Structure, and Object Form, *Pier 80 Cargo Terminal,* DPR form 523 A and B, June 15, 2011.

Permanent Improvements

- Structural repair and seismic strengthening to increase lateral capacity. Proposed work to include pier deck, substructure, and pile cap repair, installation of large diameter piles, construction of shear panels
- Alteration to raise the Piers 30-32 "valley" to the elevation of Piers 30 and 32
- Repair or alteration of approximately 540 feet of Section 10 of the bulkhead wharf
- Utility and stormwater management features

All of the temporary improvements, and most of the permanent improvements to Piers 30-32 would not have any direct impact to the Embarcadero Historic District because these piers are not in the district. The temporary improvements would be short-lived installations (approximately 2 years) that would be removed after the AC34 event. Most of the permanent improvements to the pier structure are typical repairs and alterations required to abate deterioration and strengthen the facility to maintain its structural integrity and therefore useful life. These improvements, however, are not sufficient to support future development.

One permanent alteration, however, in the vicinity of Piers 30-32 has the potential to affect Section 10 of the bulkhead wharf, which is a contributor to the Embarcadero Historic District. Because this bulkhead wharf is deteriorating, the AC34 project would include several possible treatments to various sections of the bulkhead wharf ranging from ordinary maintenance and repair to demolition and reconstruction, which could result in a potentially significant impact on this historic resource. As described above in Section 5.5.2.3, Local Regulations, in consultation with the California Office of Historic Preservation, the Port developed and adopted *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures,*[137] which provide guidance on the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function, consistent with the Secretary's Standards.

Typically, ordinary maintenance and repair activities to maintain the structural integrity and function of the historic resource include cleaning, repair and sealing of concrete supporting piles and cap beams below the deck of the bulkhead wharf concrete to abate spalling concrete and exposed rebar. In some cases, the existing piles are strengthened by the installation of shotcrete, fiberglass wrap or are jacketed to enclose the historic materials and extend their functional integrity and lifespan. Likewise, alteration or in-kind replacement is required when component parts or areas of the structure wharf are severely deteriorated that it is beyond the ability to repair them. Reconstruction and alterations required for the AC34 project may involve new materials and designs that may be out of character with the adjoining bulkhead wharves and could result in a significant impact on the historic resource. Because ordinary maintenance, repair and alteration to bulkhead wharves is reviewed for consistency with the Port's Guidelines and therefore considered consistent with the Secretary's Standards it would have a less-than-significant impact. However, to address the potential significant impacts that may result from the AC34 project, and in the event the demands of the program make compliance with the Port's guidelines infeasible, implementation of **Mitigation Measure M-CP-1a** (Bulkhead Wharf

[137] Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, 2004.

Substructure Review Process) would reduce the potential impacts associated with demolition and reconstruction of the bulkhead wharf to less than significant. This measure would require potential demolition and reconstruction of bulkhead wharves to meet performance measures designed to retain certain character defining features of the wharf that are necessary to maintain the visual continuity of the resource and its overall appearance, as well as the public experience of these contributing resources to the Embarcadero Historic District.

The project proposes to respond to the severity of deterioration and the proposed use program at each bulkhead wharf location. Because the structural analysis and engineering approaches available to achieve code compliance are continuing to be developed, this impact analysis assumes a range of improvements, from ordinary maintenance and repair to demolition and reconstruction of the bulkhead wharf.

In addition to alterations to Section 10 at Piers 30-32, the proposed project would also alter the following two bulkhead wharf sections;

- *Section 4* – 1,000 feet in length between Union and Filbert Streets. This section of wharf connects Pier 27 to the seawall and serves as the substructure for the Pier 23 restaurant building.

- *Section 3* – 1,000 feet in length between Francisco and Lombard Streets. This section of wharf connects Piers 29 and 31 to the seawall and serves as the substructure for these bulkhead buildings, as well as the Belt Railroad Office Building.

Implementation of **Mitigation Measure M-CP-1a** (Bulkhead Wharf Substructure Review Process) would reduce the potentially significant impact to historic bulkhead wharves to a less-than-significant level.

In addition, potential indirect impacts to the piers and bulkhead wharves could result from groundborne vibration generated from proposed pile driving activities during construction near Red's Java House at Piers 30-32 and near Pier 28, and from the repair of bulkhead wharf Section 10; this potential impact, analyzed in Section 5.7, Noise and Vibration, determined that implementation of **Mitigation Measure M-NO-3** (Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring) would reduce this impact to less-than-significant. **Mitigation Measure M-NO-3** (Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring) would require a pre-construction assessment by the Port's Chief Harbor Engineer, or a qualified geotechnical engineer, of subsurface conditions and the structural integrity of the subject, or adjacent, historic structures and if recommended by the Chief Harbor Engineer, or geotechnical engineer, vibration monitoring would be required in the vicinity of pile driving activities. If monitoring results indicate unacceptable ground movement, all impact work would cease and corrective measures implemented.

Red's Java House (Pier 30). Red's Java House is a historic resource located outside of, but next to, the Embarcadero Historic District on the northwest corner of Piers 30-32. Red's Java House was

determined to be a potential contributor to the Embarcadero Historic District because it is one of several waterfront restaurants that served as important gathering places for longshoremen. However, at the recommendation of the National Park Service, Red's Java House was not included in the Embarcadero Historic District because it is physically a part of Piers 30-32, a property that lacked sufficient integrity to qualify for inclusion in the Embarcadero Historic District. It is nonetheless considered a "potential" contributor to the district and a historic resource for CEQA purposes. The proposed AC34 event would not include any alterations to Red's Java House. This building would remain at its current location on Piers 30-32.

However, potential indirect impacts to Red's Java House could result from groundborne vibration generated from proposed pile driving activities during construction at Piers 30-32; this potential impact, analyzed in Section 5.7, Noise and Vibration, determined that implementation of **Mitigation Measure M-NO-3** (Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring) would reduce this impact to less-than-significant. **Mitigation Measure M-NO-3** (Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring) would require a pre-construction assessment by the Port's Chief Harbor Engineer, or a qualified geotechnical engineer, of subsurface conditions and the structural integrity of Red's Java House and if recommended by the Chief Harbor Engineer, or geotechnical engineer, vibration monitoring would be required in the vicinity of pile driving activities. If monitoring results indicate ground movement that poses risk of damage to the resource, all impact work would cease and corrective measures implemented to minimize the risk to the structure.

Potential impacts associated with long-term development, including the rehabilitation of the existing Piers 30-32 pier structure, are described below in Section 5.5.3.5.

Seawall Lot 330. Seawall Lot 330 is located outside of the Embarcadero Historic District, and is not a historic resource, as defined by CEQA. For the AC34 events, Seawall Lot 330 would be used as a surface parking lot; this use would have no impacts to historic resources.

Piers 26 and 28. The proposed project includes a number of temporary improvements to Piers 26 and 28, which are contributing resources to the Embarcadero Historic District. These temporary improvements include:

- Interior improvements to serve event storage, off-street parking and regatta and team operations needs
- Installation of docks and gangways connected to the north and south aprons

The proposed temporary use of Piers 26 and 28 would utilize existing interior office spaces and storage areas within the bulkheads and pier sheds. In addition it may be necessary to install temporary improvements at Piers 26 and 28, including free standing structures, such as tents or trailers or involve installation of partition walls that would be anchored to the pier deck, interior columns or other structural members. These alterations are highly reversible because they can be

easily disassembled, utilize materials that are less durable and constructed for a short lifespan; therefore, this aspect of the project would not adversely affect Piers 26 and 28.

Temporary improvements at Piers 26 and 28 also include the installation of docks and gangways that would connect to the north and south aprons to provide access to vessels berthed alongside the piers. The installation of docks and gangways that attach to pier aprons or are secured by temporary piles are a common alteration/improvement that is found throughout the Embarcadero Historic District. Examples of these typical kinds of maritime improvements that permit access from piers to the berthed vessels and the Bay can be found at Pier 1½ for the Water Taxi Landing, Pier 38 and the Pier 40 South Beach Marina. Although these temporary improvements are highly reversible and commonly found in the Embarcadero Historic District, these improvements have the potential to affect Piers 26 and 28. These activities are subject to the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*[138], which provide guidance on the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function, consistent with the Secretary's Standards. Review by Port staff of the detailed designs of the proposed installation of temporary structures including the docks and gangways for consistency with the Secretary's Standards would reduce the potential impacts on Piers 26 and 28 to a less-than-significant level. All temporary installations at Piers 26 and 28 would be in place for approximately two years.

Potential indirect impacts to Piers 28 could result from groundborne vibration generated from proposed pile driving activities associated with improvements to Piers 30-32; this potential impact, analyzed in Section 5.7, Noise and Vibration, determined that implementation of **Mitigation Measure M-NO-3** (Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring) would reduce this impact to less-than-significant. **Mitigation Measure M-NO-3** (Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring) would require a pre-construction assessment by the Port's Chief Harbor Engineer, or a qualified geotechnical engineer, of subsurface conditions and the structural integrity of Piers 28 and if recommended by the Chief Harbor Engineer, or geotechnical engineer, vibration monitoring would be required in the vicinity of pile driving activities. If monitoring results indicate ground movement that poses risk of damage to the resource, all impact work would cease and corrective measures implemented to minimize the risk to the structure.

Pier 26 Annex. The Pier 26 Annex is a contributor to the Embarcadero Historic District. Although the Pier 26 Annex is located immediately adjacent to the proposed America's Cup operations proposed for Piers 26 and 28, it is not part of the project, and no alterations to this building are proposed. As such, no significant impacts to Pier 26 Annex would occur as a result of the AC34 project.

Pier 28½ Restaurant Building. The Pier 28½ Restaurant building is a contributor to the Embarcadero Historic District that is located between Pier 28 and Piers 30-32; two facilities that

[138] Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, Port Commission Resolution No. 04-89, adopted October 26, 2004.

would be used to support the America's Cup event. No alterations to Pier 28½ Restaurant Building are proposed as a result of the event. As such, no significant impacts to Pier 28½ Restaurant would occur as a result of the AC34 project.

Fire Station 35 (Pier 22½). Fire Station 35 at Pier 22½ is a contributor to the Embarcadero Historic District that is located just north of the Pier 26. No alterations to Fire Station 35 at Pier 22½ are proposed as part of the AC34 project. Open water berthing located at Rincon Point between Piers 22½ and 14 (Pier 14 is outside the boundary of the Embarcadero Historic District) would have no direct or indirect adverse impacts to historic resources in this location.

Piers 19 and 19½. The proposed project includes a number of temporary improvements to Piers 19 and 19½, both of which are contributors to the Embarcadero Historic District. Each of these activities is described below.

- Interior improvements to serve as a cafeteria, volunteer center, ancillary office and storage as well as truck loading, deliveries and off-street parking within the Pier 19½ connecting shed
- Installation of floating docks and gangways connected to the north apron

The proposed temporary improvements to Pier 19 and 19½ would be free standing structures, such as tents or trailers or involve installation of partition walls that would be anchored to the pier deck, interior columns or other structural members. These alterations are highly reversible because they can be easily disassembled, utilize materials that are less durable and constructed for a short lifespan. The temporary improvements proposed include the installation of floating docks and gangways that would connect to the north apron to provide access to vessels berthed alongside the pier. The installation of docks and gangways that attach to pier aprons or secured by temporary piles is a common alteration/improvement that is found throughout the Embarcadero Historic District, as described above, and would be subject to the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures,*[139] which provide guidance on the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function, consistent with the Secretary's Standards. Review by Port staff of the detailed designs of the proposed installation of temporary structures including the docks and gangways for consistency with the Secretary's Standards would reduce the potential impacts on Piers 19 and 19½ to a-less-than-significant level. Because these improvements are temporary and highly reversible, impacts to the historic significance of Piers 19 and 19½ as contributors to the Embarcadero Historic District would be less than significant. All temporary installations at Piers 19 and 19½ would be in place for approximately two years.

Pier 23. The proposed project includes the following temporary improvements to Pier 23, a contributor to the Embarcadero Historic District:

[139] Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, Port Commission Resolution No. 04-89, adopted October 26, 2004.

- Interior improvements to serve as media operations within temporary structures or installations to support television production and broadcast studios and a media center within the transit shed
- Up to four approximately 200 square-foot broadcast booths would be erected on either the north or south apron
- An approximately 4,000 square-foot fixed barge would be installed outboard of Pier 23 in the Bay to accommodate up to 10 satellite dishes
- Installation of floating docks and gangways connected to the north apron and south aprons

The proposed temporary improvements to Pier 23 would be freestanding structures, such as tents or trailers or involve installation of partition walls that would be anchored to the pier deck or interior columns or other structural members. These alterations are highly reversible because they can be easily disassembled, utilize materials that are less durable and constructed for a short lifespan. The fixed barge proposed outboard of the Pier 23 would not physically connect to the pier and would accommodate telecommunications equipment that might otherwise be located on the transit shed roof, pier deck or aprons. In addition, the temporary floating docks and gangways would be installed and attached to the north and south aprons or secured by temporary piles to provide access to vessels berthed alongside the pier. The installation of docks and gangways and their connection to pier aprons is an improvement that is found throughout the Embarcadero Historic District.

The installation of docks and gangways would be subject to the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures,*[140] which provide guidance on the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function, consistent with the Secretary's Standards. Review by Port staff of the detailed designs of the proposed installation of temporary structures including the docks and gangways for consistency with the Secretary's Standards would reduce the potential impacts on Pier 23 to a less-than-significant level. Because the temporary improvements proposed are reversible, their installation would result in a less than significant impact to Pier 23. All temporary installations at Pier 23 would be in place for approximately two years.

Pier 23 Restaurant. The Pier 23 Restaurant Building is a contributor to the Embarcadero Historic District, and is located immediately adjacent to the proposed Piers 27-29 America's Cup Village for the AC34 2013 events, Pier 27 Cruise Terminal, and Northeast Wharf Plaza. No alterations to this building are proposed as part of the AC34 project. Therefore, no impacts to the Pier 23 Restaurant Building would occur as a result of the AC34 project.

Pier 27 Office Building. Built in 1962, the Pier 27 Office Building is a non-contributor to the Embarcadero Historic District. Removal of this non-contributing element of the district would be considered a project benefit because it would eliminate a building that was constructed outside of the Embarcadero Historic District's period of significance, and would open up views to the Bay

[140] Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, Port Commission Resolution No. 04-89, adopted October 26, 2004.

and of the surrounding contributing resources, such as the adjacent Belt Railroad Office Building. As such, the proposed demolition of the Pier 27 Office Building would have no significant impact upon the Embarcadero Historic District or any other adjacent historic resources.

Pier 27 and Piers 27-29 Valley. The proposed project at Piers 27 and Piers 27-29 valley includes the following temporary and permanent improvements:

Temporary Improvements

- Outdoor improvements within the Piers 27-29 valley to support the America's Cup Village in 2013 including event seating, grandstand, VIP entry, sponsor displays, club hospitality, and exhibitions
- Floating docks and gangways for boat berthing

Permanent Improvements

- Demolition of Pier 27 shed and Pier 27 Office Building
- Construction of new core and shell building at Pier 27
- Stormwater Management Improvements
- Removal of Teatro Zinzanni

Temporary Improvements. The proposed temporary improvements to the Piers 27-29 valley, would include construction of freestanding structures to support the America's Cup Village, such as tents, seating, and displays, or would involve installation of partition walls that would be anchored to the pier/wharf deck. These proposed alterations would be highly reversible because they can be easily disassembled, utilize materials that are less durable and constructed for a short lifespan; therefore, this aspect of the project would not indirectly affect the setting of historic resource at the Piers 27-29 valley (i.e., Pier 23, Pier 23 Restaurant, Belt Railroad Office Building, and Pier 29 & 29½). As such these proposed temporary improvements in the Piers 27-29 valley would comply with the Secretary's Standards, and thus result in impacts that would be less than significant. All temporary installations at Piers 27 and Piers 27-29 valley would be in place for approximately two years. In addition, temporary floating docks and gangways for AC34 support vessels and spectator boats would be constructed. They would be installed and attached to the north and south aprons or secured by temporary piles. The installation of docks and gangways and their connection to pier aprons is an improvement that is found throughout the Embarcadero Historic District, and would be subject to the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures,*[141] which provide guidance on the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function, consistent with the Secretary's Standards. As a result, these installations would have a less-than-significant impact.

Permanent Improvements-Phase I (Demolition of Pier 27 and construction of new core and shell building). Built in 1965, the Pier 27 shed is a non-contributor to the Embarcadero Historic District. As such, the demolition of Pier 27 shed would not have a significant impact on the Embarcadero Historic

[141] Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, Port Commission Resolution No. 04-89, adopted October 26, 2004.

District. The demolition of the Pier 27 shed was analyzed for its potential impact on historic resources by a consulting architectural historian, who determined this activity would be consistent with the Secretary's Standards for the following reasons:[142] The removal of the non-contributing Pier 27 transit shed as well as the altered outboard portion of Pier 29 would enhance the historic character of the property by expressing the Pier 29 shed's historic freestanding profile and rectangular plan (see discussion of Pier 29 alterations, below).

- Removing Pier 27 shed and the compromised outboard end of Pier 29 would remove non-historic elements from the site and would return Pier 29 to a freestanding building.

- Patching and repairing the Pier 27 deck after demolition of the Pier 27 transit shed would have no impact on historic resources, as Pier 27 is not a contributing resource to the Embarcadero Historic District.

Following demolition of the existing pier shed, Phase I includes construction of the building core and shell on Pier 27 for hospitality support use for the AC Village for 2013 AC34 events. The design of the new structure also was analyzed for its potential impact on historic resources and was found to be consistent with the Secretary Standards.[143] See discussion and impact evaluation of the proposed Pier 27 Cruise Terminal under the subheading *James R. Herman Cruise Terminal and Northeast Wharf Plaza* below.

Stormwater Management Improvements. The proposed project would also install a number of stormwater management features consistent with the San Francisco Stormwater Management Guidelines upon removal of the Pier 27 transit shed. The Guidelines provide policy and recommended design approaches for the incorporation of systems that can capture and in some instances treat stormwater on-site in new facilities or by retrofitting existing facilities. Typically, stormwater improvements on existing piers include installation of plumbing to capture and direct stormwater runoff into catchment basins rather than letting it runoff into the Bay. These improvements are usually incorporated into the pier or apron deck or installed below it and are not highly visible. However, because the stormwater improvements have not been designed yet, and must be designed to address the unique design of each Port facility, these improvements could have a significant impact on historic resources. However, because these proposed improvements would be subject to the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*[144], which provide guidance on the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function, consistent with the Secretary's Standards, potential impacts on historic resources that may result from this work would be reduced to a less-than-significant level.

Tenant Displacement and Relocation. As described in Chapter 3, Project Description, the AC34 project would require relocation of many Port tenant businesses from facilities that would be used for the AC race events in 2012 and 2013, including associated major construction

142 Architectural Resources Group, *Piers 27-29 America's Cup Improvements, Evaluation for Consistency with the Secretary Standards,* April 13, 2011.
143 Ibid.
144 Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, Port Commission Resolution No. 04-89, adopted October 26, 2004.

improvements at Piers 27-29 and Piers 30-32, and temporary installations at other Port piers. Most of these businesses are office or light industrial uses that are well suited for the large warehouse shed facilities provided by the Port's piers, and can be readily accommodated on other Port properties without major structural requirements. Three tenant businesses have been identified as having unique site relocation, and have enlisted the City's assistance in locating suitable relocation. Two of them are considering relocations to other Port sites that have historic status:

San Francisco Soccer, Telegraph Field. San Francisco Soccer is in discussions with the Exploratorium regarding possible sub-lease of shed space at Pier 17. Pier 17 is a contributing resource to the Embarcadero Historic District, located near Green Street and The Embarcadero. The Exploratorium has a long-term lease with the Port for Piers 15 and 17, both of which are contributing resources to the Embarcadero Historic District. The historic rehabilitation of Pier 15 is underway, as part of the construction of the new Exploratorium Interactive Science Museum, a federal historic tax credit project. A portion of Pier 17 has been improved consistent with the Secretary's Standards to provide new facilities for Baydelta Maritime, which relocated to its new facility from Pier 15 in May 2011. Under the Exploratorium's lease with the Port, Pier 17 is identified for future expansion space for the science museum, excluding the Baydelta premises unless the space is not longer needed for maritime uses. Until the expansion space is built, the lease allows Exploratorium to sublease space at Pier 17 not occupied by Baydelta for interim non-maritime uses, with requirements that the facility be maintained and improved in a manner that is consistent with the Secretary's Standards. If the Exploratorium and San Francisco Soccer agree on lease terms for relocating the artificial turf playing field to Pier 17, the requirement for consistency with the Secretary' Standards consistency would apply to any future alterations or installations that affect the historic structure. Thus, the impacts on historic resources from the possible relocation of San Francisco Soccer would be less than significant.

Teatro Zinzanni. The project would result in the removal of the Teatro Zinzanni tent and temporary support buildings in the Piers 27-29 valley. Installed in 2000, Teatro Zinzanni is not identified as contributing or non-contributing resource to the Embarcadero Historic District and is not considered a historic resource for CEQA purposes.[145] As presented in Chapter 3, Project Description, three site relocation options have been identified for Teatro Zinzanni. One of them is the Port-owned surface parking lot at the corner of Broadway and The Embarcadero, known as Seawall Lot 323/324 (SWL 324). This property supported access ramps to the former Embarcadero Freeway until 1989 when the earthquake damaged freeway was demolished and has been used as a parking lot since that time. This site is included within the Northeast Waterfront Historic District a local historic district under designated pursuant to Article 10 of the San Francisco Planning Code. The Northeast Waterfront Historic District consists of a collection of warehouses constructed after the 1906 Earthquake and Fire. They originally supported manufacturing, industrial, railroad and other maritime commerce activities in association with maritime shipping and industry that occupied the piers in the Embarcadero Historic District. Since the 1970s, these warehouse buildings have been rehabilitated converted to primarily for office use. The buildings

[145] Although the iconic theatre dinner tent itself is a historical artifact, it has no relation to either the Northeast or the Embarcadero Historic Districts.

generally range from four to six stories in height, constructed of brick masonry and reinforced concrete, which convey a solid and industrial form and presence, with simple yet classical and distinctive architectural features incorporated into window, entrance and cornice treatments.

The relocation of Teatro Zinzanni to SWL 324 would include the iconic theatre dinner tent and various support facilities to accommodate food services, storage, administrative, and ticketing and operations space, currently housed in temporary facilities at Pier 29. Given SWL 324's location within the Northeast Waterfront Historic District, any development of that site must be compatible with warehouse historic resources of this district. Port projects within the Northeast Waterfront Historic District would undergo design review by the Waterfront Design Advisory Committee (WDAC) under Planning Code Section 240. Without site development plans or proposals that can be reviewed to determine the compatibility with these provisions, this analysis concludes that the relocation of Teatro Zinzanni to this site could generate a potentially significant impact.

If Teatro Zinzanni relocated to this site, the Port typically would issue building permits without a Certificate of Appropriateness or review by the Historic Preservation Commission. Due to a lack of site design and development plans or details for the potential relocation to this site, it is not certain that the WDAC review process could yield an project design that is compatible with the Northeast Waterfront Historic District to avoid a significant impact. To mitigate this potentially significant impact, **Mitigation Measure M-CP-1d** (Protection of the Northeast Waterfront Historic District from Teatro Zinzanni Relocation) is identified to apply if Teatro Zinzanni opts to relocate to SWL 324. This measure would require Teatro Zinzanni to secure a Certificate of Appropriateness following design review and approval by the Historic Preservation Commission, consistent with Article 10 of the Planning Code prior to the execution of a Port lease for the site. Article 10, Appendix D includes a statement of significance that addresses the architectural and visual characteristics and features that define this district. With the implementation of this Mitigation Measure, impacts on cultural resources from the possible relocation of Teatro Zinzanni to SWL 324 would be less than significant.

Piers 29, 29½. The proposed project at Piers 29 and 29½ includes the following temporary and permanent improvements:

Temporary Improvements

- Interior improvements to Pier 29 transit shed to accommodate: food concession, merchandising, ticket sales, and restroom facilities
- Installation of floating docks and gangways connected to the north apron

Permanent Improvements - Phase I

- Demolition of the remnants of the former end bay of Pier 29 transit shed
- Construction of new Pier 29 transit shed end wall
- Structural repair/upgrade of Pier 29 transit shed
- Seismic strengthening of the Pier 29 transit shed
- Apron repair and fendering

Temporary Improvements: The proposed temporary improvements to Pier 29 and 29½ to accommodate: food concession, merchandising, ticket sales, and restroom facilities would be highly reversible because they can be easily disassembled, utilize materials that are less durable and constructed for a short lifespan; therefore, the potential impacts from this component of the project would be less than significant. The installation of floating docks and gangways that would attach to pier aprons or secured by temporary piles is a common alteration/improvement that is found throughout the Embarcadero Historic District, as described above, and would be subject to the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*,[146] which provide guidance on the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function, consistent with the Secretary's Standards. Review by Port staff of the detailed designs of the proposed installation of temporary structures including the docks and gangways for consistency with the Secretary's Standards would reduce the potential impacts on Piers 29 and 29½ to a-less-than-significant level. All temporary installations at Piers 29 and 29½ would be in place for approximately two years.

Permanent Improvements: The proposed demolition of Pier 27 shed would result in the need to rationalize the eastern, outshore end of Pier 29 to maintain its structural integrity and utility as a functioning pier shed, both in the short-term to accommodate AC34 use, and in the long-term for the Pier 27 Cruise Terminal project's proposed provisioning area. These activities were analyzed for their potential impact on historic resources by a consulting architectural historian, who determined this activity would be consistent with the Secretary's Standards for the following reasons:[147]

- The proposed project would make a number of alterations in a triangular area at Pier 29's outshore end, which was extensively altered in 1965 to accommodate Pier 27. Historic materials such as roof monitors, structural columns, roof trusses, cargo doors and steel sash windows to be removed are found in multiple areas throughout the outshore end of the Pier 29 shed. Given the altered state of the outshore end of Pier 29, the removal of these features and rationalization of the highly altered pier end that would result from the demolition of the Pier 27 shed would not compromise the overall level of integrity of this resource because the defining characteristics of the building or its site and, in particular, Pier 29 would remain a contributor to the Embarcadero Historic District.

- The removal of the altered outboard portion of Pier 29 would enhance the historic character of the property by expressing the Pier 29 shed's historic freestanding profile and rectangular plan.

- The proposed project would not remove historically significant alterations to the site because the Pier 29 alterations occurred after the Embarcadero Historic District's period of significance.

- Removing the compromised outboard end of Pier 29 removes non-historic elements from the site and returns Pier 29 to a freestanding building.

[146] Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, Port Commission Resolution No. 04-89, adopted October 26, 2004.
[147] Ibid.

- The proposed end wall for Pier 29 conveys the three-gabled shape of the historic shed, and the rhythm of the proposed roll-up doors and pedestrian entrances evokes the window and door openings of the original reinforced concrete end wall, without duplicating those features. The new wall would be separated from the existing walls of the shed by a shallow reveal, distinguishing the new construction from the historic structure.

- The shell of the proposed cruise ship terminal at Pier 27 would be situated more than 100 feet apart from the Pier 29 shed. A historic resources review of the architectural design of the proposed Pier 27 Cruise Terminal found that it would be compatible with the Embarcadero Historic District and therefore consistent with the Secretary's Standards (see discussion under the subheading, *James R. Herman Cruise Terminal and Northeast Wharf Plaza*, below). As such, this component of the project would be expected to have a less-than-significant impact on the historic setting of Pier 29.

Based on the above findings it has been determined that this component of the project would not adversely impact Pier 29 as a contributing resource to Embarcadero Historic District.[148] Because these alterations and improvements to Piers 29 and 29½ were determined consistent with the Secretary's Standards, they would have a less-than-significant impact on historic resources.

Other proposed permanent improvements to the Pier 29 transit shed include structural repair and seismic upgrade of the transit shed as is necessary to maintain the structural integrity of the superstructure. The specific design for these improvements are not yet fully developed due to a lack of a detailed existing conditions survey. This activity could have a significant adverse impact on the historic significance of Pier 29. However, structural repair and seismic upgrades to Pier 29 would be subject to Port Commission Resolution 04-89 which requires review by Port Staff for consistency with the Secretary's Standards. As such, this component of the project would have a less-than-significant impact on Pier 29.

Apron repair and fendering within the Embarcadero Historic District is considered ordinary maintenance and repair and consistent with the continued maritime use of the Embarcadero Historic District. Such work is recognized as consistent with the Secretary's Standards in the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*. Because pier substructures, which include aprons, require repair on a regular basis to address rapid deterioration from the marine environment and vessel traffic, these Guidelines identify a range of typical repair approaches that are appropriate and consistent with the Secretary's Standards. As such, this component of the project would have a less-than-significant impact on Pier 29.

Because these permanent improvements to Pier 29 would primarily entail repair and alteration necessary to maintain the integrity of the resource as a functioning pier, and would be subject to Port Commission Resolution 04-89 which requires review by Port staff for consistency with the Secretary's Standards, potential impacts that may result from this work would be less than significant.

[148] Ibid.

Belt Railroad Office Building. The Belt Railroad Office Building is a contributor to the Embarcadero Historic District. The proposed project would result in the temporary use of the building as the Welcome Center for the AC34 event. The internal, temporary use of the existing building would not result in any permanent alterations to the building's interior or exterior. The immediate setting of this building would be altered by the removal of non-contributing elements, such as the adjacent Pier 27 Office Building and Teatro Zinzanni, and replacement with temporary structures and displays for the AC34 event. However, such alterations to the setting would be temporary (approximately two years) and would not have a long-term impact on the historic setting of the Belt Railroad Office Building.

The Northeast Wharf Plaza, to be constructed immediately behind and adjacent to this historic building, could have a long-term effect on its setting. The potential impacts on the Belt Railroad Office Building are described below under the subheading, *James R. Herman Cruise Terminal and Northeast Wharf Plaza* would be less than significant as a result of compliance with **Mitigation Measure M-CP-6** (Northeast Wharf Plaza Design Criteria).

The Embarcadero Seawall. The Embarcadero Seawall is a contributor to the Embarcadero Historic District. The proposed project would have no direct impacts on the seawall, as no alterations to this resource are planned.

Other Water Areas along San Francisco Piers. Many of the other water areas along the San Francisco piers, such as Brannan Street Wharf Open Water Basin, Piers 28-30 water area, Rincon Point Open Water Basin, Piers 19-23 and Northeast Wharf Open Water Basin, and Piers 29-31 water area, would be subject to increased visitation by recreational boaters wanting to view the AC34 races. While all of these areas are outside of but adjacent to the Embarcadero Historic District, the increase in recreational boats along the San Francisco waterfront would be consistent with the historical maritime use of these areas. As such, no significant impacts to historic resources are anticipated in the other water areas along the San Francisco Piers.

SAFR/Aquatic Park. The proposed AC34 project at Aquatic Park would include temporary merchandising tents and exhibition spaces along the concrete promenade near the entrance to the historic Municipal Pier. Located in the open water of the central basin would be a floating video barge and boat exhibitions. All of these elements would lend a festival-like atmosphere that is potentially incompatible with the historic maritime setting of the Aquatic Park Historic Landmark District. However, these improvements would be temporary and fully reversible. Thus, no significant long term impacts to Aquatic Park are expected. All of these temporary installations would be removed from the district after the AC34 events are complete. Increased visitation to publicly accessible historic buildings and ships at Aquatic Park, such as the Maritime Museum and historic ships docked along Hyde Street Pier, is not expected to result in a significant impact to these resources, as no permanent alterations to these resources would occur. The Municipal Pier would be closed on race days during the periods that AC34 races occur. Existing capacity restrictions on Hyde Street Pier, which currently limit public visitation, would remain in force during the AC34 event. As such, no impacts to these structures are expected as a result of the AC34 project.

Weather equipment would be temporarily installed on Municipal Pier at Aquatic Park to monitor relevant meteorological conditions for the AC34 event. This would include the use of wind sensors (for winds speeds and direction), temperature gauges, humidity sensors and/or LIDAR (light detection and ranging) sensors. Such equipment would be small in scale, and installed on the ground or on existing structures without requiring new construction. Following the AC34 event, all weather equipment would be removed. This piece of modern electronic equipment would not be considered compatible with the historic nature of the Aquatic Park National Historic Landmark District. However, since the equipment is temporary, relatively small in size (and therefore not visible from most public viewpoints), and fully removable, it would have a less-than-significant impact on the historic integrity of the Aquatic Park National Historic Landmark District.

Fort Mason. The proposed AC34 project within Fort Mason would include the internal use of historic Pier 2 for hospitality purposes, and historic Pier 3 for an international broadcasting/media center. The project would also use historic Building FM-322 (former Battery Charging Station) for event-related administrative purposes. A satellite dish platform would be attached to the east end of Pier 3, and a floating barge for media boats would be moored in the basin towards the southwestern end of Pier 3. Large boats would also be moored off of both Piers 2 and 3. The existing parking lot to the south of Piers 2 and 3 would be used for event parking. Temporary restrooms would be located on Fort Mason's Great Meadow. The internal use of the historic Pier sheds and Building FM-322 would have no significant impact to these structures, as no permanent alterations to them would occur. These pier sheds are frequently used for temporary and special events. The satellite dish and media barge to be placed near historic Pier 3, and restrooms to be located within the Great Meadow, are potentially incompatible with the historic setting of the National Historic Landmark District and National Register District at Fort Mason. However, because such improvements would be temporary in nature and the platforms would be removed after the event, no significant long-term impacts to Fort Mason are anticipated. Although the temporary mooring of large boats at Piers 2 and 3 would be a visible new addition to the district, they would not necessarily be incompatible with the maritime heritage of the area, and they would be removed after the event has ceased. Event parking in the existing parking lot would have no impact to historic resources in the district.

Increased visitation at Fort Mason could affect some of the sensitive historic resources present in that area. For example, historic earthen fortifications are present on the north-facing bluff of Upper Fort Mason; these sensitive features could be subject to erosion due to visitors straying off designated paths to view event races on the Bay. This would be a potentially significant impact. **Mitigation Measures CP-1b** (Protection of Historical Resources due to Indirect Damage) is recommended to ensure that impacts to earthen fortifications would be less than significant. This measure calls for inclusion of specific measures in the Parks Event Operations Plan, to be prepared and implemented in support of the proposed project (see Chapter 3). The mitigation measure would require that the plan incorporate specific elements to protect cultural resources, including the use of removable protective fencing, signage, area closures, pre- and post-event conditions assessments and damage repair, and educational and awareness programs. Increased visitation to

publically accessible historic buildings at Fort Mason is not expected to result in a significant impact to these resources, as no permanent alterations to them would occur.

Marina Green and Vicinity. The proposed event venues to be located on the Marina Green would include hospitality tents, event seating, an event stage, sponsor displays, video screens, storage, restrooms, VIP hospitality tents, and concessionaire operations. Because the Marina Green has been recommended as eligible for listing on the NRHP, the introduction of these festival-like elements to the currently open greensward of the Marina Green is potentially incompatible with its historic setting, and could temporarily affect its integrity. However, because such event installations would be temporary in nature and the landscape would be returned to its current state after the event, no significant long term impacts to the Marina Green as an NRHP-eligible resource are anticipated.

Temporary floating docks to be installed just north from the Marina Green would provide anchorage for tender and race official boats and possibly some private spectator boats for the 2012 events. The temporary floating docks would be constructed parallel to the Marina Seawall, a resource eligible for listing in the NRHP, and would be accessed from a gangway connecting the Marina Green and public promenade with the floating docks below. The gangway is anticipated to be a cantilever structure so as to avoid any impact on the historic seawall. The design may include a concrete counterweight installed behind the seawall and a steel frame structure would be constructed to cantilever over the wall to provide the support for the proposed gangway. However, as the specific design and attachment method of the gangway are not fully known at this point, it is conservatively assumed that this activity would have a potentially significant impact to the integrity of the historic seawall, including its curved, cobble stone-clad façade and stone cap. Implementation of **Mitigation Measures M-CP-1c** (Protection of Historic Resources due to Direct Damage), which calls for a review of the gangway attachment methods for compliance with the Secretary's Standards, would ensure that impacts would be reduced to a less-than-significant level.

A temporary floating breakwater to be located near the harbor entrance would be a visible new element within the viewshed of the historic Marina Green. However, because it would be temporary, would not be physically attached to any historic features, and would be removed after completion of the event, the temporary floating breakwater would not result in significant long term impacts to historic resources.

Although the temporary mooring of smaller boats within the central basin's open water area would be a visible new addition to the area, and would block some northerly views of the Bay from the Marina Green, they would not necessarily be incompatible with the maritime character of the area, and they would be removed after the event has ended. As such, no significant or long-term impacts to the historic integrity of the Marina Green and vicinity are expected.

Increased visitation to publically accessible historic buildings at the Marina Green, including the concessionaire building, the harbor office, and the lighthouse at the end of the spit, would have no significant impact to these resources, as no permanent alterations to them would occur.

Crissy Field. The proposed event venues at the eastern end of Crissy Fields include restrooms, merchandising stands, boat exhibits, as well as parking, to be placed in the area currently used as parking next to the Field House. The proposed event venues at the far western end of Crissy Field include tents, seating/bleachers, concession/merchandising tents, boat exhibitions, an even stage, restrooms, and a first aid area. Crissy Field lies within the boundaries of the Presidio National Historic Landmark District. These event installations would lend a festival-like atmosphere but are potentially incompatible with the historic nature of the landscape at Crissy Field and the larger Landmark District. However, because these installations would be temporary and fully reversible, and the landscape would be restored to its current condition following the completion of the AC34 events, no significant long term or permanent impacts to either end of Crissy Field are expected.

Increased visitation to publically accessible historic buildings at Crissy Field, including the former airplane hangars and related structures along the southwestern of the field, would have no significant impact to these resources, as no permanent alterations to them would occur. No historic buildings or structures are located at the eastern end of Crissy Field. As such, increased visitation to these buildings would have no impact to historic resources.

Historic earthen fortifications located on the Presidio Bluffs above the western end of Crissy Field, specifically, Battery East, could be damaged from increased erosion due to visitors straying off designated paths to view event races on the Bay. **Mitigation Measure CP-1b** (Protection of Historical Resources due to Indirect Damage) is recommended to ensure that impacts to earthen fortifications would be less than significant. This measure calls for inclusion of specific measures in the Parks Event Operations Plan, to be prepared and implemented in support of the proposed project. The measure would require that the plan shall incorporate specific elements to protect cultural resources, including the use of removable protective fencing, signage, area closures, pre- and post-event conditions assessments and damage repair, and educational and awareness programs

Cavallo Point. Cavallo Point is within the grounds of the Forts Baker, Barry and Cronkhite Historic District. Proposed event installations to be erected at Cavallo Point include a VIP hospitality tent at the end of the Fort Baker Pier, which is a contributor to the district, as well as temporary TV platform at the southernmost end of the point adjacent to the marina breakwater. These installations are potentially incompatible with the historic military character of the district. However, because these installations would be temporary and fully reversible, and landscape beneath the TV platform would be returned to its current condition following the completion of the event, no significant long term or permanent impacts to Forts Baker, Barry and Cronkhite Historic District are expected. In addition, increased visitation to publically accessible historic buildings at Cavallo Point have no significant impact to these resources, as no permanent alterations to them would occur.

Historic earthen fortifications located along the bluffs in the Cavallo Point area could be damaged from increased erosion due to visitors straying off designated paths to view event races on the Bay. **Mitigation Measures CP-1b** (Protection of Historical Resources due to Indirect Damage) is recommended to ensure that impacts to earthen fortifications would be less than significant. This

measure calls for inclusion of specific measures in the Parks Event Operations Plan, to be prepared and implemented in support of the proposed project. The mitigation measure would require that the plan incorporate specific elements to protect cultural resources, including the use of removable protective fencing, signage, area closures, pre- and post-event conditions assessments and damage repair, and educational and awareness programs

Alcatraz Island. Proposed event venues at Alcatraz Island include the internal use of the main cellhouse building for corporate hospitality and special events. The cellhouse is a contributor to the Alcatraz Island National Historic Landmark District. The temporary internal use of the cellhouse for events would have no significant impact to this historic structure, as no permanent alterations to it would occur.

Weather equipment would be temporarily installed on Alcatraz Island to monitor relevant meteorological conditions for the AC34 events. This would include the use of wind sensors (for winds speeds and direction), temperature gauges, humidity sensors and/or LIDAR (light detection and ranging) sensors. Such equipment would be small in scale, and installed on the ground or on existing structures without requiring new construction. Following the AC34 event, all weather equipment would be removed. This piece of modern electronic equipment would not be considered compatible with the historic nature of the Embarcadero Historic District. However, since the equipment is temporary, relatively small in size (and therefore not visible from most public viewpoints), and fully removable, it would have a less-than-significant impact on the historic integrity of the Alcatraz Island National Historic Landmark District.

America's Cup 2013 Spectator Areas. The impacts at the event facilities and viewing areas listed above for the 2012 AC events would be generally similar during the 2013 events, although no temporary floating docks would be attached for the Marina Green Seawall in 2013. As such, **Mitigation Measure M-CP-1c** (Protection of Historic Resources due to Direct Damage) would not apply to the 2013 AC event.

As the attendance for the 2013 is expected to be higher than the 2012 event, increased visitation to publically accessible historic buildings could occur throughout the event areas. As with the 2012 races, no significant impact to these resources are expected in 2013, as no permanent alterations to them would occur.

Impacts from increased off-trail visitor use at Fort Mason, Crissy Field/Presidio, and Cavallo Point would potentially be greater during the 2013 events due to the expected higher attendance. **Mitigation Measure M-CP-1b** (Protection of Historic Resources due to Indirect Damage) specified for each venue in 2012 would also apply in 2013 to ensure that all impacts remain less than significant. This measure calls for inclusion of specific measures in the Parks Event Operations Plan, to be prepared and implemented in support of the proposed project. The mitigation measure would require that the plan incorporate specific elements to protect cultural resources, including the use of removable protective fencing, signage, area closures, pre- and post-event conditions assessments and damage repair, and educational and awareness programs.

America's Cup Secondary Viewing Areas

Secondary viewing areas within GGNRA lands in Marin and San Francisco Counties (Marin Headlands, Fort Baker, Baker Beach, Presidio, and Fort Point), as well as publically accessible areas of Yerba Buena/Treasure Island and State Parks land of Angel Island, would be subject to impacts from increased off-trail visitor use. For example, historic earthen fortifications within the Presidio's east and west bluffs could be damaged due to increased erosion from visitors attempting to view the event races from these higher Bay shoreline elevations. Such activities could have a potentially significant impact on historic resources. **Mitigation Measure M-CP-1b** (Protection of Historic Resources due to Indirect Damage) is recommended in these locations to ensure that impacts remain less than significant. This measure calls for inclusion of specific measures in the Parks Event Operations Plan, to be prepared and implemented in support of the proposed project. The mitigation measure would require that the plan incorporate specific elements to protect cultural resources, including the use of removable protective fencing, signage, area closures, pre- and post-event conditions assessments and damage repair, and educational and awareness programs.

Publicly accessible areas subject to secondary viewing, including San Francisco's northern waterfront and hillside locations, Yerba Buena/Treasure Island, and Marin's southern waterfront, would experience increased numbers of spectators in these locations. While increased visitor levels to these urban, semi-urban, or landscaped/park-like waterfront locations would occur as a result of the America's Cup event, such activities are not anticipated to result in significant impacts to historic resources, as no permanent or substantial alterations to such resources would occur.

Similarly, increased visitors to the Golden Gate Bridge as a secondary viewing location are not anticipated to result in significant impacts to this historic resource, as the bridge was designed to withstand the weight of many more times the number of cars and pedestrians than use it currently.

Weather equipment would be temporarily installed at a number of strategic locations in the race course vicinity, including Golden Gate Bridge, to monitor relevant meteorological conditions for the AC34 event. This would include the use of wind sensors (for winds speeds and direction), temperature gauges, humidity sensors and/or LIDAR (light detection and ranging) sensors. Such equipment would be small in scale, and installed on the structure without requiring new construction. Following the AC34 event, all weather equipment would be removed. This piece of modern electronic equipment would not be considered compatible with the historic nature of the bridge. However, since the equipment is temporary, relatively small in size (and therefore not visible from most public viewpoints), and fully removable, it would have a less-than-significant impact on the historic integrity of the Golden Gate Bridge.

Impact Summary

Construction and operation of the proposed AC34 project could cause a substantial adverse change in the significance of a historic resource as defined in CEQA Guidelines Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code.

Both temporary and permanent improvements could affect historic architectural resources if not completed in a proper manner. The project includes proposed improvements to facilities located in and near the Embarcadero Historic District, including identified contributing and non-contributing resources; and proposed improvements could result in potentially significant impacts on the historic setting of district. However, these improvements are subject to the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*,[149] which provide guidance on the repair and alteration of pier and bulkhead wharf substructures to maintain the structural integrity and function, consistent with the Secretary's Standards; and review by Port staff of the detailed designs of the proposed improvements for consistency with the Secretary's Standards, would reduce the potential impacts to a less-than-significant level. However, demolition and reconstruction of the bulkhead wharf would be *potentially significant*, but implementation of mitigation measures that incorporate design-based performance criteria that are intended to ensure compliance with the Secretary's Standards, including performance measures/criteria developed by the Port of San Francisco specifically for the proposed project, would also mitigate potentially significant impacts on historic resources to a less-than-significant level.

Potential indirect impacts to historic piers and bulkhead wharves could result from groundborne vibration generated from proposed pile driving activities during construction near Red's Java House at Piers 30-32 and near Pier 28, and from the repair of bulkhead wharf Section 10. This potential impact, analyzed in Section 5.7, Noise and Vibration, determined that implementation of a mitigation measure would reduce this impact to a less-than-significant level. This measure would require a pre-construction assessment by the Port's Chief Harbor Engineer, or a qualified geotechnical engineer, of subsurface conditions and the structural integrity of the subject, or adjacent, historic structures, and if recommended by the Chief Harbor Engineer, or geotechnical engineer, vibration monitoring would be required in the vicinity of pile driving activities.

Increased visitation by event spectators in both the primary and secondary viewing areas could cause a substantial adverse change in the significance of historic resources. Erosion of historic earthen fortifications or other historic resources due to increased event visitation is a *potentially significant* impact of the proposed AC34 project. In addition, temporary facilities on or adjacent to the historic Marina Seawall could result in a *potentially significant* impact on this resource. These impacts can be reduced to a less-than-significant level with implementation of mitigation measures designed specifically for this project to protect sensitive historic resources throughout all viewing areas.

Mitigation Measure M-CP-1a. Bulkhead Wharf Substructure Review Process

To mitigate potential impacts on Sections 3, 4 and 10 of the Bulkhead Wharf, for proposed work other than ordinary maintenance and repair (as defined in the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*), the project sponsor shall be required to meet the following performance measures intended to maintain important character defining features of the wharf necessary to maintain the visual

[149] Port of San Francisco, *Historic Preservation Guidelines for the Review of Pier and Bulkhead Wharf Substructure*, Port Commission Resolution No. 04-89, adopted October 26, 2004.

continuity and overall appearance of the Embarcadero Historic District and the public experience of these contributing resources:

- Maintain the deck elevation and provide continuous physical connections to the adjoining sections of wharf.
- Finish the deck in concrete or asphalt to match the adjoining sections of wharf.
- The above-deck wharf shall be maintained as an open wharf free of structures and appurtenances other than those minor improvements allowed as amenities for the use and enjoyment of the Embarcadero Promenade, including such things as signage, kiosks, and other temporary structures.
- Under-deck construction should maintain the general pile supported appearance of the bulkhead wharf from the Bay.
- Prior to issuance of Port building or encroachment permits for repair or alteration of pier and bulkhead wharf substructures, the project sponsor shall obtain a determination from the Port indicating that the project as proposed is consistent with either the Historic Preservation Review Guidelines or the above performance measures and therefore the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (Secretary's Standards). The Port may require the project sponsor to provide a Historic Resource Evaluation Report prepared by a qualified historic preservation professional, assessing the project's consistency with this mitigation measure and shall consult with the Planning Department and the Environmental Review Officer (ERO) who shall determine whether the project complies with the above performance criteria and this mitigation measure.

Mitigation Measure M-CP-1b: Protection of Historic Resources due to Indirect Damage

As described in the Project Description, the Parks Event Operations Plan will be prepared and implemented in support of the proposed project. This mitigation measure requires that this plan shall incorporate specific elements to protect cultural resources through the use of removable protective fencing, signage, area closures, pre- and post-event conditions assessments, and educational and awareness programs. Federal and state agencies would likely require these or similar measures pursuant to their mission and regulatory obligations under federal and state law. Implementation of this plan would protect historic resources due to indirect damage from event activities. The plan shall contain, at a minimum, the following measures to protect historic resources.

- ***Fencing and Signage*:** The project sponsor shall protect the integrity of historic earthen fortifications by the installation of fencing. The fencing shall consist of, for example, filter fabric backed with welded mesh set into the ground. These fences should be light enough for removal between 2012 and 2013 race events, but would be obvious deterrents to visitors. The fencing shall also have signs announcing that these are sensitive historic areas and that entry is prohibited. Fencing location/length and signage type shall be determined in consultation with the appropriate land authority where indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or Cal Parks).

- ***Area Closures***. Access to certain historic sites that cannot be sufficiently protected through the use of fencing and signage shall be closed to the public during the duration of the AC34 events. The exact locations and timing of the closures are to be determined in consultation with the appropriate land authority where the indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or Cal Parks).

- ***Pre- and Post-Event Conditions Assessment and Repair*:** Prior to the 2012 AC34 events, the project sponsor shall ensure that qualified cultural resources personnel assess the existing condition of the historic earthen fortifications that could be subject to erosion from increased visitation. Standardized site assessment forms, similar to those used by the National Park Service, shall be completed for all such affected historic resources. Forms include thorough photo documentation, description, and GIS location information. The exact number of resources to be recorded, and the exact methods of recordation, shall be determined in consultation with the appropriate land authority where the indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or Cal Parks). Following the 2013 AC34 event, the project sponsor shall ensure that qualified cultural resources personnel reassess the condition of historic resources identified above. Any unintended damage to historic resources as a result of the AC34 event will be repaired by the project sponsor to its pre-event condition.

- ***Educational and Awareness Programs.*** The project sponsor shall create an educational program that increases the public awareness of the sensitivity of historic resources during the AC34 events and encourages public participation in the protection of such resources. The exact nature of the program shall be determined in consultation with the appropriate land authority where the indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or Cal Parks).

- ***Crowd Control*:** The project sponsor shall ensure that crowd control personnel and volunteers are posted at or near the historic areas susceptible to erosion in order to direct visitors away from those sensitive locations. The exact number, location, and timing of the crowd control volunteers shall be determined in consultation with the with the appropriate land authority where the indirect impacts are anticipated (e.g., NPS, the Presidio Trust, or Cal Parks).

Mitigation Measure M-CP-1c: Protection of Historic Resources due to Direct Damage

The project sponsors shall ensure that any plans which call for the attachment, anchoring, or bracing of temporary structural elements to existing historic buildings, structures, or objects (e.g., the stone façade of the historic Marina Seawall), are reviewed for compliance with the Secretary's Standards by a qualified architectural historian, or in the alternative, a qualified architectural historian shall develop a proposed plan for such attachments setting forth appropriate techniques to govern and guide such activities that are consistent with the Secretary's Standards (the "Temporary Structure Approach"), which plan will be reviewed by the Department of City Planning for consistency with the Secretary's Standards before implementation. Removal of any such attachments, anchors, or bracing shall be fully reversible and include post-removal stabilization of historic materials to prevent long-term degradation in condition. Any unintended damage to historic resources as a result of the AC34 event will be repaired by the project sponsors to its pre-event condition.

Mitigation Measure M-CP-1d: Protection of the Northeast Waterfront Historic District from Teatro Zinzanni Relocation

If Teatro Zinzanni opts to relocate to Seawall Lot 324 within the Northeast Waterfront Historic District, prior to the execution of any Port lease Teatro Zinzanni shall secure a Certificate of Appropriateness for the proposed relocation project from the Historic Preservation Commission (HPC), which shall require compliance with Article 10, Appendix D of the Planning Code and the Secretary's Standards. Specifically, the HPC shall require compliance with Sections 6 and 7 of Article 10, Appendix D, incorporated here by reference, which provide additional requirements for Certificates of Appropriateness in the Northeast Waterfront Historic District. These additional requirements address the architectural and visual characteristics that define this district, including façade line continuity, fenestration and design elements for new construction, and appropriate roof treatments. If a Certificate of Appropriateness is not granted, the Port shall not approve the proposed lease on Seawall Lot 324.

Mitigation Measure M-NO-3: Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring

(See Section 5.7, Noise and Vibration)

Impacts Associated with Implementation of Mitigation Measure M-CP-1b. CEQA Section 15126.4 states that "if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed." Implementation of **Mitigation Measure M-CP-1b** (Protection of Historic Resources due to Indirect Damage) would include closure of historic earthen fortifications. It is likely that on closure days, some recreationists who currently use these areas may instead use other similar regional recreational facilities and shoreline areas, including those described in Section 5.11, Recreation, such as the Presidio, other Crissy Field or Fort Mason, as well as other nearby recreation areas such as Golden Gate Park, Baker Beach, and Ocean Beach, resulting in occasional increases in use of other recreational facilities in San Francisco during the AC34 events. However, given the availability of recreational facilities in the region, increased use of regional recreational facilities would not result in substantial physical deterioration of recreational resources, or otherwise result in physical degradation of existing recreational resources, and the impact of this mitigation measure would be less than significant and would not change the conclusions of the recreation impact analysis presented in Section 5.11, Recreation.

Archeological Resources

Impact CP-2: Construction and operation of the proposed AC34 project could cause a substantial adverse change in the significance of an archeological resource, including shipwrecks. (Less than Significant with Mitigation)

Based on the results of the background research, there is a high probability that important, early prehistoric resources exist in currently submerged locations within the Bay, and buried under natural alluvial/aeolian sediment or imported historic-era fill. However, there is a low potential for encountering significant prehistoric archeological resources during implementation of the AC34 project, because of the limited amount of ground disturbance that is proposed in previously undisturbed natural soil profiles, both above and below the Bay waters. Although there are reported shipwrecks in the vicinity of some of the proposed in-water construction or potential spectator anchoring locations along the San Francisco waterfront, the precise locations of these wrecks are unknown. Many of the reported wrecks were at least partially salvaged or burned. However unlikely, it is possible that previously unrecorded and submerged/buried (or otherwise obscured) archeological deposits could be discovered during ground-disturbing activity, including pile driving or dredging into undisturbed sediments. Ground-disturbing activities could expose and cause impacts on unknown archeological resources, including shipwrecks, which would be a *potentially significant* impact. These impacts could be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-2** (Inadvertent Discovery of Archeological Resources or Shipwrecks). This measure would require the project sponsor to distribute an "ALERT" sheet to all construction workers outlining the procedures to be taken in the unlikely event that a buried/submerged cultural resource is encountered during construction activities. With implementation of this measure, the potential impact on archeological resources would be reduced to a less-than-significant level.

America's Cup Event Facilities and Spectator Areas

Piers, Seawalls and Open Water Areas along San Francisco Embarcadero. No previously recorded archeological resources are located along piers, seawalls and open water areas along the San Francisco Embarcadero or northern waterfront that could be affected by the America's Cup event facilities or spectator venues. However, historic-era wrecks of three ships have been reported in this vicinity. The remains of the *Lydia* were encountered inland during a sewer line installation project in 1980, and were partially excavated. The remains of the *Reliance* and the *San Carlos* may be located in the vicinity of Piers 19-29. Project activities in this area that could potentially affect archeological resources would include possible seismic upgrades to Pier 29, possible substructure repairs to Piers 19½, 27, and 29, and pile driving to support the proposed satellite dish barge at Pier 23. No additional dredging is proposed for this area, beyond the routine dredging of berths at Pier 27 under the Port's permitted dredging maintenance plan. Therefore, there is a potential for encountering buried/submerged archeological resources.

Aquatic Park. One previously recorded prehistoric archeological resource is located in the vicinity of Aquatic Park, but not within the area proposed for ground disturbance associated with event facilities. No event-related ground-disturbing activities are proposed at Aquatic Park, therefore there is no potential for encountering archeological resources at this project site.

Fort Mason. Three previously recorded prehistoric archeological resources are located in the vicinity of the Fort Mason, but not within the area proposed for ground disturbance associated with event facilities. No ground-disturbing activities are planned at Fort Mason, as all activities would occur within existing buildings or in the open water areas (barge docking/vessel berthing). Because no subsurface disturbance would occur either on dry land or within the Bay, there is no potential for encountering archeological resources at this project site.

Marina Green and Vicinity. No previously recorded prehistoric archeological resources are located in the area proposed for ground disturbance associated with the Marina Green spectator venues. Ground-disturbing activities for the America's Cup event would include surface disturbance and the anchoring of tents and stands. These activities would not extend beneath the depth of artificial fill located throughout Marina Green, therefore there would be no potential for encountering archeological resources at this project site.

Crissy Field. Two previously recorded prehistoric archeological resources are located in the vicinity of the western end of the Crissy Field spectator venues. Both resources were uncovered underneath 1–2.7 meters of artificial fill. Ground-disturbing activities in the Crissy Field C-APE would include surface disturbance and the anchoring of tents and stands. These activities would not extend more than one meter into the artificial fill located throughout Crissy Field. Therefore there would be no potential for encountering archeological resources at this project site.

Cavallo Point. No previously recorded prehistoric archeological resources are located in the Cavallo Point event spectator venues. Ground disturbances would be limited to surface disturbance for the TV platform site only; there is no potential for encountering archeological resources at this project site.

Alcatraz Island. No previously recorded prehistoric archeological resources are located in the vicinity of the Alcatraz Island spectator venues. No specific ground-disturbing activities are proposed at Alcatraz Island for the America's Cup events, as all events would be within existing buildings (i.e., the historic cellhouse). There is no potential for encountering archeological resources at this project site.

AC 34 Live Sites- Civic Center, Union Square, and Justin Herman Plaza. Although there may be undocumented prehistoric sites and/or historic archeological remains in the vicinity of the AC34 Live Sites (notably old City Hall and/or Yerba Buena Cemetery underneath the Civic Center and remains of the *Roma* underneath Justin Herman Plaza), there would be no ground disturbance in these locations as a result of the project. There is no potential to encounter archeological resources at these project sites.

America's Cup Secondary Viewing Locations and Vicinity

San Francisco Northern Waterfront. No additional previously recorded prehistoric archeological resources are located in the San Francisco Northern Waterfront area other than those noted in the spectator venue locations. There would be no subsurface ground disturbance; therefore there would be no potential for archeological resources to be encountered at these locations.

Northern San Francisco Hillside Locations. Northern San Francisco Hillside locations are paved and/or built upon. There would be no surface ground disturbance associated with the event viewing. Therefore, there is no potential to encounter archeological resources at these locations.

GGNRA, San Francisco (Baker Beach, Presidio, Fort Point). There are no recorded prehistoric archeological resources in the GGNRA San Francisco secondary viewing areas. There would be no subsurface ground disturbance associated with the event viewing, therefore there would be no potential for archeological resources to be encountered at these locations.

Golden Gate Bridge. The Golden Gate Bridge is a structural landmark, but as a potential spectator viewing location, there would be no subsurface ground disturbance and no potential to encounter archeological resources.

GGNRA, Marin County (Marin Headlands and Fort Baker). No previously recorded prehistoric archeological resources are located in the Marin Headlands and Fort Baker secondary viewing areas. There would be no subsurface ground disturbance and there is consequently no potential to encounter archeological resources at these locations.

Southern Marin County. Eight previously recorded prehistoric archeological resources are located in the vicinity of the Southern Marin County secondary viewing locations. All of these resources are currently either paved and/or built upon. As there would be no subsurface ground disturbance at these locations there is no potential that these resources would be affected. There is no potential for archeological resources to be encountered at these locations.

Angel Island. Seven previously recorded prehistoric archeological resources are located in the vicinity of the Angel Island secondary viewing locations. These resources are located in areas that are currently paved or built upon, or are in isolated areas away from the spectator viewing locations. There would be no subsurface ground disturbance associated with the event and there would be no potential to encounter archeological resources.

Treasure Island and Yerba Buena Island. There is one previously recorded prehistoric archeological resource on Yerba Buena Island, however this resource is not within a secondary viewing location. There would be no subsurface ground disturbance associated with event viewing, therefore there would be no potential to encounter archeological resources.

Mitigation Measure M-CP-2: Inadvertent Discovery of Archeological Resources or Shipwrecks

The following measures shall be implemented should construction activities result in the inadvertent discovery of a cultural resource:

> To avoid any potential adverse effect from the proposed project on inadvertently discovered buried or submerged historic resources, as defined in CEQA Guidelines Section 15065.4(a)(c), the project sponsor will distribute the Planning Department's archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor firms (including demolition, excavation, grading, foundation, pile

driving, etc.); and/or to utilities firms involved in soil- or Bay bottom-disturbing activities within the project site. Prior to any soil- or Bay bottom-disturbing activities being undertaken, each contractor is responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. the project sponsor will provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the ALERT sheet.

In the event that any indication of a potential cultural resource is encountered during soil- or Bay bottom-disturbing activities (such as in-water pile driving for temporary berths and seismic improvements to Piers 30-32), the head foreman and/or project sponsor shall immediately notify the ERO and shall suspend soil- or Bay bottom-disturbing activities within 50 feet of the find until the ERO has determined what additional measures should be undertaken. Abandoned shipwrecks, archeological sites and historic resources in submerged lands of California are under the jurisdiction of the California State Lands Commission (CSLC). In the case of an inadvertent discovery of a submerged archeological site, shipwreck or related artifacts, the ERO shall contact and initiate consultation with the CSLC staff within 2 business days of such discovery.

If the ERO (in consultation with the CSLC staff, if applicable) determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of an archeological consultant from the pool of qualified archeological consultants maintained by the Planning Department archaeologist. In the event of a shipwreck a qualified maritime archeological consultant shall be retained. The archeological consultant will advise the ERO as to whether the discovery is an archeological resource that retains sufficient integrity and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant will identify and evaluate the archeological resource. The archeological consultant will make a recommendation as to what action, if any, is warranted. Based on this information, the ERO (in consultation with the CSLC, if applicable) may require, if warranted, specific additional measures to be implemented by the project sponsor no more than forty eight (48) hours from receipt of such recommendation.

Measures might include: preservation in situ of the archeological resource; an archeological monitoring program; or an archeological evaluation program. If an archeological monitoring or evaluation program is required, it shall be consistent with the Environmental Planning (EP) division of the Planning Department guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO (and the CSLC staff, if applicable). This report shall include an evaluation of the historical significance of any discovered archeological resource, as well as a description of the archeological and historical research methods employed in any archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological 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: the relevant California Historical Resources Information System Information Center shall receive one (1) copy and the ERO shall receive a copy of the transmittal letter of the FARR to the Information Center. The EP and the CSLC staff (if applicable) shall receive one bound, one unbound, and one unlocked, searchable PDF copy on CD of the FARR along with copies 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. The project sponsor shall receive copies of the FARR in the number requested. In instances of high public interest in or the high interpretive value of the resource, the ERO or the CSLC staff may require a different final report content, format, and distribution than that presented above.

Paleontological Resources

Impact CP-3: Construction and operation of the proposed AC34 project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant)

Any soil moving, excavation, grading or dredging activities associated with construction of the proposed AC34 facilities represents a potential effect on paleontological resources. Such activities could include site preparation and construction of facilities for spectator venues, reinforcements and repairs for berthing facilities, dredging beneath harbors and piers, and pile driving. However, as discussed in the paleontological setting, the event facility areas are all located on artificial fills and bay mud deposits, which have low paleontological potential. Because these soil materials are too young to contain unique or significant paleontological resources, construction associated with project facilities would have a less than significant impact. The Franciscan Complex, which is the only geologic unit with high paleontological potential in the area, would remain undisturbed by construction activities of the project.

During the event, certain spectator viewing areas, including all secondary viewing areas, could experience increased foot traffic in areas underlain by Franciscan Complex bedrock. However, in most areas, the bedrock is protected by surface layers of soil. Areas where the Franciscan Complex occurs in outcrop are typically too steep to be accessed by the public. For these reasons, potential damage or disturbance of fossil resources within Franciscan bedrock is considered to be a *less-than-significant* impact.

Mitigation: None required

Human Remains

Impact CP-4: Construction and operation of the proposed AC34 project could disturb any human remains, including those interred outside of formal cemeteries (Less than Significant with Mitigation)

As discussed in the impact evaluation regarding archeological resources, no known human burial locations have been identified within either the primary event sites or the secondary viewing areas; however the possibility cannot be entirely discounted, as human remains could exist anywhere. Project construction could result in direct impacts to previously undiscovered human remains during earthmoving activities. Although ground disturbance associated with construction would be minimal and limited to the immediate ground surface of artificial fills and bay mud deposits, impacts on human remains (if discovered during ground-disturbing activities) would constitute a significant impact. This impact would be *potentially significant*, but could be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-4** (Inadvertent Discovery of Human Remains), as described below.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains

The following measures shall be implemented should construction activities result in the inadvertent discovery of human remains:

> The treatment of any human remains and associated or unassociated funerary objects discovered during soil-disturbing activities shall comply with applicable state laws. Such treatment would include immediate notification of the City and County of San Francisco Coroner. In the event of the coroner's determination that the human remains are Native American, the coroner shall notify of the Native American Heritage Commission, which would appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). The archeological consultant, the project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. If the MLD and the other parties could not agree on the reburial method, the project sponsor shall follow Section 5097.98(b) of the PRC, which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

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James R. Herman Cruise Terminal and Northeast Wharf Plaza

Architectural/Structural Resources

James R. Herman Cruise Terminal

Impact CP-5. Construction and operation of the proposed Pier 27 Cruise Ship Terminal would not result in a substantial adverse change in the significance of a historic resource. (Less than Significant)

Demolition, alteration, and new construction associated with the James R. Herman Cruise Terminal and Northeast Wharf Plaza could directly and indirectly affect historic resources within the San Francisco within the Embarcadero Historic District. For example, alterations to contributing resources, as well as new construction within the district boundaries, could directly and indirect affect the overall integrity of the district if not completed in a manner consistent with the Secretary's Standards. These specific proposed project features have been evaluated for compliance with the Secretary's Standards, with the findings summarized in this section. In those instances where designs are not yet fully developed, and therefore cannot be evaluated for compliance with the Secretary's Standards, potentially significant impacts have been identified, and a set of performance criteria have been put forth as mitigation measures specifically for this project.

The proposed Pier 27 Cruise Terminal would be a new non-contributing building within the Embarcadero Historic District. Although the design of the building would be rendered in a modern architectural style, the Cruise Terminal has been designed to respond specifically to its immediate historical context of the transit sheds on Piers 23 and 29, as well as the maritime industrial character of the larger district in general. The effects of the proposed Pier 27 Cruise Terminal on adjacent resources and the district at-large was evaluated and determined to be consistent with the Secretary's Standards (see Appendix CP of this EIR).[150] A historic resources evaluation response (HRER) prepared by the San Francisco Planning Department concurred with these findings.[151] As such, construction of the new Pier 27 Cruise Terminal would have a less-than-significant impact on the integrity of the setting of the Embarcadero Historic District. The following provides a summary of the evaluation findings.

- The proposed removal of the existing Pier 27 shed and construction of the Cruise Terminal retains the character of the Embarcadero Historic District and the maritime use of the property.

- Removal of the existing Pier 27 shed would constitute a significant improvement to the character of the Embarcadero Historic District because the existing shed design is incompatible with the character and setting of the Embarcadero Historic District, and obscures the outboard end of Pier 29 and views of the shed and to the Bay.

[150] Architectural Resources Group, *Pier 27 Cruise Terminal Consistency with the Secretary Standards*, June 6, 2011.
[151] San Francisco Planning Department, Memorandum, *Historic Resource Evaluation Response, The 34th America's Cup and James R. Herman Cruise Terminal and Northeast Wharf Plaza,* from Rich Sucre, July 1, 2011. This memorandum is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400.

- Pier 27 and associated shed are non-contributing features of the Embarcadero Historic District, as they were built outside the district's period of significance. In addition, Pier 27 does not appear to be eligible for listing in the National Register of Historic Places as an individual resource. The pier is less than 50 years old and does not possess sufficient architectural or historic significance to be a contributor to the Embarcadero Historic District or an individually eligible resource. As a result, proposed demolition of the Pier 27 shed would not conflict with the Secretary's Standards.

- The proposed construction of the Pier 27 Cruise Terminal does not entail removal or alteration of any historic materials, features or spaces.

- The proposed design of the Pier 27 Cruise Terminal does not include any elements that would create a false sense of historical development and the proposed design incorporates several elements that clearly reference aspects of San Francisco's historic pier buildings without mimicking those buildings.

- The proposed design of the Cruise Terminal incorporates a number of elements that, together, ensure that the building would be both compatible with and differentiated from the surrounding Embarcadero Historic District, drawing on the architectural vocabulary of the district's contributing piers as follows:

    - The footprint, height, and horizontally-oriented massing of the proposed terminal are similar to those of the historic pier structures.

    - The tallest portions of the proposed terminal are limited to a central spine, in keeping with the arrangement of monitor windows along the historic pier sheds.

    - Projecting metal canopies are a common feature in the Embarcadero Historic District. The proposed terminal is capped with an overhanging canopy roof that, in profile and scale, evokes these historic canopies.

    - The design of the cargo area along the east side of the building references the scale and rhythm of solid to void created by the historic placement of the roll-up doors and pedestrian entrances along the historic pier sheds.

    - The design of the proposed terminal visually separates the solid first floor cargo area from the glazing-dominated passenger area above. This approach references the distinction in the design of the historic pier sheds between the main body of the shed, which entailed using mostly solid walls to securely store goods, and the roof monitors above, which provided illumination.

    - The horizontal metal panels or concrete siding proposed for the first floor cargo and baggage handling areas is similar in location and scale to the horizontal cladding, including wood siding and board formed concrete, found on the historic pier sheds.

- At the same time, the proposed terminal does not mimic the historic pier sheds and would be clearly identifiable as a modern intervention because:

    - The extensive use of metal/concrete panel cladding and glass walls would clearly identify the building as a contemporary structure.

- The discontinuous massing of the building would differentiate it from the repetitive, strictly linear massing of the historic pier sheds.
- The building's canopy roof, which would be broken into two separate portions of slightly varied slope, references both the flat roof and shallow-pitched gable roofs of historic pier sheds within the Embarcadero Historic District without duplicating either.
- While the proposed canopy roof references the projecting metal canopies of the historic pier sheds, the proposed use of narrow columns to support the canopy on the terminal's west side would distinguish the new canopy from the historic canopies.
- The proposed terminal's outboard end, which would consist of an uncovered service area enclosed by an open aluminum fence up to ten feet in height, would be easily distinguishable from the historic sheds, most of which terminate in a low-pitched gabled end wall. This visual distinction would remain if this portion of the terminal is built out in the future as an extension of the cargo-oriented first floor.
- Though not required in order to be in conformance with the Secretary's Standards, the base of the terminal may be visually strengthened through incorporation of fritted glass or metal screens at the first story of the lobby portion of the building. Based on initial renderings, the proposed fritted glass design consisting of horizontal striations appears to best accomplish that objective.

The proposed cruise terminal would not be physically connected to any contributing buildings or character-defining features of the Embarcadero Historic District. As a result, removal of the building in the future would not alter any historic resource or adversely affect the integrity of the Embarcadero Historic District.

Based on the above historic resource evaluation and findings of consistency with the Secretary's Standards, potential impacts to historic resources resulting from the proposed construction and operation of the Pier 27 Cruise Terminal would be *less-than-significant*.

Mitigation: Not required

Northeast Wharf Plaza

Impact CP-6: Construction of the proposed Northeast Wharf Plaza could cause a substantial adverse change in the significance of a historic resource. (Less than Significant with Mitigation)

Phase 2 of the proposed Cruise Terminal project includes construction of the Northeast Wharf Plaza, a new public open space along the Embarcadero. The final design of the plaza would be determined in a public planning and design review process managed by the Port and BCDC. The build-out of the Northeast Wharf Plaza would include construction of a new public open space and possibly including up to three new ancillary commercial structures near the Belt Railroad Office Building, and potentially a fourth building at the southern corner of the Plaza adjacent to

the Embarcadero and Pier 23 Café. Because all of these changes have the potential to significantly alter the historic setting and integrity not only Pier 29 and 29½, the Belt Railroad Office Building, and Pier 23 Restaurant, but also the Embarcadero Historic District as a whole, the proposed project may have a *significant* adverse impact upon historic resources. To assist in mitigating this impact to a less-than-significant level, the project would implement performance criteria mitigation that would ensure consistency with the Secretary's Standards (see **Mitigation Measure M-CP-6**, Northeast Wharf Plaza Performance Criteria). The performance criteria and evaluation findings were prepared by ARG on behalf of the Port of San Francisco specifically for this project (see Appendix CP of this EIR).[152] The findings are summarized as follows:

- The Northeast Wharf Plaza, designed as an open park space, would provide for public access to the Cruise Terminal and expands views and vistas to the open water. The performance criteria (see **Mitigation Measure M-CP-6,** Northeast Wharf Plaza Performance Criteria) identify means to retain the physical character of the pier deck with low-scale landscape features clearly delineated as an added layer and distinguished from the pier structure.

- The Belt Railroad Office Building would remain a contributor to the Embarcadero Historic District. Its use will likely remain an office function or support building for the proposed plaza. Proposed site improvements remove non-contributing resources which have altered the historic setting.

- The proposed open space would reinforce the Belt Railroad Office Building's status as a freestanding structure. As indicated in Guideline No. 3 of the Northeast Wharf Plaza Design Criteria, any proposed landscaping should be set back from the building to recognize the building's placement within a working maritime environment (see **Mitigation Measure M-CP-6**, Northeast Wharf Plaza Performance Criteria).

- The proposed maritime use of Pier 27 would be consistent with the Port's Public Trust mandate as set forth in the San Francisco Bay Conservation and Development Commission (BCDC) San Francisco Waterfront Special Area Plan and the Port's Waterfront Land Use Plan. The continued maritime use of the Embarcadero Historic District is also important because it is a form of the historic use and function as an ocean and inland cargo transportation port.

- The park development performance criteria (see **Mitigation Measure M-CP-6**, Northeast Wharf Plaza Performance Criteria) seek to ensure that new construction is compatible with the historic character of Pier 27, Pier 29, the Belt Railroad Office Building, and the surrounding Embarcadero Historic District.

- The Belt Railroad Office Building, a contributing resource to the Embarcadero Historic District, would be retained as a part of the proposed Northeast Wharf Plaza development.

- The performance criteria do not propose or encourage the removal of any distinctive features, finishes or character defining construction technique (see **Mitigation Measure M-CP-6,** Northeast Wharf Plaza Performance Criteria).

[152] Architectural Resources Group, *Design Guidelines for Northeast Wharf Plaza, Pier 27, Project Consistency with the Secretary Standards*, June 6, 2011.

- The proposed new construction would not be physically connected to contributing buildings or character defining features of the Embarcadero Historic District. As a result, if removed in the future, new features would not alter the historic resource or destroy the integrity of its environment.

Based on the findings above, performance criteria for the design of the Northeast Wharf Plaza have been identified that would achieve a greater level of consistency with the Secretary's Standards. These criteria are described in **Mitigation Measure M-CP-6** (Northeast Wharf Plaza Performance Criteria)**.** Implementation of this measure would ensure that the design and construction of the Northeast Wharf Plaza improvements are sensitive to the historic character of this contributing resource and compatible with the Embarcadero Historic District, reducing potential impacts from the design and construction of the Wharf Plaza to less than significant.

Mitigation Measure M-CP-6: Northeast Wharf Plaza Performance Criteria

To mitigate the project's potential impacts of the Northeast Wharf Plaza on Pier 29, Belt Railroad Office Building, Pier 23 Restaurant, and the Embarcadero Historic District, the following design criteria have been defined to produce a plaza design that maintains the character and integrity of the District and to achieve consistency with the Secretary's Standards, and the Port shall comply with these criteria:

a) ***Plaza Relationship to Embarcadero Historic District.*** Plaza structures and public spaces should be consistent with the Secretary's Standards with respect to the character-defining features and be compatible with the Embarcadero Historic District by recognizing the bulkhead, pier, and apron zones, with improvements within those zones being compatible with the architectural character of the Embarcadero Historic District.

b) ***Structures at Northeast Wharf Plaza.*** Structures near the Northeast Wharf Plaza should be designed to be consistent with the Secretary's Standards and compatible with the historic character of bulkhead buildings through the following:

- To feature the Belt Railroad Office Building and recognize its unique waterfront placement as a freestanding structure located on the bulkhead wharf fronting on the Embarcadero Promenade and rehabilitated consistent with the Secretary's Standards, new structures should be set back from the Embarcadero Promenade at least 30 feet and provide visual separation from the Belt Railroad Office Building accomplished by separating the new structures from the Belt Railroad Office Building by at least 40 feet;

- As part of the design process the Port shall assess the historic integrity of the rear addition of the Belt Railroad Office Building and determine whether it retains sufficient integrity to be considered an integral part of its contributing resource status. Should the addition be determined integral to the contributing resource its treatment shall be consistent with the Secretary's Standards.

- To acknowledge and strengthen the Cruise Terminal as the dominant maritime use of the pier, new structures should be located to respect the sight line from the Embarcadero Promenade to the terminal, and sited to follow the geometry

established by the cruise terminal structure (instead of being parallel to the Embarcadero Promenade);

- To acknowledge the monumental scale and civic character of the historic bulkhead buildings, new structures should have substantial height, massing and forms which may be accomplished with tall ground floor heights, walls with large sections of solid and void, strong cornice features, and prominent entries. This may be accomplished with a symmetrical façade to the front of the new structures that features a wide central storefront with doors and windows to the base, and flanked with solid sections that have fewer or smaller amounts of glazing; and

- New structures within the Plaza shall be designed to support the historic setting of the Embarcadero Historic District including Pier 23, 29 and the Belt Railroad Office Building and shall be compatible but not mimic these historic resources in order to avoid creating a false sense of historical development; and,

- To architecturally complement the Belt railroad and bulkhead buildings, new structures should be finished in industrial materials characteristic of the Embarcadero Historic District such as concrete, stucco or metal siding and steel sash windows.

c) ***Plantings at Northeast Wharf Plaza.*** To recognize the Belt Railroad Office Building's historic placement as a freestanding structure within a working maritime environment and the industrial character of the Embarcadero Historic District, significant plantings should be setback at least 20 feet from the Belt Railroad Office Building. Lawn areas in the Plaza should be in raised planters that appear as an additive feature over the pier deck. Other plantings in the Plaza should serve to delineate space and should be limited to trees or plants in clearly defined planters or within the pier deck in a manner that continues to allow the site to be expressed as a pier deck.

d) ***Evaluation for Consistency with Design Criteria.*** Prior to issuance of Port Building or Encroachment Permits, consult with the Planning Department to review and determine consistency of the Northeast Wharf Plaza with the above performance criteria, as determined by the Port of San Francisco preservation staff and the Planning Department preservation staff. This would include preparation of a Historic Resource Evaluation Report by a qualified historic preservation professional to assess the project's consistency with these performance criteria.

Fill Removal for the James R. Herman Cruise Terminal and Northeast Wharf Plaza

Impact CP-7: Proposed fill removal within Port properties associated with amendments to the BCDC Special Area Plan for the AC34 and Cruise Terminal projects would not cause a substantial adverse change in the significance of a historic resource. (No Impact)

Proposed amendments to the BCDC Special Area Plan (SAP) for the AC34 and Cruise Terminal projects include preservation of Pier 23 in its entirety, rather than removal of the eastern 315 feet

of pier shed. This would maintain the character and integrity of the Embarcadero Historic District. To address BCDC's fill removal objectives, the BCDC amendments also include proposals for fill removal at other sites that avoid impacts on the Embarcadero Historic District.

Several Port facilities are currently identified as fill removal sites. These sites include dilapidated piers, wharves, and remnant pilings that were constructed with creosote-treated wood that have no current maritime uses, lack historic significance, and are fragments of former maritime industry operations in the southern waterfront. The locations of these sites are shown in Chapter 3 and described below.

Pier 98 (Former LASH pier). Constructed in 1972, the former LASH facility is less than 50 years of age and has yet to be evaluated for historic resource eligibility. Given its relatively recent date of construction, it would not meet the minimum age criteria for potential listing in the federal, state, or local registers. The proposed fill removal at this location would be limited to collapsed and deteriorated piles and deck, and would not involve adjacent improvements on Pier 96 such as the large warehouse building. No impacts to historic resources are anticipated as a result of fill removal at Pier 98.

Pier 84 and 88 (Former Bulk Copra Processing Plant). Constructed in 1965, fill removal at these piers would eliminate remnant piles and a surviving potion of wharf but would exclude the Copra Crane and the portion of the pier that supports it. The Copra Crane was identified by the San Francisco Planning Department as an eligible historic resource and is proposed for restoration by the Copra Crane Labor Landmark Association. No impacts to historic resources are anticipated as a result of fill removal at Pier 84 and 88.

Pier 70 Wharves 6, 7 and 8 (Former World War II Navy Shipyard). The 65-acre former Union Iron Works/Bethlehem Steel Shipyard is commonly known as Pier 70. However, south of Pier 68 are remnants of a pile supported wharf system that included a Pier 70 and Wharves 6, 7, and 8. These wharves are within the National Register of Historic Places eligible Pier 70 Historic District. The Port has prepared a draft National Register nomination to list the district in the National Register that identifies these wharves as non-contributing resources. The classification of these wharves as non-contributing is based on their lack of integrity as a result of advanced deterioration. Wharves 6 and 7 were constructed in the 1940s and supported the Navy's operations at the site during WWII. Wharf 8 was originally built in 1945 and rebuilt in the 1980s with concrete and steel and until recently supported an emergency fuel pipeline for the Potrero Power plant which is now closed. No impacts to historic resources are anticipated as a result of fill removal at Pier 70.

Pier 64 (Mission Bay Waterfront). Remnant piles from the former Pier 64 (demolished in the 1970s) would be removed. A 1996 Historic Resources Database prepared for the Port identified Pier 64 as remnant piles and determined that portions of the surviving structure lacked integrity and were not eligible historic resources. Pier 64 has been reevaluated by Port preservation staff and has been determined not to be a historic resource. No impacts to historic resources are anticipated as a result of fill removal at Pier 64.

Pier 60 (Former Carmen's Restaurant). Constructed circa 1915, this 30-foot-wide pier extends west from the Third Street Bridge approximately 200 feet in Mission Creek. In 1994 the pier and restaurant building were evaluated and determined to lack historic significance. Since that time the pier has deteriorated and is now structurally unsound and fencing has been erected to secure the failing pier from the public. Likewise, the restaurant building has been extensively damaged as a result of interior fires. Pier 60 has been reevaluated by Port preservation staff and has been determined not to be a historic resource. No impacts to historic resources are anticipated as a result of fill removal at Pier 60.

Impact Summary

Because the surviving portions of dilapidated wharves described above lack historic significance primarily due to a loss of integrity or would not meet the minimum age threshold required for potential listing, their proposed removal as part of proposed amendments to BCDC's SAP would have *no impact* on historic resources.

Mitigation: Not required

Archeological Resources

Impact CP-8: Construction and operation of the proposed Pier 27 Cruise Ship Terminal and Northeast Wharf Plaza could cause a substantial adverse change in the significance of an archeological resource, including shipwrecks. (Less than Significant with Mitigation)

No previously recorded archeological resources, including submerged shipwrecks, are located at or near the Pier 27 Cruise Terminal and Northeast Wharf Plaza project area. The majority of the project would occur on top of existing pier structures and above the water. There would be no subsurface ground disturbance associated with construction of the Pier 27 Cruise Terminal and Northeast Wharf Plaza, therefore there would be no potential to encounter archeological resources, including shipwrecks. In the unlikely event that archeological resources are discovered during construction of the proposed Pier 27 Cruise Ship Terminal and Northeast Wharf Plaza, **Mitigation Measure M-CP-2** (Inadvertent Discovery of Archeological Resources or Shipwrecks) would also apply to this project.

Mitigation Measure M-CP-2: Inadvertent Discovery of Archeological Resources or Shipwrecks (see above)

Paleontological Resources

Impact CP-9: Construction and operation of the proposed Pier 27 Cruise Ship Terminal and Northeast Wharf Plaza would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant)

No previously recorded paleontological resources are located at or near the Pier 27 Cruise Terminal and Northeast Wharf Plaza project area. The majority of the project would occur on top of existing pier structures and above the water. There would be no subsurface ground disturbance associated with construction of the Pier 27 Cruise Terminal and Northeast Wharf Plaza, therefore there would little to no potential to encounter unique paleontological resources.

Mitigation: Not required

Human Remains

Impact CP-10: Construction and operation of the proposed Pier 27 Cruise Ship Terminal and Northeast Wharf Plaza could disturb any human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

The majority of the project would occur on top of existing pier structures and above the water. There would be no subsurface ground disturbance associated with construction of the Pier 27 Cruise Terminal and Northeast Wharf Plaza, therefore there would be no potential to encounter human remains, including those interred outside of formal cemeteries. In the unlikely event that human remains are discovered during construction of the proposed Pier 27 Cruise Ship Terminal and Northeast Wharf Plaza, **Mitigation Measure M-CP-4** (Inadvertent Discovery of Human Remains) would also apply to this project.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains

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5.5.3.3 Future Long-Term Development Impacts and Mitigation Measures

Impact LT-CP-1: Long-term development could result in redevelopment of existing Port properties at Piers 30-32, which could result in a significant impact to cultural resources. (Significant and Unavoidable with Mitigation)

Long-term development of Port properties as provided for under the Host Agreement could result in significant direct and indirect impacts to historic resources at Piers 30-32, including Red's Java House, located on Piers 30-32. Piers 30-32 are located outside of the boundaries of the Embarcadero Historic District, and is not a historic resource for CEQA purposes. However, Red's Java House is identified as a historic resource for CEQA purposes. Due to a lack of information regarding the proposed long-term development and its potential for physical impacts upon Piers

30-32, the effect of this development on Red's Java House, and/or the historic character of the Embarcadero Historic District are potentially significant, and may not be mitigated to a less than significant level. The potential impacts and mitigation measures that are specific to each of the historic Port properties which could be redeveloped are described below.

Piers 30-32

Piers 30-32 could include up to 610,000 square feet of retail/commercial, office, entertainment, and maritime uses. Future upgrades would be required to support this level of development. Development of the piers would also include a number of stormwater management features consistent with the San Francisco Stormwater Management Guidelines. The Guidelines provide policy and recommended design approaches for the incorporation of systems that can capture and in some instances treat stormwater on-site in new facilities or by retrofitting existing facilities. Typically, stormwater improvements on existing piers include installation of plumbing to capture and direct stormwater runoff into catchment basins rather than letting it runoff into the Bay. These improvements are usually incorporated into the pier or apron deck or installed below it and are not highly visible.

Long-term development at Piers 30-32 would be subject to the City's existing height and bulk limits and zoning, which are regulated by the 40-X Height and Bulk District and the Waterfront Special Use District No. 1, with a maximum 5.0 floor area ratio. This site could also accommodate up to two cruise ship berths, as a backup to the primary Cruise Ship Terminal at Pier 27. Assembly spaces would be temporarily devoted to cruise terminal uses while ships are in port. The specific details and design for the potential rehabilitation of the existing pier structure and new "above deck" development at Piers 30-32 could create potential impacts on the historic setting of the adjacent Embarcadero Historic District or Red's Java House because new construction could be out of character and potentially incompatible with the district. Therefore, implementation of **Mitigation Measure M-LT-CP-a** (Piers 30-32 Performance Criteria) would be required to reduce potential impacts of long-term development at this location. This mitigation measure would require the developer to hire a qualified consultant to prepare a focused historic resource analysis with the assistance of qualified historic preservation experts to help guide new optional long-term development to be compatible with the Embarcadero Historic District's maritime industrial character and setting. However, because no specific design proposal is before the Port and, in fact, none has yet been formulated, this impact is *potentially significant and unavoidable*, even with this mitigation measure.

Red's Java House (Pier 30)

Red's Java House is a historic resource located outside of, but next to, the Embarcadero Historic District on the northwest corner of Piers 30-32. Red's Java House was determined to be a potential contributor to the Embarcadero Historic District because it is one of several waterfront restaurants that served as important gathering places for longshoremen. However, at the recommendation of the National Park Service Red's Java House was not included in the Embarcadero Historic District because it is physically a part of Piers 30-32, a property that lacked sufficient integrity to qualify for inclusion in the Embarcadero Historic District. It is nonetheless

considered a "potential" contributor to the district, and a historic resource for CEQA purposes. Potential indirect impacts to the historic setting of Red's Java House could result from the rehabilitation of the existing Piers 30-32 pier structure and "above deck" development. This potential impact would be reduced through implementation of **Mitigation Measure M-LT-CP-a** (Piers 30-32 Performance Criteria), which requires the Port to develop specific design criteria for compatible future development on Piers 30-32. However, due to a lack of information regarding the proposed long-term development and its potential for physical impacts upon the project site, this impact is *potentially significant and unavoidable*.

Impact LT-CP-2: Long-term development could result in redevelopment of existing Port properties within the Embarcadero Historic District, which could result in a significant impact to cultural resources. (Less than Significant with Mitigation)

Long-term development of Port historic piers, or properties within the Embarcadero Historic District could result in significant direct and indirect impacts to the Embarcadero Historic District. Standard mitigation measures for the protection of cultural resources in the City and County of San Francisco would apply to reduce the impacts of long term development, and are incorporated here by reference. These include: 1) Archeological Testing, Monitoring, Data Recovery and Reporting, 2) Review of New Construction within the Embarcadero Historic District for Compliance with the Secretary's Standards, and 3) Documentation and Interpretation for Demolition or Alteration of Buildings.

The potential impacts and mitigation measures that are specific to each of the historic Port properties that could be redeveloped are described below. With regard to the treatment of roof colors for long-term development at Port properties, specifically, please see Impact LT-AE in Section 5.3, Aesthetics.

Piers 26-28

The proposed project includes a long-term development option to develop a number of permanent improvements within Pier 26 and 28, including rehabiliatation and alteration of approximately 195,000 square feet for retail/commercial, office, and entertainment/assembly uses. These improvements are typical of the historic rehabilitation projects that have occurred within the Embarcadero Historic District at Piers 1, 1½, 3, 5, 15 and the Embarcadero end of Pier 17. All but the Pier 17 project have been certified by the National Park Service as rehabilitation projects that met the Secretary's Standards and received Federal Rehabilitation Tax Credits. Because it is uncertain whether the option to develop the interior of Piers 26 and 28 will occur, such improvements have not yet been designed. Because these improvements have not yet been designed, it is unknown whether they would be consistent with the Secretary's Standards. As such, it is conservatively assumed that the long-term development at Pier 26 and 28 has the potential to result in adverse impacts to these contributors to the Embarcadero Historic District. Implementation of **Mitigation Measure M-LT-CP-b** (Performance Criteria for Long-Term

Development on Historic Piers) would reduce this potential impact to a less-than-significant level. This mitigation requires that the long term development meet specific design and performance criteria developed to ensure that the project is sensitive to the historic character-defining features of the resource and maintains its integrity. These measures would apply to any improvements to the bulkhead building, transit shed, as well as substructures of the pier, its aprons and the bulkhead wharf as part of the long-term development proposal to respond to Secretary's Standards. As a result, potential impacts on Piers 26 and 28 would be less than significant. The project sponsor may decide to exercise this option to develop the interiors of Piers 26 and 28 bulkhead buildings and transit sheds at sometime in the future.

Piers 19-19½

The proposed project includes the option to develop a number of permanent improvements within Piers 19 and 19½ connecting shed. Because it is uncertain whether the option to develop the interior of Piers 19 and 19½ would occur, such improvements have not yet been designed. Because these improvements have not yet been designed, it is unknown whether they would be consistent with the Secretary's Standards. As such, it is conservatively assumed that the long-term optional development at Piers 19 and 19½ has the potential to result in adverse impacts to these contributors to the Embarcadero Historic District. Implementation of **Mitigation Measure M-LT-CP-b (**Performance Criteria for Long-Term Development on Historic Piers) would reduce this potential impact to a less-than-significant level. This mitigation requires that improvements meet specific design and performance criteria developed to ensure that the project is sensitive to the historic character-defining features of the resource and maintains its integrity. These measures would apply to any improvements to the bulkhead building, transit shed, as well as substructures of the pier, its aprons and the bulkhead wharf, so that the potential impacts on Piers 19 and 19½ would be less than significant. The project sponsor may decide to exercise this option to develop the interiors of Pier 19 and 19½ bulkhead building and transit shed at sometime in the future.

Pier 23

The proposed project includes long-term developments within the Pier 23 transit shed, including up to 130,700 square feet of retail/commercial, office, and entertainment/assembly uses. These optional improvements are typical of the historic rehabilitation projects that have occurred within the Embarcadero Historic District as described above. Because it is uncertain whether the option to develop the interior of Pier 23 will occur, such improvements have not yet been designed. Because these improvements have not yet been designed, it is unknown whether they would be consistent with the Secretary's Standards. As such, it is conservatively assumed that the long-term optional development at Pier 23 has the potential to affect Pier 23, a contributor to the Embarcadero Historic District. Implementation of **Mitigation Measure M-LT-CP-b (**Performance Criteria for Long-Term Development on Historic Piers) would reduce this potential impact to a less-than-significant level. This mitigation requires that the optional improvements meet specific design and performance criteria developed to ensure that the project is sensitive to the historic character-defining features of the resource and maintains its integrity. These measures would apply to any improvements to the bulkhead building, transit shed, as well as substructures of the pier its aprons and the bulkhead

wharf so that their potential impacts on Pier 23 would be less than significant. The project sponsor may decide to exercise this development option to make a number of permanent improvements to Pier 23 in the future.

Seawall Lot 330

Seawall Lot 330 is located outside of the Embarcadero Historic District, and is not a historic resource, as defined by CEQA. Long-term development of Seawall Lot 330 could include up to 250,000 square feet of new development pursuant to existing zoning, which allows for downtown residential use. The height and bulk zoning district currently allows for a building with a maximum podium height of 65 feet. Above 65 feet, a tower would be set back from the lot line and rise to a maximum height of 105 feet. The building would cover a maximum of 80 percent of the lot, and parking provided would be required to be below-grade. As Seawall Lot 330 is located outside of the Embarcadero Historic District, and separated from it by the width of the Embarcadero roadway (about 150 feet), and is located adjacent to other recently constructed mixed-use developments, this potential development would have no significant impacts to the historic setting of the district.

Mitigation Measure M-LT-CP

- ***Archeological Testing, Monitoring, Data Recovery and Reporting*** (see San Francisco Planning Department standard mitigation)
- ***Review of New Construction within the Port of San Francisco Embarcadero Historic District for Compliance with the Secretary of the Interior's Standards*** (see San Francisco Planning Department standard mitigation)
- ***Documentation and Interpretation for Demolition or Alteration of Buildings*** (see San Francisco Planning Department standard mitigation)

a) ***Piers 30-32 Performance Criteria***

The potential new "above deck" development at Piers 30-32 shall be subject to the following requirements:

- Port preparation of detailed design criteria for the long-term development of Piers 30-32 with the assistance of a qualified historic preservation architect;
- Port hiring of qualified historic preservation consultant to prepare a Historic Resources Evaluation Report (HRER) that analyzes the design of the proposed development for compatibility with the historic setting and character of the Embarcadero Historic District. The Report would be subject to review by Planning Department Preservation Staff and, if recommended by the Preservation Coordinator and the Environmental Review Officer (EOR) Department, the Historic Preservation Commission.

Prior to issuance of Port Building or Encroachment Permits for optional long-term development of Piers 30-32, the Port shall consult and seek approval from the Planning Department and the ERO, who shall determine whether this mitigation measure has been satisfied.

b) ***Long-Term Development on Historic Piers Performance Criteria***

The project sponsor may rehabilitate and develop one or more historic piers for future long-term uses, which may include the following kinds of improvements:

- Construction of new uses within existing pier bulkheads and sheds
- Installation of seismic joints between the bulkhead and piers
- Repair or alteration of the bulkhead wharf connecting piers to the seawall
- Substructure pile repairs
- Fire safety, Building Code, and access improvements

Port Planning staff shall review future development proposals and designs for consistency with the Secretary's Standards. Port staff, in consultation with a qualified historic preservation consultant, shall prepare a Historic Resources Evaluation Report (HRER) to analyze any proposed project's consistency with the Secretary's Standards, which report shall be reviewed and approved by the San Francisco Planning Department. The purpose of this review is to ensure that the proposal: (1) complies with Port Commission Resolution 04-89 and the Port's *Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures*; (2) is consistent with the Secretary's Standards; (3) is compatible with the Embarcadero Historic District; and (4) protects character-defining features of the historic piers. These character-defining features include:

- Bulkhead buildings of Neo-classical or Mission architectural design with maritime industrial transit sheds, including three-part gable roof, and roof monitors that may be present in repeating sequence or as one continuous monitor for the entire length;
- Pile supported pier deck and aprons with rail tracks that are flush with the apron deck or depressed below the level of the deck
- Open interior volumes with exposed wood and steel roof trusses and structural systems
- Transit shed walls constructed of board-formed concrete punctuated at regular intervals with cargo openings with roll-up doors and clerestory industrial sash windows or sidelights
- Mooring bitts and cleats mounted on the aprons wood to tie-up berthed vessels, timber fender piles attached to the side of the apron
- Use of industrial materials, especially for the transit sheds, including concrete, steel glass and wood
- Historic lettering and identification signage

The HRER shall analyze any proposal against precedents set by past rehabilitation projects for historic piers for information, guidance and approaches that have been previously determined consistent with the Secretary Standards. Although new approaches to the rehabilitation of contributing piers consistent with the Secretary's Standards are encouraged as appropriate to respond to different conditions and uses, the HRER shall

include analysis of whether the proposal is consistent with the Port's stewardship of contributing piers and other historic resources.

The following performance criteria shall guide the HRER's analysis:

1. Construction of new uses in historic pier bulkheads shall minimize the subdivision of interior space and, where appropriate, maintain a continuous sightline through the central bay of pier sheds.

2. New construction shall minimize or avoid obstructing existing windows and doors and obscuring interior columns and trusses. New construction shall, to the extent feasible, be free-standing and detached from the historic pier to differentiate the historic pier from any contemporary additions.

3. Materials that are compatible with the industrial character of the resource shall be used whenever feasible.

4. If seismic joints are installed between the bulkhead and pier, they shall be incorporated into the interior and exterior design in a manner that minimizes appearance but meets applicable building and seismic code requirements.

5. Mechanical equipment shall be integrated into the architectural design of the building or structure and the size and appearance of any roof-top equipment shall be minimized to the greatest extent feasible.

6. Bulkhead wharf and pier substructures shall be repaired and strengthened to meet contemporary structural requirements for existing or proposed new uses; in areas of high public visibility along The Embarcadero, the historic appearance of the bulkhead wharf and pier substructures shall, to the greatest extent feasible, be maintained consistent with the character of the Embarcadero Historic District.

7. Alterations and construction necessary to meet applicable Building Code, fire safety, and access requirements shall, to the greatest extent feasible, be sensitive to the character-defining features of the interior and exterior of the piers. If feasible, such alterations shall be co-located with existing electrical and mechanical systems to reduce impacts to historic materials.

5.5.3.4 Cumulative Impacts

Impact C-CP: The combination of the AC34 and Cruise Terminal projects, in combination with other past, present and foreseeable future projects, could have a cumulatively considerable effect on cultural resources. (Less than Significant with Mitigation)

The geographic scope of potential cumulative cultural resources impacts encompasses all areas that would support AC34 2012 and 2013 event facilities, all secondary viewing areas, and the location of the proposed Cruise Terminal. Those projects described in Section 5.1, Impact Overview, that would be located within this geographic scope and could have a potentially significant impact on cultural resources include the following:

- Streetcar F Line Extension
- Treasure Island/Yerba Buena Island Redevelopment Plan
- Presidio Coastal Trail Project
- Doyle Drive Phase II Construction
- Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan
- Energy Improvements on Alcatraz Island
- Fort Mason Center Long-term Lease
- GGNRA Dog Management Plan
- San Francisco Marina Renovation Project
- Various projects within the Embarcadero Historic District

Architectural/Structural Resources

Port of San Francisco Embarcadero Historic District. To determine whether the proposed project would contribute to any cumulative impact on historic resources within the Embarcadero Historic District, it is necessary to evaluate the effects of the proposed project with the combined effects of other past, present, and reasonably foreseeable projects within or adjacent to the Embarcadero Historic District. The first step of this analysis is to determine whether the past, present, and reasonably foreseeable future projects result in a cumulative impact to which the project could potentially contribute.

A conservative time period for analysis of past and present projects occurring within the Embarcadero Historic District is to the year 2000 because this was the year the District was formally determined eligible for listing in the National Register of Historic Places (NRHP). These past and present projects are listed below.

- Pier 1 Rehabilitation (2000);
- Pier 14 construction of a new breakwater and public access pier (2001);
- Pier 43 Ferry Arch restoration (2002);
- Installation of bicycle racks throughout the waterfront (2003);
- Downtown Ferry Terminal – Phase 1 (2003);
- Ferry Building Rehabilitation (2003);
- Rehabilitation of Piers 1½, 3, and 5 (2006);
- Pier 24 Annex Rehabilitation (2009);
- Pier 40 - Phase II Rehabilitation (SF Redevelopment Agency) (2009);
- Piers 15-17 Rehabilitation to accommodate Exploratorium relocation (currently under construction);
- Embarcadero pedestrian signage and map program (currently underway), and
- Pier 22½ Fireboat House substructure seismic upgrade (currently underway).

Reasonably foreseeable future projects that are within or immediately adjacent to the Embarcadero Historic District include:

- ***Seawall Lot 337*:** The Port of San Francisco has selected a development team and is in negotiations to secure exclusive negotiation rights for the sites. There is no current development proposed for the site, and Seawall Lot 337 is not within the boundaries of the Embarcadero Historic District, but is located directly adjacent.

- ***Pier 48*:** Rehabilitation of Pier 48 is a possible component of the development of Seawall Lot 337. If Pier 48 is a component of the project, the terms under the development agreement and the RFQ are to have Pier 48 rehabilitated consistent with the Secretary's Standards. Pier 48 is a contributing resource to the District.

- ***Proposition A Clean and Safe Parks Projects*:** Waterfront open space improvements to Port property are planned including the Pier 43 Bay Trail Promenade, which is located adjacent to the district. The Proposition A Open Space Negative Declaration found that the proposed projects would not adversely affect historic resources (Planning Department Case No. 2008.0680E).

- ***Piers 31-33 Alcatraz Landing Improvements*:** This project would result in a number of improvements and alterations to existing facilities to support the existing ferry service under a contract with the National Park Service to Alcatraz Island National Park. Two phases of improvements are proposed: 1) initial phase of passenger improvements to provide signage, central visitor canopy area with interpretative displays, benches, trash and recycling receptacles, and repair of existing floating berth for vessel berthing; and 2) long term improvements within the Pier 33 shed to install glazing and demising walls around the portion of the shed to provide a ticketing office, retail sales and information, and a covered awning over passenger queuing area extending onto the Pier 31½deck. Piers 31-33 and associated wharves are contributors to the Embarcadero Historic District.

- ***Downtown Ferry Terminal Project*:** The Water Emergency Transportation Authority (WETA) is studying plans for development of Downtown Ferry Terminal Phase II. The 2nd phase of the Downtown Ferry Terminal was conceived to provide for additional ferry gates next to Gate E, to the south of Ferry Building. WETA has been considering a possible ferry berth off Pier 1/2, immediately north of Ferry Building. The location of the project is primarily in the waterside area east of the Agriculture Building, which is outside the district, but is located directly adjacent to the district.

- ***Brannan Street Wharf Project*:** The Port and the Army Corps of Engineers are jointly completing the state and federal environmental review process for the Brannan Street Wharf project. The Final EIR was certified on June 16, 2011, and Port Commission hearing for approval of the project is anticipated to occur in Fall 2011. The project would result in the demolition of Pier 36 and Sections 11a, 11 and 12 of the bulkhead wharf all of which are contributing resources to the Embarcadero Historic District. It was determined that the Brannan Street Wharf Project would result in significant and unavoidable impacts to historic resources from new construction and demolition.

Port Commission Resolution No. 04-89 requires that all Port (public) and private projects within the Embarcadero Historic District be evaluated for consistency with the Secretary's Standards. Because of this requirement, all Port projects within the Embarcadero Historic District over the past 10 years, with the exception of the Brannan Street Wharf project, have been consistent with the *Secretary Standards*. Additionally, four of the past projects discussed above (Pier 1, Ferry Building, Piers 1-1/2, 3 & 5, as well as Piers 15 & 17) utilized Federal Rehabilitation Tax Credits and were found to be consistent with the Secretary's Standards by the California Office of Historic Preservation (OHP) and the National Park Service (NPS). The proposed Brannan Street Wharf project will result in a significant and unavoidable project-level impact to historic resources from demolition of Pier 36 and Bulkhead Wharf Sections 11, 11a, and 12 and from construction of a new feature that is inconsistent with the character of the Embarcadero Historic District. Despite the Brannan Street Wharf project's project-level impact, its EIR concluded that no cumulative impact to the Embarcadero Historic District would result from that project. Specifically, the Brannan Street Wharf EIR found that the past, present and foreseeable projects would not result in a cumulative impact because the district would retain a substantial degree of integrity regardless of the project-level effects of the Brannan Street Wharf project.

The analysis here is no different. As discussed above, past projects within and adjacent to the Embarcadero Historic District have, since at least 2000, have been consistent with the Secretary's Standards, and thus have not caused an adverse impact to the district. Additionally, present and reasonably foreseeable future projects will not result in adverse impacts to the district because of the Port Commission's ongoing requirement that all projects within the Embarcadero Historic District comply with the Secretary's Standards. Notwithstanding the project-level significant effects of the Brannan Street Wharf project, the district will continue to retain a substantial degree of integrity and thus remain eligible for listing on the NRHP. Because the combined effects of past, present, and reasonably foreseeable projects do not result in a significant effect on the Embarcadero Historic District, there is no cumulative impact to the district to which the proposed AC34 and Cruise Terminal projects would contribute. Thus, although the proposed AC34 and Cruise Terminal projects would result in a number of temporary, permanent, and long term improvements within and adjacent to the district, these changes when considered in combination with the aforementioned past, present, and reasonably foreseeable projects, would not have a significant cumulative impact on the historic integrity of the Embarcadero Historic District.

The temporary improvements for AC34 would include, but are not limited to, freestanding tents, trailers and portable buildings, exhibitions, bleachers, gangways and docks, wave attenuators, and floating docks. The permanent improvements for AC34 would include structural repair and upgrade of transit sheds, seismic strengthening of transit sheds, apron repair and fendering, installation of stormwater management features as well as bulkhead wharf substructure repair, alteration, and reconstruction in certain locations. The Cruise Terminal project would result in construction of a new cruise terminal and a waterfront plaza at Pier 27. Long-term development to Piers 26-28, 19-19 ½, and Pier 23 would include pier, apron and bulkhead wharf substructure repair, alteration and reconstruction, installation of seismic joints between pier bulkheads and transit sheds, construction of new accessible offices within pier bulkheads and transit sheds, and

fire safety and access improvements. Additionally, long-term development of Pier 30-32 would include construction of retail/commercial, office, entertainment, and maritime uses.

Compliance with existing Port policy use of the Secretary's Standards, as well as the aforementioned mitigation measures, would reduce the AC34 and Cruise Terminal project-level impacts to the Embarcadero Historic District to a less-than-significant level. Moreover, the AC34 event's proposed alterations to the district are generally temporary and highly reversible and would thus have a less-than-significant impact on the district due to the relatively short timeframe that they would be installed. Additionally, the potentially significant and unavoidable impacts from long-term development at Pier 30-32 would not contribute to any potential cumulative impacts to the Embarcadero Historic District because Piers 30-32 and Red's Java House are located outside of the district boundaries, Piers 30-32 are not considered historic resources for the purposes of CEQA, and Red's Java House, while an historic resource as discussed above, is not a contributor to the district.

Additionally, the proposed project improvements and long term development located within the Embarcadero Historic District would be required to comply with the Secretary's Standards as mandated by Port Policy 04-89, as well as **Mitigation Measures M-CP-1a** (Bulkhead Wharf Substructure Review Process), **Mitigation Measure M-CP-6** (Northeast Wharf Plaza Performance Criteria) and **Mitigation Measure M-LT-CP-b** (Performance Criteria for Long-Term Development on Historic Piers). The project's contribution to any potential cumulative impacts associated with vibration impacts from multiple construction projects requiring impact tools, such as pile driving, would be reduced to less than significant with implementation of **Mitigation Measure M-NO-3** (Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring).

Accordingly, the proposed AC34 and Cruise Terminal projects, as well as the long term development, would not contribute in a cumulatively considerable manner to any cumulative impact to the Embarcadero Historic District. First, past, present, and reasonably foreseeable future projects will not result in a cumulative impact to the district because the district will continue to retain integrity and be eligible for listing on the NRHP. Second, any project-level effects of the proposed AC34 and Cruise Terminal projects to the Embarcadero Historic District would be mitigated to a less than significant level by **Mitigation Measures M-CP-1a** (Bulkhead Wharf Substructure Review Process), **M-CP-1b** (Protection of Historic Resources due to Indirect Damage), **M-CP-6** (Northeast Wharf Plaza Performance Criteria), **M-LT-CP-b** (Performance Criteria for Long-Term Development on Historic Piers), and **M-NO-3** (Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring). Although the proposed long term development at Piers 30-32 may result in a significant and unavoidable impact to the district, any such impact would not contribute to a cumulative impact because, as discussed above, no such impact exists at this time. Additionally, implementation of **Mitigation Measures M-CP-2** (Inadvertent Discovery of Archeological Resources or Shipwrecks) and **Mitigation Measures M-CP-4** (Inadvertent Discovery of Human Remains) would also reduce any contribution to potentially significant cumulative impacts to archeological resources and human remains,

respectively, to a less-than-significant level. Accordingly, cumulative impacts to the Embarcadero Historic District are less than significant with mitigation.

SAFR/Aquatic Park. The proposed extension of historic streetcar through Aquatic Park to Fort Mason Center would result in adverse impacts to the integrity of the Aquatic Park Historic Landmark District, according to the Draft EIS recently prepared for this project.[153] These impacts would include a reduction in the integrity of setting, association, and feeling of the historic district due to the introduction of incompatible elements and uses. While the proposed project would also introduce potentially incompatible elements to the Aquatic Park Historic Landmark District, this would be a temporary and reversible effect. Furthermore, construction of the streetcar extension would not begin until after 2013, when the proposed AC34 event uses and installations will have been removed (no event installations are planned for this area in 2013). No impacts to the Aquatic Park Historic Landmark District are anticipated from any of the other cumulative scenario projects; therefore, impacts to cultural resources at the Aquatic Park AC34 venue would not be cumulatively considerable.

Fort Mason. The proposed extension of the F Line streetcar through Fort Mason would result in adverse impacts to the integrity of the Fort Mason National Register District and the San Francisco Port of Embarkation U.S. Army National Historic Landmark District. The proposed Fort Mason Center Long-term Lease would rehabilitate a number of historic buildings at Fort Mason, including Piers 2 and 3. These two projects, in combination with the AC34 event, could result in impacts to historic resources that are cumulatively considerable. However, the proposed AC34 event venues would only use the interior of historic Piers 2 and 3 and Building FM-322 at Fort Mason for a short duration, and would make no substantial or permanent alterations to them. In addition, the significant impacts to the district from the streetcar extension are not expected to overlap temporally with the AC34 event, which will have been removed by the time the streetcar project has begun. Finally, the long term lease of Piers 2 and 3 (among other buildings at Fort Mason) would require that any improvements made to these structures by future tenants be completed in a manner consistent with the Secretary's Standards, as required by the NPS for all leased historic properties. As such, no significant impacts to historic resources at Fort Mason are anticipated. The combined effects of the two projects in addition to the AC34 event would not be cumulatively considerable.

The GGNRA Dog Management Plan Draft EIS identifies potential impacts to historic earthen fortifications in Fort Mason due to increased erosional activity associated with off-trail human and dog use (Alternative A only). Other alternatives indentified in the Draft EIS prohibit both on- and off-leash dog use within the north fortifications area of Fort Mason, and would result in no impact to historic earthen batteries. Alternative A of the GGNRA Dog Management Plan is not the preferred alternative identified by NPS; however, the Draft EIS is still in a public review stage, and the final implementation of the Dog Management Plan is uncertain. If Alternative A is chosen, this impact would potentially overlap with the similar effects anticipated from AC34 spectators in the historic earthen fortification area at the northern edge of the Upper Fort Mason bluffs. The

[153] GGNRA San Francisco Maritime National Historical Park, *Draft Environmental Impact Statement for Extension of F-Line Streetcar Service to Fort Mason Center*, February, 2011.

increased erosion from both AC34 use and proposed dog use of the Fort Mason batteries would constitute a cumulatively considerable effect that could be reduced to a level of less than significant by the implementation of **Mitigation Measure M-CP-1b** (Protection of Historic Resources due to Indirect Damage).

Marina Green and Vicinity. The San Francisco Marina Renovation Project, proposed by the San Francisco Department of Recreation and Parks, would replace dilapidated slips and docks with new slips and docks in both the East Harbor and West Harbor areas, and would install new breakwaters in both the East and West Harbor. Replacement slips and docks in the West Harbor have been completed or are currently on-going, while the installation of these improvements to the East Harbor are uncertain due to funding constraints. Neither breakwater project has begun. Construction of the breakwater in the West Harbor could have a significant impact on the historic Marina Green Seawall as it would be physically attached to this historic structure. Mitigation measures identified in the San Francisco Marina Renovation Project EIR,[154] which requires the design of this project element to be consistent with the Secretary's Standards, would reduce this portion of the project to a less-than-significant level. This measure, in addition to **Mitigation Measure M-CP-1c** (Protection of Historic Resources due to Direct Damage) requiring any temporary AC 2012 gangways along the Seawall to also be designed for consistency with the Secretary's Standards, would ensure that no impacts to the Marina Green and vicinity would be cumulatively considerable. In addition, the proposed temporary floating docks and gangways for the AC 2012 would be removed prior to the construction of the permanent breakwater in the West Harbor. As such, there would be no temporal overlap of construction.

Crissy Field. Doyle Drive Phase II Construction would include, among other transportation improvements, enhanced pedestrian access to historic fortifications in the Presidio. This project, in combination with the proposed AC34 event venue at the western end of Crissy Field, could have a cumulative impact to historic earthen fortifications along the eastern bluff of the Presidio (Battery East) due to erosion from increased visitation. However, since the Doyle Drive project would not be completed until late 2013, and well after the AC34 event has ended, there would be no temporal overlap between the two projects. For this reason, the impact to historic resources in the Crissy Field vicinity would not be cumulatively considerable.

Cavallo Point. The Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan would include improvements to 11 miles of historic roads in the Marin Headlands and Fort Baker. Roadway improvements in the Fort Baker area, in particular, could coincide with the AC34 event at Cavallo Point, as these improvements are planned for 2012 and 2013. Although no direct impacts to historic resources were identified at Cavallo Point as a result of the AC34 event, the indirect effects of secondary viewing could damage historic earthen fortifications along the bluffs in the Cavallo Point area from increased erosion due to visitors straying off designated paths during event races. The roadway improvements planned in these areas could enhance access to these fortifications, which along with the increased visitation from the AC34 event, could combine to form an impact to historic resources that is cumulatively

[154] San Francisco Planning Department, *San Francisco Marina Renovation Project Final Environmental Impact Report*, January, 2007.

considerable. These effects, however, could be reduced to a less-than-significant level with implementation of **Mitigation Measures CP-1b** (Protection of Historical Resources due to Indirect Damage).

Alcatraz Island. The proposed energy improvements at Alcatraz Island would include new photovoltaic (PV) panels on the Prison Building and New Industries Building to reduce the island's reliance on diesel-generated power. These rooftop alterations to the Prison Building (cellhouse) would not combine with the effects of the proposed project to form an impact that is cumulatively considerable, as the proposed event uses would be entirely internal to the cellhouse building.

AC34 Live Sites. There are no other past, present, or reasonably foreseeable projects at Civic Center or Union Square which could combine with the effects of the proposed project to form an impact that is cumulatively considerable. Because Justin Herman Plaza is not a historically significant area, any cumulative scenario projects in Justin Herman Plaza would not, in combination with the proposed project, have a cumulatively considerable effect on cultural resources.

America's Cup Secondary Viewing Areas

Past, present, or reasonably foreseeable projects in the secondary viewing areas are as follows.

San Francisco Northern Waterfront. There are no other past, present, or reasonably foreseeable projects along the San Francisco northern waterfront which could combine with the effects of the proposed projects to form an impact that is cumulatively considerable. While these secondary viewing locations would be temporarily affected due to the influx of additional spectators, no changes to infrastructure or other physical affects on the environment are anticipated.

Northern San Francisco Hillside Locations. There are no other past, present, or reasonably foreseeable projects along the San Francisco hillside locations which could combine with the effects of the proposed project to form an impact that is cumulatively considerable. While these secondary viewing locations would be temporarily affected due to the influx of additional spectators, no changes to infrastructure or other physical affects on the environment are anticipated.

GGNRA, San Francisco (Baker Beach, Presidio, Fort Point). The GGNRA Dog Management Plan Draft EIS identifies potential impacts to historic earthen fortifications in at the Presidio, Baker Beach, and Fort Point due to increased erosional activity associated with off-trail human and dog use (Alternative A only). If Alternative A is chosen, this impact could potentially overlap with the similar effects anticipated from AC34 spectators in the historic earthen fortifications located in these areas. The Presidio Coastal Trail Project would also enhance public access along the coastal trail where historic earthen fortifications are located on the Presidio's western bluffs (Battery West), in particular, including Batteries Godfrey and Marcus Miller.

The increased erosion from secondary viewing for AC34 in combination with the proposed dog use and the coastal trail project could constitute a cumulatively considerable impact to the GGNRA-managed historic fortifications. However, implementation of **Mitigation Measure M-CP-1b** (Protection of Historic Resources due to Indirect Damage) in addition to those identified in the Dog Management Plan EIS, as well as policies contained within the Presidio Coastal Trail Project intended to protect the batteries from erosion, would reduce such potentially significant cumulative impacts to a less-than-significant level.

Golden Gate Bridge. The Doyle Drive Phase II Construction Project would include, among other transportation improvements, enhanced vehicular and pedestrian access to the southern approach of the Golden Gate Bridge. No alterations to the bridge itself are proposed as part of this project. Since the Doyle Drive project will not be completed until late 2013, and well after the 2013 AC34 event has ended, there would be no temporal overlap between the two projects. The temporary weather station proposed for the AC34 event, to be located on the Golden Gate Bridge, will have been removed by the time the Doyle Drive project is complete. For this reason, the impact to historic resources would not be cumulatively considerable.

GGNRA, Marin County (Marin Headlands and Fort Baker). Similar to the properties managed by the GGNRA in San Francisco, those properties managed by the GGNRA in Marin County, including the Marin Headlands and Fort Baker, could also experience cumulative impacts to historic earthen fortifications resulting from combined visitation from implementation of the Dog Management Plan, the Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan, and the AC34 event. However, implementation of **Mitigation Measure M-CP-1b** (Protection of Historic Resources due to Indirect Damage) in addition to those identified in the Dog Management Plan EIS and the Transportation Management Plan intended to protect the historic fortifications from erosion, would reduce such potentially significant cumulative impacts to a less-than-significant level.

Southern Marin County. There are no other past, present, or reasonably foreseeable projects in Southern Marin County which could combine with the effects of the proposed project to form an impact that is cumulatively considerable.

Angel Island. There are no other past, present, or reasonably foreseeable projects at Angel Island which could combine with the effects of the proposed project to form an impact that is cumulatively considerable.

Treasure Island and Yerba Buena Island. Implementation of the Treasure Island/Yerba Buena Island Redevelopment Plan would include large-scale development on Treasure Island, including rehabilitation and reuse of most of its historic buildings. Some historic buildings on the island, however, would be demolished to make way for new construction, which would have a significant and unavoidable impact on historic resources. This project, in combination with the secondary viewing of proposed project, could have impacts to historic resources that are cumulatively considerable. However, secondary viewing of the AC34 event from currently developed/urbanized areas such as Treasure Island would not result in significant impacts to

historic resources, as no substantial alterations to such resources would occur. In addition, the development schedule for Treasure Island has a long-term (15-20 year) timeframe for completion. As such, there would be little if any temporal overlap between the development activities and the proposed event activities. For these reasons, no significant cumulative impacts to historic resources at Treasure Island/Yerba Buena Island are anticipated.

James R. Herman Cruise Terminal and Northeast Wharf Plaza

The construction of the proposed Pier 27 Cruise Terminal and Northeast Plaza would result in permanent changes to the Embarcadero Historic District. While these changes would create two new non contributory resources to the Embarcadero Historic District, and could combine with other past, present, and reasonably foreseeable changes to the District, they have been designed conform to the Secretary's Standards (in the case of the Cruise Terminal), or would be designed in accordance with performance standards as required in **Mitigation Measure M-CP-6** (Northeast Wharf Plaza Performance Criteria) that would require design compatibility not only with adjacent contributing resources but also the maritime industrial setting of the Embarcadero Historic District. The vast majority of the past, present, and reasonably foreseeable projects in the Embarcadero Historic District have also been designed for conformance with the Secretary's Standards, or would be required to conform, as part of future conditions and in compliance with Port policy 04-89. For these reasons, no significant cumulative impacts to historic resources would result from the construction of the Pier 27 Cruise Terminal and Northeast Wharf Plaza.

Archeological Resources

All of the identified past, present, and reasonably foreseeable future projects that involve ground disturbance have the potential to combine with the impacts of the proposed project to form cumulative impact to both recorded and unknown/unrecorded buried archeological resources. However, all of these above-listed projects as well as the proposed project have been, or would be, required to adhere to the standard mitigation measures developed for the protection of archeological resources, similar to **Mitigation Measure M-CP-2** (Inadvertent Discovery of Archeological Resources or Shipwrecks) for the accidental discovery of archeological resources during construction. In addition, the cumulative projects identified on NPS-managed lands, in particular, would be required to adhere to strict Federal resource protection measures developed specifically for these management areas. As such, no significant cumulative impact to archeological resources is anticipated.

Paleontological Resources

Several sections of the California State Public Resources Code protect paleontological resources. Section 5097.5 of the PRC prohibits "knowing and willful" excavation, removal, destruction, injury, and defacement of any paleontological feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted permission. As no significant impacts to paleontological resources were identified as part of the proposed project (primarily because ground disturbance would be limited to artificial fills and/or Bay mud), the proposed project would not have a

significant cumulative contribution to potential impacts to paleontological resources. All of these above-listed projects as well as the proposed project have been, or would be, required to adhere to state laws concerning the protection and appropriate treatment of paleontological resources. As such, no significant cumulative impacts to paleontological resources are anticipated as a result of the proposed project.

Human Remains

All of the identified past, present, and reasonably foreseeable future projects that involve ground disturbance have the potential to combine with the impacts of the proposed project to form cumulative impact to unrecorded human remains, including those interred outside of formal cemeteries. Human remains are protected under several state laws, including PRC Section 5097.98 and Health and Safety Code Section 7050.5. All of these above-listed projects as well as the proposed project have been, or would be, required to adhere to state laws concerning the protection and appropriate treatment of human remains, similar to **Mitigation Measure M-CP-4** (Inadvertent Discovery of Human Remains) for the accidental discovery of such remains during construction. In addition, the cumulative projects identified on NPS-managed lands, in particular, would be required to adhere to strict Federal resource protection measures developed specifically for these management areas. As such, no significant cumulative impact to human remains is anticipated.

Mitigation Measure M-CP-1a (Bulkhead Wharf Substructure Review Process)

Mitigation Measure M-CP-1b (Protection of Historic Resources due to Indirect Damage)

Mitigation Measure M-CP-1c (Protection of Historic Resources due to Direct Damage)

Mitigation Measure M-CP-1d (Protection of the Northeast Waterfront Historic District from Teatro Zinzanni Relocation)

Mitigation Measure M-NO-3 (Pre-Construction Assessment to Minimize Structural Pile Driving Vibration Impacts to Adjacent Buildings and Structures and Vibration Monitoring)

Mitigation Measure M-CP-2 (Inadvertent Discovery of Archeological Resources or Shipwrecks)

Mitigation Measure M-CP-4 (Inadvertent Discovery of Human Remains)

Mitigation Measure M-CP-6 (Northeast Wharf Plaza Performance Criteria)

Mitigation Measure M-LT-CP-a (Piers 30-32 Performance Criteria)

Mitigation Measure M-LT-CP-b (Performance Criteria for Long-Term Development on Historic Piers)

5.6 Transportation and Circulation

This section provides an assessment of the potential for impacts on transportation and circulation during construction and operation of the proposed 34th America's Cup (AC34) and the James R. Herman Cruise Terminal and Northeast Wharf Plaza (Cruise Terminal) projects. This section provides an overview of existing transportation conditions within the project area, a description of applicable transportation regulations and policies, methodologies and assumptions used in the impact analysis, and impact assessment and mitigation measures. Supporting detailed technical information is included in Appendix TR.

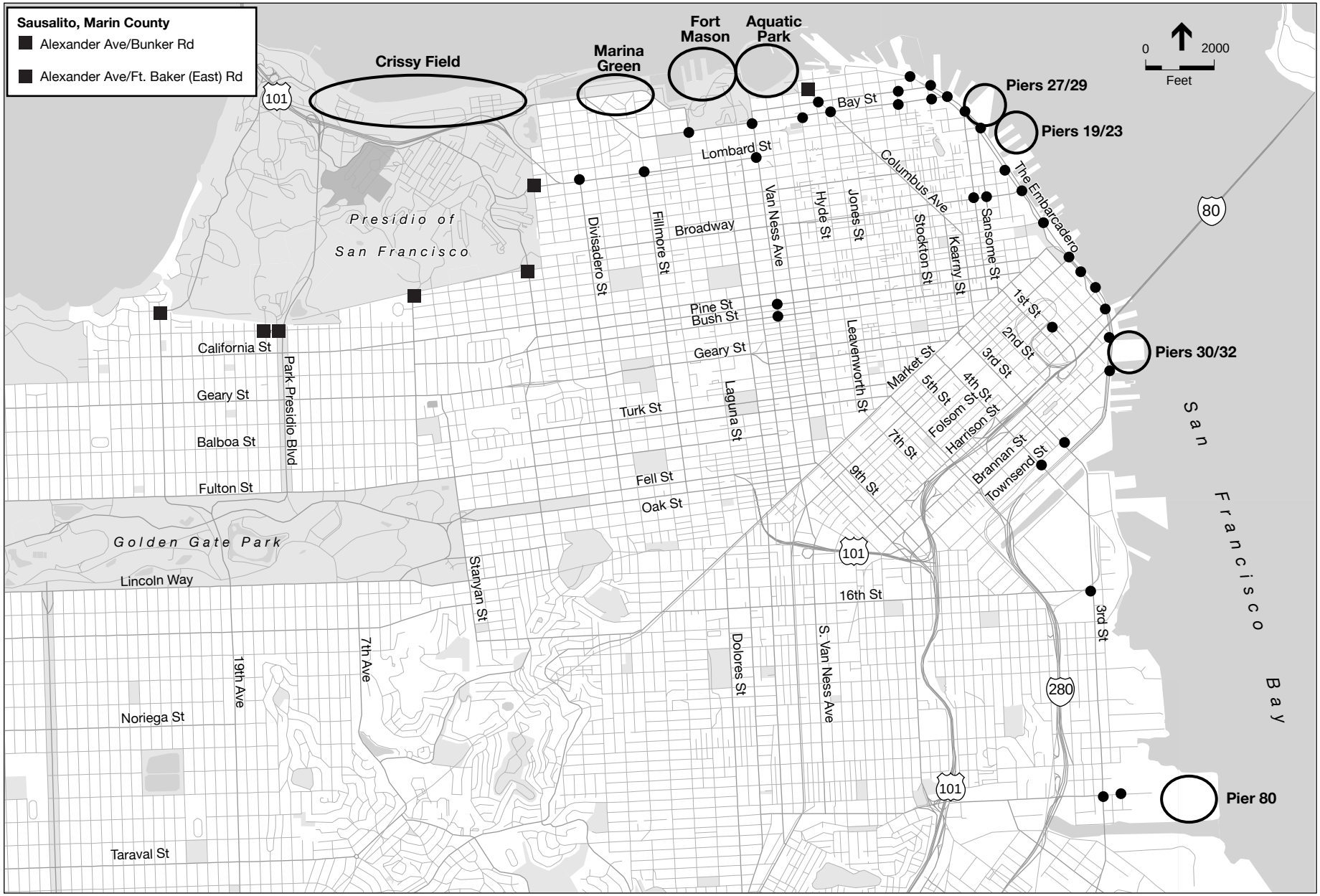
5.6.1 Setting

The transportation study area includes all aspects of the transportation network that may be measurably affected by the proposed projects. The transportation study area is defined by travel corridors and by facilities such as bus stop and transit stations. It includes the existing street intersections that AC34 spectators, cruise ship passengers, other visitors, and employees would use in traveling to and from the project sites.

A total of 44 existing study intersections (42 in San Francisco and 2 in Marin County) were identified as the key locations that would likely be affected by the proposed projects. **Figures 5.6-1A** and **5.6-1B** present the location of the 44 study intersections analyzed for the AC34 project and the parking study area, respectively. While all 44 intersections were analyzed for the AC34 project, a subset of these intersections (22) were analyze for the Cruise Terminal project. **Figure 5.6-2** presents the intersections selected for analysis for the Cruise Terminal project and the Cruise Terminal project parking study area.

A number of these intersections were selected for analysis because they are typically congested during peak periods due to traffic traveling to and from the San Francisco-Oakland Bay Bridge (Bay Bridge) and downtown San Francisco and are therefore, most likely to experience increases in peak hour traffic associated with the proposed projects. Other intersections were selected for analysis because they are key intersections along routes to and from the spectator venues for the AC34 project and the Cruise Terminal. Further, the 22 Cruise Terminal study intersections were evaluated during the weekday a.m., weekday p.m., and Saturday midday peak hours, where as the remaining study intersections were evaluated during the weekday p.m. and Saturday midday peak hours. The analysis hours were selected to reflect the times during which the proposed projects would be expected to have the most effect on the transportation network.

The transit analysis includes an assessment of the transit lines within the transportation study area that would serve the proposed project sites.

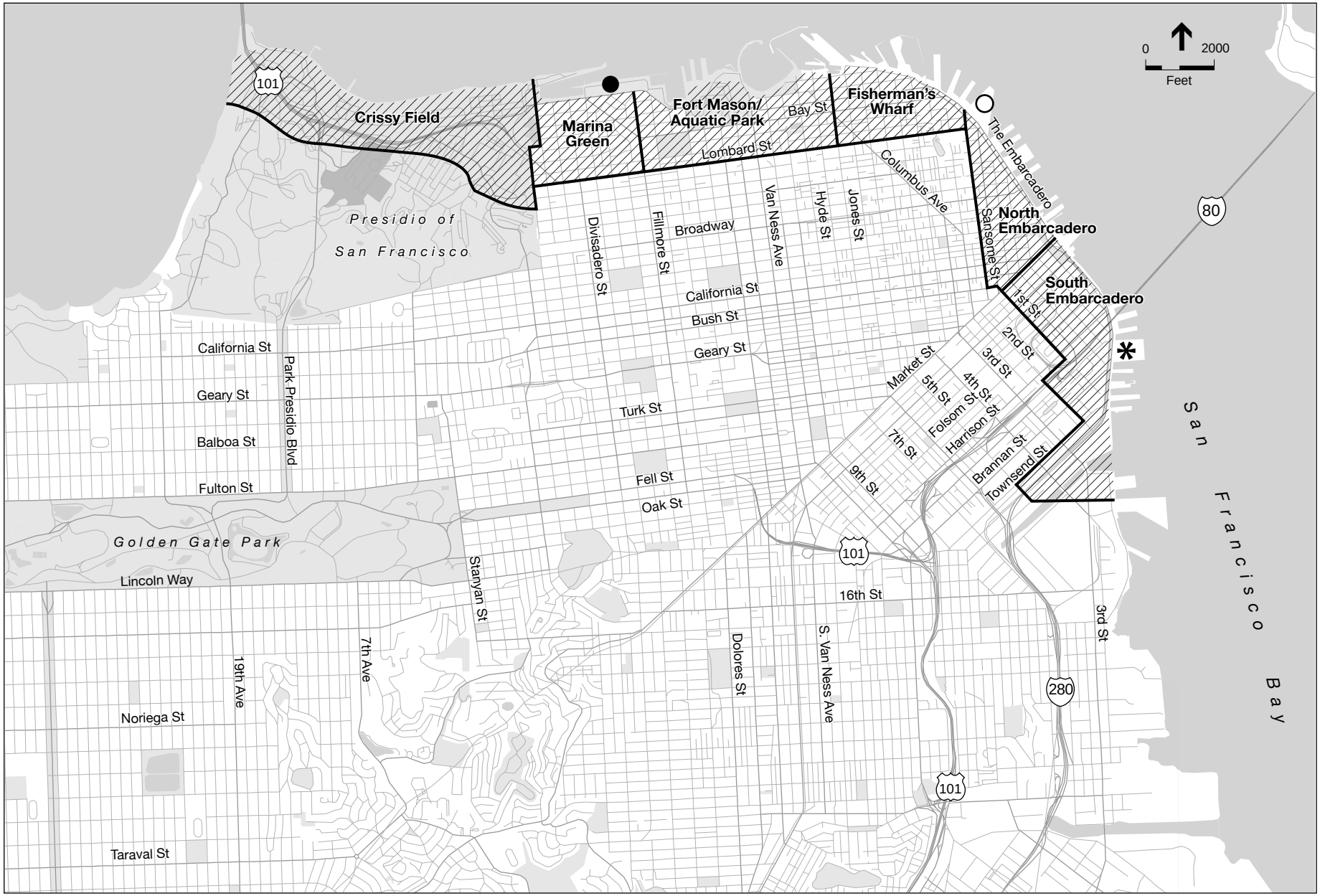


● Signalized Study Intersection ■ Stop-Sign Controlled Study Intersection ○ Project Sites

SOURCE: San Francisco Planning Department; Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-1A
AC34 Study Intersections

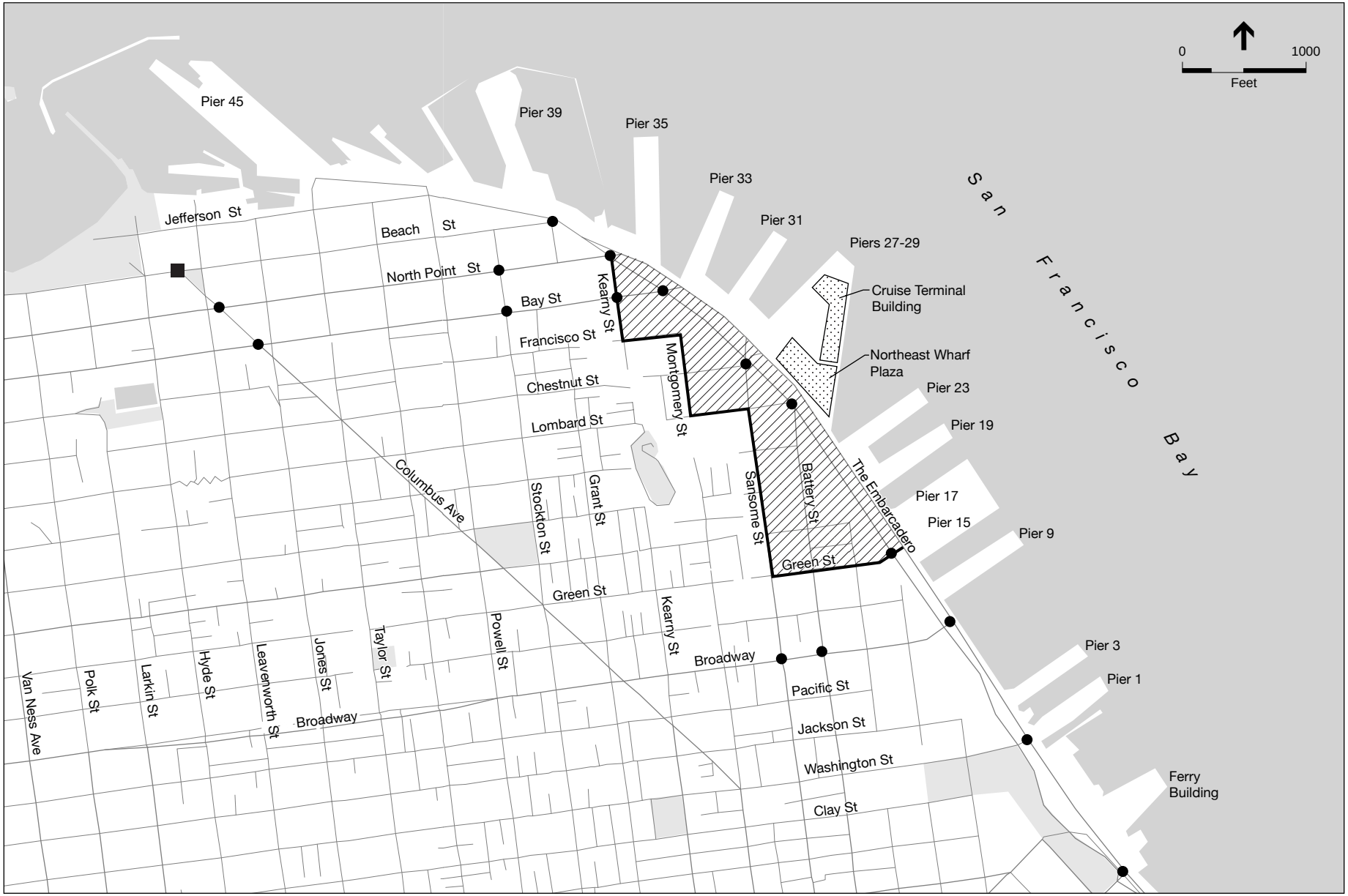


Parking Study Areas ○ Cruise Terminal and Northeast Wharf Plaza; America's Cup Village in 2013 ● America's Cup Village in 2012 ✱ America's Cup Team Bases

SOURCE: Adavant Consulting; LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-1B
AC34 Parking Study Area



SOURCE: San Francisco Planning Department; Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-2

Cruise Terminal Study Intersections and Parking Study Area

5.6.1.1 Regional and Local Roadways

Regional Access

Interstate 80 (I-80) and U.S. Highway 101 (U.S. 101) are the two primary facilities that provide regional access to downtown San Francisco and The Embarcadero waterfront. U.S. 101 serves San Francisco and the Peninsula/South Bay, and extends north via the Golden Gate Bridge to the North Bay. Within San Francisco, Lombard Street and Van Ness Avenue are designated as U.S. 101. U.S. 101 is an access-controlled freeway south of South Van Ness and 13th Street. North of the Golden Gate Bridge, U.S. 101 is an eight-lane north-south freeway.

I-80 connects San Francisco to the East Bay and points further east via the Bay Bridge. U.S. 101 and I-80 merge south of the project area on an elevated structure. The closest ramps providing access to and from downtown San Francisco are at the intersections of Fourth Street/Harrison Street, First Street/Harrison Street, Essex Street/Harrison Street and Sterling Street/Bryant Street (High Occupancy Vehicle-only between 3:30 p.m. and 7:00 p.m.) and the off-ramps at the intersections of Fremont Street/Harrison Street and Fourth Street/Bryant Street. Interstate 280 (I-280) provides regional access to southern San Francisco, the Peninsula, and South Bay. I-280 has an interchange with U.S. 101 south of downtown San Francisco (south of the project area). The closest on- and off-ramps are located at the intersections of Fifth Street/King Street and Sixth Street/Brannan Street.

Local Access

The Embarcadero is a two-way north-south roadway that runs between King Street (in the South Beach area near AT&T Park) and Taylor Street (near Fisherman's Wharf). In general, The Embarcadero has two or three travel lanes in each direction, with a wide center median for the F-Market & Wharves historic streetcar and the N-Judah and T-Third light rail lines. The Embarcadero features pedestrian amenities including wide sidewalks, public art, viewing decks, active street and sidewalk activities, open plazas, and the F-Market & Wharves historic streetcar line running down the center. Left turns are permitted in the northbound direction with separate left-turn channelization and signal phasing at Washington Street, Broadway, Green Street, Chestnut Street, Bay Street, and North Point Street. In the southbound direction, no left turns are permitted into the historic and grand pier buildings fronting The Embarcadero, although left-turn pockets are provided for drivers wishing to make U-turns or access public parking facilities. No left turns are permitted out of mid-block pier driveways onto The Embarcadero going southbound; exits from those driveways are restricted to right turns only.

Between Lombard and Chestnut Streets, in the vicinity of Piers 27-29, The Embarcadero has two northbound and southbound lanes. Class II bicycle lanes are located on both sides of The Embarcadero. On-street parking is not permitted on either side of the street. A 10-foot wide sidewalk is provided on the land side, and a 25-foot wide pedestrian promenade runs along the waterfront. The San Francisco General Plan identifies The Embarcadero as a Major Arterial in the Congestion Management Program (CMP) Network, a Metropolitan Transportation System (MTS)

Street, a Transit Preferential Street (Transit Important), a Neighborhood Pedestrian Street. Bicycle Route 5 runs along The Embarcadero as a Class II facility between King Street and North Point Street.

In addition, The Embarcadero is designated as part of the Bay, Ridge, and Coast Trail, which is a recreational pedestrian/bicycle path connecting destinations and cities around the San Francisco Bay. In 1996, the City of San Francisco gave the name Herb Caen Way to the 25-foot wide pedestrian promenade that runs approximately 3.2 miles along the waterfront next to The Embarcadero from South Beach to Fisherman's Wharf. Herb Caen Way is part of the Bay Trail, which runs along the San Francisco Waterfront (see Section 5.11, Recreation, for further description of the Bay Trail).

North Point Street is a two-way east-west roadway between The Embarcadero and Van Ness Avenue that has one travel lane and a bicycle lane (Class II facility) in each direction. On-street parking is permitted on both sides of the street. The San Francisco General Plan identifies North Point Street as a Major Arterial, a Transit Important Street, a neighborhood Commercial Street, and a Congestion Management Network Street. Bicycle Route 2 runs along North Point Street as a Class II facility.

Bay Street is a two-way east-west roadway that runs between The Embarcadero and Fillmore Street, with two travel lanes in each direction. On-street parking is permitted on both sides of the street, except weekdays between 4:00 and 7:00 p.m., when parking is prohibited on the north side of the street to create a third westbound travel lane. Bay Street functions as an arterial street for through traffic and provides access to the Golden Gate Bridge. The San Francisco General Plan identifies Bay Street as Major Arterial in the CMP Network, an MTS Street, and a Neighborhood Commercial Street.

Chestnut Street is an east-west two-way roadway that runs discontinuously, due to grade, between The Embarcadero and Lyon Street (near the Presidio). In the vicinity of Piers 27-29, Chestnut Street is a two-lane westbound roadway between The Embarcadero and Montgomery Street, and a two-way one-lane each way roadway between Montgomery and Kearny Streets. On-street parking is provided on both sides of the street. Chestnut Street is identified in the General Plan as a Secondary Transit Preferential Street from Van Ness Avenue westward, and as a Neighborhood Commercial and Neighborhood Pedestrian Street from Fillmore Street to Richardson Avenue (near the Presidio).

Lombard Street is an east-west roadway that runs discontinuously due to grade between The Embarcadero and Lincoln Boulevard (near the Presidio). In the vicinity of Piers 27-29, Lombard Street is a two-lane one-way westbound roadway between Montgomery Street and The Embarcadero. Parallel parking is provided on both sides of the street between Montgomery and Sansome Streets, and on the south side between Sansome Street and The Embarcadero. Diagonal parking is provided on the north side between Sansome Street and The Embarcadero.

Green Street is a two-way east-west roadway that is discontinuous between The Embarcadero and Lyon Street (near the Presidio). In the project vicinity, Green Street connects The Embarcadero and Sansome Street and has one travel lane each way with metered parking on either side of the street and a 10-foot wide sidewalk on both sides of the street.

Broadway is a two-way east-west roadway that runs between The Embarcadero and Lyon Street, with two travel lanes in each direction. The Robert Levy Tunnel runs along Broadway, between Hyde Street and Mason Street. In the San Francisco General Plan, Broadway, between Franklin Street and The Embarcadero is defined as a Major Arterial, and an MTS Street. Bicycle Route 10 runs eastbound and westbound on Broadway between Webster Street and The Embarcadero; the segment of Broadway between Larkin Street and Powell Street comprising the Broadway Tunnel is designated as Bicycle Route 210. Along Broadway, Bicycle Route 210 and Route 10 are signed routes (Class III facility).

Washington Street is an east-west roadway that connects The Embarcadero with Arguello Boulevard. Washington Street operates two-way between The Embarcadero and Drumm Street, one-way westbound between Drumm and Powell Streets, one-way eastbound between Powell and Gough Streets, and two-way between Gough Street and Arguello Boulevard. Between Drumm Street and The Embarcadero, Washington Street has two lanes each way and parking on both sides. The San Francisco General Plan identifies Washington Street as a Major Arterial in the Congestion Management Network between Kearny Street and The Embarcadero, a Transit Preferential Street between Hyde and Mason Streets, and a Neighborhood Pedestrian Street between Fillmore and Mason Streets.

Howard Street is an east-west street that connects The Embarcadero with South Van Ness Avenue. It is a four-lane street that operates one-way westbound between Fremont Street and South Van Ness Avenue and two-way between Fremont Street and The Embarcadero. It serves as one of the main westbound connectors to the I-80 freeway ramps in the South of Market area. Howard Street is designated as a Major Arterial (CMP Network) and as Citywide Bicycle Route 30 (Class III facility). On-street parking is generally permitted on both sides, some of which as designated as tow-away during the p.m. peak commute period.

Folsom Street runs east-west between The Embarcadero and Duboce Avenue and north-south between Duboce Avenue and Alemany Boulevard. It is primarily a four-lane roadway, operating one-way eastbound between Eleventh and Essex Streets and two-way between Essex Street and The Embarcadero. Folsom Street is a primary eastbound connector to the I-80 freeway ramps in the South of Market area. Folsom Street is designated as a Major Arterial (CMP Network) from The Embarcadero to 13th Street. Bicycle Route 30 runs from The Embarcadero to 11th Street, as a Class III facility between The Embarcadero and Main Street, and as a Class II facility west of Main Street. On-street parking is generally permitted on both sides of the street.

Harrison Street runs in the east-west direction between The Embarcadero and 13th/ Division Street, operating one-way westbound between Third and Tenth Streets, and runs in the north-south direction between 13th/Division Street, ending south of César Chávez Street in Bernal

Heights at Norwich Street. In the downtown area, Harrison Street is a primary route to the I-80 freeway, with on-ramps at the First Street and Essex Street intersections, and to U.S. 101 southbound, with an on-ramp at Fourth Street. It is a designated Major Arterial (CMP Network) between The Embarcadero and Division Street. Harrison Street is a Transit Preferential Street between Fourth and 11th Streets (Primary Transit between Fourth and Seventh Streets and Secondary Transit between Seventh and 11th Streets). It is a Neighborhood Commercial Pedestrian Street between Fourth and 16th Streets.

Bryant Street extends from The Embarcadero in the South of Market area to Precita Avenue in Peralta Heights. From The Embarcadero to Second Street, Bryant Street operates two-way in the east-west direction with two to three lanes. Bryant Street is a Transit Preferential Street (Primary Transit between Fourth and Seventh Streets. In the vicinity of The Embarcadero, sidewalks on Bryant Street range from seven feet to 15 and 22 feet. Parking is prohibited at all times between The Embarcadero and Main Street.

Brannan Street operates in the east-west direction between The Embarcadero and Tenth Street. It has one travel lane in each direction. Sidewalks are 11-feet wide. In the project vicinity parking on Brannan Street is metered between The Embarcadero and Delancey Street and non-metered west of Delancey Street.

King Street is a four-lane east-west road with an exclusive Muni Metro right-of-way in the center median. It links the I-280 on- and off-ramps at Fifth Street with The Embarcadero. King Street is designated in the Transportation Element of the San Francisco General Plan as a Major Arterial (CMP Network), Primary Transit Street, Neighborhood Network Connection Pedestrian Street. Bicycle Route 5 runs on King Street east of Third Street as a Class II facility (bicycle lane). There is on-street parking on the north side of the street between The Embarcadero and Fourth Street and on the south side of the street between Fourth and Fifth Streets.

Battery Street is a one-way southbound roadway between The Embarcadero and Market Street, with two travel lanes. The San Francisco General Plan identifies Battery Street as a Major Arterial, as a Transit Preferential Street, and as a Neighborhood Pedestrian Street. Bicycle Route 11 runs on Battery Street as a Class III facility (signed route only) between Clay Street and Market Street.

Sansome Street is a one-way northbound roadway between Washington Street and The Embarcadero. South of Washington Street, Sansome Street is a two-way roadway, although the southbound movement to Market Street is restricted to commercial vehicles and transit only. In the vicinity of The Embarcadero, Sansome Street has two northbound travel lanes. On-street parking is generally permitted on both sides of the street, although peak period tow-away regulations are in effect during the evening peak period. The San Francisco General Plan identifies Sansome Street as a Major Arterial, as a Transit Preferential Street, and as a Neighborhood Pedestrian Street.

Van Ness Avenue is a north-south street that runs between North Point Street and Market Street. In the vicinity of the Cathedral Hill campus, Van Ness Avenue is a six-lane roadway (three travel lanes each way) with metered parking on both sides of the street. In the San Francisco General

Plan, Van Ness Avenue is classified as a Major Arterial in the CMP Network and part of the MTS Network, a Transit Preferential Street (Primary Transit Street – transit important), is part of the Citywide Pedestrian Network and a Neighborhood Pedestrian Street (neighborhood commercial street).

Fillmore Street is a north-south street that runs from Duboce Avenue to Marina Boulevard. In the vicinity of Lombard Street, Fillmore Street operates as a two-way road with one lane each way, parking on both sides of the street, and 15-foot wide sidewalks. The San Francisco General Plan identifies Fillmore Street as a Secondary Transit Street (from Chestnut Street to Duboce Avenue), a Citywide Pedestrian Network Street (between Chestnut Street and Duboce Avenue), a Neighborhood Network Connection Street (between Geary Boulevard and Haight Street), and as a Neighborhood Commercial Street (between Chestnut Street and Geary Boulevard; between Haight Street and Waller Street). Trucks over 6,000 pounds are restricted on Fillmore Street between Union Street and Broadway.

Divisadero Street is a north-south street running from Marina Boulevard to Waller Street. In the vicinity of Lombard Street, Divisadero Street operates as a two-way street with one travel lane each way and parking on both sides of the street. In the San Francisco General Plan, Divisadero Street is identified as a Major Arterial (from Castro Street to Pine Street), a Secondary Arterial (from Pine Street to Lombard Street), a Secondary Transit Street (from Castro Street to California Street), and a Neighborhood Commercial Street (between California Street and Haight Street). In addition, Divisadero Street is part of the CMP network between Castro Street, and Pine Street, and a Metropolitan Transportation System (MTS) street between Lombard and Castro Streets.

Laguna Street is a north-south street that runs discontinuously between Beach Street and Market Street. In the vicinity of Lombard Street, Laguna Street has one travel lane each way and on-street parking on both sides of the street. North of Bay Street, Laguna Street has two travel lanes each way with no parking allowed on either side of the street. Trucks with a gross weight in excess of 6,000 pounds and tour buses or vans carrying eight or more passengers are prohibited from traveling on Laguna Street, north of Bay Street.[1]

Marina Boulevard is an east-west street that runs between Bay Street and the Doyle Drive approach to the Golden Gate Bridge. It is a four-lane roadway (two travel lanes each way) with regulated non-metered parking on the south side of the street. In the San Francisco General Plan, Marina Boulevard is classified as a Secondary Arterial and part of the MTS Network, and part of the Citywide Pedestrian Network (Bay, Ridge and Coastal Trail). Bicycle Route 2 runs along Marina Boulevard between Fillmore Street and Lyon Street as a Class I facility (bicycle path). Trucks with a gross weight in excess of 6,000 pounds and tour buses or vans carrying eight or more passengers are prohibited from traveling on Marina Boulevard. The Marina Green, a seven-acre public park originally constructed in 1915 for the Panama-Pacific International Exposition, is adjacent to Marina Boulevard.

[1] Local streets within the Russian Hill and North Beach neighborhoods also have restrictions prohibiting tour buses with eight or more passengers.

Alexander Avenue is a two-lane arterial roadway in Marin County located between U.S. 101 and Sausalito. Alexander Avenue provides access to Fort Baker via Bunker Road/Danes Drive and East Road. Because it is an approach road to the Golden Gate Bridge, Alexander Avenue is under the joint jurisdiction of the Golden Gate National Recreation Area (GGNRA), the California State Department of Transportation (Caltrans), and the Golden Gate Bridge Highway and Transportation District (GGBHTD).

East Road is a two-lane, two-way north-south roadway in Marin County that runs between Alexander Avenue and the Fort Baker parade ground, which is under the jurisdiction and control of the National Park Service (NPS).

Bunker Road is a two-lane road in Marin County under the jurisdiction and control of the NPS connecting the Marin Headlands to the north with Fort Baker to the south. Access to the Marin Headlands is through the one-lane Barry-Baker tunnel between Fort Baker and the Fort Barry area. Motor vehicle travel through the tunnel alternates between eastbound and westbound traffic and is controlled by traffic signals on each end of the tunnel. Four-foot-wide, striped Class II bicycle lanes are provided for several hundred feet on both sides of the tunnel.

Sausalito is located in Marin County adjacent to the San Francisco Bay, approximately three miles north of the Golden Gate. Access to Sausalito is available from U.S. 101 via Alexander Avenue to the south and Bridgeway to the north. Most of the streets in Sausalito are classified as local streets, except for Bridgeway north of Napa Street, a primary arterial street. Bridgeway from Napa Street south to Richardson Street and the continuation of the through traffic route via Richardson, Second and South Alexander Avenue are secondary arterial streets. The City's collector street system includes Harbor Drive, Marinship Way, Caledonia Street, Spencer Avenue and Monte Mar Drive.

Most traffic congestion in Sausalito is related to visitors and occurs mostly on weekends and in the downtown area, with relatively little traffic congestion in the rest of the City street system. Visitor trips to Sausalito range from a low of ten percent of total City trips on a Winter weekday to 37 percent of total City trips on a typical summer weekend day.[2] About 90 percent of visitors come to Sausalito by automobile, 6 percent by ferry, and 4 percent by other modes. The heavy reliance by visitors on the automobile as the primary mode of access to Sausalito results in traffic and parking congestion in the downtown area on peak season weekend days.

The Town of Tiburon is located in a peninsula approximately 10 miles north of San Francisco, in Marin County. It is accessible by ferry from downtown San Francisco, as well as by automobile from U.S. 101 and State Highway 131 (SR 131). SR 131 is a four-lane highway locally known as Tiburon Boulevard that begins at U.S. 101, running northwest-southeast, and serving as the primary access for Tiburon. Tiburon Boulevard becomes a two-lane road and eventually turns into Paradise Drive east of Main Street in downtown. SR 131 from U.S. 101 to Main Street is in the CMP network, as designated by the Transportation Authority of Marin. Paradise Drive runs

[2] *Sausalito General Plan, Circulation Element*, City of Sausalito, including amendments through October 1999.

along the northeast facing side of the Tiburon peninsula and connects downtown Tiburon with the Town of Corte Madera to the north.

Intersection Operations

Existing conditions at 44 study intersections were analyzed for the weekday p.m. (5:00 to 6:00 p.m.) peak hour (which coincides with the existing evening commute), and the Saturday midday peak hour (12:00 to 1:00 p.m.) (generally, the peak hour of travel on weekends). In addition, 22 study intersections in the vicinity of the proposed Cruise Terminal and along the waterfront were analyzed for the weekday a.m. (8:00 to 9:00 a.m.) peak commute hour.[3] Intersection turning movement counts were collected at the study intersections on multiple midweek days (Tuesday, Wednesday, or Thursday) and on Saturdays in March, April, and May 2011. Existing turning movement volume summaries and figures presenting the existing lane geometries at the study intersections are included in Appendix TR-3.

Traffic volumes at intersections in downtown San Francisco are generally lower on Saturdays than on weekdays. Saturday midday peak hour traffic volumes are greater than the weekday a.m. and p.m. conditions at intersections in the vicinity of Fisherman's Wharf, particularly during good weather weekend days. During peak weekend conditions, congestion occurs along The Embarcadero northbound, at the approach to the intersections with Beach/Grant and North Point/Kearny.

Existing weekday daily traffic volumes collected in 2010 along The Embarcadero in the vicinity of Piers 27-29 indicate that on weekdays, northbound volumes increase gradually throughout the day, peaking between 5:00 and 6:00 p.m., with approximately 1,300 to 1,500 vehicles per hour (about 7.5 percent of the daily total). Southbound traffic follows a different pattern, peaking more sharply between 8:00 and 9:00 a.m., with approximately 1,600 vehicles per hour (about 9 percent of the daily total). The weekday traffic patterns on The Embarcadero reflect the commuter traffic in the a.m. (southbound) and the p.m. (northbound) peak commute periods.[4]

Southbound daily traffic volumes on Alexander Avenue at East Road in Marin County are generally higher than northbound daily volumes, suggesting that motorists use different routes for trips into and out of Sausalito, and that exiting vehicles are more likely to drive through Sausalito than inbound vehicles. During summer, the average weekday traffic volume is approximately 18 percent higher than in the spring, while the average summer Saturday traffic volume is about four percent higher than spring.[5]

Traffic conditions at the study intersections were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A (i.e., free-flow conditions with little or no delay) to LOS F (i.e., jammed conditions with excessive delays).

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[3] Traffic volume counts at the 22 study intersections for the Cruise Terminal project were conducted on non-cruise ship call days.

[4] *Pier 27 Traffic Simulation Study – Final Report*, CHS Consulting, October 15, 2010. This study is included in Appendix TR.

[5] *Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan, Final EIS*, National Park Service, March 2009.

Section 5.6.3.3, under "Approach to Impact Analysis Methodology," presents the analysis methodology and the LOS definitions for signalized and unsignalized intersections; it defines each of the levels of service and shows the correlation between average control delay and LOS.

Existing levels of service at the study intersections are presented in **Table 5.6-1** for the weekday a.m., weekday p.m., and the Saturday midday peak hours. **Figure 5.6-3A** presents the existing LOS conditions at intersections in the vicinity of the proposed Cruise Terminal, **Figure 5.6-3B** presents the existing LOS conditions at study intersections located south of the Bay Bridge, and **Figure 5.6-3C** presents the existing LOS conditions at intersections within northwest San Francisco. As indicated in Table 5.6-1 and the figures, during the peak hours of analysis, most study intersections currently operate at LOS D or better, with the exception of the following:

- During the weekday p.m. peak hour, the intersections of King/Third and King/Fourth operate at LOS E.

- During the Saturday midday peak hour, the intersections of The Embarcadero/Beach/Grant and The Embarcadero/North Point/Kearny operate at LOS F.

Generally, conditions in downtown San Francisco are more congested during the p.m. peak hour than the a.m. peak hour. In the mornings, access to downtown San Francisco is constrained by the limited capacity of the Bay Bridge to deliver traffic into the City. In the evenings, the opposite occurs, when traffic attempting to leave downtown San Francisco is constrained by the limited capacity of the Bay Bridge ramps onto the bridge, causing queues to form on surface streets leading to the bridge. Congestion in downtown San Francisco can vary depending on a number of other factors, including incidents on the bridge, special events, and seasonal variation in travel conditions. It should also be noted that traffic operations at a number of intersections in the South of Market area are affected by traffic associated with special events and during baseball season when the San Francisco Giants have home games at AT&T Park (on King Street, between Second and Third Streets). Transportation impacts associated with game day conditions are most severe prior to games and after the conclusion of games. The greatest impact occurs after weekday afternoon sellout events, during the 3:30 to 4:40 p.m. period when traffic, transit, and pedestrian flows exiting the ballpark (and game-day street closures near the park) coincide with the evening commute traffic already on the transportation network. As a result, on days when San Francisco Giants play home games at AT&T Park, existing service levels at study intersections between the ballpark and the Bay Bridge would generally be worse than those presented in Table 5.6-1.

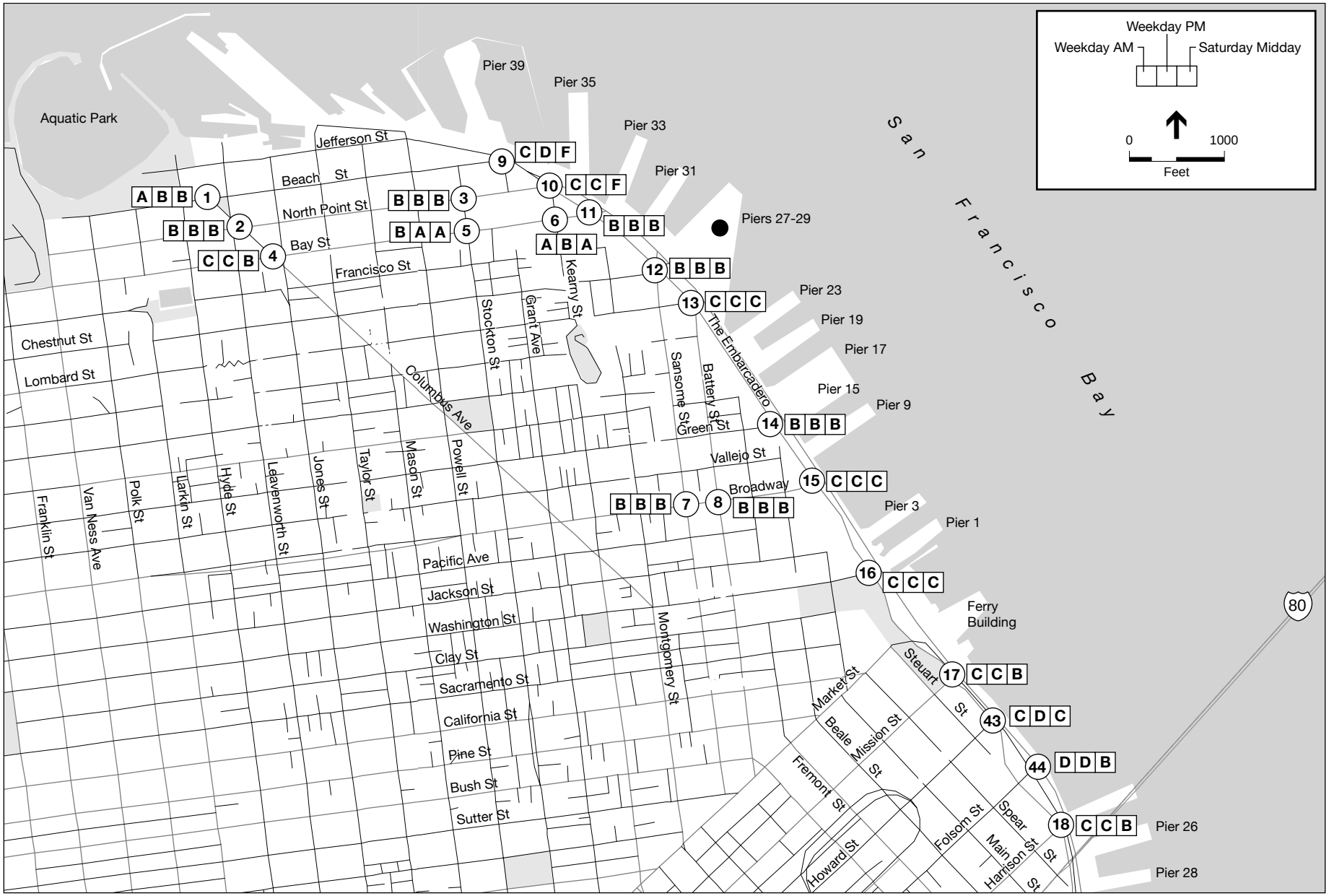
5.6.1.2 Transit Service

This section describes the transit network in San Francisco, and in the vicinity of Piers 27-29. Generally, the City is well-served by public transit; however, there are isolated areas within the waterfront study area without nearby transit service, and/or with infrequent service. Due to topography constraints and discontinuity of the street network, portions of the waterfront can be isolated from convenient transit.

TABLE 5.6-1
INTERSECTION LEVEL OF SERVICE - EXISTING CONDITIONS -
WEEKDAY AM, WEEKDAY PM, AND SATURDAY MIDDAY PEAK HOURS[d]

#	Intersection		Control	Weekday AM		Weekday PM		Saturday Midday	
				Delay[a,b]	LOS	Delay	LOS	Delay	LOS
1	Beach Street	Columbus Avenue	STOP-sign	9.8 (nb)	A	10 (nb)	B	11.3 (nb)	B
2	North Point Street	Columbus Avenue	Signal	11.9	B	13.8	B	11	B
3	North Point Street	Stockton Street	Signal	11.7	B	11.9	B	10	B
4	Bay Street	Columbus Avenue	Signal	30.1	C	21.2	C	16.8	B
5	Bay Street	Stockton Street	Signal	10	B	9.4	A	9.4	A
6	Bay Street	Kearny Street	Signal	4	A	10	B	8.6	A
7	Broadway	Sansome Street	Signal	19.4	B	14.3	B	11.9	B
8	Broadway	Battery Street	Signal	18.7	B	18.8	B	17.2	B
9	The Embarcadero	Beach Street	Signal	20.9	C	51.2	D	**>80/0.56**	**F**
10	The Embarcadero	North Point Street	Signal	27.7	C	28.8	C	**>80/0.76**	**F**
11	The Embarcadero	Bay Street	Signal	18.9	B	14.7	B	11.6	B
12	The Embarcadero	Chestnut Street	Signal	14.2	B	18	B	16.2	B
13	The Embarcadero	Lombard Street	Signal	21.7	C	32.7	C	21.5	C
14	The Embarcadero	Green Street	Signal	19.6	B	19.2	B	17.9	B
15	The Embarcadero	Broadway	Signal	32.9	C	31.8	C	27.9	C
16	The Embarcadero	Washington Street	Signal	34.9	C	32.9	C	29.6	C
17	The Embarcadero	Mission Street	Signal	25.4	C	30.5	C	13.1	B
18	The Embarcadero	Harrison Street	Signal	25.7	C	33.4	C	12.1	B
19	The Embarcadero	Bryant Street	Signal	30	C	32.4	C	22.9	C
20	The Embarcadero	Brannan Street	Signal	28.7	C	28.6	C	19.8	B
43[c]	The Embarcadero	Howard Street	Signal	25	C	46.4	D	20.3	C
44[c]	The Embarcadero	Folsom Street	Signal	48.4	D	45.2	D	19.9	B
21	Fremont Street	Folsom Street	Signal	--	--	25.9	C	24.8	C
22	King Street	Third Street	Signal	--	--	**77.0**	**E**	24.4	C
23	King Street	Fourth Street	Signal	--	--	**64.6**	**E**	38.2	D
24	16th Street	Third Street	Signal	--	--	21.3	C	20.2	C
25	Cesar Chavez St	Third Street	Signal	--	--	22.7	C	20.4	C
26	Cesar Chavez St	Illinois Street	Signal	--	--	21.5	C	14.5	B
27	Lincoln Avenue	25th Avenue	STOP-sign	--	--	14.9 (wb)	B	15.3 (nb)	C
28	Lake Street	14th Avenue	STOP-sign	--	--	12.5 (wb)	B	9.9 (wb)	A
29	Lake Street	15th Avenue	STOP-sign	--	--	10.3 (wb)	B	8.4 (eb)	A
30	Jackson Street	Arguello Blvd	STOP-sign	--	--	20.6 (sb)	C	12.7 (sb)	B
31	Pacific Avenue	Presidio Blvd	STOP-sign	--	--	18 (sb)	C	11.6 (sb)	B
32	Lombard Street	Lyon Street	STOP-sign	--	--	26.7 (eb)	D	20.8 (eb)	C
33	Lombard Street	Divisadero Street	Signal	--	--	32.2	C	14.4	B
34	Lombard Street	Fillmore Street	Signal	--	--	33.8	C	12.9	B
35	Bay Street	Laguna Street	Signal	--	--	18.4	B	14.8	B
36	Bay Street	Van Ness Avenue	Signal	--	--	15.8	B	32.6	C
37	Bay Street	Hyde Street	Signal	--	--	5.8	A	7.0	A
38	Alexander Avenue	Bunker Road	STOP-sign	--	--	12.3 (eb)	B	16.9 (eb)	C
39	Alexander Avenue	Ft. Baker (East) Road	STOP-sign	--	--	10.4 (wb)	B	13.5 (wb)	B
40	Bush Street	Van Ness Avenue	Signal	--	--	20.7	C	18.3	B
41	Pine Street	Van Ness Avenue	Signal	--	--	21	C	19.0	B
42	Lombard Street	Van Ness Avenue	Signal	--	--	42.5	D	44.7	D

[a] Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ( ).
[b] Intersections operating at LOS E or LOS F conditions highlighted in bold, and overall intersection volume-to-capacity (v/c) ratio is presented for LOS F conditions.
[c] Intersections 43 and 44 are out of order because they were added to the network after the transportation model was coded in response to a change in the project description.
[d] The 22 Cruise Terminal study intersections were evaluated during the weekday a.m., weekday p.m., and Saturday midday peak hours, where as the remaining study intersections were evaluated during the weekday p.m. and Saturday midday peak hours. The analysis hours were selected to reflect the times during which the proposed projects would be expected to have the most effect on the transportation network.

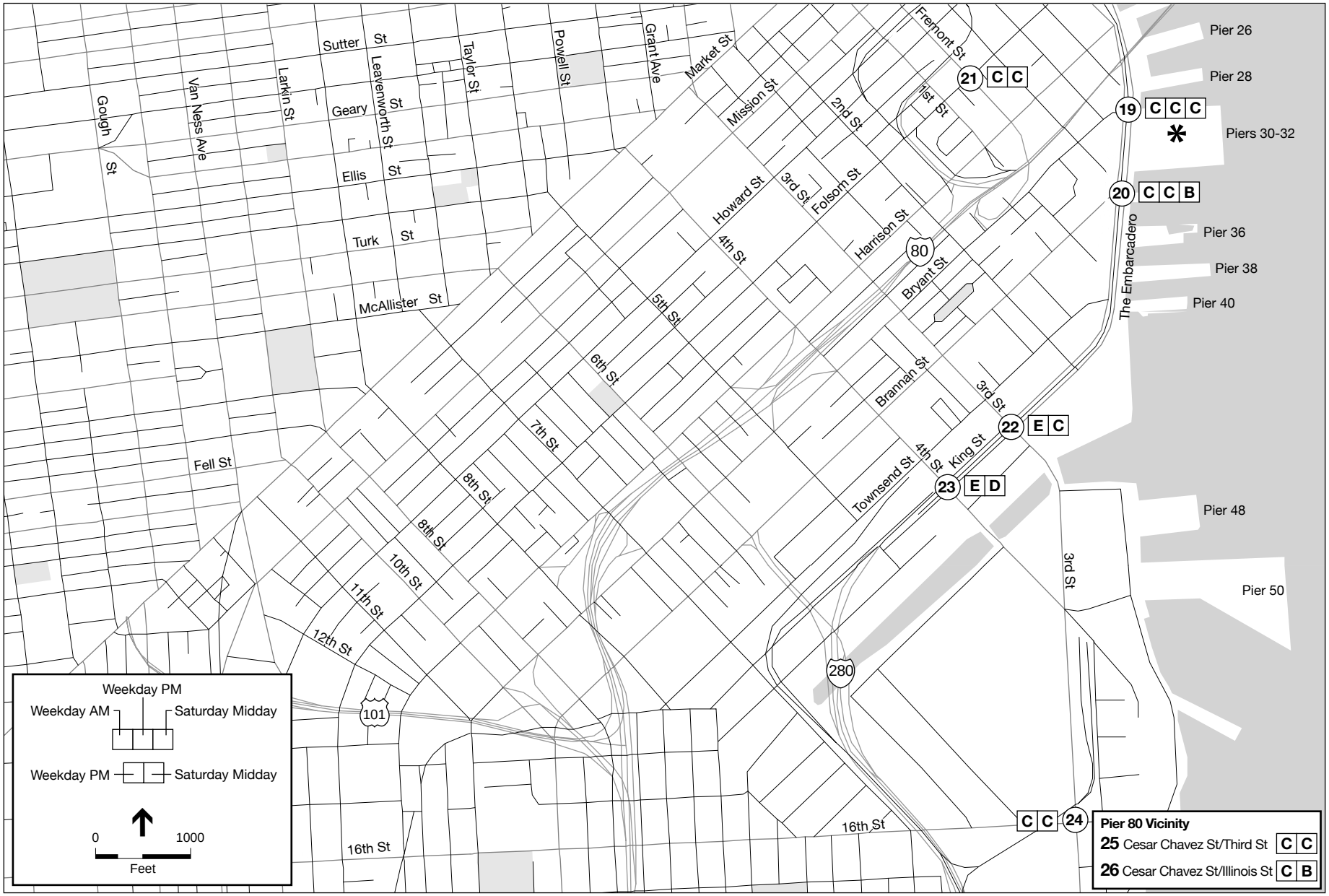


● Cruise Terminal and Northeast Wharf Plaza; America's Cup Village in 2013

SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

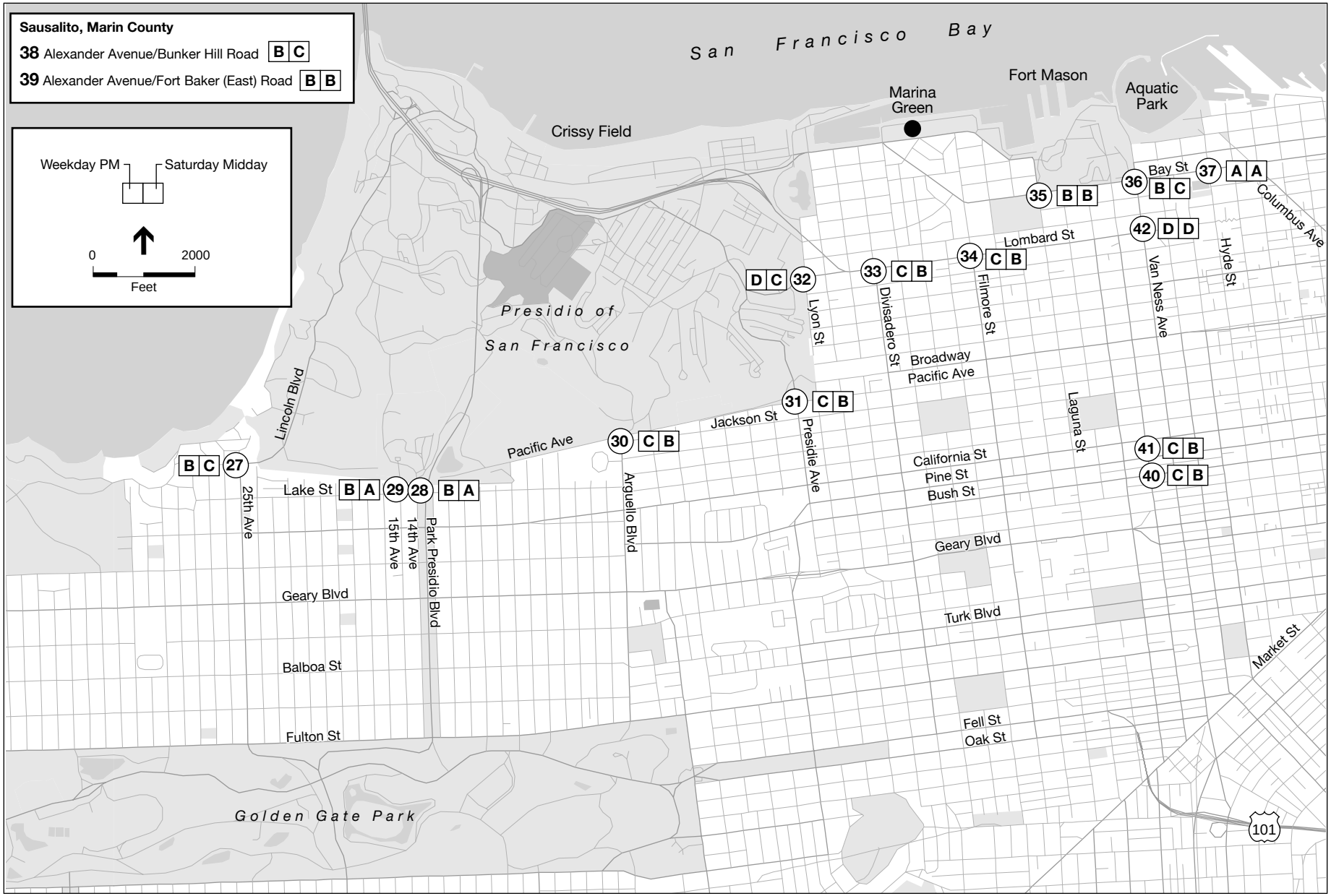
Figure 5.6-3A
Existing Study Intersection LOS Conditions-
Piers 27-29 Vicinity



SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-3B
Existing Study Intersection LOS Conditions-
South of Bay Bridge



America's Cup Village in 2012

SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-3C
Existing Study Intersection LOS Conditions-
Northwest San Francisco

Local service is provided by the San Francisco Municipal Railway (Muni), the transit division of the San Francisco Municipal Transportation Agency (SFMTA). Muni bus, cable car and light rail lines can be used to access regional transit operators. Service to and from the East Bay is provided by BART, AC Transit and ferries; service to and from the North Bay is provided by Golden Gate Transit buses and ferries; and service to and from the Peninsula and the South Bay is provided by Caltrain, SamTrans and BART. **Figure 5.6-4** presents the Muni transit network in the northeast portion of San Francisco.

The Cruise Terminal project site at Piers 27-29 is located approximately 0.85 miles to the north of the Ferry Building, approximately a mile from the Embarcadero Muni Metro and BART station, and adjacent to the F-Market & Wharves historic streetcar line (with a stop adjacent to Piers 27-31, to the south of Chestnut Street). **Figure 5.6-5** presents the transit service and stop locations in the vicinity of Piers 27-29, while **Figure 5.6-6** presents the existing commuter and recreational ferry network.

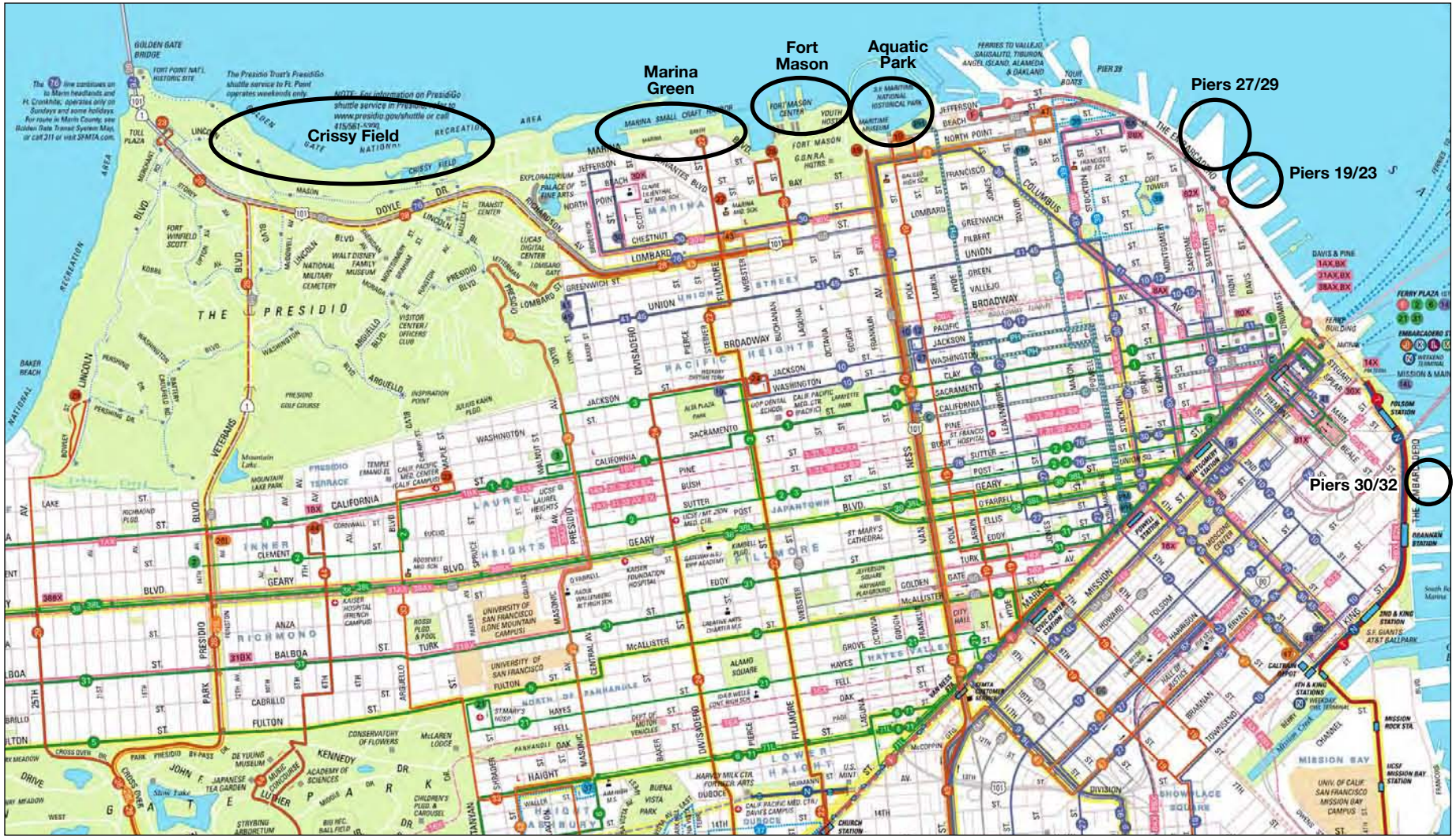
Temporary Transit Terminal phase 1 opened on the block bounded by Howard Street to the north, Folsom Street to the south, Main Street to the east, and Beale Street to the west on August 7, 2010 and the completed temporary terminal opened on December 11, 2010. AC Transit, WestCAT, and Greyhound buses operate inside the Terminal site, while Muni, Golden Gate Transit and SamTrans buses operate on the perimeter streets. New passenger islands have been constructed on Beale and Main streets for use by Muni.

Local Muni Service

Nearby Muni service in the vicinity of Piers 27-29 includes the F-Market & Wharves historic streetcar service along The Embarcadero, the 82X-Levi Plaza Express bus line, the 8X-Bayshore Express, and the 8BX-Bayshore "B" Express at Kearny/North Point. The 82X-Bayshore Express connects to the Caltrain station at King and Fourth streets.

The 82X-Levi Express is a weekday peak period only commuter bus route. The morning route begins at the Caltrain station at King and Fourth Streets, and continuing via King Street, The Embarcadero, Bryant Street, Main Street, Drumm Street, Sacramento Street and Sansome Street to Filbert Street. The evening route returns from Levi's Plaza via Battery Street, Clay Street, Davis Street, Beale Street, Folsom Street, The Embarcadero and King Street to the Caltrain station. This route provides a connection to the Embarcadero BART/Muni station. The nearest 82X-Levi Express route bus stops are located at Sansome/Filbert during the a.m. commute period, and at Battery/Filbert during the p.m. commute period.

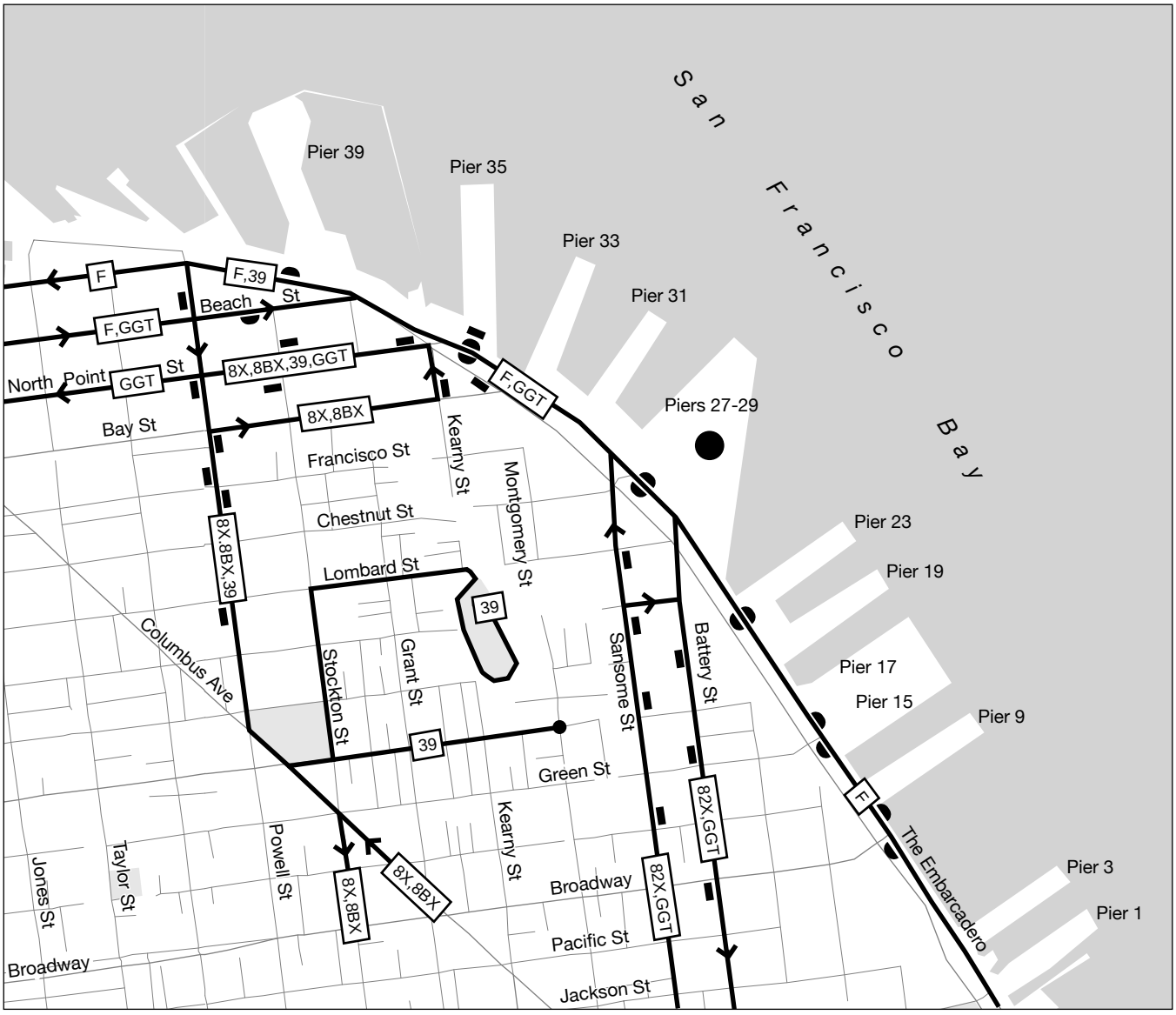
The F-Market & Wharves is a historic street line connecting Fisherman's Wharf with the Castro, by way of The Embarcadero and Market Street. It runs within mixed-traffic lanes on Market Street, within a semi-exclusive median along The Embarcadero, and within mixed-traffic lanes within the Fisherman's Wharf area. It serves Pier 39, Pier 41, and Fisherman's Wharf to the north of Piers 27-29, and the Ferry Building, Market Street, and the BART/Muni Metro Embarcadero station to the south of Piers 27-29. The F-Market & Wharves has four stops within the median of The Embarcadero within two blocks of Piers 27-29; at Chestnut Street, Bay Street, Greenwich Street and



SOURCE: SFMTA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-4
Existing MUNI Transit Network



Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: SFMTA

Figure 5.6-5
Existing Transit Network and Stop Locations
Cruise Terminal Vicinity

at Green Street. **Table 5.6-2** presents the existing transit ridership and capacity for the F-Market & Wharves historic streetcar service for the weekday a.m. and p.m. peak hours, and for the Saturday midday peak hour, and the calculated capacity utilization (riders as a percentage of capacity) for each analysis hour.[6] During the weekday a.m. and p.m. peak hours, and during the Saturday midday peak hour, the existing capacity utilization exceeds Muni's adopted capacity standard of 85 percent or less of total capacity. Along The Embarcadero, ridership demand often exceeds capacity, particularly on weekends in the summer, and passengers have been observed waiting to board the next train.

TABLE 5.6-2
F-MARKET & WHARVES CAPACITY UTILIZATION ANALYSIS
EXISTING CONDITIONS

Analysis Period/ Direction on The Embarcadero[a]	Ridership[b]	Capacity[b]	Capacity Utilization[c]
Weekday AM			
Northbound	601	700	**86%**
Southbound	157	770	22%
Weekday PM			
Northbound	635	700	**91%**
Southbound	933	770	**121%**
Saturday Midday			
Northbound	693	630	**110%**
Southbound	359	630	57%

[a] Northbound towards Fisherman's Wharf and southbound towards the Castro
[b] Ridership and capacity at Maximum Load Point (MLP)
[c] Capacity utilization - riders as a percentage of capacity calculated at the maximum load point (the point of greatest demand).

SOURCE: SFMTA, Adavant Consulting/LCW Consulting, 2011

Muni Metro operates six streetcar lines that provide citywide service using light-rail vehicles. The closest station location to the cruise terminal site and the 2013 AC Village site is the Embarcadero Station, which is located approximately one mile from Piers 27-29. All six streetcar lines can be accessed from the Embarcadero Station: the J-Church, providing service between the Embarcadero Station and Balboa Park, the L-Taraval, providing service between the Embarcadero Station and the San Francisco Zoo, the M-Ocean View, providing service between the Embarcadero Station and Balboa Park, the N-Judah, providing service between the Caltrain Station and Ocean Beach on weekdays and between the Embarcadero Station and Ocean Beach on weekends, and the K-Ingleside/T-Third providing service between Balboa Park and the Sunnydale station (from Balboa Park runs as the K-Ingleside to West Portal, and continues as the T-Third to the Sunnydale Station, while from the Sunnydale Station runs as the T-Third to Folsom Street, and continues as a K-Ingleside to Balboa Park).

[6] Transit capacity utilization - riders as a percentage of capacity – is calculated at the maximum load point (the point of greatest demand). Section 5.6.3.3, Approach to Analysis, presents the analysis methodology for the transit capacity utilization analysis.

SOURCE: Google Maps; ESA

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-6
Existing Ferry Network

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Presidio Trust Shuttle Service

The Presidio Trust operates two shuttle routes serving residents, employees and visitors to the Presidio: the PresidiGo Downtown and the PresidiGo Around the Park. The PresidiGo Downtown service is interlined with the internal shuttle route (PresidiGo Around the Park) and allows Presidio riders to travel downtown without transferring to another bus. During peak commute hours, the Downtown Shuttle is available to Presidio residents and employees with an appropriate boarding pass as well as to members of the general public with a Muni Passport. It is available to all between 10:00 a.m. and 3:00 p.m. without a passport or boarding pass. Riders can board the Downtown shuttle service at the temporary Transbay Terminal, the Embarcadero BART/Muni Metro Station or at the intersection of Union Street and Van Ness Avenue. The shuttle provides direct drop-off to several sites within the park such as the Lombard Gate, the Letterman Digital Arts center, the YMCA and the Main Post Transit Center. PresidiGo downtown shuttle service is provided on weekdays from 5:45 a.m. to 9:00 p.m. Downtown service operates with 15 minutes between shuttles during the two-hour morning and afternoon peak periods, 30 minutes between shuttles during the shoulder periods, and one hour between shuttles during the midday. There is no PresidiGo Downtown shuttle service on weekends and holidays.

PresidiGo Around the Park runs a continuous loop within the Presidio, making stops at nearly forty park destinations. It is free and available to everyone. The internal shuttle routes connect residential areas, commercial areas and visitor destinations in the park, as well as key transfer points to Muni and Golden Gate Transit buses, such as the Main Post Transit Center, Presidio Visitor Center, and the Lombard Gate. PresidiGo Around the Park shuttle service operates with 30 minutes between shuttles on weekdays between 6:30 a.m. and 8:30 p.m., and one hour between shuttles on weekends between 11:00 a.m. and 6:00 p.m. It operates on a limited weekend service schedule on federal holidays. PresidiGo shuttle ridership has been steadily increasing, and the Presidio Trust has been adding runs, extending service hours, and using larger vehicles in order to keep pace with the rising demand.

Regional Service Providers

BART operates regional rail transit service in the metropolitan Bay Area. BART currently operates five lines: Pittsburg/Bay Point to San Francisco International Airport (SFIA) - Millbrae, Fremont to Daly City, Richmond to Daly City-Millbrae, Fremont to Richmond, Dublin/Pleasanton to Daly City. Within downtown San Francisco, BART operates underground below Market Street. During the weekday p.m. peak period, headways are generally 5 to 15 minutes for each line. The Embarcadero station serves the waterfront.

AC Transit is the primary bus operator for the East Bay, including Alameda and western Contra Costa Counties. AC Transit operates 37 routes between the East Bay and San Francisco, all of which terminate at the temporary Transbay Terminal, located in the block bounded by Main, Beale, Howard and Folsom Streets. Most transbay service is peak-hour and peak-direction (to San Francisco during the a.m. peak period and from San Francisco during the p.m. peak period), with headways of 15 to 30 minutes per route.

The Water Emergency Transportation Authority (WETA) currently operates ferry service to Alameda/Oakland and Alameda Harbor Bay. Per California Senate Bill 1093, WETA was charged with creating and adopting a Transition Plan for Bay Area ferry service. Under the Transition Plan, Vallejo Baylink, Alameda/Oakland and Alameda Harbor Bay service would be consolidated under WETA. The Alameda/Oakland and Alameda Harbor Bay ferry services have already been transitioned, and the Vallejo Baylink service transition is expected to be completed in 2011.

Caltrain provides rail passenger service on the Peninsula between Gilroy and San Francisco. The San Francisco terminal is located at Fourth and Townsend Streets. Caltrain operates a combination of baby bullet, limited stop and local service. Headways during the evening peak period are approximately 5 to 30 minutes.

SamTrans, operated by the San Mateo County Transit District, provides bus service between San Mateo County and San Francisco. SamTrans operates three bus lines that serve San Francisco: the KX, 292 and 391 lines. In general, SamTrans service to downtown San Francisco operates along Mission Street to the temporary Transbay Terminal.

Golden Gate Transit, operated by the Golden Gate Bridge, Highway, and Transportation District (GGBHTD), provides bus service between the North Bay (Marin and Sonoma Counties) and San Francisco. Golden Gate Transit operates 22 commuter bus routes, 9 basic bus routes and 16 ferry feeder bus routes into San Francisco, several of which are at or near the temporary Transbay Terminal. Basic bus routes operate at regular intervals of 15 to 90 minutes depending on the time and day of week. Commute and ferry feeder bus routes operate at more frequent intervals in the mornings and evenings. Golden Gate Transit also operates ferry service between the North Bay and San Francisco. During the morning and evening commute periods, ferries are operated between Larkspur and San Francisco, and between Sausalito and San Francisco. Additional North Bay ferry service operated by Blue & Gold connects both Sausalito and Tiburon with San Francisco.

Transit service to Fort Baker and the Marin Headlands is extremely limited. On Sundays and holidays only Muni's 76-Marin Headlands line operates hourly from San Francisco's Caltrain Station to destinations in the Marin Headlands. Golden Gate Transit Basic Routes 10 and 70/80 operate approximately hourly along Alexander Avenue, adjacent to Fort Baker, with bus stops located near the U.S. 101 interchange (northbound only), at the Bunker Road intersection (southbound only), and at the East Road intersection (northbound and southbound). Neither of these stops serve popular destinations in the Marin Headlands or Fort Baker, nor do they provide connections to Muni's Sunday service to the Marin Headlands.

Golden Gate Transit provides bus transportation to and from Sausalito to San Francisco and northern Marin County via Bridgeway and Alexander Avenue. A transit node is located downtown at Bridgeway and Bay Street, near the ferry landing. Both the Blue and Gold Fleet and the Golden Gate Transit District provide ferry service from Sausalito to San Francisco at Pier 41 and the Ferry Building.

Golden Gate Transit buses also serve Tiburon, including Tiburon Boulevard, with several downtown bus stops. Downtown Tiburon serves as a hub for multiple transit modes. Ferry service from downtown Tiburon connects to San Francisco's Pier 41 and Ferry Building (Blue and Gold Fleet) and Angel Island State Park (Angel Island-Tiburon Ferry Company).

Local and Regional Transit Screenline Analysis[7]

Four screenlines have been established in San Francisco to analyze potential impacts of projects on Muni service: Northeast, Northwest, Southwest, and Southeast, with subcorridors within each screenline. Three regional screenlines have been established around San Francisco to analyze potential impacts on the regional transit agencies: East Bay (BART, AC Transit, ferries), North Bay (Golden Gate Transit buses and ferries), and the South Bay (BART, Caltrain, SamTrans).

Downtown screenlines examine the overall utilization of Muni transit capacity into and out of downtown San Francisco from the Northeast, Northwest, Southeast, and Southwest of San Francisco because transit travel into downtown San Francisco in the a.m. and out of downtown in the p.m., travel across the screenlines tends to be the most congested transit flow in the City. The screenline analysis focuses on transit trips in the inbound direction, i.e., trips into downtown San Francisco from other parts of the City and the region during the a.m. peak hour, and in the outbound direction, i.e., trips from downtown San Francisco to other parts of the City and the region during the p.m. peak hour. For the regional transit providers, a Saturday midday peak hour screenline analysis was developed for transit trip in the inbound direction.

The transit analysis is conducted by calculating the existing capacity utilization (riders as a percentage of capacity) at the maximum load point (the point of greatest demand). Section 5.6.3.3, under "Approach to Impact Analysis Methodology," presents the analysis methodology for the transit capacity utilization and screenline analysis.

Table 5.6-3 presents the Muni downtown and regional transit screenlines for weekday a.m. peak hour (inbound) and p.m. peak hour (outbound) conditions.[8] With the exception of the subway lines within the Southwest Muni screenline, all sub-corridors and regional operators operate below the capacity utilization standard, and could accommodate additional passengers. Weekend screenline analyses are not conducted, as weekend travel demand into and out of downtown is substantially lower than on weekdays, and transit service is correspondingly decreased to accommodate the lower ridership. **Table 5.6-4** presents the regional transit screenline analysis for the Saturday midday peak hour in the inbound direction. During the Saturday midday peak hour, all regional operators operate below the capacity utilization standard, and could accommodate additional passengers.

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7 The concept of screenlines is used to describe the magnitude of travel to or from the greater downtown area, and to compare estimated transit volumes to available capacities. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its vicinity and other parts of San Francisco and the region.

8 Weekday a.m. and p.m. Muni and regional screenlines obtained from *Transit Center District Plan Transportation Technical Analysis*, AECOM, San Francisco Planning Department Case No. 2007.0558E and 2008.0789E, July 2011, in combination with information provided by regional transit agencies.

TABLE 5.6-3
MUNI DOWNTOWN AND REGIONAL TRANSIT SCREENLINES – EXISTING CONDITIONS
WEEKDAY AM AND PM PEAK HOURS

Screenline / Transit Provider		AM Peak Hour (Inbound)			PM Peak Hour (Outbound)		
		Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization
Muni Downtown Screenlines							
Northeast	Kearny/Stockton Corridor	1,138	1,947	58%	1,129	2,010	56%
	All Other Lines	744	1,834	41%	757	1,589	48%
	Subtotal	*1,882*	*3,781*	*50%*	*1,886*	*3,599*	*52%*
Northwest	Geary Corridor	1,697	2,704	63%	1,684	2,230	76%
	California	1,598	2,351	68%	1,413	2,050	69%
	Sutter/Clement	616	1,134	54%	565	1,008	56%
	Fulton/Hayes	992	1,386	72%	861	1,260	68%
	Balboa	809	1,405	58%	615	1,247	49%
	Chestnut/Union	1,722	2,457	70%	1,483	2,328	64%
	Subtotal	*7,434*	*11,437*	*65%*	*6,621*	*10,123*	*65%*
Southeast	Third Street	505	833	61%	554	714	78%
	Mission Street	1,221	1,880	65%	1,254	2,350	53%
	San Bruno/Bayshore	1,460	1,880	*78%*	1,671	2,256	*74%*
	All Other Lines	1,062	1,708	62%	1,189	1,708	70%
	Subtotal	*4,248*	*6,301*	*67%*	*4,668*	*7,028*	*66%*
Southwest	Subway Lines	5,350	6,188	***86%***	5,883	6,783	***87%***
	Haight/Noriega	1,029	1,951	53%	1,247	2,140	58%
	All Other Lines	248	560	44%	304	700	43%
	Subtotal	*6,627*	*8,699*	*76%*	*7,434*	*9,623*	*77%*
	Total All Muni Screenlines	***20,191***	***30,218***	***67%***	***20,609***	***30,373***	***68%***
Regional Transit Screenlines							
East Bay	BART	19,391	24,150	80%	20,067	24,150	83%
	AC Transit	1,670	3,058	55%	2,517	4,193	60%
	Ferries	667	1,186	56%	702	1,519	46%
	Subtotal	*21,728*	*28,394*	*77%*	*23,286*	*29,862*	*78%*
North Bay	Golden Gate Transit Buses	1,510	2,655	57%	1,397	2,205	63%
	Golden Gate Transit Ferries	949	1,700	56%	906	1,700	53%
	Subtotal	*2,459*	*4,355*	*56%*	*2,303*	*3,905*	*59%*
South Bay	BART	10,841	16,800	65%	10,202	16,800	61%
	SamTrans	2,128	3,250	65%	1,986	3,250	61%
	Caltrain	686	1,060	65%	575	940	61%
	Subtotal	*13,655*	*21,110*	*65%*	*12,763*	*20,990*	*61%*
	Total All Regional Screenlines	***37,842***	***53,859***	***70%***	***38,352***	***54,757***	***70%***

SOURCES: AECOM, 2011

TABLE 5.6-4
REGIONAL TRANSIT SCREENLINES – EXISTING CONDITIONS
SATURDAY MIDDAY PEAK HOUR

Screenline / Transit Provider		Saturday Midday Peak Hour (Inbound)		
		Ridership	Capacity	Capacity Utilization
Regional Transit Screenlines				
East Bay	BART	3,900	8,064	48%
	AC Transit	117	200	59%
	Ferries	560	688	81%
	Subtotal	*4,577*	*8,952*	*51%*
North Bay	Golden Gate Transit Buses	62	205	30%
	Golden Gate Transit Ferries	691	2,580	27%
	Subtotal	*753*	*2,785*	*27%*
South Bay	BART	2,340	8,547	27%
	SamTrans	543	650	84%
	Caltrain	32	40	80%
	Subtotal	*2,915*	*9,237*	*32%*
	Total All Regional Screenlines	***8,245***	***20,974***	***39%***

SOURCES: SF Planning Department, AC Transit, BART, Caltrain, Golden Gate Transit, SamTrans, WETA, Blue & Gold, Adavant Consulting/LCW Consulting, 2011

5.6.1.3 Other Water Transportation

Alcatraz Cruises operations at Pier 31½ are dedicated to serving Alcatraz Island, Angel Island, and some Bay excursions throughout the year. During the low season, generally from November through March, there are typically 10 daily vessels to Alcatraz Island, plus one night tour service from Thursday through Monday. During the high season, generally from April through the end of October, Alcatraz Cruises provides 14 daily vessel runs to Alcatraz Island, including two night tour services. One combination ferry service to and from Angel Island, with an intermittent stop at Alcatraz Island, is also provided.

In addition, Alcatraz Cruises provides Bay excursions from Pier 31½, that are 90-minute tours of San Francisco Bay during which passengers remain on the vessel at all times and do not stop at Alcatraz or Angel Islands. Depending on demand, the number of Bay excursions varies between one and three trips per day, approximately five days a week.

The Angel Island Tiburon Ferry provides year-round service between downtown Tiburon and Angel Island, with both scheduled ferry transportation and special charter operations for the 10-minute ferry ride. During the low season, from November to March there is generally only weekend service, with four ferries scheduled per weekend day. From April through October, there is regular ferry service seven days a week with more frequent service on weekends.

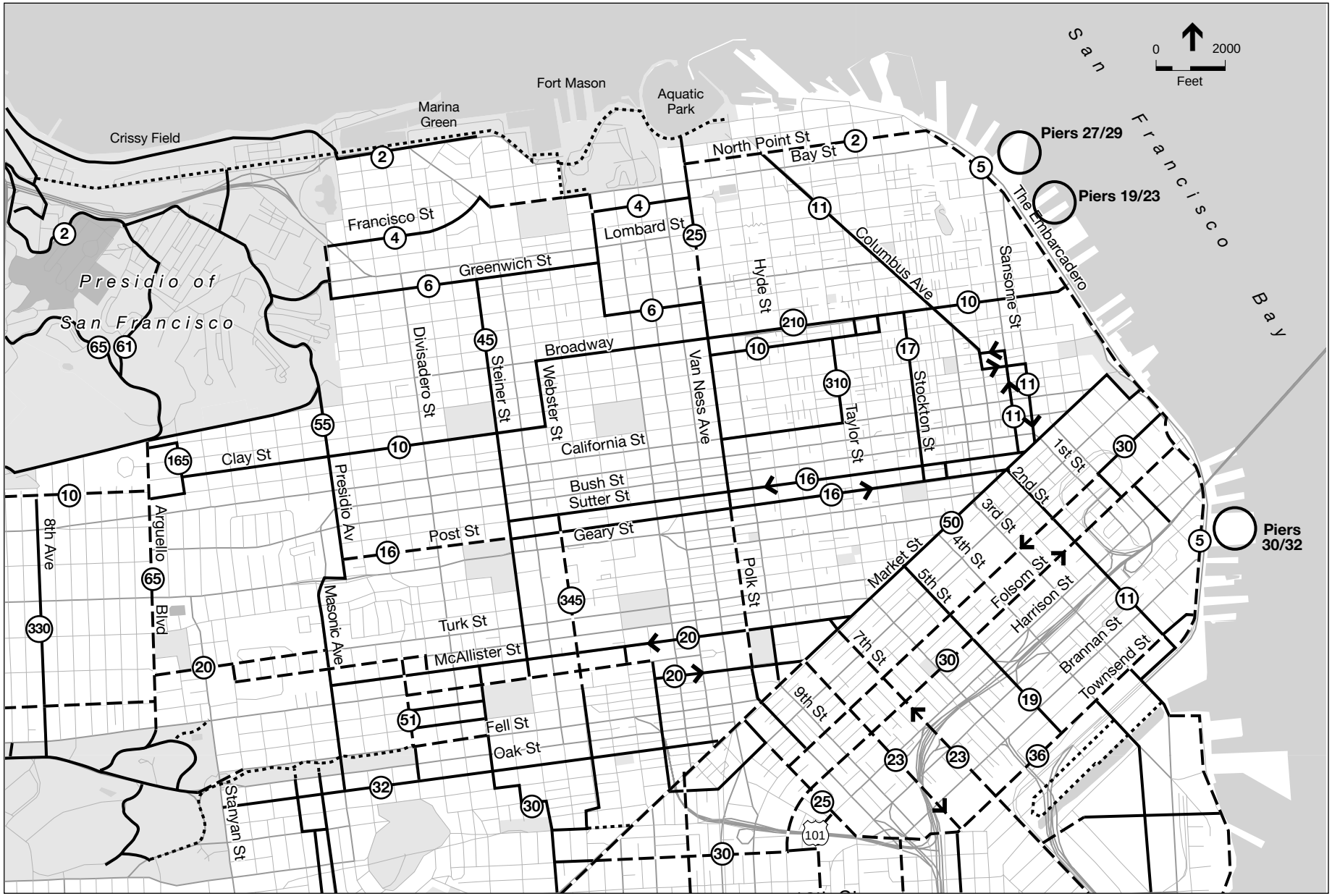
5.6.1.4 Bicycle Network

Existing bicycle facilities are part of the San Francisco Bicycle Network. Bikeways are typically classified as Class I, Class II or Class III facilities. Class I bikeways are bike paths with exclusive right-of-way for use by bicyclists or pedestrians. Class II bikeways are bicycle lanes striped within the paved areas of roadways and established for the preferential use of bicycles, and Class III bikeways are signed bicycle routes where bicycles share the street with vehicles.

Figure 5.6-7 shows the bicycle route network in the northeast quadrant of San Francisco. In the vicinity of Piers 27-29, The Embarcadero and Broadway are designated Route 5 and Route 10, respectively. These routes are interconnected to the citywide bicycle network and provide access between the study area and other locations within the City. Route 5 runs on The Embarcadero and is a Class II facility (on-street bicycle lanes) from AT&T Park in the south to North Point Street in the north, where it terminates. Route 10 is a Class III facility (signed route only) from Webster Street to The Embarcadero that runs along Broadway. West of Webster Street, Route 10 becomes a Class II facility (on-street bicycle lanes) all the way to the Pacific Ocean. Route 11 is a Class III facility (signed route only) and runs from AT&T Park in the south to North Point Street in the north along Second Street, the Clay-Battery/Sansome-Washington one-way couplet, and Columbus Avenue.

Bicycles were observed in the project vicinity and bicycle movement counts were collected on Herb Caen Way and in the adjacent northbound bicycle lane on The Embarcadero in front of Piers 27-29 to help understand the relationship of bicycle use on Herb Caen Way versus bicycle use in the northbound bicycle lane adjacent to the promenade. The data show that during the weekday a.m. and p.m. peak hours, about three fourths of all the northbound bicyclists use Herb Caen Way rather than the bicycle lane. The number decreases on Saturday, most likely due to the larger number of pedestrians in the promenade that make bicycle travel on Herb Caen Way very difficult. As a result, the total number of bicyclists on the promenade in front of Piers 27-29 during the Saturday midday peak hour (30 bicyclists) is about 60 percent lower than during the weekday a.m. (73 bicyclists) or p.m. (72 bicyclists) peak hours. In addition, a number of southbound bicyclists (24 during the weekday a.m. peak hour, 11 during the weekday p.m. peak hour, and 18 during the Saturday midday peak hour) representing about 25 to 30 percent of the total southbound flow were observed utilizing Herb Caen Way to travel southbound rather than the bicycle lane located on the west side of The Embarcadero.

In general, during both the weekday midday and evening periods, bicycle conditions were observed to be operating acceptably, with only minor conflicts between bicyclist, pedestrians and vehicles. It should be noted, however, that conflicts can be serious due to the complex nature of the environment. The Embarcadero and the adjacent Herb Caen Way promenade host a wide variety of transportation modes: automobiles, charter buses, transit buses, bicycles, heavy pedestrian volumes, and the F-Market & Wharves historic streetcar.



SOURCE: San Francisco Municipal Transportation Agency

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-7
Existing Bicycle Route Network

Sausalito is a popular bicycling destination. The north-south Bridgeway corridor serves significant populations of commuter, touring, and recreational bicyclists from both within and outside the City. The primary bicycle facilities in Sausalito include:

- *Bridgeway Bikeway South*. A largely Class III bicycle route, with portions of Class II facilities, from the south City limits through the downtown that accommodates all types of bicyclists.
- *Bridgeway Bikeway North*. A Class II bicycle facility from downtown to the north City limits that accommodate largely commuters and experienced touring cyclists.
- *North-South Recreational Bikeway*. A combination Class I and Class II bicycle facility from downtown to the north City limits that serves recreational riders, visitors, and novice cyclists.

Tiburon has a Class II bicycle facility which runs along Tiburon Boulevard from Mar West Street to Main Street and on Paradise Drive from Main Street to Mar West Street.

5.6.1.5 Pedestrian Network

Variations in sidewalk width in the project area occur due to curb indents that serve parking and loading functions. In front of Piers 27-29, the public promenade (Herb Caen Way, part of the Bay Trail) is approximately 15 feet wide to the north in front of the Pier 29 bulkhead building and approximately 25 feet wide to the south in front of Pier 27; the narrowest portion of the public promenade, across from Lombard Street, is approximately 10 feet wide. There are several raised portions of the five-foot wide lighted Art Ribbon that rise intermittently along Herb Caen Way in front of Piers 27-29.

An assessment of pedestrian conditions at the Project Site was performed for the weekday a.m., p.m. peak hour and weekend midday peak hour at four locations: 1) two crosswalks at the intersection of The Embarcadero/Bay Street; 2) three crosswalks at the intersection of The Embarcadero/ Chestnut/Sansome; 3) three crosswalks at the intersection of The Embarcadero/ Lombard/ Battery; and 4) Herb Caen Way in front of Piers 27-29. Additionally, pedestrians were counted on The Embarcadero Promenade between Lombard and Chestnut Streets. The existing crosswalks across The Embarcadero are 20 feet in width, while the crosswalks on the minor streets (i.e., Chestnut, Sansome, Lombard, Battery streets) are between 12 and 20 feet wide. The curb-to-curb width of The Embarcadero is approximately 120 feet. **Table 5.6-5** presents the results of the pedestrian LOS analyses at these four locations. **Figure 5.6-8** presents the peak hour pedestrian volumes at the intersection crosswalks and LOS conditions.

All pedestrian study locations currently operate at acceptable conditions (LOS A or LOS B) for the weekday a.m. and p.m. peak hours and Saturday midday peak hour conditions. Note that the pedestrian analysis represents typical conditions but does not take into account occasional pedestrian activity associated with the debarking or boarding of cruise ships at Pier 35 or Pier 27, which would be accounted for as part of the proposed project.

TABLE 5.6-5
PEDESTRIAN LEVEL OF SERVICE EXISTING CONDITIONS
WEEKDAY AM, WEEKDAY PM, AND SATURDAY MIDDAY PEAK HOURS

	Weekday AM			Weekday PM			Saturday Midday		
	Peds per Hour	MOE[a]	LOS	Peds per Hour	MOE	LOS	Peds per Hour	MOE	LOS
Crosswalks									
The Embarcadero/Bay Street									
North (The Embarcadero)	156	338	A	188	280	A	374	200	A
West (Bay)	63	362	A	95	240	A	109	209	A
The Embarcadero/Chestnut Street/ Sansome Street									
North (The Embarcadero)	119	169	A	64	315	A	139	144	A
South (Sansome)	103	493	A	114	445	A	118	429	A
West (Chestnut)	96	795	A	125	610	A	107	713	A
The Embarcadero/Lombard Street/ Battery Street									
North (The Embarcadero)	71	490	A	82	424	A	94	369	A
South (Battery)	38	379	A	64	225	A	130	110	A
West (Lombard)	99	676	A	149	44	A	143	467	A
Sidewalk									
The Embarcadero Promenade[b]	181	0.3	A	270	0.4	A	1,045	1.6	B

[a] The measure of effectiveness for crosswalks is density – pedestrians per square foot. The measure of effectiveness for sidewalks is the flow rate – pedestrians per minute per foot.
[b] The Embarcadero promenade between Lombard Street and Chestnut Street.

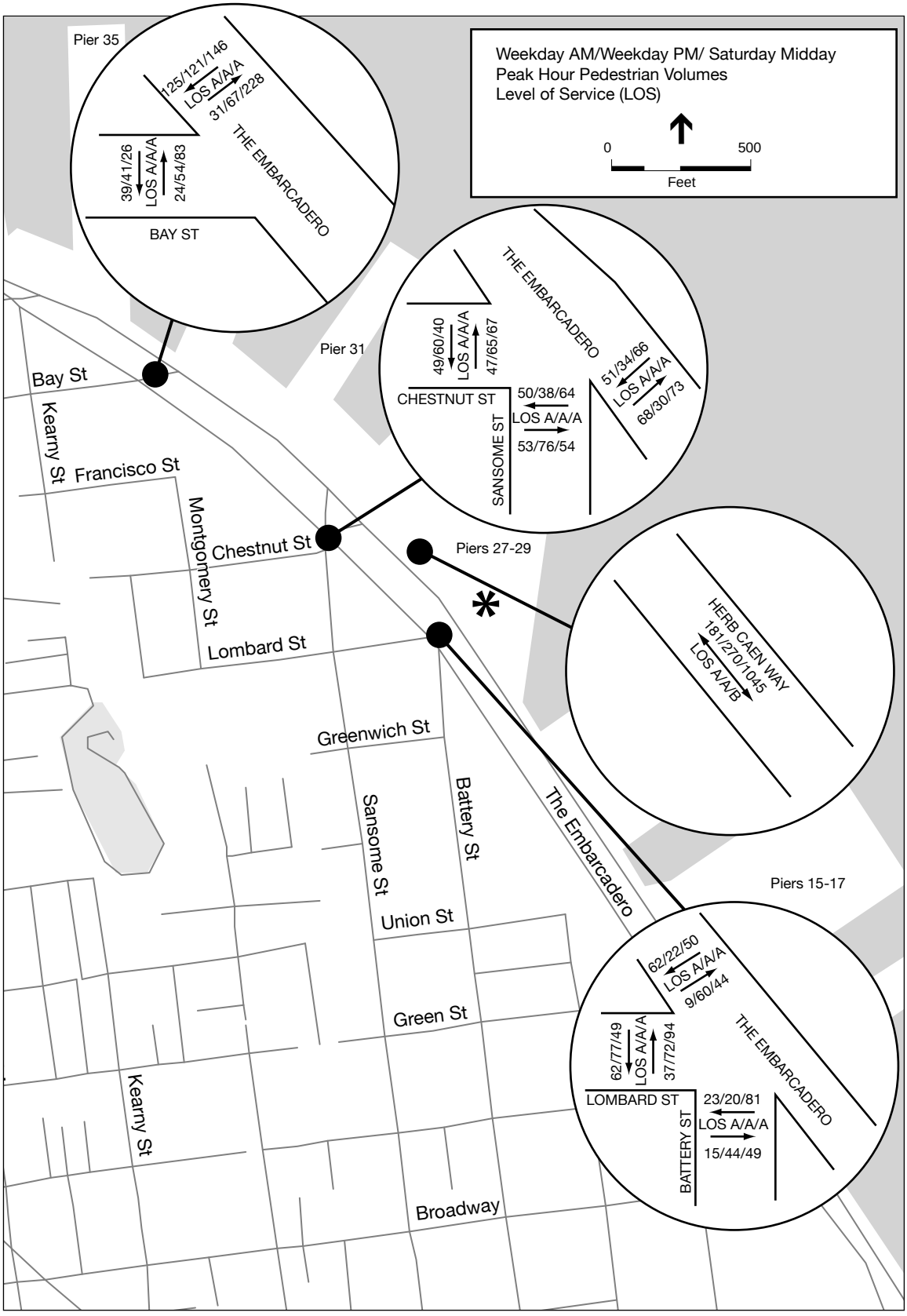
SOURCE: Adavant Consulting/LCW Consulting, 2011

5.6.1.6 Loading

Freight delivery and service vehicle demand within the northern waterfront is served via off-street facilities within buildings, as well as on-street commercial vehicle (yellow curb) loading/unloading zones. Within the Fisherman's Wharf area there are numerous passenger (white curb) zones, as well as tour bus loading zones. Loading/unloading along The Embarcadero occurs either within on-street recessed bays, or within the piers.

5.6.1.7 Emergency Vehicle Access

The existing roadway network within the northern waterfront enables emergency vehicle response to all areas. Peak period traffic congestion generally does not result in delay for emergency vehicles, which utilize multi-lane major arterials (e.g., The Embarcadero, Van Ness Avenue, Bay Street, Battery Street, Sansome Street) for access.



* Cruise Terminal and Northeast Wharf Plaza; America's Cup Village in 2013

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: Adavant Consulting/LCW Consulting

Figure 5.6-8
Existing Pedestrian Conditions-
Cruise Terminal Vicinity

5.6.1.8 Parking

America's Cup Study Area

The existing parking conditions were examined within the parking study area identified on Figure 5.6-1B, and were based on information available from the San Francisco Municipal Transportation Agency (SFMTA) GIS database.[9] **Table 5.6-6** summarizes the publicly-available off-street parking supply within each study area in San Francisco, as identified in Figure 5.6-1B.

TABLE 5.6-6
ESTIMATED OFF-STREET PARKING SUPPLY BY SUBAREA IN SAN FRANCISCO

Parking Study Area Subarea	Free, Publicly Available	Paid, Publicly Available	Non-Public	Total
A. Presidio and Crissy Field	1,252[a]	779	865	2,896
B. Marina Green	615	152	428	1,195
C. Fort Mason to Aquatic Park	301	1107	572	1,980
D. Fisherman's Wharf	0	5,432	1,175	6,607
E. Northeast Embarcadero	0	8,127	355	8,482
F. South of Ferry Building to Mission Bay	0	11,509[b]	2,295	13,804
Total	**2,168**	**27,106**	**5,690**	**34,964**

[a] Does not include public parking available in the Main Post area which totals approximately 1,100 spaces. Approximately half of the supply is located along Crissy Field, Mason Street and the Palace of Fine Arts and might not be available during AC34 events.
[b] Includes Ballpark parking lots in the Mission Bay Area with combined supply of about 2,500 parking spaces.

SOURCE: SFMTA, Adavant Consulting/LCW Consulting, 2011

Overall, approximately 30,000 parking spaces are available to the general public within the San Francisco study area.

On-street parking regulations within the San Francisco study area include Residential Permit Parking (RPP), metered parking, un-metered time-limited parking, as well as unrestricted parking. Parking is generally provided on both sides of the streets. On-street parking west of Sansome Street is generally subject to RPP regulations. On-street parking within the downtown area, both north and south of Market Street, is generally one-hour or two-hour metered or un-metered parking.

RPP regulations generally restrict on-street parking to a one-hour or two-hour period, but vary on the days of the week and time of day that the regulations are in effect (regulations are generally in effect between 8:00 a.m. and 10:00 p.m., Monday through Friday, and in some locations the RPP regulations are in effect every day). Within the study area, there is an Area "M" RPP regulation in the Marina north of Lombard Street, and Area "K" south of Lombard Street. East of Van Ness Avenue, there is an RPP "A" Area generally south of Bay Street. North of Bay

[9] Parking information is included in Appendix TR-7.

Street on-street parking is generally metered, although there are some streets with unrestricted parking. In the Fisherman's Wharf and South of Market areas, a number of on-street parking spaces are currently in the SFpark pilot program, an initiative which adjusts the price, hours of operation, and time limits of on-street parking spaces based on demand.

On-street parking within the Presidio is under the jurisdiction and management of NPS (coastal area) and the Presidio Trust (non-coastal area). Publicly available on-street parking is generally metered, except in the vicinity of the Main Post where approximately 1,100 spaces are available in and around the old parade grounds. South of the Presidio, on-street parking is generally unrestricted to the west of 15th Avenue, and subject to RPP Area "N", "F" and "G" to the east of 15th Avenue.

On-street parking occupancy varies throughout the study area, depending on the day of week, time of day, and location. Within the Fisherman's Wharf area, on-street parking occupancy is greatest on weekends, with frequent double parking in the areas with greatest tourist activity.

According to the NPS, there are approximately 1,600 parking spaces in the Marin Headlands and 960 parking spaces in Fort Baker. In addition, there are about 1,000 parking spaces, both public and private, in the Sausalito downtown area. Parking meters in Sausalito operate every day from 9:00 a.m. to 6:00 p.m.; public parking lots charge a fee until 10 p.m. Downtown Tiburon has approximately 700 public parking spaces in public and parking lots. There are about 150 on-street parking spaces, most of them on Main Street and Tiburon Boulevard, with two-hour maximum parking limits which are enforced daily until 6:00 p.m.

An inventory of parking utilization conducted in July 2000 by the NPS showed that the majority of parking areas in the study area are not used to capacity even during a sunny summer weekend day.[10] During special events at the Bay Area Discovery Museum and the Marin Headlands Center for the Arts, parking demand is high. Visitor parking demand in downtown Sausalito on a typical summer weekend day is estimated to exceed 1,200 spaces at certain times according to City data, matching the available supply and leaving virtually no parking available. There is sufficient public and private parking in downtown Tiburon to meet the existing demand. According to City data, there are several hundreds of spaces within a few blocks of downtown which are generally available during all but peak event times. On the other hand, the free on-street parking spaces near Main Street are almost always occupied.

James R. Herman Cruise Terminal Study Area

The existing parking conditions were examined within the parking study area, which is bounded by Bay Street to the north, Kearny, Montgomery, and Sansome Streets to the west, Francisco, Lombard, and Green Streets to the south, and San Francisco Bay to the east (see Figure 5.6-2).

Existing off-street parking supply and utilization data were obtained from available studies conducted in the area (e.g., for the Exploratorium EIR, with surveys conducted in September

[10] *Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan, Final EIS,* National Park Service, March 2009.

2006), and supplemented with additional field surveys to update and validate the parking occupancy data. There are seven off-street parking facilities that were observed for parking occupancies in the parking study area, containing a total of approximately 1,350 parking spaces. During the weekday midday, off street facilities were observed to range in occupancy between 40 percent and fully occupied, with an average of 83 percent occupancy. Parking demand in the study area is lower during the weekend midday peak period, with occupancies between 30 percent and fully occupied, with an average of 46 percent occupancy. Since many parking facilities in the study area serve the commercial uses in the area and the downtown office uses, the occupancy of the off-street facilities is substantially lower during weekday evenings.

On-street parking spaces within the study area in San Francisco are time-limited, either regulated by meters or posted time limit signs, and RPP area "A" signs (i.e., to the west of Sansome Street). Along The Embarcadero on-street parking is limited on the east side of the street, adjacent to San Francisco Bay. On the east side of The Embarcadero on-street parking is not provided between Lombard and Chestnut Streets (adjacent to Piers 27-29), and to the north and south on-street parking is permitted within recessed bays. On the west side of The Embarcadero, on-street parking is generally provided south of Lombard Street within recessed bays. In both the northbound and southbound directions of The Embarcadero within the study area, a bicycle lane is provided adjacent to the curb. Overall, on-street parking within the study area is generally available, and has been observed to be about 75 percent occupied during the weekday and weekend peak periods.

5.6.2 Regulatory Framework

5.6.2.1 Federal and State Regulations

There are no federal or state transportation regulations applicable to the proposed projects.

5.6.2.2 Regional Regulations

Water Emergency Transportation Authority's Water Transportation System Management Plan

WETA is a regional agency authorized by the State to operate a comprehensive San Francisco Bay Area public water transit system. In 2009, the WETA adopted the Emergency Water Transportation System Management Plan, which complements and reinforces other transportation emergency plans that will enable the Bay Area to restore mobility after a regional disaster.

San Francisco Bay Trail Plan

The Association of Bay Area Governments (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 (see Section 5.11, Recreation, for further description). The 2005 Gap Analysis Study, prepared by ABAG for the

entire Bay Trail area, attempted to identify the remaining gaps in the Bay Trail system; classify the gaps by phase, county, and benefit ranking; develop cost estimates for individual gap completion; identify strategies and actions to overcome gaps; and present an overall cost and timeframe for completion of the Bay Trail system. In the project area, the 2005 Gap Analysis Study proposes to connect two Bay Trail segments along the waterfront: The Embarcadero between Taylor and Powell Streets, and Jefferson Street between Taylor Street and west of Hyde Street.

5.6.2.3 Local Regulations

San Francisco General Plan

The Transportation Element of the San Francisco General Plan is composed of objectives and policies that relate to the eight aspects of the citywide transportation system: General Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management. The Transportation Element references San Francisco's "Transit First" Policy in its introduction, and contains the following objectives and policies that are directly pertinent to consideration of the proposed project:

***Objective 2*:** Use the transportation system as a means for guiding development and improving the environment.

Policy 2.1: Use rapid transit and other transportation improvements in the city and region as the catalyst for desirable development, and coordinate new facilities with public and private development.

Policy 2.4: Organize the transportation system to reinforce community identity, improve linkages among interrelated activities, and provide focus for community activities.

***Objective 9*:** Improve bicycle access to San Francisco from all outlying corridors.

Policy 9.2: Where bicycles are prohibited on roadway segments, provide parallel routes accessible to bicycles or shuttle services that transport bicycles.

***Objective 11*:** Establish public transit as the primary mode of transportation in San Francisco and as a means through which to guide future development and improve regional mobility and air quality.

***Objective 14*:** Develop and implement a plan for operational changes and land use policies that will maintain mobility and safety, despite a rise in travel demand that could otherwise result in system capacity deficiencies.

Policy 14.2: Ensure that traffic signals are timed and phased to emphasize transit, pedestrian, and bicycle traffic as part of a balanced multimodal transportation system.

Policy 14.3: Improve transit operation by implementing strategies that facilitate and prioritize transit vehicle movement and loading.

Policy 14.4: Reduce congestion by encouraging alternatives to the single-occupancy auto through the reservation of right-of-way and enhancement of other facilities dedicated to multiple modes of transportation.

Policy 14.7: Encourage the use of transit and other alternative modes of travel to the private automobile through the positioning of building entrances and the convenient location of support facilities that prioritizes access from these modes.

***Objective 23*:** Improve the city's pedestrian circulation system to provide for efficient, pleasant, and safe movement.

Policy 23.2: Widen sidewalks where intensive commercial, recreational, or institutional activity is present and where residential densities are high.

Policy 23.3: Maintain a strong presumption against reducing sidewalk widths, eliminating crosswalks, and forcing indirect crossings to accommodate automobile traffic.

Policy 23.6: Ensure convenient and safe pedestrian crossings by minimizing the distance pedestrians must walk to cross a street.

***Objective 24*:** Improve the ambiance of the pedestrian environment.

***Objective 28*:** Provide secure and convenient parking facilities for bicycles.

Policy 28.1: Provide secure bicycle parking in new governmental, commercial, and residential developments.

Policy 28.3: Provide parking facilities which are safe, secure, and convenient.

San Francisco Bicycle Plan

The San Francisco Bicycle Plan describes a City program to provide the safe and attractive environment needed to promote bicycling as a transportation mode. The San Francisco Bicycle Plan identifies the citywide bicycle route network, and establishes the level of treatment (i.e., Class I, Class II or Class III facility) on each route. The Plan also identifies near-term improvements that could be implemented within the next five years, as well as policy goals, objectives and actions to support these improvements. It also includes long-term improvements, and minor improvements that would be implemented to facilitate bicycling in San Francisco.

Transit First Policy

In 1998, the San Francisco voters amended the City Charter (Charter Article 8A, Section 8A.115) to include a Transit-First Policy, which was first articulated as a City priority policy by the Board of Supervisors in 1973. The Transit-First Policy is a set of principles that underscore the City's commitment that travel by transit, bicycle, and foot be given priority over the private automobile. These principles are embodied in the policies and objectives of the Transportation Element of the San Francisco General Plan. All City boards, commissions, and departments are required, by law, to implement transit-first principles in conducting City affairs.

Better Streets Plan

The Better Streets Plan focuses on creating a positive pedestrian environment through measures such as careful streetscape design and traffic calming to increase pedestrian safety. The Better Streets Plan includes guidelines for the pedestrian environment, which it defines as the areas of the street where people walk, shop, sit, play, or interact. Generally speaking, the guidelines are for design of sidewalks and crosswalks; however, in some cases, the Better Streets Plan includes guidelines for certain areas of the roadway, particularly at intersections.

5.6.3 Impacts and Mitigation Measures

5.6.3.1 Significance Criteria

The City has not formally adopted significance standards for impacts related to transportation and circulation, but generally considers that implementation of the project could have a potentially significant impact related to transportation and circulation if it were to:

- Conflict with an applicable plan, ordinance, or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

- Conflict with an applicable congestion management program, including but not limited to level-of-service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;

- Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks;

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;

- Result in inadequate emergency access; or

- Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities.

Due to the nature of the proposed project, there would be no impact related to the following topics for the reasons described below:

- ***Change in air traffic patterns.*** The project site is not near an airfield; San Francisco International Airport is about 12 miles to the south, and Metropolitan Oakland International Airport is about 11 miles to the southeast. These distances are outside of the limit for objects near airports in the guidance published by the Federal Aviation Administration (FAA). Therefore, this criterion is not discussed further.

Below is a list of significance criteria used by the San Francisco Planning Department to assess whether a proposed project would result in significant impacts. These criteria are organized by mode to facilitate the transportation impact analysis; however, the transportation impact criteria are essentially the same as the ones presented above.

- ***Traffic.*** The operational impact on signalized intersections is considered significant when project-related traffic causes the intersection level of service to deteriorate from LOS D or better to LOS E or LOS F, or from LOS E to LOS F. The operational impacts on unsignalized intersections are considered potentially significant if project-related traffic causes the level of service at the worst approach to deteriorate from LOS D or better to LOS E or LOS F and Caltrans signal warrants would be met, or would cause Caltrans signal warrants to be met when the worst approach is already operating at LOS E or LOS F. The project may result in significant adverse impacts at intersections that operate at LOS E or LOS F under existing conditions depending upon the magnitude of the project's contribution to the worsening of the average delay per vehicle. In addition, the project would have a significant adverse impact if it would cause major traffic hazards or contribute considerably to cumulative traffic increases that would cause deterioration in levels of service to unacceptable levels.

- ***Transit.*** A project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result. With the Muni and regional transit screenlines analyses, the project would have a significant effect on the transit provider if project-related transit trips would cause the capacity utilization standard to be exceeded during the peak hour.

- ***Pedestrians.*** A project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.

- ***Bicycles.*** A project would have a significant effect on the environment if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.

- ***Loading.*** A project would have a significant effect on the environment if it would result in a loading demand during the peak hour of loading activities that could not be accommodated within the proposed on-site loading facilities or within convenient on-street loading zones, and as a consequence created potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, or pedestrians.

- ***Emergency Access.*** A project would have a significant effect on the environment if it would result in inadequate emergency access.

- ***Construction.*** Construction-related impacts generally would not be considered significant due to their temporary and limited duration.

5.6.3.2 Project Transportation Improvements Assumptions

America's Cup – Implementation Plans

As described in Chapter 3, Section 3.4.7, Implementation Plans, the Host Agreement provides that the City, in accordance with the Event Authority, develops a number of event-related implementation plans to support AC34 during both the 2012 and 2013 events. One of these is the "People Plan", a transportation management strategy under development to coordinate and optimize local and regional transportation service plans and traffic management measures to accommodate additional AC34 travel demand. The initial Draft People Plan was produced on March 31, 2011 for public review and comment, and has been incorporated into the scope of the transportation analysis in this EIR either as base assumptions in the evaluation of impacts, or as a basis for developing mitigation measures. It is anticipated that the transportation improvement strategies for the AC34 project would evolve, as the City continues to refine the People Plan to incorporate transportation issues identified through public review, and ongoing outreach and planning with regional transit agencies, and intergovernmental coordination with the San Francisco Metropolitan Transportation Commission, NPS, Presidio Trust, California State Parks, Marin County and the communities of Sausalito, Tiburon and Belvedere. The transportation management program developed would be implemented during the 2012 race events and would provide a preliminary test of the effectiveness of the People Plan, and the opportunity to incorporate further improvements and refinements for the 2013 race events, which would run for a longer duration and attract higher volumes of spectators.

The America's Cup project sponsor has prepared spectator estimates for AC34 2012 and 2013 events, distributed among primary and secondary spectator viewing areas. The spectator estimates provide the basis for the travel demand impact analysis presented herein (see Appendix PD-1). Given the large numbers of spectators anticipated, the People Plan is oriented to maximizing options for public transit, bicycles, walking, and to minimizing use of private vehicles to access AC34 race events. This section presents proposed elements in the March 31, 2011 Draft People Plan that have been developed by the City including the Planning Department, San Francisco Municipal Transportation Agency (SFMTA), and the Port of San Francisco. Similar efforts are underway to identify supplemental special event service on regional bus, rail and water transit systems that can be programmed for the AC34. The discussion below summarizes how transportation strategies from the Draft People Plan are included in the EIR transportation analysis.

Transit

Under the AC34 project, the amount of additional transit service over the existing baseline service for both Muni and the regional transit providers (including bus and ferry service) would vary based on the anticipated number of spectators. Muni has identified a base level of additional service that could be provided on weekdays and weekends, and is currently developing additional strategies for increased service during the peak event days. This service plan is an initial starting point for addressing service needs. It would be implemented in a flexible nature that is responsive to resource availability. Additionally, SFMTA anticipates a learning curve and

service would likely be modified as more is learned about how spectators travel to the various viewing sites. As described in the People Plan, this strategy includes working with the regional transit service providers to enhance the regional transit capacity, particularly on weekends. The provision of additional Muni and regional transit service would require extra transit vehicles and transit operators as well as funding. At the time of the publication of the Draft EIR, these constraints remain unresolved, and therefore, implementation of additional transit service identified in the Draft People Plan is uncertain. Accordingly, for CEQA purposes, the *existing* transit service currently provided by Muni and the regional transit operators was assumed for the impact analysis of the AC34 project, and *not* the additional service identified in the Draft People Plan. Instead, the additional service recommendations outlined in the Draft People Plan are included as mitigation measures. It is important to note, however, that one of the most significant efforts in preparation for the America's Cup events would be to identify a package of transportation options to reliably transport racing teams, event personnel, event sponsors, members of the media and thousands of America's Cup spectators to and from their destinations on any given race day, while at the same time satisfying the daily transportation needs of residents, businesses and visitors not associated with the races.[11] This effort is embodied in the Draft People Plan that is anticipated to be finalized in the fall of 2011, and would reflect various levels of spectators anticipated to attend the 2012 and 2013 events. The Muni recommendations that were developed as part of the People Plan effort for peak event days are shown on **Figure 5.6-9**, and include the following:[12]

- Increased frequencies on the 30X-Marina Express (a weekday peak period service), which would run every 8 minutes on all event days, including weekends.

- Supplemental 30L-Marina, which would run every 6 minutes in the peak direction of travel (e.g., towards the waterfront through the mid-afternoon, and from the waterfront through the evening) throughout the day on event days. The service would run between the Caltrain terminal and the intersection of Beach/Broderick (via Third/Fourth, Stockton, Broadway, Van Ness, and Lombard).

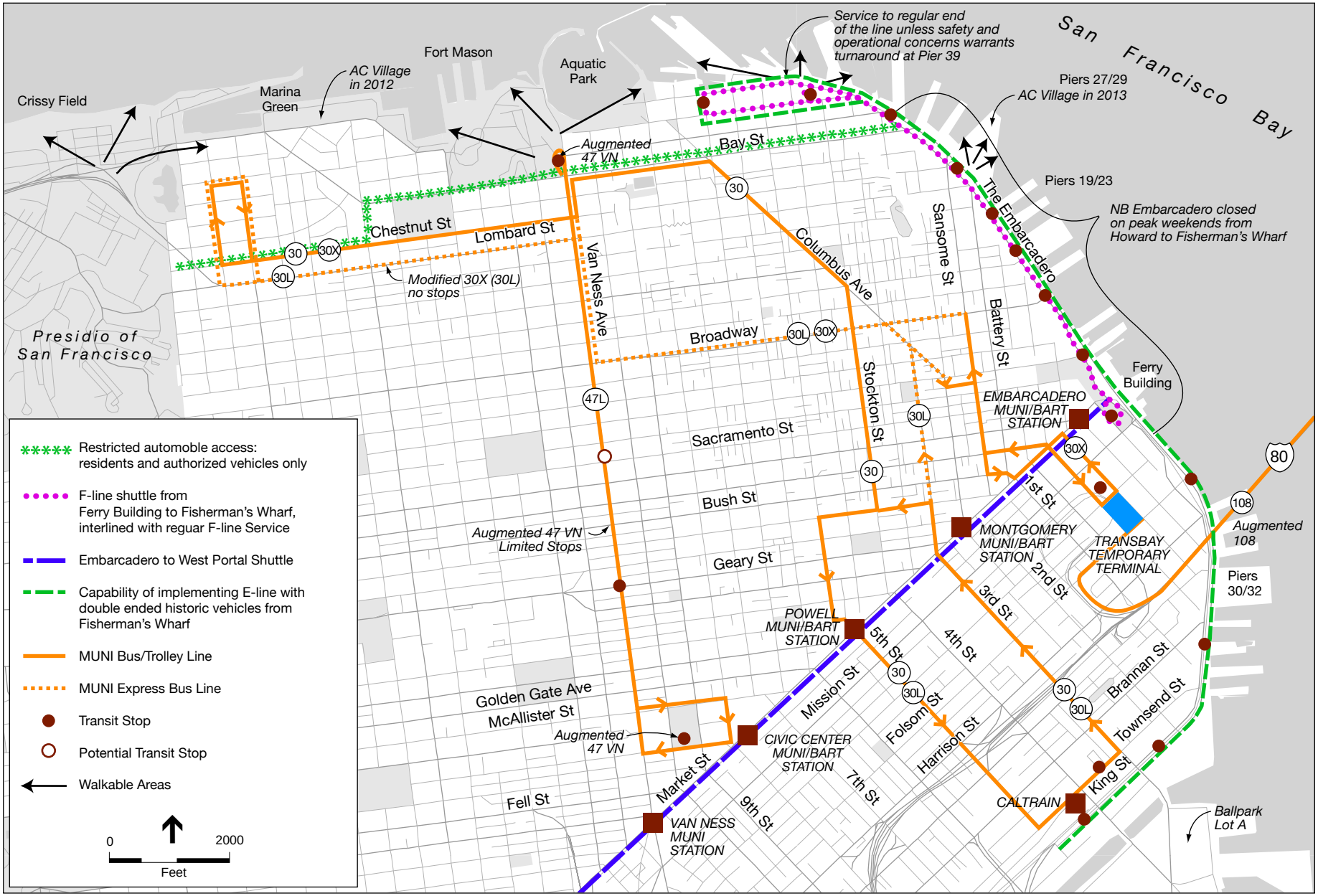
- Supplemental 47L-Van Ness, which would run every 10 minutes in the peak direction of travel throughout the day on event days. Service would be provided between the Civic Center BART/Muni station and North Point Street, via Van Ness Avenue.

- Increased frequencies on the 108-Treasure Island, which would run every 15 minutes on all event days, including weekends.

- Increased frequencies on the F-Market & Wharves historic streetcar between the Ferry Building and Fisherman's Wharf (i.e., at Pier 39), which would run every 5 minutes throughout the day on event days (including existing service to Jones Street and additional shuttle that would turn back at Pier 39).

[11] *America's Cup Draft People Plan for the 2012 and 2013 Regattas on San Francisco Bay*, page 1-1, City and County of San Francisco, March 2011.

[12] The service presented here is for peak event days and is expected to be modified based on the anticipated transit demand during other event days.



SOURCE: San Francisco Planning Department; SFMTA

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Figure 5.6-9

AC34 People Plan - Proposed Augmented Local Transit Routes

- New E-Embarcadero historic streetcar service between Caltrain and Pier 39. This service would need to use the double-ended historic streetcars, and would run every 20 minutes throughout the day on event days. The provision of new E-Embarcadero service would require the closure of eastbound Mission Street between Steuart Street and The Embarcadero for staging of F-Market & Wharves streetcars for the shuttle service.

- Supplemental Muni Metro Shuttle. This light rail vehicle service would run within the Market Street tunnel between the Embarcadero station and the West Portal station. Shuttle service would be provided every 20 minutes on weekends only.

Combined, the Muni service enhancements identified above would provide an additional transit capacity of 1,544 passengers per hour during the weekday p.m. peak hour and 2,825 passengers per hour during the Saturday midday peak hour compared to existing conditions.

The service provided by the regional service providers could range from the additional service provided during special events, such as San Francisco Giants baseball games or Fleet Week, to mobilization of weekday peak period service on weekends. However, as discussions with regional agencies are in process, the transportation analysis presented in this section assumes regional transit service without any additional capacity. This provides a base case against which the estimated travel demand associated with AC34 is identified for each regional transit provider. The increment of additional service needed is identified as a mitigation measure and would help inform the City's current coordination with the transit providers.

The Embarcadero Northbound Roadway Closure

On AC34 event days that are projected to attract a large number of spectators, one of the strategies in the People Plan is closure of the northbound lanes of The Embarcadero to private vehicles between Howard Street and Bay Street; access for emergency response vehicles and Port tenants on piers within the restricted area would be provided. Travel on all southbound lanes of The Embarcadero would be permitted at all times. The roadway closure would extend between approximately 10:00 a.m. and 5:00 p.m. and is anticipated to be required primarily on weekend days when the number of spectators exceeds a specified threshold. The threshold at which the closure would be implemented (e.g., for example, when more than 100,000 spectators are projected to attend events on a particular day) and methods to permit vehicular access to existing businesses along the waterfront are currently being developed, and would be included as part of the final People Plan. For CEQA purposes, the transportation impact analysis assumes The Embarcadero northbound roadway closure for Saturday conditions, for both 2012 and 2013 events.[13] This is a conservative assumption to identify potential transportation impacts by the project; the preferred management strategy would ultimately be identified by the People Plan document.

As part of the roadway closure, alternate routing plans would be implemented, including signage and other communications strategies, which would be deployed when The Embarcadero is closed to northbound traffic. Detours signs would be provided between the I-280 northbound

[13] Closure of The Embarcadero northbound could also occur on holiday weekdays on days when more than 100,000 spectators are anticipated.

ramps on King Street and Howard Street, and all vehicles remaining on The Embarcadero northbound at Howard Street would be required to turn left onto Howard Street westbound. Between I-280 and north of Market Street, it is anticipated that Third, Fourth, and Kearny streets would be used as detour routes. Between Fisherman's Wharf and the South of Market area, Battery, Sansome, Main and Beale streets would likely be used as detour routes. The actual detour routes would be developed by SFMTA, and may vary to reflect conditions in 2012 and 2013 (such as traffic demand, street closures as part of other special events, and infrastructure construction projects).

Closure of The Embarcadero northbound would be implemented sequentially, and would start in the northern section of the Bay Street to Howard Street segment, and continue southward toward Howard Street. For example by initially closing the segment between Bay and Jefferson Streets, and would then progress southbound by subsequently closing the segments between Broadway and Bay Street, then Washington Street to Broadway, and finally Howard Street to Washington Street. The closure would be coordinated with the parking component of the People Plan, that would direct visitors to larger off-street parking facilities with access via The Embarcadero northbound (e.g., Pier 39 Garage, Golden Gateway), based on their location and availability of parking spaces.

Restricted Access

On event days when the northbound segment of The Embarcadero between Howard and Bay streets would be closed (i.e., on weekends and holiday weekdays when more than 100,000 spectators are anticipated), auto access would also be restricted along the northern waterfront. As indicated in Figure 5.6-9, the area currently proposed for restricted access would be north of Bay Street between The Embarcadero and Fillmore Street, and north of Chestnut Street between Fillmore Street and Lyon Street. Residents, authorized vehicles (e.g., business deliveries, transit vehicles, event staff), and emergency response vehicles would continue to have access into and within the restricted access area; parking would be strictly enforced. For CEQA purposes, the transportation analysis assumes restricted access for Saturday conditions, for both 2012 and 2013 events. This is a conservative assumption to identify potential transportation impacts by the project; the preferred management strategy would ultimately be identified by the People Plan document.

Bicycle

The transportation analysis assumes that bicycle rental, bike share, and secured bicycle parking location would be provided throughout the waterfront and at key transit facilities (e.g., Caltrain terminal, Civic Center BART/Muni station). The People Plan would coordinate with the bicycle sharing project planned to be implemented by SFMTA as part of the Bay Area Regional Bicycle Sharing Pilot Program. The program is planning to deploy 1,000 bicycles regionally in spring 2012 at up to 100 stations, with 500 bicycles at about 50 stations in San Francisco. In San Francisco, the pilot service area would be centered in the employment- and transit-rich downtown/SoMa corridor between the Financial District, Market Street, and the Transbay and Caltrain terminals. This area is notably flat, has the city's densest bikeway network coverage and enjoys the highest levels of cycling. The People Plan would explore extending the pilot service

area to the west along the waterfront, extending west into the Presidio, and south to Lombard Street between the Presidio and Fillmore Street, and south to Bay Street between Fillmore and Stockton Street.

Parking

The transportation analysis assumes that the existing SFMTA's *SFpark* program, a web-based application that allows visitors to track the availability of parking facilities on high-spectator event days, including public and private off-street facilities, on-street parking, and satellite parking facilities continues to be implemented. The People Plan also targets the use of satellite parking facilities to accommodate necessary parking support, but located to avoid contributing to traffic congestion near major AC34 venue and spectator viewing locations. Parking for the AC34 events would be limited and enforced, and priority would be provided top shuttles, high occupancy vehicles, and buses, as needed, to ensure efficient event operations with minimal impacts on nearby neighborhoods. On streets that are subject to Residential Permit Parking regulations, SFMTA would consider temporarily extending the days and/or times during which parking is restricted to those with residential parking permits.

Where parking capacity, as opposed to transit capacity, is found to limit the potential for ferries, buses, or trains to meet the demand for regional access to San Francisco, shuttles coordinated by the transit providers or other may play a role in providing additional access between off-site parking lots and the regional transit service.

Coordinated Communications Protocols

The People Plan, as well as the other implementation plans, would include protocols related to information on traffic management at the event sites, maps, signage, management of roadway closures, diversion and detours plans, media announcements, delivery schedules, roadway and transit system management, and response to incidents.

Transportation Demand Management

Various transportation demand management strategies would be implemented to facilitate travel to and from the AC34 events, as well as maintain access for other residents, visitor and workers who travel to and within San Francisco. These strategies are related to People Plan components described above, and reflect the multi-modal nature of the People Plan. TDM strategies include:

- Bicycle rentals and bicycle sharing program, along with safe and secure bicycle parking.
- Promotion of the Clipper Card for use in AC34 event travel.
- Use of private shuttles and priority parking, particularly between transit hubs and select event sites, to complement the transportation options.
- Wayfinding strategies such as signage and on-street ambassadors to promote walking, bicycling and transit use by providing directional guidance to walking, bicycling, and transit access to events.

- Employer outreach to develop employer strategies that would facilitate access to work in San Francisco during the AC34 events.

- Communications and marketing strategies in advance (months, weeks, and days) of the AC34 events, and during events to discourage the use of private autos and encourage transit and other modes. These and other transportation-related communications and marketing strategies would be coordinated and integrated with the overall AC34 advertising and marketing strategies.

Cruise Terminal

Transportation Monitors

On days when a cruise ship is in port, the cruise terminal operator would employ transportation monitoring personnel on The Embarcadero (e.g., off-duty police officers) to protect pedestrians and bicyclists on the promenade and to ensure that vehicles destined into the Cruise Terminal would proceed into the off-street Ground Transportation Area (GTA) in the valley of Piers 27-29 to avoid blocking The Embarcadero travel lanes and minimize traffic backups. This function would be similar to current practices at the existing cruise terminal at Pier 35, where pedestrians on the promenade are stopped to allow for buses and trucks to access Pier 35. A minimum of four transportation monitors would be positioned during the hours of operation of the Cruise Terminal (generally between 7:00 a.m. and 5:00 p.m.) and would alternate stopping vehicles driving into and out of the proposed cruise terminal and northbound/southbound pedestrian and bicyclists traveling along the promenade or the adjacent northbound bicycle lane, similar to how a signal would operate.

Transportation monitoring personnel would also be posted within the GTA at the two crosswalks connecting the cruise terminal building with the taxi and bus loading/unloading areas to momentarily stop pedestrians and allow private vehicles to exit the passenger loading/unloading zone. Additional personnel would manage the taxi pick up lanes to ensure that passengers could simultaneously load into six vehicles at peak demand times. In addition, baggage handlers, etc. would be available to assist passengers and to reduce the private vehicle dwell times at the curb.

5.6.3.3 Approach to Analysis

This section presents the methodologies for analyzing the transportation impacts and the information considered in the travel demand and impact analysis. This section is organized in the following order:

1. Approach to impact analysis, including analysis years and analysis methodology.

2. Methodology and results of travel demand forecasts for the proposed AC34 project and Cruise Terminal project.

3. Future transportation improvements assumed to be in place as part of the 2035 cumulative conditions.

4. Methodology for development of 2035 cumulative traffic and transit forecasts.

1. Approach to Impact Analysis Methodology

The impacts of the AC34 and Cruise Terminal projects on the transportation facilities serving the proposed project area were analyzed using the guidelines set forth in the City of San Francisco Planning Department's 2002 Transportation Impact Analysis Guidelines for Environmental Review (SF Guidelines), modified to account for the unique location and character of the projects.[14] These guidelines provide direction for analyzing transportation conditions and in identifying the transportation impacts of a proposed project in the City of San Francisco.

The transportation analysis of the AC34 project and the Cruise Terminal project was conducted for "Existing plus Project" conditions. Existing plus Project conditions assess the near-term impacts of the temporary AC34 events and of the Cruise Terminal project. A long-term "2035 Cumulative" analysis was also conducted that assessed the long-term impacts of the Cruise Terminal project in combination with other development.

Analysis of AC34 weekday events was conducted for the peak hour of the typical p.m. peak period (4:00 to 6:00 p.m.), which also coincides with spectators departing the event venues following the end of the races. Analysis of Saturday events was conducted for the peak hour of the Saturday midday peak period (11:00 to 1:00 p.m.) hour, which coincides with spectators arriving to the venue sites. Analysis of the Cruise Terminal project was conducted for the peak hour of the typical weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak periods, as well as the peak hour of the Saturday midday peak period (11:00 to 1:00 p.m.). The peak periods are consistent with most transportation analyses conducted in San Francisco and were selected because they represent the times during typical days that routinely experience the highest traffic volumes and greatest congestion.

Project impacts were assessed by comparing existing conditions with the project to existing conditions without the project. For future year 2035 cumulative conditions, the Cruise Terminal project impacts were assessed by comparing the contribution of the project to future year 2035 cumulative traffic and transit conditions. Year 2035 was selected as the future analysis year because the San Francisco County Transportation Authority (SFCTA) travel demand forecasting model used in this analysis developed traffic and transit forecasts for cumulative development and growth through the year 2035.

The traffic impact assessment for AC34 2012 and 2013 events was conducted for intersections in the vicinity of the event venues and secondary viewing areas. Analysis of regional freeway operations was not conducted based on an assessment of traffic on regional facilities during special events. Specifically, transbay traffic volume characteristics on the San Francisco-Oakland Bay and the Golden Gate bridges were analyzed during several major events in San Francisco in 2010 to determine the changes in travel demand patterns. Hourly inbound vehicular traffic data were collected for both bridges for the Independence Day (July 4th), Fleet Weekend (October 9th and 10th), and San Francisco Giants World Series Championship Parade (November 3rd) events

[14] San Francisco Planning Department, *2002 Transportation Impact Analysis Guidelines for Environmental Review*, October 2002.

and compared against the traffic data from the previous week. **Table 5.6-7** presents the traffic volumes on the Golden Gate Bridge and on the Bay Bridge for the three special event days.

TABLE 5.6-7
TRAFFIC VOLUMES ON SAN FRANCISCO BAY BRIDGES DURING SPECIAL EVENTS IN 2010

	San Francisco-Oakland Bay Bridge[a]				Golden Gate Bridge[b]			
Special Event	**AM Peak Hour[c]**	**Midday Peak Hour[d]**	**PM Peak Hour[e]**	**Total All Day**	**AM Peak Hour[c]**	**Midday Peak Hour[d]**	**PM Peak Hour[e]**	**Total All Day**
Independence Day - Sunday, 7-4-10	5,710	6,703	6,298	99,968	2,001	3,239	3,436	45,065
Baseline - Sunday, 6-27-10	7,614	7,694	6,635	111,295	3,395	4,270	4,229	52,884
Difference	-1,904	-991	-337	-11,327	-1,394	-1,031	-793	-7,819
	-25%	-13%	-5%	-10%	-41%	-24%	-19%	-15%
Fleet Weekend - Saturday, 10-9-10	7,773	8,040	6,988	123,695	3,130	3,724	3,508	49,662
Baseline - Saturday, 10-2-10	8,456	8,136	7,628	126,247	3,719	4,058	4,126	52,696
Difference	-683	-96	-640	-2,552	-589	-334	-618	-3,034
	-8%	-1%	-8%	-2%	-16%	-8%	-15%	-6%
Fleet Weekend - Sunday, 10-10-10	7,993	8,017	7,245	114,545	3,368	4,107	3,993	49,562
Baseline - Sunday, 10-3-10	8,037	8,316	6,868	114,783	3,532	4,713	3,781	49,406
Difference	-44	-299	377	-238	-164	-606	212	156
	-1%	-4%	**5%**	0%	-5%	-13%	**6%**	**0%**
SF Giants World Series Parade - Wednesday, 11-3-11	9,095	6,182	6,717	115,247	5,837	3,858	3,352	55,517
Baseline - Wednesday, 10-27-10	8,874	7,648	7,004	123,231	5,808	3,435	3,859	56,930
Difference	221	-1,466	-287	-7,984	29	423	-507	-1,413
	2%	-19%	-4%	-6%	**0%**	**12%**	-13%	-2%

[a] Westbound (towards San Francisco) traffic volumes.
[b] Southbound (towards San Francisco) traffic volumes.
[c] One-hour period with the highest value before 11:00 a.m.
[d] One-hour period with the highest value between 11:00 a.m. and 3:00 p.m.
[e] One-hour period with the highest value after 3:00 p.m.

SOURCE: Caltrans, Adavant Consulting/LCW Consulting, 2011

As shown in the table, hourly traffic volumes on both bridges during event days were comparable to non-event traffic, with the total daily traffic volumes generally lower than during non-event days. There were minor traffic increases between two and four hours prior to the start of the event, resulting in virtually all cases in the same or less peak hour traffic on event days than during non-event days. On those instances when the peak hour volumes during event days are noticeable higher than on non-event days (for example, 12 percent higher traffic at midday on the Golden Gate Bridge during the San Francisco Giants World Series Championship Parade) the event day peak hour traffic (3,858 vehicles) is still lower than the morning peak hour traffic on a typical day (5,808 vehicles). It appears that regular commuter or leisure travel that occurs during non-event days may be more flexible than the event traffic, and either does not materialize on event days, switches to public transportation (BART experienced peak hour travel increases of up to 350 percent during some event days), or self-diverts to other routes and facilities, possibly to avoid potential congestion in San Francisco. It is expected that similar characteristics would be

exhibited as part of the AC34 events. Therefore, additional analysis of event traffic on regional freeway facilities including ramps within San Francisco was determined not to be necessary (see Appendix TR-3).

Ramp analyses were also not conducted for the ramps connecting I-80/Bay Bridge with Yerba Buena Island. The Bay Bridge travels through a short tunnel on Yerba Buena Island, and on- and off-ramps are provided to Yerba Buena Island, linking to Treasure Island. In the westbound direction, one off-ramp is provided from the Bay Bridge to Yerba Buena Island on the east side of the tunnel. Two on-ramps are provided to westbound I-80 from Yerba Buena Island, one on each side of the tunnel. Similarly, there are two off-ramps from the eastbound Bay Bridge, one on each side of the tunnel. There is one eastbound on-ramp on the east side of the tunnel. As part of the Caltrans' Bay Bridge East Span Project the eastbound on-ramp on the east side of Yerba Buena Island will be reconstructed entirely as part of the replacement of the Bay Bridge east span. The new ramp will be in a similar location to the existing ramp, but will provide increased acceleration distance. This ramp is scheduled for completion in 2013.[15]

During the a.m. and p.m. peak hours, the merge and diverge areas of the Bay Bridge travel lanes generally operate at acceptable levels of service, except for the eastbound off-ramp on the west side of Yerba Buena Island during the p.m. peak hour. On the on-ramps themselves, however, vehicles experience substantial amounts of delay while waiting for gaps in traffic on the bridge. The ramps have very short acceleration lanes, poor sight distance, and tight curve radii, which, when combined with heavy mainline traffic volumes, result in a longer driver reaction time before entering the freeway. These constrained conditions would remain regardless of additional event traffic that may access Treasure Island. Therefore additional analysis of event traffic on ramps on Yerba Buena Island/Treasure Island was determined not to be necessary.

As indicated in Chapter 3, Project Description, Live Sites would be part of the AC34 events, which would consist of viewing locations at Justin Herman Plaza, Union Square, and the Civic Center where the AC34 races could be viewed remotely on large outdoor television screens. These Live Sites would provide a range of hospitality services, including general merchandise sales, food and beverage concessions, and entertainment.

As part of AC34 2012 events, a Live Site would be located in Justin Herman Plaza during weekend events, while as part of the AC34 2013 events, Live Sites would be at all three locations (i.e., Justin Herman Plaza, Union Square, and the Civic Center) on weekend event days. Live Sites are not proposed on weekday event days for either 2012 or 2013 events. For purposes of the transportation analysis, the Live Site at Justin Herman Plaza was incorporated into the analysis of the Embarcadero. Live Sites in Union Square and at the Civic Center are not called out specifically, because the number of spectators to these site are anticipated to be lower than at other event venues along the waterfront and would generally serve visitors and residents in the vicinity of Union Square and the Civic Center, and because visitors to these sites would primarily walk, bicycle, or take transit (rather than drive). Both Union Square and the Civic Center are

[15] *Treasure Island /Yerba Buena Island Redevelopment Project*, Draft EIR, July 2010. Case No. 2007.0903E.

designed to accommodate larger crowds associated with civic and other special events, and similar live sites have been implemented by the City to view the soccer World Cup and baseball World Series games. For these reasons, additional analysis of the Union Square and the Civic Center Live Sites was determined not to be necessary.

Intersection Analysis

The traffic impact assessment for AC34 2012 and 2013 events was conducted for intersections in the vicinity of the event venues and secondary viewing areas. The study intersections were evaluated using the 2000 Highway Capacity Manual (2000 HCM) methodology. For signalized intersections, this methodology uses various intersection characteristics (e.g., traffic volumes, lane geometry, and signal phasing and timing) to estimate the capacity for each lane group approaching the intersection, and to calculate the average control delay experienced by motorists traveling through the intersection. The LOS is based on average delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average delay and LOS is presented for the intersection. For unsignalized intersection, average delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn), for those movements that are subject to delay. For purposes of this analysis, the operating conditions (LOS and delay) for unsignalized intersections are presented for the worst approach (i.e., the approach with the highest average delay per vehicle). **Table 5.6-8** presents the level of service descriptions and associated delays for signalized and unsignalized intersections.

The AC34 project and the Cruise Terminal project were determined to have a significant traffic impact at an intersection if project-generated trips would cause an intersection operating at LOS D or better under Existing conditions to operate at LOS E or LOS F, or intersections operating at LOS E under Existing conditions to deteriorate to LOS F conditions. At intersections that operate at LOS E or LOS F under Existing conditions, and would continue to operate at LOS E or LOS F under Existing plus Project conditions, the increase in proposed project vehicle trips was reviewed at the critical movements to determine whether the increase would contribute considerably to unacceptable levels of service.[16] Supporting documentation regarding project contributions to intersections operating at LOS E or LOS F is included in Appendix TR-4.

The Cruise Terminal project was also determined to have a significant cumulative impact if project-generated trips would contribute considerably at intersections operating at LOS E or LOS F under 2035 Cumulative conditions. The increases in project vehicle trips were reviewed at the critical movements to determine whether the increase would contribute considerably to the critical movements. In addition, if it was determined that the Cruise Terminal project would have a significant project-specific traffic impact at an intersection under Existing plus Project conditions, then the impact would also be considered a significant cumulative impact.

[16] At an intersection, the critical traffic movements operate with the highest volume-to-capacity ratio. In other words, the critical movements are the most congested movements.

TABLE 5.6-8
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS

Control/LOS	Description of Operations	Average Control Delay (seconds per vehicle)
Signalized		
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	≤ 10
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10.0 and ≤ 20
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20.0 and ≤ 35
D	Tolerable Delays. Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35.0 and ≤ 55
E	Significant Delays: Volumes approach capacity. Vehicles may wait through several signal cycles and long queues form upstream.	> 55.0 and ≤ 80
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80
Unsignalized		
A	No delay for STOP-controlled approach.	≤ 10
B	Operations with minor delays.	> 10.0 and ≤ 15
C	Operations with moderate delays.	> 15.0 and ≤ 25
D	Operations with some delays.	> 25.0 and ≤ 35
E	Operations with high delays and long queues.	> 35.0 and ≤ 50
F	Operations with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

NOTE: LOS – Level of Service

SOURCE: Transportation Research Board, 2000. Highway Capacity Manual – Special Report, Washington, DC

Transit Analysis

The impact of additional transit ridership generated by the AC34 project and Cruise Terminal project was assessed by comparing the projected ridership to the existing transit capacity. Transit "capacity utilization" refers to transit riders as a percentage of the capacity of a transit line, or group of lines combined and analyzed as screenlines across which the transit lines travel.

For the AC34 project, the transit capacity utilization analysis was conducted at the Planning Department's three regional transit screenlines (for visitors from the East Bay, North Bay and South Bay traveling to the spectator venues by transit) and at four Muni screenlines developed for the AC34 analysis. The Muni transit routes serving the event venues and secondary viewing areas were grouped into four screenlines, and include the following Muni routes.

- ***Presidio/Crissy Field/Marina Screenline*:** 22-Fillmore, 28-19th Avenue, 30-Stockton (long-line service), 43-Masonic, 45-Union-Stockton, 49-Van Ness-Mission.

- ***Fisherman's Wharf Screenline*:** 8X-Bayshore Express, 8BX-Bayshore "B" Express, 19-Polk, 30-Stockton (short-line service), 47-Van Ness, F-Market & Wharves, Powell-Hyde Cable Car, Powell-Mason Cable Car.

- ***The Embarcadero Screenline*:** California Cable Car, N-Judah, J-Church, K-Ingleside/T-Third, L-Taraval, M-Ocean View, 1-California, 1AX-California "A" Express, 1BX-California "B" Express, 2-Clement, 5-Fulton, 6-Parnassus, 9-San Bruno, 9L-San Bruno Limited, 10-Townsend, 12-Folsom-Pacific, 14-Mission, 14X-Mission Express, 14L-Mission Limited, 21-Hayes, 30X-Marina Express, 31-Balboa, 38-Geary, 38L-Geary Limited, 41-Union, 71-Haight-Noriega, 71L-Haight-Noriega Limited, 82X-Levi Plaza Express.

- ***Treasure Island Screenline*:** 108-Treasure Island.

The existing a.m. and p.m. peak hour ridership was obtained from Muni monitoring data (September-October 2010).[17] The service capacity of each line was estimated by multiplying the passenger capacity of each transit vehicle by the number of service trips. For service provided by Muni, the capacity includes seated passengers and an appreciable number of standing passengers per vehicle (the number of standing passengers is between 30 and 80 percent of the seated passengers depending upon the specific transit vehicle configuration). The maximum loads, including both seated and standing passengers, vary by vehicle type and are 45 passengers for a 30-foot bus, 63 passengers for a 40-foot bus, 94 passengers for a 60-foot bus, 70 passengers for a cable car and a historic streetcar, and 119 passengers for a light-rail vehicle. The percent utilization of capacity was then calculated by comparing the ridership demand to the capacity provided. Muni has established a capacity utilization standard of 85 percent, which was applied for assessment of the Cruise Terminal. For analysis of the temporary AC34 event impacts, a capacity utilization of 100 percent was used, since more congested conditions on transit are acceptable for temporary special event conditions. Capacity of supplemental transit service expected to be provided as part of the People Plan was based on proposed service levels and vehicle types.

Weekday a.m. and p.m. peak hour transit ridership demand and capacity at the three regional transit screenlines was obtained from the ongoing analysis of the Transit Center District Plan.[18] Saturday midday peak hour ridership and capacity at the regional screenlines were developed for this EIR analysis based on transit route, ridership and capacity information obtained by the Planning Department from the regional transit providers, including AC Transit, BART, Caltrain, WETA, SamTrans, Golden Gate Transit, and Blue & Gold. All regional transit providers have a peak hour capacity utilization standard of 100 percent.

For the Cruise Terminal project, the transit capacity utilization analysis was conducted at the Planning Department's four downtown San Francisco Muni screenlines, and at the three regional transit screenlines. Since transit trips into and out of downtown San Francisco are greatest during the weekday a.m. and p.m. commute periods, they represent the most congested transit

[17] San Francisco Municipal Transportation Agency (SFMTA), Automatic Passenger Counter Data, September-October 2010.

[18] AECOM, *Transit Center District Plan Transportation Technical Analysis*, San Francisco Planning Department Case No. 2007.0558E and 2008.0789E, July 2011.

conditions in the City. Therefore, for a conservative assessment of transit impacts, the Planning Department assesses impacts of development projects on weekday peak commute conditions. During the Saturday midday period, transit ridership and capacity utilization of lines into and out of downtown is substantially less, and impacts of projects would generally be less. For these reasons, additional analysis of downtown screenlines for Saturday conditions was determined not to be necessary. However, an additional capacity utilization analysis of the impact of the Cruise Terminal project on the F-Market & Wharves historic streetcar that runs adjacent to the project site was conducted for weekday a.m. and p.m. and Saturday midday peak hours.

Transit capacity utilization calculations are included in Appendix TR-5.

Pedestrian Analysis

The impact of the pedestrian trips generated by the proposed projects was assessed qualitatively for the AC34 project, and quantitatively and qualitatively for the Cruise Terminal project. For the Cruise Terminal project, a quantitative assessment of pedestrian operations was conducted at crosswalks at three intersections in the vicinity of Piers 27-29 and at one location on The Embarcadero promenade. The level of service for the study crosswalks and walkway locations was calculated using the methodology presented in the 2000 HCM. Crosswalk levels of service are measures of the amount of space (square feet) each pedestrian has in the crosswalk (i.e., density). These measures depend on pedestrian volumes, signal timing, crosswalk dimensions, and roadway widths. Walkway operating conditions are measured by average pedestrian flow rate, which is defined as the average number of pedestrians that pass a specific point on a sidewalk during a certain period (pedestrians per minute per foot or p/m/f). LOS A represents free-flowing pedestrian conditions, while LOS F indicates that there are substantial restrictions to pedestrian movement and speed. Pedestrian level of service calculations are included in Appendix TR-6. **Table 5.6-9** shows the LOS criteria for pedestrians based on the 2000 HCM methodology.

TABLE 5.6-9
PEDESTRIAN LEVEL OF SERVICE CRITERIA

LOS	Crosswalks Density (sq ft per pedestrian)	Walkway Flow Rate (pedestrians per minute per foot)
A	> 13	< 0.5
B	> 10 – 13	> 0.5 – 3
C	> 6 – 9.9	> 3 – 6
D	> 3 – 5.9	> 6 – 11
E	> 2 – 2.9	> 11 – 18
F	< 2	> 18

SOURCE: Transportation Research Board, 2000. Highway Capacity Manual – Special Report, Washington, DC

Bicycle Analysis

The project impact analysis includes a qualitative assessment of bicycle conditions. Bicycle conditions are assessed as they relate to the proposed project area, including bicycle routes, safety and right-of-way issues, and conflicts with traffic.

Loading Analysis

Loading analysis for the AC34 project includes a qualitative assessment of the expected loading/unloading activities at the AC34 venues. Loading analysis for the Cruise Terminal project was conducted by comparing the loading supply that would be required by the *Planning Code* to the projected demand that would be generated by the cruise terminal operations. The peak loading demand of truck and service vehicle trips was based on surveys of existing cruise terminal operations at Pier 35.[19]

Construction Analysis

Potential short-term construction impacts for the AC34 and Cruise Terminal projects were assessed based on preliminary construction information for the two projects. The construction impact evaluation addresses the staging and duration of construction activity, truck routings, barge activity, estimated daily truck and vessel volumes, street and/or sidewalk closures.

Parking Analysis

Parking analysis was conducted by comparing the projected demand that would be generated by the proposed uses to the publicly available supply in the vicinity of the proposed AC34 venues and the cruise terminal site.

2. Travel Demand Methodology and Results

The methods commonly used for forecasting trip generation of development projects in San Francisco are based on person-trip generation rates, trip distribution information, and mode splits data described in the Transportation Impact Analysis Guidelines for Environmental Review, published by the San Francisco Planning Department in October 2002 (*SF Guidelines*). These data are based on a number of detailed travel behavior surveys conducted within San Francisco. The data in the *SF Guidelines* are generally accepted as more appropriate than conventional methods because of the unique mix of uses, density, availability of transit, and cost of parking commonly found in San Francisco. However, the *SF Guidelines* do not include travel demand estimate for specialized uses such as the America's Cup or a passenger cruise terminal. Similarly, standard trip generation rates, such as those provided by Trip Generation, 8th Edition, 2008, Institute of Transportation Engineers, do not provide trip generation rates for such specialized uses. Therefore, the travel demand for the proposed projects was based for the most part on the estimated number of AC34 visitors and cruise passengers expected to be in San Francisco. Travel demand for standard project land uses, such as restaurant, have been developed in accordance with the *SF Guidelines*. Travel demand calculations are included in Appendix TR-2.

[19] CHS Consulting, *San Francisco Cruise Terminal at Pier 35 Survey Data*, May – July 2010.

America's Cup

Visitation estimates for AC34 were prepared by the project sponsors, and the detailed analysis is included in Appendix PD-1 of this EIR, and summarized in Chapter 3, Section 3.4.1, AC34 Visitation Estimates. In general, the number of visitors anticipated to view the event would vary by day of week (weekday versus weekend), weather, race schedule and position, interest in competing teams, and planned activities at the AC34 venues. Visitor attendance is first presented for AC34 2013 events, followed by a discussion of the racing events proposed to occur in 2012.

Visitor attendance for the AC34 2013 is projected to range between 18,000 visitors on non-race days (visitors to the AC34 Village) to between 400,000 and 500,000 visitors on a "super peak race day" if combination of favorable factors all fall upon a weekend day. **Table 5.6-10** presents the estimated distribution of peak and average attendance for AC34 event days in 2013.

TABLE 5.6-10
ESTIMATED SPECTATORS FOR AC34 2012 AND AC34 2013

AC34 2012[a]

Profile	Total Number of Event Days in 2012	Average Visitors Per Day
Peak Race Weekend Day[b]	**4**	**197,000**
High Interest – Weekend	2	120,000
High Interest – Weekday	**2**	**45,000**
Medium Interest Days	6	35,000
Low Interest Days	6	21,000
Total (Race + Non Race Days)	20	--

AC34 2013

Profile	Total Number of Event Days in 2013	Average Visitors Per Day
Average Peak Race Day[c]	**5**	**334,000**
Medium High Weekend/Holiday Race Day	6	191,050
Average Weekend/Holiday Race Day	12	95,530
Peak Race Weekday	**11**	**50,000**
Non-Peak Race Weekday	11	23,800
Non Race Days	40	18,000
Total (Race + Non Race Days)	85	--

[a] Assumes two 10-day World Series events.
[b] Four peak race days with attendance of about 197,000 spectators on each of the four days.
[c] Average of one super peak race day with attendance of between 400,000 and 500,000 spectators, and four average peak race days that do not include the super peak with attendance of about 305,425 spectators.

Bold indicates AC34 Scenarios analyzed in this EIR

SOURCE: AECOM, 2011

As indicated in the Table 5.6-10, for about 74 of the 85 days of AC34 event days, daily visitor attendance is projected to be less than 100,000 visitors per day. For purposes of conservatively addressing the potential impacts for 2013, an "average peak race weekend day" scenario attracting about 334,000 visitors during the weekend day was developed and analyzed in this EIR. The average peak weekend race day represents the average of one super peak race day with attendance of between 400,000 and 500,000 spectators and four average peak weekend race days of high spectator interest (305,425 spectators), such as opening race days or race finals, competitions featuring high-interest countries, or days near the beginning or end of the competition with exceptionally good weather. In addition, an "average peak race weekday" attracting about 50,000 visitors during the day is also analyzed in this EIR, representing a peak race day during the weekdays (see Appendix PD-1 for description of visitation and spectator assumptions).

The scale and duration of the AC34 2012 events would be less than for AC34 2013, and the projected visitorship would also be less. Table 5.6-10 presents the estimated distribution of peak and average attendance for AC34 event days in 2012. As indicated in the table, for about 14 of the 20 days of AC34 event days, daily visitor attendance is projected to be at or below 45,000 visitors per day. For purposes of conservatively addressing potential impacts for 2012, a "peak race weekend day" scenario attracting about 197,000 visitors during the day is analyzed for the weekend, and an "average peak race weekday" attracting about 45,000 visitors during the day is analyzed for the weekdays.

The visitation analysis also estimated geographic distribution for visitors to all proposed AC34 venues and other public areas where spectators might watch the AC34 races, based on spectator origin, access, visitor capacity, assumed viewing area appeal, and event programming and support services for spectators. Table 3-4: Estimated Geographic Distribution of AC34 Visitors on Peak Race Day in 2012, and Table 3-6: Estimated Geographic Distribution of AC34 Visitors on Average Peak Race Weekend Day and Average Peak Race Weekday in 2013 present the detailed distribution by venue, secondary viewing areas, and identifies the number of spectators on boats. For purposes of the transportation impact analysis, the visitor locations were aggregated into broader study areas, and are summarized in **Table 5.6-11** for AC34 2012 and 2013 conditions. The visitation analysis also estimated geographic distribution for visitors at all proposed AC34 venues and other public areas where spectators might watch the AC34 races in 2012, based on spectator origin, access, visitor capacity, assumed viewing area appeal, and other factors.

The estimated daily spectators were allocated to travel modes in order to determine the number of auto, transit, walk, and other trips, where "other" includes bicycles, motorcycles, and taxis. Mode split information for the project was estimated from information taken from the *SF Guidelines* for visitor trips to the Northeastern Waterfront (Superdistrict 1), where most of the AC34 events would take place.[20] According to the *SF Guidelines*, visitor trips to Superdistrict 1 from other San Francisco locations have a high share (more than 85 percent) of non-auto trips, as

[20] San Francisco is divided into four Superdistricts delineated to capture the different travel characteristics that are associated with the various street network, transit opportunities, and geographical constraints of different areas of San Francisco (Superdistrict 1 includes the northeast quadrant, Superdistrict 2 includes the northwest quadrant, Superdistrict 3 includes the southeast quadrant, and Superdistrict 4 includes the southwest quadrant.

TABLE 5.6-11
ESTIMATED DAILY SPECTATORS BY AREA FOR AVERAGE PEAK RACE DAY FOR AC34 2012 AND AC34 2013

Study Area Location	AC34 2012		AC34 2013	
	Weekday	Weekend	Weekday	Weekend
Landside				
Presidio and Crissy Field	11,450	77,000	12,800	82,000
Marina and Fort Mason to Aquatic Park	18,900	60,000	9,200	62,000
Fisherman's Wharf	3,500	15,000	3,900	25,000
Northeast Embarcadero	4,600	15,000	15,500	106,000
Downtown (Live Sites)	0	0	0	12,000
Other San Francisco	0	3,000	0	5,000
Treasure Island	1,300	5,500	1,500	12,000
Alcatraz and Angel Island	50	1,500	50	1,500
Marin County	600	7,300	700	10,500
Subtotal Landside	*40,400*	*184,300*	*43,700*	*316,000*
Spectators on Boats	4,630	13,000	6,300	18,000
Total all Spectators	***45,000***	***197,300***	***50,000***	***334,000***

SOURCE: AECOM, 2011

it would likely be the case of AC34 visitors. Similarly, travel modes for AC34 visitor trips to San Francisco from all other Bay Area locations were assumed to be similar to those originating in the East Bay, which have the highest share (34 percent) of non-auto trips.

To determine the number of vehicle trips generated/attracted by the AC34, an average vehicle occupancy rate was applied to the number of person-trips based on information from surveys of visitors to the Fisherman's Wharf Area.[21] **Table 5.6-12A** summarizes the mode split, average vehicle occupancy and origin/destination for trips destined to San Francisco destinations, while **Table 5.6-12B** presents this information for trips destined outside to secondary viewing areas outside of San Francisco.

Table 5.6-13 presents the total daily and peak hour person-trips by mode and vehicle trips generated by the AC34 for the peak race weekday and weekend in 2012 and 2013. Based on the mode share percentages and average vehicle occupancies, the project would generate about 4,249 vehicle trips during the peak race 2012 weekday p.m. peak hour (1,062 inbound and 3,187 outbound), 14,596 vehicle trips during the 2012 weekend midday peak hour (12,644 inbound and 1,952 outbound), 4,608 vehicle trips during the 2013 weekday p.m. peak hour (1,152 inbound and 3,456 outbound), and 24,995 vehicle trips during the weekend midday peak hour (19,996 inbound and 4,999 outbound).

[21] Fisherman's Wharf Visitor Survey - Fisherman's Wharf Community Benefit District, November 2006.

TABLE 5.6-12A
AC34 2012 AND AC34 2013 TRAVEL DEMAND ASSUMPTIONS
MODE SPLIT AND ORIGIN/DESTINATION FOR VIEWING LOCATIONS IN SAN FRANCISCO

		Weekday				Weekend			
		Worker		Visitor		Worker		Visitor	
Mode Split by Origin/Destination		**%**[b]	**AVO**[a,b]	**%**[c]	**AVO**[a,e]	**%**[b]	**AVO**[a,b]	**%**[d]	**AVO**[a,f]
San Francisco	Auto	13.8%	1.32	12.9%	2.21	13.8%	1.32	12.9%	3.82
	Transit	36.0%		17.1%		36.0%		17.1%	
	Walk/Other	50.2%		70.0%		50.2%		70.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
East Bay	Auto	39.4%	3.33	65.6%	2.43	39.4%	3.33	65.6%	3.82
	Transit	57.0%		34.4%		57.0%		34.4%	
	Walk/Other	3.6%		0.0%		3.6%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
North Bay	Auto	52.8%	1.7	88.1%	1.91	52.8%	1.7	65.6%	3.82
	Transit	45.3%		11.9%		45.3%		34.4%	
	Walk/Other	1.9%		0.0%		1.9%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
South Bay	Auto	58.0%	1.23	70.7%	2.46	58.0%	1.23	65.6%	3.82
	Transit	40.7%		29.3%		40.7%		34.4%	
	Walk/Other	1.3%		0.0%		1.3%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
Out of Region	Auto	47.8%	1.5	59.8%	3.17	47.8%	1.5	65.6%	3.82
	Transit	50.0%		40.2%		50.0%		34.4%	
	Walk/Other	2.2%		0.0%		2.2%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
All Origins	Auto	40.6%	1.6	56.3%	***2.34***	40.6%	1.6	52.3%	***3.82***
	Transit	45.1%		26.2%		45.1%		30.1%	
	Walk/Other	14.3%		17.6%		14.3%		17.6%	
	Total	***100%***		***100%***		***100%***		***100%***	
Origin/Destination		**%**[g]		**%**[g]		**%**[g]		**%**[g]	
San Francisco		25.1%		25.1%		25.1%		25.1%	
East Bay		28.0%		28.0%		28.0%		28.0%	
North Bay		11.7%		11.7%		11.7%		11.7%	
South Bay		30.4%		30.4%		30.4%		30.4%	
Out of Region		4.8%		4.8%		4.8%		4.8%	
	Total	*100%*		*100%*		*100%*		*100%*	

[a] AVO – Average Vehicle Occupancy in terms of persons per vehicle.
[b] *SF Guidelines*, Work Trips to Superdistrict 1- All (All San Francisco assumed same as SD1).
[c] *SF Guidelines*, Visitor Trips to Superdistrict 1 – All Other (All San Francisco assumed same as Superdistrict 1. Walk/other into and out of San Francisco were proportionally allocated to Auto and Transit %).
[d] *SF Guidelines*, Visitor Trips to Superdistrict 1 – All Other (All San Francisco assumed same as Superdistrict 1. Mode split for all trips into and out of SF were assumed to be similar to the East Bay. Walk/other into and out of San Francisco were proportionally allocated to Auto and Transit %).
[e] AVO based on *SF Guidelines*, Visitor Trips to Superdistrict 1 (All Other).
[f] AVO based on Fisherman's Wharf Visitor Survey – Fisherman's Wharf Community Benefit District, November 2006.
[g] AECOM, Analysis of Potential Visitation Patterns for America's Cup 34, June 2011.

SOURCE: *SF Guidelines*, AECOM, Adavant Consulting/LCW Consulting, 2011

TABLE 5.6-12B
AC34 2012 AND AC34 2013 TRAVEL DEMAND ASSUMPTIONS
MODE SPLIT AND ORIGIN/DESTINATION
FOR VIEWING LOCATIONS OUTSIDE OF SAN FRANCISCO

		Weekday				Weekend			
		Worker		Visitor		Worker		Visitor	
Mode Split by Origin/Destination		**%[b]**	**AVO[a,b]**	**%[c]**	**AVO[a,d]**	**%[b]**	**AVO[a,b]**	**%[c]**	**AVO[a,e]**
San Francisco	Auto	13.8%	1.32	100%	2.21	13.8%	1.32	100%	3.82
	Transit	36.0%		0.0%		36.0%		0.0%	
	Walk/Other	50.2%		0.0%		50.2%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
East Bay	Auto	39.4%	3.33	100%	2.43	39.4%	3.33	100%	3.82
	Transit	57.0%		0.0%		57.0%		0.0%	
	Walk/Other	3.6%		0.0%		3.6%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
North Bay	Auto	52.8%	1.7	100%	1.91	52.8%	1.7	100%	3.82
	Transit	45.3%		0.0%		45.3%		0.0%	
	Walk/Other	1.9%		0.0%		1.9%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
South Bay	Auto	58.0%	1.23	100%	2.46	58.0%	1.23	100%	3.82
	Transit	40.7%		0.0%		40.7%		0.0%	
	Walk/Other	1.3%		0.0%		1.3%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
Out of Region	Auto	47.8%	1.5	100%	3.82	47.8%	1.5	100%	3.82
	Transit	50.0%		0.0%		50.0%		0.0%	
	Walk/Other	2.2%		0.0%		2.2%		0.0%	
	Subtotal	*100%*		*100%*		*100%*		*100%*	
All Origins	Auto	40.6%	1.95	100%	***2.25***	40.6%	1.94	100%	***3.82***
	Transit	45.1%		0.0%		45.1%		0.0%	
	Walk/Other	14.3%		0.0%		14.3%		0.0%	
	Total	***100%***		*100%*		***100%***		*100%*	
Origin/Destination		**%[f]**		**%[f]**		**%[f]**		**%[f]**	
San Francisco		12.0%		12.0%		12.1%		12.1%	
East Bay		44.9%		44.9%		44.2%		44.2%	
North Bay		28.9%		28.9%		29.2%		29.2%	
South Bay		11.6%		11.6%		11.7%		11.7%	
Out of Region		2.7%		2.7%		2.9%		2.9%	
	Total	*100%*		*100%*		*100%*		*100%*	

[a] AVO – Average Vehicle Occupancy in terms of persons per vehicle.
[b] *SF Guidelines*, Work Trips to Superdistrict 1- All (All San Francisco assumed same as Superdistrict 1).
[c] All visitor trips assigned to Auto %.
[d] AVO based on *SF Guidelines*, Visitor Trips to Superdistrict 1 (All Other).
[e] AVO based on Fisherman's Wharf Visitor Survey – Fisherman's Wharf Community Benefit District, November 2006.
[f] AECOM, Analysis of Potential Visitation Patterns for America's Cup 34, June 2011.

SOURCE: *SF Guidelines*, AECOM, Adavant Consulting/LCW Consulting, 2011

TABLE 5.6-13
DAILY AND ANALYSIS-HOUR PERSON TRIP GENERATION
AC34 2012 AND AC34 2013

	AC34 2012		AC34 2013	
	Weekday	**Weekend**	**Weekday**	**Weekend**
Daily				
Landside Spectators	40,400	184,300	43,700	316,000
Spectators on Boats	4,630	13,000	6,300	18,000
Total Spectators	45,000	197,300	50,000	334,000
Landside Person Trips	84,840	387,030	91,770	663,600
Analysis Hour[a]				
Person Trips				
Inbound	4,242	77,406	4,589	132,720
Outbound	12,726	19,352	13,766	33,180
Total Person Trips	*16,968*	*96,758*	*18,354*	*165,900*
Transit Trips				
Inbound	1,090	22,028	1,176	37,831
Outbound	3,271	5,507	3,527	9,458
Total Transit Trips	*4,362*	*27,534*	*4,703*	*47,289*
Vehicle Trips				
Inbound	1,062	11,677	1,152	19,996
Outbound	3,187	2,919	3,456	4,999
Total Vehicle Trips	*4,249*	*14,596*	*4,608*	*24,995*

[a] Analysis hours are weekday 5:00 to 6:00 p.m., and weekend 12:00 to 1:00 p.m.

SOURCE: AECOM, Adavant Consulting/LCW Consulting, 2011

The number of person and vehicle trips generated/attracted by AC34 were allocated to the different viewing locations within and outside San Francisco based on their expected number of visitors. **Table 5.6-14** presents the trip generation by mode of travel and location for AC34 2012, while **Table 5.6-15** presents the trip generation by mode of travel and location for AC34 2013. As shown in the tables, auto travel represents approximately 55 to 58 percent of the total person trips, transit represents 26 to 29 percent, and walk/other represents 16 to 17 percent.

Parking demand for the AC34 events was estimated from the total daily trips by private auto, and an average turnover rate of 1.43 vehicles per space.[22] **Table 5.6-16** presents the parking demand for the AC34 weekday and weekend events for 2012 and 2013.

[22] A turnover of 1.43 means that each parking space turns over 1.43 times during the day. A turnover of 1 means that a vehicle arrives and stays in the parking space all day. The turnover of 1.43 was derived from projected inbound and outbound distribution patterns, based on the distribution patterns of BART ridership for a Fleet Week weekend event day.

TABLE 5.6-14
AC34 2012 TRIP GENERATION BY MODE
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
LANDSIDE LOCATIONS

Analysis Hour/Location	Person Trips				Vehicle Trips
	Auto	Transit	Walk/Other	Total	
Weekday PM Peak Hour					
Presidio and Crissy Field	2,676	1,294	839	4,809	1,159
Marina and Fort Mason to Aquatic Park	4,417	2,136	1,385	7,938	1,914
Fisherman's Wharf	818	396	257	1,470	354
Northeast Embarcadero	1,075	520	337	1,932	466
Downtown (Live Sites)	0	0	0	0	0
Other San Francisco	0	0	0	0	0
Subtotal SF Locations	*8,985*	*4,346*	*2,818*	*1,6149*	*3,893*
Treasure Island	565	12	3	579	233
Alcatraz and Angel Island	18	0	0	18	10
F. Baker/Marin Headlands/Cavallo Pt.	127	3	0	130	67
Sausalito	73	1	0	74	38
Tiburon/Belvedere	18	0	0	18	10
Subtotal Non-SF Locations	*800*	*16*	*3*	*819*	*356*
Total all Landside Locations	***9,785***	***4,362***	***2,821***	***16,968***	***4,249***
Weekend Midday Peak Hour					
Presidio and Crissy Field	20,969	12,405	7,051	40,425	5,727
Marina and Fort Mason to Aquatic Park	16,339	9,666	5,494	31,500	4,463
Fisherman's Wharf	4,085	2,417	1,374	7,875	1,116
Northeast Embarcadero	4,085	2,417	1,374	7,875	1,116
Downtown (Live Sites)	0	0	0	0	0
Other San Francisco	817	483	275	1,575	223
Subtotal SF Locations	*16,295*	*27,388*	*15,567*	*89,250*	*12,644*
Treasure Island	2,810	59	12	2,881	745
Alcatraz and Angel Island[a]	774	15	4	792	206
Fort Baker/Marin Headlands/Cavallo Point	1,442	25	8	1,475	387
Sausalito	1,792	37	2	1,830	477
Tiburon/Belvedere	518	11	1	529	137
Subtotal Non-SF Locations	*7,335*	*147*	*25*	*7,507*	*1,952*
Total all Landside Locations	***53,630***	***27,534***	***15,593***	***96,758***	***14,596***

a Auto person-trips and vehicle trips to Alcatraz and Angel Island have been assigned to Other San Francisco and Tiburon, respectively.

SOURCE: AECOM, Adavant Consulting/LCW Consulting, 2011

TABLE 5.6-15
AC34 2013 TRIP GENERATION BY MODE
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
LANDSIDE LOCATIONS

Analysis Hour/Location	Person Trips				Vehicle Trips
	Auto	Transit	Walk/Other	Total	
Weekday PM Peak Hour					
Presidio and Crissy Field	2,991	1,447	938	5,376	1,296
Marina and Fort Mason to Aquatic Park	2,150	1,040	674	3,864	932
Fisherman's Wharf	911	441	286	1,638	395
Northeast Embarcadero	3,634	1,757	1,140	6,531	1,574
Downtown (Live Sites)	0	0	0	0	0
Other San Francisco	0	0	0	0	0
Subtotal SF Locations	*9,686*	*4,685*	*3,038*	*17,409*	*4,197*
Treasure Island	615	13	2	630	252
Alcatraz and Angel Island	21	0	0	21	11
Fort Baker/Marin Headlands/Cavallo Point	185	3	1	189	94
Sausalito	93	2	0	94	49
Tiburon/Belvedere	10	0	0	10	5
Subtotal Non-SF Locations	*923*	*19*	*3*	*945*	*411*
Total all Landside Locations	***10,610***	***4,703***	***3,041***	***18,354***	***4,608***
Weekend Midday Peak Hour					
Presidio and Crissy Field	22,331	13,210	7,509	43,050	6,099
Marina and Fort Mason to Aquatic Park	16,884	9,988	5,677	32,550	4,611
Fisherman's Wharf	6,808	4,028	2,289	13,125	1,859
Northeast Embarcadero	28,866	17,077	9,707	55,650	7,884
Downtown (Live Sites)	3,268	1,933	1,099	6,300	893
Other San Francisco	1,362	806	458	2,625	372
Subtotal SF Locations	*79,519*	*47,042*	*26,739*	*153,300*	*21,718*
Treasure Island	6,146	127	26	6,300	1,630
Alcatraz and Angel Island[a]	769	16	4	787	204
Fort Baker/Marin Headlands/Cavallo Point	2,210	40	8	2,257	593
Sausalito	2,570	52	2	2,625	685
Tiburon/Belvedere	616	13	1	630	164
Subtotal Non-SF Locations	*12,311*	*247*	*42*	*12,600*	*3,276*
Total all Landside Locations	***91,830***	***47,289***	***26,782***	***165,900***	***24,995***

[a] Auto person-trips and vehicle trips to Alcatraz and Angel Island have been assigned to Other San Francisco and Tiburon, respectively.

SOURCE: AECOM, Adavant Consulting/LCW Consulting, 2011

TABLE 5.6-16
ESTIMATED PARKING DEMAND BY AREA FOR AC34 2012 AND 2013 EVENT DAYS

Study Area Location	AC34 2012		AC34 2013	
	Weekday	Weekend	Weekday	Weekend
Presidio and Crissy Field	2,030	8,085	2,270	8,610
Marina and Fort Mason to Aquatic Park	3,351	6,300	1,632	6,510
Fisherman's Wharf	621	1,575	692	2,625
Northeast Embarcadero[b]	816	1,671	2,759	11,225
Downtown (Live Sites)	0	0	0	1,260
Other San Francisco	0	315	0	525
Subtotal San Francisco	*6,818*	*17,946*	*7,353*	*30,756*
Treasure Island[c]	414	1,050	478	2,290
Marin County[d]	207	1,584	237	2,195
Subtotal Non-SF Locations	*621*	*2,634*	*715*	*4,485*
Total all Locations	***7,439***	***20,580***	***8,068***	***35,241***

[a] Does not include parking demand associated with trips to San Francisco by ferry.
[b] Includes parking demand associated with trips to Alcatraz Island.
[c] For purposes of transportation analysis, Treasure Island included with non-San Francisco locations.
[d] Includes parking demand associated with trips to Angel Island.

SOURCE: Adavant Consulting/LCW Consulting, 2011

Cruise Terminal and Northeast Wharf Plaza

Travel demand estimates for the Cruise Terminal were calculated based on historical information on cruise ship activities obtained from the Port of San Francisco, existing cruise terminal operations at Pier 27 and Pier 35, information contained within the *SF Guidelines*, and information on cruise terminal operations in Seattle, Washington and Brooklyn, New York.

Existing Cruise Ship Call Characteristics. San Francisco currently functions as both a home-port and transit port, with an average of 136,000 total passengers per year between 1998 and 2011. About 66 percent of the passengers are on home-based cruise ship calls (meaning cruise ship calls originate and end in San Francisco) while 34 percent are in transit (meaning that calls do not originate or end in San Francisco). For San Francisco home-based cruise ship calls, the primary destinations are Alaska and Mexico. The port also hosts numerous transit calls that do not originate or end in San Francisco. The number of cruise ship calls per year ranged between 37 (in 1998) and 84 (in 2004 and 2005), with an average of 57 cruise ship calls per year. On average there are six cruise ship calls a month, with the greatest number of calls in May (15 calls) and September (12 calls). Cruise ship arrivals and departures are generally evenly distributed over the week.

The average (2003 to 2011) cruise ship size is 1,640 passengers; about 26 percent of vessels carry fewer than 1,000 passengers, 54 percent of vessels carry between 1,000 and 2,000 passengers, and

20 percent of vessels carry more than 2,000 passengers. A single cruise ship is in port about 88 percent of the time, two vessels are typically in port about 10 percent of the time, and more than two ships are in port about 2 percent of the time. Most of the cruise ship arrivals (83 percent) take place between 5:00 and 8:00 a.m., while most of the departures (63 percent) take place between 3:00 and 6:00 p.m.

Existing Pier 35 Cruise Terminal Characteristics. Surveys of existing cruise terminal operations at Pier 27 and Pier 35 were conducted by CHS Consulting in May through July 2010 for eight cruise ships (six home-ported and two transit). Surveys included counts of passenger vehicles, taxis, trucks, and buses (by type of bus) arriving and departing, counts of pedestrians entering and exiting the main terminal and debarkation gates, and a passenger intercept survey to obtain information regarding origin and destination of trip, travel mode(s), and city of residence. Surveys of cruise ship operations were conducted between 7:30 a.m. and 3:00 p.m. In addition, hourly traffic volume counts were conducted on The Embarcadero for a one-week period between May 29 and June 4, 2010. The survey data provided information related to vehicle and passenger arrivals and departures to the cruise terminal by time of day, type of vehicle, and dwell times. Summary of survey results used in the travel demand calculations are included in Appendix TR-8.2.

Proposed Cruise Terminal at Piers 27-29. The level of improvements and equipment proposed in the Pier 27 Cruise Terminal would be designed to optimally handle vessels carrying 2,600 passengers (base design load), and would provide additional capacity at key areas to serve vessels carrying up to 4,000 passengers (peak design load). A sample of the North American Cruise market determined that 91 percent of the cruise ships have a capacity of 3,000 passengers or less and in San Francisco about 98 percent of ship calls between 2003 and 2011 were for ships with fewer than 3,000 passengers.[23] Therefore, the chance that a 4,000-passenger ship would dock at Pier 27 would be rare. A more probable maximum passenger load would be a 3,000-passenger ship (the average vessel size plus one standard deviation), which would encompass more than two thirds of the ship calls, and as such was assumed for the travel demand analysis, together with a cruise terminal employment of 220 employees (see Chapter 3).

The analysis of the Cruise Terminal project assumed one home-berthed cruise ship in port. Under this condition the ship begins and ends its cruise in San Francisco, requiring a larger amount of servicing, which translates in higher travel demand. Similarly, passengers would be more likely to access the ship by private automobile, taxi, or shuttle bus, which have a relatively low vehicle occupancy, substantially increasing the vehicle travel demand of the project. A home-ported ship generally arrives in port early in the morning with the passengers from the previous cruise. Passengers disembark, and the ship is re-provisioned, and passengers for the next cruise embark before departure in the late afternoon. Typically the home-ported ships spend less than one day in port.

[23] *North America Cruise Data 2004-2010*, US Maritime Administration, 2010.

The cruise terminal project travel demand is associated with private vehicles dropping-off or picking-up passengers, taxis, public transit, buses (motor coaches, shuttle buses), provisioning and service vehicles, and employees (by mode of travel).

The travel demand estimates also account for trips that would be associated with shared use of the cruise terminal. As described in Chapter 3, Project Description, the design for the proposed cruise terminal building provides for approximately 46,000 square feet of interior space for shared uses. In addition, depending on needs of the shared-use space, the GTA could also be used for temporary installations and holding of outdoor public gatherings. It is estimated that up to 100 shared events could occur at the cruise terminal site annually. For purposes of the transportation analysis, a special event accommodating 600 guests was assumed for the weekday p.m. peak hour analysis; special events would not overlap with cruise terminal operations during the weekday a.m. or Saturday midday peak hours, and were therefore included only in the analysis of weekday p.m. peak hour conditions.

The Northeast Wharf Plaza would provide an approximately 2½-acre open space at the south end of Pier 27, fronting The Embarcadero promenade. It would be designed to serve as a waterfront park resource to support passive recreational enjoyment and expansive public views of San Francisco Bay. It is anticipated that existing and future pedestrians traveling along The Embarcadero promenade would benefit from the Northeast Wharf Plaza, and that the plaza would not generate any new trips to the area.

As indicated in **Table 5.6-17**, the Cruise Terminal project would generate about 13,800 person trips per day on a weekday, including about 920 person-trips during the a.m. peak hour (about 6.6 percent of total daily trips), and 390 person-trips during the p.m. peak hour (about 2.8 percent of total daily trips). On a Saturday, the Cruise Terminal project would generate a similar number of person-trips on a daily basis, and about 2,080 person-trips during the midday peak hour (about 15 percent of total daily trips).

TABLE 5.6-17
CRUISE TERMINAL AND NORTHEAST WHARF PLAZA TRIP GENERATION
DAILY AND PEAK HOUR

	Weekday			Saturday	
	Daily	AM Peak Hour	PM Peak Hour	Daily	Midday Peak Hour
Cruise Terminal[a]	12,300	898	197	12,300	2,068
Retail[b]	102	18	9	119	12
Special Event[b,c]	1,380	0	184	1,380	0
Total	**13,782**	**916**	**390**	**13,799**	**2,080**

[a] Includes trips generated by 3,000-passenger home-port cruise ship. Northeast Wharf Plaza would not generate any new trips to the area.
[b] Based on studies of non-work (visitor) trips performed within the area and the type of retail uses proposed to serve the cruise terminal operation, a daily and peak hour 90 percent linked trips reduction was applied to non-work (visitor) trips.
[c] A special event of 600 guests was assumed for the weekday p.m. peak hour analysis. Special events would not overlap with cruise ship operations during the weekday a.m. or Saturday midday peak hours.

SOURCE: Adavant Consulting/LCW Consulting, 2011

The project-generated person-trips were assigned to travel modes in order to determine the number of auto, transit, walk, and other trips, where "other" includes bicycles, motorcycles, and taxis. Mode split information for the project was taken from the *SF Guidelines* for retail, special event, and cruise terminal employee and visitor trips to Superdistrict 1, and from surveys of the existing cruise terminal for cruise ship visitors.

To determine the number of vehicle trips generated by the project, an average vehicle occupancy rate was applied to the number of person-trips. Average vehicle occupancies for retail and special event uses were obtained from the *SF Guidelines*. Average vehicle occupancies for the new cruise terminal were based on information from surveys of the existing cruise terminal for cruise ship visitors.

Table 5.6-18 presents the total person-trips by mode and vehicle trips generated by the project for the three analysis time periods. Based on the mode share percentages and average vehicle occupancies, the project would generate about 205 vehicle trips during the weekday a.m. peak hour (109 inbound and 96 outbound), 85 vehicle trips during the weekday p.m. peak hour (35 inbound and 50 outbound), and 565 vehicle trips during the Saturday midday peak hour (291 inbound and 274 outbound).

TABLE 5.6-18
CRUISE TERMINAL AND NORTHEAST WHARF PLAZA
TOTAL TRIP GENERATION BY MODE

	Person-Trips						
Peak Hour	**Auto**	**Motor Coach (Cruise Only)[a]**	**Transit**	**Taxi (Cruise Only)[a]**	**Walk/ Other[b]**	**Total**	**Vehicle-Trips**
Weekday AM	2,613	322	113	197	23	916	205
Weekday PM	190	33	77	36	74	390	85
Saturday Midday	1,009	391	214	416	50	2,080	565

[a] Motor Coach and taxis associated with pick up and drop off of cruise ship passengers.
[b] "Other" mode includes bicycles, motorcycles, and taxis associated with the proposed retail and special event uses.

SOURCE: Adavant Consulting/LCW Consulting, 2011

The distribution of trips to and from the Cruise Terminal project site was based on the origin/destination of a specific trip, and separated into the four quadrants of San Francisco (Superdistricts 1 through 4), East Bay, North Bay, South Bay, and outside of the region. The distributions for all uses were obtained from the *SF Guidelines* for work and non-work trips to Superdistrict 1.

As indicated in **Table 5.6-19**, the highest percentage of trips generated by the project would come to and from areas within San Francisco. These distribution patterns were used as the basis for assigning project-related vehicle trips to the local streets in the study area and transit trips to the local and regional transit operators.

TABLE 5.6-19
CRUISE TERMINAL AND NORTHEAST WHARF PLAZA
TRIP DISTRIBUTION PATTERNS

	Cruise Terminal/Special Event		Retail	
	Work[a]	**Visitor[b]**	**Work[a]**	**Visitor[c]**
Superdistrict 1	12.8%	22.0%	12.8%	19.0%
Superdistrict 2	14.4%	14.0%	14.4%	7.0%
Superdistrict 3	17.0%	13.0%	17.0%	8.0%
Superdistrict 4	11.2%	7.0%	11.2%	3.0%
East Bay	22.4%	11.0%	22.4%	11.0%
North Bay	6.1%	5.0%	6.1%	5.0%
South Bay	14.3%	7.0%	14.3%	8.0%
Out of Region	1.8%	21.0%	1.8%	39.0%
Total	**100%**	**100%**	**100%**	**100%**

[a] Work Trips to Superdistrict 1 - All.
[b] Visitor Trips to Superdistrict 1 – All Other.
[c] Visitor Trips to Superdistrict 1 – Retail.

SOURCE: SF Guidelines, Adavant Consulting/LCW Consulting, 2011

The *SF Guidelines* methodology for estimating freight and service vehicle loading/unloading demand was used to calculate the proposed project's loading demand. For the retail uses, daily truck trip generation was calculated based on the rate per 1,000 square feet of use contained in the *SF Guidelines*, then converted to hourly demand based on a 9-hour day and a 25-minute average stay. Average hourly demand was converted to a peak hour demand by applying a peaking factor. For the cruise terminal use, the daily number of truck trips was based on surveys of the existing cruise terminal facility, adjusted to reflect additional demand that would be generated by a 3,000-passenger ship. The hourly demand was based on an 8-hour day (i.e., 6:30 a.m. to 3:30 p.m.) and a two-hour average stay. Surveys of the existing operations also indicated that 37 percent of delivery and service vehicles arrive prior to 7:00 a.m. **Table 5.6-20** summarizes the daily truck trip generation and peak hour loading space demand for the cruise terminal and retail uses.

TABLE 5.6-20
CRUISE TERMINAL AND NORTHEAST WHARF PLAZA LOADING DEMAND

	Daily Truck Generation	**Peak Hour Loading Space Demand**
Cruise Terminal	48	28.0
Retail[a]	1	0.1
Total	**49**	**28.1**

SOURCE: Adavant Consulting/LCW Consulting, 2011

The *SF Guidelines* methodology for estimating parking demand was used to calculate the parking demand associated with the cruise terminal. For the cruise terminal employee and retail uses, the long-term parking demand was derived by estimating the number of employees, and applying the trip mode split and average vehicle occupancy from the trip generation calculations. The short-term parking for the cruise terminal and retail uses was estimated from the total daily visitor trips by private auto, and an average auto turnover rate of 5.5 vehicles per space (per *SF Guidelines*). **Table 5.6-21** summarizes the parking demand for the cruise terminal and retail uses.

TABLE 5.6-21
CRUISE TERMINAL AND NORTHEAST WHARF PLAZA PARKING DEMAND

	Long Term	Short Term	Total
Cruise Terminal	55	93	148
Retail[a]	4	1	5
Total	**59**	**94**	**154**

SOURCE: Adavant Consulting/LCW Consulting, 2011

Relocation of Existing Uses at Piers 27-29. It is expected that most existing tenants leasing and occupying Piers 27-29 would be displaced or relocated prior to the AC34 2012 event. The City and Port are working with the following businesses at Piers 27-29 to identify possible relocation sites: Teatro Zinzanni dinner theater, Bauer's California Coach Sales and Services, and San Francisco Soccer's Telegraph Field. Three possible relocation sites were identified for Teatro Zinzanni: at The Embarcadero/Broadway parking lot about 0.5 miles south along The Embarcadero, within the Mission Bay South Area on the block between Third and Fourth streets, north of Channel Street, or at another site located on property outside the jurisdiction of the Port of San Francisco.[24] Bauer's is proposed to be relocated about 2½ miles to the south at Pier 50, and the San Francisco Soccer's Telegraph Field is proposed to be relocated about 0.2 miles to the south at the Pier 17 shed at Piers 15-17 (see Section 3.4.6: Tenant Displacement and Relocation for additional details). Since these are existing uses generating trips to and from the waterfront, the vehicle, transit, pedestrian and bicycle trips associated with these uses are currently accounted for within the transportation network. Counts of person and vehicle trips at Piers 27-29 indicated that during the weekday p.m. peak hour, there are about 14 inbound and 9 outbound person trips generated by the Teatro Zinzanni (start time of show is at 6:15 p.m., and most patrons arrive between 6:00 and 6:30 p.m., after the peak hour), 31 inbound and 52 outbound vehicle trips associated with the public parking facility, and 2 inbound and 2 outbound bus trips into and out of Pier 27. The relocation of the existing uses on Piers 27-29 may result in minimal changes in vehicle trips in the vicinity of Pier 50 and the Mission Bay South Area. The effect of the relocation of Teatro Zinzanni to a currently-undetermined site outside of the jurisdiction of the Port of

[24] For any of the three sites Theatro Zinzanni would have to develop design and construction proposals that would be subject to City review for compliance with applicable zoning and design review requirements; depending on details of the site and design, further environmental review may be required.

San Francisco on travel demand is unknown. Therefore, additional changes to travel demand were not determined necessary to account for tenant relocation.

3. Future Transportation Improvements Assumptions

The future year 2035 cumulative analysis assumes completion of certain planned and reasonably foreseeable traffic, pedestrian, transit and bicycle changes, as described below, that, although not part of the proposed project, could affect circulation. These improvements would be completed by the City directly.

- The Planning Department's Northeast Embarcadero Study presents public realm improvements and urban design guidelines for new development within a 40-acre study area that is roughly located on the west side of The Embarcadero between Market and North Point streets.[25] Roadway modifications required as part of the public realm/pedestrian improvements identified in the Northeast Embarcadero Study would affect the study intersections of Broadway/Battery, Broadway/Sansome, The Embarcadero/Broadway, and The Embarcadero Washington. On Broadway, the number of travel lanes would be reduced from two lanes in each direction, to one lane in each direction (plus left turn pockets within a center median), and bicycle lanes in each direction would be installed. On Washington Street, the number of travel lanes is also proposed to be reduced from two lanes in each direction, to one lane in each direction. As a result of these changes, at the northbound approach of The Embarcadero at Broadway and at Washington Street, the number of left turn lanes would be reduced from two to one.

- The Planning Department's Fisherman's Wharf Public Realm Plan would provide an overall vision for the streets, open spaces and building design in Fisherman's Wharf. It would also implement a parking signage program, traffic circulation plan, passenger and freight loading management, gateway improvement projects, streetscape improvements, and open space improvements.[26] Roadway modifications required as part of the public realm improvements identified in the Fisherman's Wharf Public Realm Plan would affect the study intersections of The Embarcadero/Beach/Grant and The Embarcadero/North Point/Kearny. Although a number of variants related to traffic operations are presented, the 2035 cumulative analysis incorporates the variant that would divert northbound The Embarcadero traffic to westbound Beach Street. Intersection modifications include restriping of existing travel lanes and signal timing changes to accommodate the proposed traffic diversion.

- The Port of San Francisco's Embarcadero Promenade Design Criteria would provide direction to the Port and City efforts to increase the pedestrian carrying capacity and public realm quality of The Embarcadero Promenade by refining and improving the placement and organization of street fixtures and furniture, removing specified raised seating/platforms of the Embarcadero Art Ribbon that constrain pedestrian circulation, and establishing criteria for tenant design improvements along waterfront bulkhead buildings.

[25] San Francisco Planning Department, Northeast Embarcadero Study, An Urban Design Analysis for the Northeast Embarcadero Area, June 2010.
[26] San Francisco Planning Department, Preliminary Mitigated Negative Declaration, Fisherman's Wharf Public Realm Plan Project, Planning Department Case No. 2010.0256E, April 2011.

- SFMTA's Transit Effectiveness Project (TEP), which would institute a series of changes to Muni's service to streamline operations, including changes to frequencies, service hours, route alignments, and vehicle capacity.

- Central Subway (utility relocation currently underway) which would extend Muni's T-Third light rail line from the intersection of Fourth/King into Union Square and Chinatown.

- Transbay Transit Center project, currently under construction, which would serve existing transit service at the temporary terminal, as well as Caltrain's Downtown Extension and possibly intercity high-speed rail.

- Transit Center District Plan project, which would allow for greater development around the Transbay Transit Center and result in changes to the public realm, including modifications to intersection geometries and direction of streets.

- Expanded ferry service on San Francisco Bay, consistent with the Water Emergency Transportation Authority Implementation and Operations Plan.

- The San Francisco Bicycle Plan Howard Street Bicycle Lane project, which would create a westbound bicycle lane on Howard Street between The Embarcadero and Fremont Street, and which would result in travel lane reductions on Howard Street.

- The San Francisco Bicycle Plan Long-Term Improvement on Battery Street between Clay Street and The Embarcadero would involve installation of Class II and/or Class III bicycle facilities in the southbound direction in order to provide a southbound connection between existing Bicycle Route 5 on The Embarcadero and existing Bicycle Route 11 on Battery Street south of Clay Street. This 10-block section of Battery Street is not currently part of the bicycle route network.

- The San Francisco Bicycle Plan Long-Term Improvement on the San Francisco Bay Trail, which runs as an unimproved on-street trail through Fisherman's Wharf along The Embarcadero (Powell Street to Taylor Street) and Jefferson Street (Taylor Street to Hyde Street), both one-way westbound streets. The on-street trail is not currently part of the bicycle route network.

4. Development of 2035 Cumulative Traffic and Transit Forecasts Methodology

Future year 2035 cumulative conditions were developed via a two-step process that (1) utilized the San Francisco's County's travel demand model (SF-CHAMP) to determine background traffic growth on study area roadways, and (2) traffic volume overlays to reflect traffic volume turning movements associated with developments that are not fully reflected in the SF-CHAMP model output. The 2035 cumulative conditions includes the development that could occur as part of the long-term development rights that would be provided to the Event Authority as part of the Host Agreement (see Chapter 3, Section 3.4.8, Long-Term Development Rights).[27]

[27] As indicated in Chapter 3, Project Description, the Host Agreement directs that any such future development plans and uses allowed under the Transfer Agreement would be required to undergo separate environmental review to comply with CEQA, when site-specific development project details are proposed.

Future year 2035 traffic volume forecasts were estimated based on cumulative development and growth identified by SF-CHAMP travel demand model. The SF-CHAMP model is an activity-based travel demand model that has been validated to represent future transportation conditions in San Francisco and is updated regularly. The model predicts person travel for a full day based on assumptions of growth in population, housing units, and employment, which are then allocated to different periods throughout the day, using time of day sub-models. The SF-CHAMP model predicts future travel demand by mode for auto, transit, walk and bicycle trips. The SF-CHAMP model provides forecasts of vehicular traffic on regional freeways, major arterials, and on the study area local roadway network considering the available roadway capacity, origin-destination demand, and travel speeds when assigning the future travel demand to the roadway network.

The SFCTA model divides San Francisco into approximately 981 geographic areas, known as Traffic Analysis Zones (TAZs). The SF-CHAMP model also includes zones outside of San Francisco for which data is obtained through the current Metropolitan Transportation Commission (MTC) Model. For each TAZ, the SF-CHAMP model estimates the travel demand based on TAZ population and employment growth assumptions developed by the Association of Bay Area Governments (ABAG) for year 2035 (Projections 2009). Within San Francisco, the San Francisco Planning Department is responsible for allocating ABAG's countywide growth forecast to each SF-CHAMP model TAZ, based upon existing zoning and approved plans, using an area's potential zoning capacity, and the anticipated extent of redevelopment of existing uses.

Future year 2035 intersection turning movement volumes were developed by applying growth factors calculated from traffic volume growth between year 2010 and 2035 conditions, obtained from the SF-CHAMP model to actual traffic volumes collected in the field. Traffic demand associated with development not fully reflected within the SF-CHAMP model, calculated based on the methodology contained within the *SF Guidelines*, was added to the intersection turning movement volumes. Since the SF-CHAMP model is a weekday travel demand model, future year Saturday midday peak hour conditions were estimated based on the net growth developed for the weekday p.m. condition. This approach was consistent with the methodology used on previous analyses of weekend conditions in the Northeast Waterfront and provided conservative results, since in addition to the expected growth of visitor-oriented uses, it included additional growth from standard uses, such as office, that would not generate as many trips on a weekend as they would on a weekday.

Future year 2035 transit ridership for the Muni downtown and regional transit screenlines was based on the analysis conducted for the Transit Center District Plan for future year 2030 conditions. Background growth in transit ridership between 2030 and 2035 at the Muni and regional transit screenlines was based on the SF-CHAMP model transit output, which provides ridership projections for each of the transit lines, and was adjusted across the Muni and regional screenlines where necessary to smooth out the growth in ridership.

5.6.3.4 AC34 Events and Cruise Terminal Impacts and Mitigation Measures

America's Cup 2012

Impacts associated with the America's Cup 2012 events are presented below. The following are the topics addressed and the impacts analyzed for these topics:

- Traffic: Impacts TR-1 through TR-16
- Transit: Impacts TR-17 through TR-28
- Bicycle: Impacts TR-29 through TR-30
- Pedestrian: Impacts TR-31 through TR-32
- Loading: Impact TR-33
- Emergency Vehicle Access: Impact TR-34
- Construction: Impact TR-35 through TR-36
- Other Special Events: Impact TR-37

As described in Chapter 3, Project Description, and Section 5.6.3.3 above, proposed AC34 events in 2012 would include 20 event (race and non-race) days with the number of spectators per day projected to range from 21,000 to 197,000 spectators. The Event Authority estimates about 14 event days with between 21,000 and 45,000 spectators, and six event days with between 120,000 and 197,000 spectators (which would occur only on weekend days). The transportation impact analysis was conducted assuming 45,000 spectators on a weekday, and 197,000 spectators on a Saturday, which represents a worst-case assessment of weekday and weekend conditions, respectively. As described in Section 5.6.3.2, Project Transportation Improvements Assumptions, a transportation management program (i.e., the People Plan) to coordinate and optimize local and regional transit service plans and traffic, pedestrian, and bicycle management measure to accommodate the AC34 travel demand would be implemented for AC34 2012 events.

Overview of Project Traffic Impacts associated with the America's Cup 2012 Events

The proposed AC34 2012 events would generate new vehicle trips to the various AC34 venues as well as to secondary viewing areas during the 20 days of AC34 2012 events. While the AC34 2012 events would result in an increase in vehicle trips to the various AC34 venues, this increase would be temporary, and would only last several days in 2012. On high attendance event days, as part of the proposed project, all of the northbound travel lanes on The Embarcadero could be closed between Howard and Bay Streets to all but pier tenants within the restricted area, and emergency response vehicles. Access to areas north of Bay Street between The Embarcadero and Fillmore Street, and north of Chestnut Street between Fillmore and Lyon Streets would be restricted to residents and authorized vehicles only. These traffic management strategies on weekends (and possibly on some weekdays), are assumed in this analysis. Vehicles traveling on or destined to the closed streets would be required to reroute to other streets, which would result in increased congestion at adjacent intersections and improved traffic operations on the closed and restricted streets.

The AC34 2012 events would result in significant and unavoidable impacts at 12 of the 44 study intersections, including: The Embarcadero/Beach, The Embarcadero/Howard, King/Third,

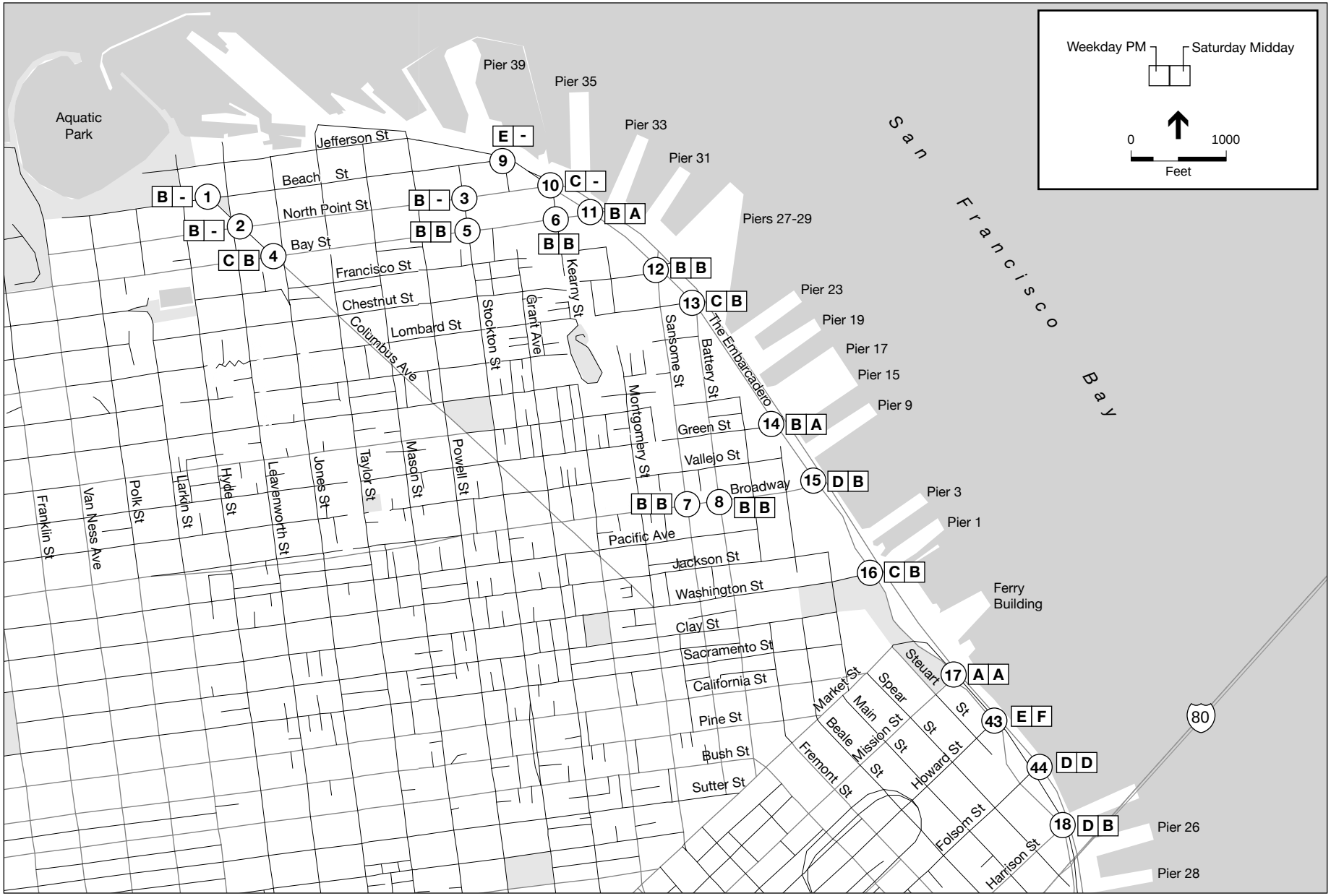
Lombard/Divisadero, Lombard/Fillmore, Bay/Laguna, Bay/Van Ness, Bush/Van Ness, Pine/Van Ness, Lombard/Van Ness, Lincoln/25th, and Lombard/Lyon. **Mitigation Measure M-TR-1** (People Plan Specific Provisions)**,** which would require the People Plan to develop and implement strategies to manage traffic associated with visitors arriving by auto and to encourage use of alternate modes of transportation, would reduce, but not eliminate these significant and unavoidable impacts.

The AC34 2012 events would have less than significant impacts at the intersections of King/Fourth, Jackson/Arguello, and Pacific/Presidio that would operate at LOS E or LOS F under Existing plus AC34 2012 conditions. This conclusion was based on examining the increase in AC34 2012 event project-generated vehicle trips at these intersections and determining whether the project's increase would contribute considerably to critical movements operating at LOS E or LOS F. Supporting documentation regarding project contributions to intersections operating at LOS E or LOS F is included in Appendix TR-3. Twenty-nine of the 44 study intersections would operate at LOS D or better under Existing plus AC34 2012 events conditions, including:

- Beach/Columbus
- North Point/Columbus
- North Point/Stockton
- Bay/Columbus
- Bay/Stockton
- Bay/Kearny
- Broadway/Sansome
- Broadway/Battery
- The Embarcadero/N Point/Kearny
- The Embarcadero/Bay
- The Embarcadero/Chestnut
- The Embarcadero/Lombard
- The Embarcadero/Green
- The Embarcadero/Broadway
- The Embarcadero/Washington
- The Embarcadero/Mission
- The Embarcadero/Harrison
- The Embarcadero/Bryant
- The Embarcadero/Brannan
- The Embarcadero/Folsom
- Fremont/Folsom
- 16th/Third
- Cesar Chavez/Third
- Cesar Chavez/Illinois
- Lake/14th Avenue
- Lake/15th Avenue
- Bay/Hyde
- Alexander/Bunker (Marin Co.)
- Alexander/Ft. Baker-East (Marin Co.)

Impact TR-1 through Impact TR-12: Implementation of the AC34 2012 events would result in significant impacts at 12 signalized and unsignalized intersections that would operate at LOS E or LOS F under Existing plus AC34 2012 conditions. (Significant and Unavoidable with Mitigation)

As discussed above, the AC34 2012 events would generate 4,250 vehicle trips during the weekday p.m. peak hour (1,060 inbound and 3,190 outbound), and 14,600 vehicle trips during the Saturday midday peak hour (11,680 inbound and 2,920 outbound). These trips were distributed to the roadway network based on the expected number of spectators (45,000 spectators on a weekday, and 197,000 spectators on a Saturday) and their estimated origins and destinations (see Tables 5.6-13 and 5.6-14). The LOS conditions for weekday p.m. and Saturday midday peak hour for the study intersections analyzed for AC34 2012 events are presented in **Figures 5.6-10a** through **5.6-10c**.



SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

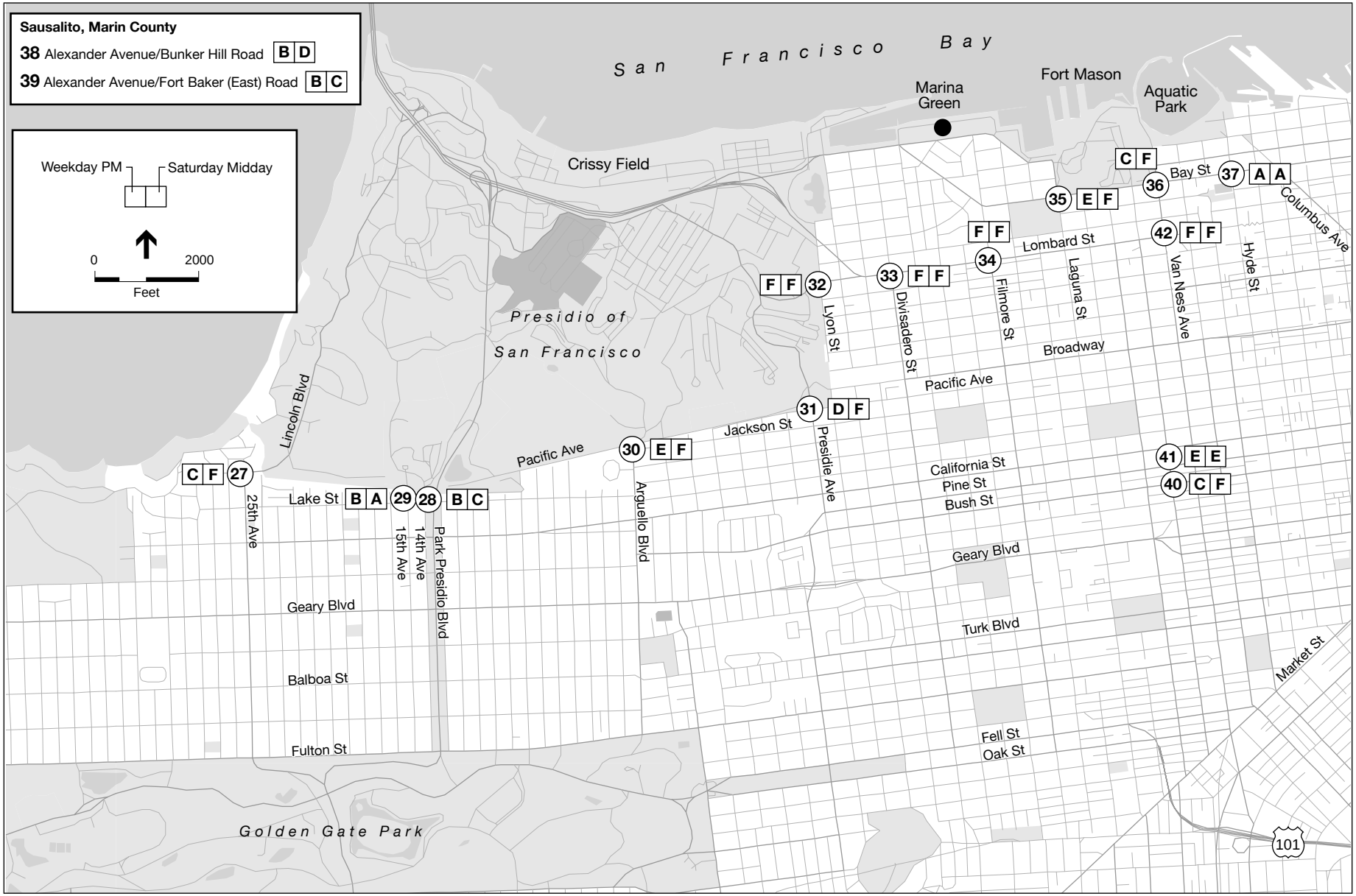
Figure 5.6-10A
Existing Plus AC34 2012 Intersection LOS-
Piers 27-29 Vicinity

✱ America's Cup Team Bases

SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-10B
Existing Plus AC34 2012 Intersection LOS-
South of Bay Bridge



America's Cup Village in 2012

SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-10C
Existing Plus AC34 2012 Intersection LOS-
Northwest San Francisco

As discussed in Section 5.6.3.3, under "Approach to Impact Analysis Methodology," a project would have a significant impact at an intersection if project-generated trips would cause a signalized intersection operating at LOS D or better under Existing conditions to operate at LOS E or LOS F, or intersection operating at LOS E under Existing conditions to deteriorate to LOS F conditions. At intersections that currently operate at LOS E or LOS F conditions, and would continue to operate at LOS E or LOS F under Existing plus Project conditions, the increase in project vehicle trips would be reviewed to determine whether the increase would contribute considerably to critical movements operating at LOS E or LOS F. A project would result in a significant impact at an unsignalized intersection if project-generated trips would cause the level of service at the worst approach to deteriorate from LOS D or better to LOS E or LOS F and Caltrans signal warrants would be met, or cause Caltrans signal warrants to be met when the worst approach is already operating at LOS E or LOS F.[28]

Table 5.6-22 presents the intersection LOS conditions at the study intersections for Existing plus AC34 2012 events conditions for the weekday p.m. peak hour, while **Table 5.6-23** presents the intersection LOS for the Saturday midday peak hour. During AC34 2012 events, the vehicle trips traveling to and from the spectator venues would degrade operations at ten signalized from LOS D or better, to LOS E or LOS F conditions. At two unsignalized intersections (Lincoln/25th and Lombard/Lyon), the worst approach would operate at LOS E or LOS F, and Caltrans signal warrants would be met. The AC34 2012 events would result in temporary but significant impacts at the following 12 study intersections:

- Impact TR-1: The Embarcadero/Beach (LOS E during weekday p.m.)
- Impact TR-2: The Embarcadero/Howard (LOS E during weekday p.m. and Saturday midday)
- Impact TR-3: King/Third (LOS F during weekday p.m.)
- Impact TR-4: Lombard/Divisadero (LOS F during weekday p.m. and Saturday midday)
- Impact TR-5: Lombard/Fillmore (LOS F during weekday p.m. and Saturday midday)
- Impact TR-6: Bay/Laguna (LOS E during weekday p.m. and LOS F during Saturday midday)
- Impact TR-7: Bay/Van Ness (LOS F during the Saturday midday)
- Impact TR-8: Bush/Van Ness (LOS F during the Saturday midday)
- Impact TR-9: Pine/Van Ness (LOS E during the weekday p.m. and Saturday midday)
- Impact TR-10: Lombard/Van Ness (LOS F during weekday p.m. and Saturday midday)
- Impact TR-11: Lincoln/25th (LOS F during the Saturday midday)
- Impact TR-12: Lombard/Lyon (LOS F during weekday p.m. and Saturday midday)

[28] A signal warrant is a condition that an intersection must meet to justify a signal installation. There are different warrants, which examine factors such as the volume of vehicles, bicyclists, and pedestrians, the signal system, collision statistics, as well as the geometric/physical configuration of the intersection. Even if a signal warrant is not met under the strictest interpretation, the determination to signalize an intersection could be made based upon the city traffic engineer's professional judgment of intersection operations.

TABLE 5.6-22
INTERSECTION LEVEL OF SERVICE - EXISTING, EXISTING PLUS AC34 2012, AND EXISTING PLUS AC34 2013 CONDITIONS - WEEKDAY PM PEAK HOUR

#	Intersection		Existing		Existing plus AC34 2012		Existing plus AC34 2013	
			Delay[a,b]	LOS	Delay[a,b]	LOS	Delay[a,b]	LOS
1	Beach Street	Columbus Avenue	10 (nb)	B	10 (nb)	B	10 (nb)	B
2	North Point Street	Columbus Avenue	13.8	B	13.8	B	13.8	B
3	North Point Street	Stockton Street	11.9	B	12.1	B	12.6	B
4	Bay Street	Columbus Avenue	21.2	C	21.4	C	21.3	C
5	Bay Street	Stockton Street	9.4	A	10.2	B	10.0	A
6	Bay Street	Kearny Street	10.0	B	12.1	B	19.4	B
7	Broadway	Sansome Street	14.3	B	14.5	B	15.6	B
8	Broadway	Battery Street	18.8	B	19.4	B	22.1	C
9	The Embarcadero	Beach Street	51.2	D	**56.2**	**E**	**72.6**	**E**
10	The Embarcadero	North Point Street	28.8	C	30.1	C	34.9	C
11	The Embarcadero	Bay Street	14.7	B	15.4	B	16.4	B
12	The Embarcadero	Chestnut Street	18.0	B	19.4	B	23.1	C
13	The Embarcadero	Lombard Street	32.7	C	33.8	C	36.7	D
14	The Embarcadero	Green Street	19.2	B	19.7	B	21.2	C
15	The Embarcadero	Broadway	31.8	C	36.9	D	**63.6**	**E**
16	The Embarcadero	Washington Street	32.9	C	33.9	C	36.8	D
17[d]	The Embarcadero	Mission Street	30.5	C	2.0	A	2.3	A
43[c]	The Embarcadero	Howard Street	46.4	D	**77.6**	**E**	**>80/1.6**	**F**
44[c]	The Embarcadero	Folsom Street	45.2	D	49.1	D	**77.2**	**E**
18	The Embarcadero	Harrison Street	33.4	C	45.7	D	**>80/1.01**	**F**
19	The Embarcadero	Bryant Street	32.4	C	36.5	D	**56.0**	**E**
20	The Embarcadero	Brannan Street	28.6	C	30.1	C	37.1	D
21	Fremont Street	Folsom Street	25.9	C	26.6	C	28.9	C
22	King Street	Third Street	**77.0**	**E**	**>80/1.00**	**F**	**>80/1.05**	**F**
23	King Street	Fourth Street	**64.6**	**E**	**68.1**	**E**	**78.4**	**E**
24	16th Street	Third Street	21.3	C	21.5	C	22.2	C
25	Cesar Chavez St	Third Street	22.7	C	23.0	C	23.9	C
26	Cesar Chavez St	Illinois Street	21.5	C	20.3	C	20.3	C
27	Lincoln Blvd	25th Avenue	14.9 (wb)	B	21.0 (wb)	C	22.3 (wb)	C
28	Lake Street	14th Avenue	12.5 (wb)	B	12.9 (wb)	B	13.0 (wb)	B
29	Lake Street	15th Avenue	10.3 (wb)	B	11.2 (wb)	B	11.3 (wb)	B
30	Jackson Street	Arguello Boulevard	20.6 (sb)	C	**36.0 (sb)**	**E**	**38.9 (sb)**	**E**
31	Pacific Avenue	Presidio Boulevard	18 (sb)	C	28.0 (sb)	D	29.8 (sb)	D
32	Lombard Street	Lyon Street	26.7 (eb)	D	**>50 (eb)**	**F**	**>50 (eb)**	**F**
33	Lombard Street	Divisadero Street	32.2	C	**>80/1.56**	**F**	**>80/1.18**	**F**
34	Lombard Street	Fillmore Street	33,8	C	**>80/1.20**	**F**	**>80/1.09**	**F**
35	Bay Street	Laguna Street	18.4	B	**69.3**	**E**	31.4	C
36	Bay Street	Van Ness Avenue	15.8	B	25.8	C	20.9	C
37	Bay Street	Hyde Street	5.8	A	6.0	A	5.9	A
38	Alexander Avenue	Bunker Road	12.3 (eb)	B	12.4 (eb)	B	12.6 (eb)	B
39	Alexander Avenue	Ft. Baker (East) Rd	10.4 (wb)	B	10.5 (wb)	B	10.8 (wb)	B
40	Bush Street	Van Ness Avenue	20.7	C	23.9	C	24.9	C
41	Pine Street	Van Ness Avenue	21.0	C	**55.3**	**E**	42.7	D
42	Lombard Street	Van Ness Avenue	42.5	D	**>80/1.40**	**F**	**>80/1.29**	**F**

[a] Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated by ( ).

[b] Intersections operating at LOS E or LOS F conditions highlighted in bold, and overall intersection volume-to-capacity (v/c) ratio is presented for LOS F conditions.

[c] Intersections 43 and 44 are out of order because they were added to the network after the transportation model was coded in response to a change in the project description.

[d] The LOS at this intersection reflects the closure of eastbound Mission Street between Steuart Street and The Embarcadero as needed for the provision of a short F-Market & Wharves service between the Ferry Building and Fisherman's Wharf.

TABLE 5.6-23
INTERSECTION LEVEL OF SERVICE - EXISTING, EXISTING PLUS AC34 2012, AND EXISTING PLUS AC34 2013 CONDITIONS - SATURDAY MIDDAY PEAK HOUR

#	Intersection		Existing		Existing plus AC34 2012		Existing plus AC34 2013	
			Delay[a,b]	LOS	Delay[a,b]	LOS	Delay[a,b]	LOS
1[c]	Beach Street	Columbus Avenue	11.3 (nb)	B	--	*N/A*	--	*N/A*
2[c]	North Point Street	Columbus Avenue	11.0	B	--	*N/A*	--	*N/A*
3[c]	North Point Street	Stockton Street	10.0	B	--	*N/A*	**--**	*N/A*
4	Bay Street	Columbus Avenue	16.8	B	11.0	B	11.0	B
5	Bay Street	Stockton Street	9.4	A	11.5	B	11.5	B
6	Bay Street	Kearny Street	8.6	A	10.1	B	9.9	A
7	Broadway	Sansome Street	11.9	B	15.7	B	23.7	C
8	Broadway	Battery Street	17.2	B	16.0	B	20.2	C
9[c]	The Embarcadero	Beach Street/Grant	**>80/0.56**	**F**	--	*N/A*	--	*N/A*
10[c]	The Embarcadero	North Point St/Kearny	**>80/0.76**	**F**	--	*N/A*	--	*N/A*
11[d]	The Embarcadero	Bay Street	11.6	B	0.4	A	0.4	A
12[d]	The Embarcadero	Chestnut Street	16.2	B	10.9	B	10.9	B
13[d]	The Embarcadero	Lombard Street	21.5	C	17.6	B	17.6	B
14[d]	The Embarcadero	Green Street	17.9	B	9.3	A	9.3	A
15[d]	The Embarcadero	Broadway	27.9	C	19.4	B	19.4	B
16[d]	The Embarcadero	Washington Street	29.6	C	16.4	B	16.4	B
17[d,f]	The Embarcadero	Mission Street	13.1	B	0.7	A	0.7	A
43[e]	The Embarcadero	Howard Street	20.3	C	**>80/0.78**	**E**	**>80/1.16**	**F**
44[e]	The Embarcadero	Folsom Street	19.9	B	51.6	D	**>80/0.66**	**F**
18	The Embarcadero	Harrison Street	12.1	B	14.5	B	15.0	B
19	The Embarcadero	Bryant Street	22.9	C	26.8	C	27.9	C
20	The Embarcadero	Brannan Street	19.8	B	27.8	C	34.0	C
21	Fremont Street	Folsom Street	24.8	C	30.4	C	**>80/0.97**	**F**
22	King Street	Third Street	24.4	C	30.4	C	39.6	D
23	King Street	Fourth Street	38.2	D	40.2	D	**75.0**	**E**
24	16th Street	Third Street	20.2	C	19.4	B	19.0	B
25	Cesar Chavez St	Third Street	20.4	C	20.9	C	23.1	C
26	Cesar Chavez St	Illinois Street	14.5	B	11.9	B	12.3	B
27	Lincoln Blvd	25th Avenue	15.3 (nb)	C	**>50 (nb)**	**F**	**>50 (nb)**	**F**
28	Lake Street	14th Avenue	9.9 (wb)	A	23.1 (nb)	C	27.0 (nb)	D
29	Lake Street	15th Avenue	8.4 (eb)	A	9.1 (sb)	A	9.2 (sb)	A
30	Jackson Street	Arguello Boulevard	12.7 (sb)	B	**>50 (nb)**	**F**	**>50 (nb)**	**F**
31[g]	Pacific Avenue	Presidio Boulevard	11.6 (sb)	B	**>50 (nb)**	**F**	**>50 (nb)**	**F**
32	Lombard Street	Lyon Street	20.8 (eb)	C	**>50 (wb)**	**F**	**>50 (wb)**	**F**
33	Lombard Street	Divisadero Street	14.4	B	**>80/2.5**	**F**	**>80/2.4**	**F**
34	Lombard Street	Fillmore Street	12.9	B	**>80/2.2**	**F**	**>80/2.1**	**F**
35	Bay Street	Laguna Street	14.8	B	**>80/1.6**	**F**	**>80/1.4**	**F**
36	Bay Street	Van Ness Avenue	32.6	C	**>80/1.2**	**F**	**>80/1.2**	**F**
37	Bay Street	Hyde Street	7.0	A	5.8	A	5.8	A
38	Alexander Avenue	Bunker Road	16.9 (eb)	C	29.9 (eb)	D	34.9 (eb)	D
39	Alexander Avenue	Ft. Baker (East) Road	13.5 (wb)	B	19.8 (wb)	C	23.6 (wb)	C
40	Bush Street	Van Ness Avenue	18.3	B	**>80/1.7**	**F**	**>80/1.8**	**F**
41	Pine Street	Van Ness Avenue	19.0	B	**74.2**	**E**	**>80/1.6**	**F**
42	Lombard Street	Van Ness Avenue	44.7	D	**>80/1.5**	**F**	**>80/1.8**	**F**

[a] Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach indicated by ( ).
[b] Intersections operating at LOS E or LOS F conditions highlighted in bold, and overall intersection volume-to-capacity (v/c) ratio is presented for LOS F conditions.
[c] These intersections were not analyzed during the Saturday peak hour because access to this portion of the City would be restricted as part of the Traffic Monitoring and Management Program (see discussion under "The Embarcadero Northbound Roadway Closure" and "Restricted Access" subsections of this Chapter).
[d] The LOS at these intersections do not include the northbound vehicles due to the closure of northbound The Embarcadero lanes to general traffic (see "The Embarcadero Northbound Roadway Closure" and "Restricted Access" subsections of this Chapter).
[e] Intersections 43 and 44 are out of order because they were added to the network completion of the initial transportation model.
[f] The LOS at this intersection reflects the closure of eastbound Mission Street between Steuart Street and The Embarcadero as needed for the provision of a short F-Market & Wharves service between the Ferry Building and Fisherman's Wharf.
[g] While the intersection of Pacific/Presidio would operated at LOS E during the Saturday midday under AC34 2012 conditions, the peak hour signal warrants would not be met and therefore, the AC34 2012 event traffic impacts would be less than significant.

SOURCE: Adavant Consulting/LCW Consulting, 2011.

Mitigation Measure M-TR-1: People Plan Specific Provisions

As part of the proposed project, the City would develop and implement a People Plan consisting of a variety of interrelated programs to facilitate access by all modes to and from the AC34 event venues, while maintaining acceptable conditions for residents, commuters, businesses and visitors. To address specific impacts identified in this EIR, the programs in the People Plan shall be developed to accommodate weekday and weekend events at various levels of spectator attendance and shall include specific provisions described below. The People Plan shall include, but not be limited to, the following programs:

M-TR-1a: Traffic Monitoring and Management Program. As a means to reduce congestion in the vicinity of the venue sites and on access roadways to and from the sites, the City shall develop and implement a Traffic Monitoring and Management Program that could include the following measures:

- Preferred spectator routes;
- Bus priority streets;
- New bus lanes;
- Extension of existing bus-only lanes;
- Bicycle priority streets;
- On-street parking restrictions;
- Traffic control officer deployment;
- Coordination with other events (e.g., ballgames; roadway construction projects);
- Roadway closures;
- Restricted access streets;
- Diversion plans related to roadway closures;
- Event signage including weekend detour signs; and
- Media announcements of roadway closures and detour signs.

M-TR-1b: Transit Operating Plan. As part of the People Plan, the City shall develop and implement a transit operating plan to provide additional transit service to accommodate peak transit demands during the AC34 project events. Elements of the plan (as developed to date) could include, but are not limited to:

- Increased service hours and frequency on 30X-Marina Express, which would run every 8 minutes on all event days, including weekends.

- Supplemental 30L-Marina, which would run every 6 minutes in the peak direction of travel (e.g., towards the waterfront through the mid-afternoon, and from the waterfront through the evening). The service would run between the Caltrain terminal and the intersection of Beach/Broderick (via Third/Fourth, Stockton, Broadway, Van Ness, and Lombard).

- Supplemental 47L-Van Ness, which would run every 10 minutes in the peak direction of travel throughout the day. Service would be provided between the Civic Center BART/Muni station and North Point Street, via Van Ness Avenue. Providing the supplemental service within a temporary bus lane is currently being considered.

- Increased frequencies on the 108-Treasure Island, which would run every 10 minutes on all event days, including weekends.

- Increased frequencies on the F-Market & Wharves historic streetcar between the Ferry Building and Fisherman's Wharf (i.e., at Pier 39), which would run every 5 minutes throughout the day.

- New E-Embarcadero historic streetcar service between Caltrain and Pier 39. This service would need to use the double-ended historic streetcars, and would run every 20 minutes throughout the day.

- Supplemental Muni Metro Shuttle. This light rail vehicle service would run within the Market Street tunnel between the Embarcadero station and the West Portal station. Shuttle service would be provided every 20 minutes on weekends only.

M-TR-1c: Satellite Parking Facility Program. As a means to reduce the number of vehicles traveling to and from the northern waterfront, the City shall implement satellite parking facilities and frequent transit or shuttle service between the satellite parking facilities and the various venues. Parking facilities could include existing public and private garages and lots, as well as other undeveloped parcels such as Mission Bay Lot A and Candlestick Park.

M-TR-1d: Public Information Program. As a means to facilitate access to and from venues and spectator viewing areas by all modes, while encouraging the use of transit and alternate modes, the City shall develop and implement a Public Information Program. For event days that overlap with other special events, a coordinated public information program shall be developed and provided to the public. The program shall provide:

- Access information for all modes before, during and after the events;
- Maps and guidelines;
- Special signage;
- Marketing campaign to encourage transit use and bicycle use to event sites;
- Web-based event information;
- Media and press releases to update information on a regular basis; and
- Public information for commuters, businesses and deliveries.

Impacts of Mitigation Measure. While the components of the mitigation measure would reduce transportation impacts by discouraging use of private auto and encouraging use of transit, walking and bicycling for access to and from the event venues, and would reduce vehicle (including transit) delays by responsive management of conditions during the event, any increase in bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and

unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

Implementation of **Mitigation Measures M-TR-1a** through **M-TR-1d** (People Plan Specific Provisions) would serve to reduce vehicle trips to and from the northern waterfront, and would reduce congestion in the vicinity of the event venues, but the effectiveness of these measures to reduce vehicle trips and poor operating conditions at these intersections to LOS D or better is unknown, therefore the AC34 2012 project would result in temporary but *significant and unavoidable traffic impacts.*

Impact TR-13: Implementation of the AC34 2012 events would have less than significant impacts at the signalized intersection of King/Fourth that would operate at LOS E under Existing plus AC34 2012 conditions, and unsignalized intersections of Jackson/Arguello and Pacific/Presidio where the worst approach would operate at LOS E or LOS F under Existing plus AC34 2012 conditions. (Less than Significant)

As indicated in Table 5.6-22, during the weekday p.m. peak hour, the intersection of King/Fourth currently operates at LOS E conditions, and would continue to operate at LOS E conditions with the AC34 2012 events. During the Saturday midday peak hour, this intersection would operate at LOS D under Existing plus AC34 2012 events conditions. The increase in AC34 2012 event project-generated vehicle trips at the intersection of King/Fourth during the weekday p.m. peak hour was reviewed to determine whether the project's increase would contribute considerably to critical movements operating at LOS F at this intersection. Based on this examination, the project's contributions (48 vehicles) were determined to be less than significant. Since the AC34 2012 events would not contribute considerably to the poor operating conditions, the project-related traffic impact would be *less than significant*.

As noted in Impact TR-1, a project would result in a significant impact at an unsignalized intersection if project-generated trips would cause the level of service at the worst approach to deteriorate from LOS D or better to LOS E or LOS F and Caltrans signal warrants would be met, or cause Caltrans signal warrants to be met when the worst approach is already operating at LOS E or LOS F.

Under AC34 2012 events conditions, the southbound approach at the intersection of Jackson/ Arguello would operate at LOS E during the weekday p.m. peak hour, and the northbound approach would operate at LOS F during the Saturday midday peak hour. At the intersection of Pacific/Presidio, the northbound approach would operate at LOS F conditions during the Saturday midday peak hour. However, at both of these intersections, the peak hour signal warrants would not be met, and therefore AC34 2012 event traffic impacts at these intersections would be *less than significant*.

Mitigation: Not required

Impact TR-14: Implementation of the AC34 2012 events would have less than significant impacts at 29 study intersections that would operate at LOS D or better under Existing plus AC34 2012 conditions. (Less than Significant)

With implementation of the AC34 2012 events, the following 29 study intersections would continue to operate at LOS D or better during the weekday p.m. and Saturday midday peak hours, and therefore, traffic impacts at these locations would be *less than significant:*

- Beach/Columbus
- North Point/Columbus
- North Point/Stockton
- Bay/Columbus
- Bay/Stockton
- Bay/Kearny
- Broadway/Sansome
- Broadway/Battery
- The Embarcadero/North Point/Kearny
- The Embarcadero/Bay
- The Embarcadero/Chestnut
- The Embarcadero/Lombard
- The Embarcadero/Green Street
- The Embarcadero/Broadway
- The Embarcadero/Washington
- The Embarcadero/Mission
- The Embarcadero/Harrison
- The Embarcadero/Bryant
- The Embarcadero/Brannan
- The Embarcadero/Folsom
- Fremont/Folsom
- 16th/Third
- Cesar Chavez/Third
- Cesar Chavez/Illinois
- Lake/14th
- Lake/15th
- Bay/Hyde
- Alexander/Bunker (Marin Co.)
- Alexander/Ft. Baker-East (Marin Co.)

Mitigation: Not required

Impact TR-15: Implementation of the AC34 2012 events would result in significant impacts at other signalized and unsignalized intersections in the project area within San Francisco in addition to impacts identified at the study intersections. (Significant and Unavoidable with Mitigation)

In addition to impacts on the study intersections in San Francisco analyzed in Impacts TR-1 through TR-12 above, the new vehicle trips generated by the AC34 2012 events would affect traffic at adjacent signalized and unsignalized intersections. The increased congestion would be temporary and would be due to high vehicle volumes destined to and from the waterfront, detours associated with closure of the northbound The Embarcadero travel lanes, reroute of traffic to other local streets, and congestion in the vicinity of parking facilities. The increased traffic volumes would exacerbate congestion and likely reduce levels of service at numerous intersections. In addition, other areas of northern San Francisco with possible viewing opportunities of the AC34 races (i.e., secondary viewing areas) would be expected to experience

increases in traffic, particularly on weekend race days; these areas include north-facing slopes of the Presidio, Pacific Heights, Russian Hill, and various vista points, such as Coit Tower and overlook locations in the Presidio. **Mitigation Measure M-TR-1**, which includes various measures to encourage transit use, and limit the use of private autos to access the spectator venues, would reduce, but may not mitigate these temporary impacts to a less-than-significant level. Therefore, impacts would remain significant and unavoidable.

> **Mitigation:** Implementation of **Mitigation Measure M-TR-1** (People Plan Specific Provisions).

Impact TR-16: Implementation of the AC34 2012 events would result in significant impacts on traffic operations at secondary viewing areas outside of San Francisco. (Significant and Unavoidable with Mitigation)

As described in Section 5.1, Impact Overview, the secondary viewing areas are expected to attract numerous visitors and spectators due to their potential viewing opportunities for the AC34 races. These include the south side of Angel Island, overlooks in the Marin Headlands and at Fort Baker, and waterfront areas in Sausalito and possibly Belvedere and Tiburon. During the Saturday midday peak hour, the AC34 2012 peak events would result in a total of 1,210 vehicle trips (970 inbound and 240 outbound) destined to the various secondary viewing areas outside of San Francisco (not including vehicle trips to and from Treasure Island). These trips would be distributed among multiple locations, and could potentially temporarily exacerbate congestion and reduce levels of service at key intersections. During peak events, it is anticipated that spectators destined to Marin viewing areas would also travel to Sausalito and Tiburon, resulting in temporary increases in congestion that would be similar to conditions that occur during special events at these locations (e.g., during the Sausalito Art Festival). **Mitigation Measure M-TR-1**, which includes various traffic management strategies, would reduce, but may not mitigate impacts to a less-than-significant level. Therefore, impacts would remain significant and unavoidable.

> **Mitigation:** Implementation of **Mitigation Measure M-TR-1** (People Plan Specific Provisions).

Overview of Project Transit Impacts associated with the America's Cup 2012 Events

The proposed AC34 2012 events would result in a temporary increase in the number of transit trips to and from the various AC34 venues as well as to secondary viewing areas during the 20 days of AC34 2012 events. The AC34 2012 transit demand on Muni bus, light rail, and historic streetcar lines serving the AC34 venues would not be accommodated during the weekday p.m. or Saturday midday peak hours of analysis, and would exceed 100 percent of Muni's capacity, thereby resulting in temporary significant impacts on Muni operations. Implementation of

Mitigation Measure M-TR-17 (Additional Muni Transit Service) would provide more frequent Muni service and corresponding increases in capacity. However, transit routes to and from the Presidio/Crissy Field/Marina and Fisherman's Wharf would continue to exceed 100 percent of Muni's capacity, and a greater increase in transit service enhancements in the form of increased headways or supplemental transit routes would be required. Accordingly, AC34 2012 event's impacts to Muni service would remain significant and unavoidable. Increased transit demand within the Presidio would temporarily increase travel demand on the PresidiGo shuttle service which currently operates close to capacity. This would be considered a significant impact on PresidiGo operations, and shuttle service enhancements would be required. **Mitigation Measure M-TR-18** (Additional PresidiGo Shuttle Service) would require the City to work with the Presidio Trust to develop and implement an operating plan that would increase shuttle service during the AC34 events.

The AC34 2012 transit demand on regional transit services, including AC Transit, BART, Blue & Gold, WETA, Golden Gate Transit, Caltrain, and SamTrans, would be accommodated within the existing available capacity during the weekday p.m. peak hour. However, on Saturdays, when substantially less regional transit capacity into and out of San Francisco is provided, the AC34 2012 transit demand would exceed the available capacity, thereby resulting in temporary significant impacts on AC Transit, BART, Blue & Gold, WETA, Golden Gate Transit, Caltrain, and SamTrans operations. Implementation of **Mitigation Measures M-TR-19** (Additional AC Transit Service), **M-TR-20** (Additional BART Service), **M-TR-21** (Additional WETA Service), **M-TR-22** (Additional Golden Gate Transit Service), **M-TR-23** (Additional Blue & Gold Service), **M-TR-24** (Additional Caltrain Service), and **M-TR-25** (Additional SamTrans Service) would require the City to work with the various regional transit providers to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the East Bay, North Bay, and South Bay. However, because full funding for additional regional transit service has not yet been identified, implementation of **Mitigation Measures M-TR-19** through **M-TR-24** remain uncertain. Accordingly, AC34 2012 event's impacts to AC Transit, BART, Blue & Gold, WETA, Golden Gate Transit, Caltrain, and SamTrans transit capacity would remain significant and unavoidable.

As discussed under Impacts TR-1 through TR-12 and under Impact TR-15, implementation of the AC34 2012 events would result in temporary unacceptable levels of service at numerous intersections throughout the City. The congestion generated by this project would be temporary, however would have the potential to adversely affect ground transit operations, including Muni and other regional transit providers such as AC Transit, Golden Gate Transit and SamTrans. **Mitigation Measure M-TR-1** (People Plan Specific Provisions) would serve to reduce the amount of congestion by implementing a Traffic Monitoring and Management Program, a Transit Operating Plan, a Satellite Parking Facility Program, and a Public Information Program. However, the effectiveness of these programs to reduce congestion on City streets is unknown therefore, operational impacts to transit would remain significant and unavoidable.

Impact TR-17: Implementation of the AC34 2012 events would exceed the available transit capacity of Muni lines. (Significant and Unavoidable with Mitigation)

As presented in Table 5.6-14, the AC34 2012 events would generate a total of about 4,360 transit trips during the weekday p.m. peak hour, and about 27,530 transit trips during the Saturday midday peak hour. **Table 5.6-24** summarizes the outbound (i.e., away from the waterfront) weekday p.m. peak hour ridership and capacity utilization of the Muni line serving the areas along the waterfront (based on the screenline methodology), as well as for regional transit lines to the East Bay, North Bay, and the South Bay, while **Table 5.6-25** presents this information for inbound (i.e., towards the waterfront) Saturday midday peak hour. It should be noted that depending on the origin and destination of the transit trip, a portion of the transit trips arriving from outside of San Francisco would also be required to take a Muni line to their destination, and these trips were included in the San Francisco screenlines (for example, transit riders taking Caltrain from the South Bay and destined to Crissy Field would take the Supplemental 30L-Marina service which would run from the Caltrain terminal, and were therefore also included in the ridership at the Presidio/Crissy/Marina screenline).

The total AC34 2012 transit demand on Muni buses, light rail and historic streetcars would not be accommodated during the weekday p.m. or Saturday midday peak hours of analysis, and transit service towards Fisherman's Wharf and Presidio/Crissy Field/Marina would exceed 100 percent of Muni's capacity. Since the utilization of Muni's transit service would exceed 100 percent of Muni's standard during the peak hours, the AC34 2012 events' impact to transit capacity would be considered a temporary but significant impact.

The 22-Fillmore (which would most directly serve the AC34 Village at Marina Green) and the 43-Masonic (which would bring spectators the closest to Crissy Field) are bus lines that would be heavily utilized by AC34 2012 event spectators. During the weekday p.m. peak hour, both of these lines currently operate at 76 percent capacity utilization in the outbound direction of travel, and could accommodate an additional 195 passengers. During the Saturday midday peak hour in the inbound direction, the 22-Fillmore (about 10 minutes between buses) operates at 65 percent capacity utilization and could accommodate an additional 132 riders, while the 43-Masonic (about 15 minutes between buses) operates at 73 percent capacity utilization and could accommodate an additional 68 passengers (for a combined available capacity of 200 passengers). With an AC34 2012 outbound demand of 2,425 riders during the weekday p.m. peak hour, and an inbound demand of 14,147 riders during the Saturday midday peak hour destined to the Presidio, Crissy Field, Marina, it is anticipated that service levels on these lines would fall substantially short of the service needed to serve the expected passenger demand.

The F-Market & Wharves historic streetcar service would serve visitors destined to the northern waterfront from the Castro and Civic Center areas, and would also provide supplemental service between the Ferry Building transit hub and venues in the Fisherman's Wharf vicinity. Currently the F-Market & Wharves line operates at 121 percent capacity utilization during the weekday p.m. peak hour (outbound) and 110 percent capacity utilization during the Saturday midday peak hour (inbound). The number of spectators destined to the Fisherman's Wharf and

TABLE 5.6-24
TRANSIT ANALYSIS
EXISTING PLUS AC34 2012 AND EXISTING PLUS AC34 2013 CONDITIONS
WEEKDAY PM PEAK HOUR

	EXISTING			EXISTING PLUS AC34 2012			EXISTING PLUS AC34 2013		
Outbound	**Capacity**	**Ridership**	**Percent Utilization**	**Peak Hour AC34 Riders**	**Ridership**	**Percent Utilization**	**Peak Hour AC34 Riders**	**Ridership**	**Percent Utilization**
San Francisco									
Presidio/Crissy/Marina	2,891	1,820	63%	**2,425**	**4,245**	**147%**	**1,758**	**3,578**	**124%**
Fisherman's Wharf	4,049	3,309	82%	280	3,589	89%	312	3,621	89%
The Embarcadero	13,737	10,796	79%	93	10,889	79%	308	11,104	81%
Treasure Island	252	116	46%	9	125	50%	10	126	50%
Total	20,929	16,041	77%	2,807	18,848	90%	2,387	18,428	88%
East Bay									
BART	24,150	20,067	83%	997	21,064	87%	1,074	21,141	88%
AC Transit	4,193	2,517	60%	151	2,668	64%	163	2,680	64%
Ferries	1,519	702	46%	51	753	50%	53	755	50%
Total	29,862	23,286	78%	1,198	24,484	82%	1,291	24,576	82%
North Bay									
Buses	2,205	1,397	63%	108	1,505	68%	117	1,514	69%
Ferries	1,706	906	53%	79	985	58%	85	991	58%
Total	3,911	2,303	59%	187	2,490	64%	201	2,504	64%
South Bay									
BART	16,800	10,202	61%	876	11,078	66%	945	11,147	66%
Caltrain	3,250	1,986	61%	170	2,156	66%	183	2,169	67%
SamTrans	940	575	61%	49	624	66%	53	628	67%
Total	20,990	12,763	61%	1,096	13,858	66%	1,181	13,945	66%

[a] Conditions exceeding 100 percent capacity utilization are highlighted in **bold.**

SOURCE: Adavant Consulting/LCW Consulting, 2011

TABLE 5.6-25
TRANSIT ANALYSIS
EXISTING PLUS AC34 2012 AND EXISTING PLUS AC34 2013 CONDITIONS
SATURDAY MIDDAY PEAK HOUR

	EXISTING			EXISTING PLUS AC34 2012			EXISTING PLUS AC34 2013		
Inbound	**Capacity**	**Ridership**	**Percent Utilization**	**Peak Hour AC34 Riders**	**Ridership**	**Percent Utilization**	**Peak Hour AC34 Riders**	**Ridership**	**Percent Utilization**
San Francisco									
Presidio/Crissy/Marina	2,738	1,827	67%	**15,320**	**17,147**	**626%**	**16,103**	**17,930**	**655%**
Fisherman's Wharf	3,119	2,339	75%	**1,677**	**4,016**	**129%**	**2,796**	**5,135**	**165%**
The Embarcadero	8,494	5,547	62%	388	5,635	66%	2,744	7,991	94%
Treasure Island	189	84	44%	47	131	69%	**102**	186	98%
Total	14,540	9,497	65%	17,433	26,930	185%	21,745	31,242	215%
East Bay									
BART	8,064	3,900	48%	**6,252**	**10,152**	**126%**	**10,732**	**14,632**	**181%**
AC Transit	200	117	56%	163	**280**	**140%**	**282**	**399**	**200%**
Ferries	688	560	81%	653	**1,213**	**176%**	**1,113**	**1,673**	**243%**
Total	8,952	4,577	51%	7,069	11,646	130%	12,142	16,704	187%
North Bay									
Buses	205	62	30%	219	**281**	**137%**	**381**	**443**	**216%**
Ferries	2,580	691	27%	2,681	**3,372**	**131%**	**4,599**	**5,290**	**205%**
Total	2,785	753	27%	2,899	3,652	131%	4,980	5,733	206%
South Bay									
BART	8,547	2,340	27%	6,752	9,092	106%	11,598	13,938	163%
Caltrain	650	543	84%	745	**1,288**	**198%**	1,268	1,811	279%
SamTrans	40	32	80%	44	**76**	**190%**	73	105	262%
Total	9,237	2,915	32%	7,541	10,456	113%	12,953	15,853	172%

[a] Conditions exceeding 100 percent capacity utilization are highlighted in **bold.**

SOURCE: Adavant Consulting/LCW Consulting, 2011

Embarcadero viewing areas that would use the F-Market & Wharves to travel along The Embarcadero is difficult to determine given that this line already operates at over 100 percent capacity utilization. It is anticipated that that during the peak midday/afternoon period would need to wait for one or more streetcars before being able to board, or visitors may decide to walk instead.

Table 5.6-26 presents the ridership and capacity for the screenlines assuming existing transit capacity, and additional transit capacity identified as part of **Mitigation Measure M-TR-1b**. With implementation of **Mitigation Measure M-TR-1b**, the AC34 2012 transit demand from the Fisherman's Wharf venues during the weekday p.m. and towards the Fisherman's Wharf venues during the Saturday midday peak hour would be accommodated within Muni service, because there would be more frequent Muni service and corresponding increases in capacity. However, transit capacity to and from the Presidio/Crissy Field/Marina would continue to exceed 100 percent, and a greater increase in transit service enhancements in the form of increased headways or supplemental transit routes would be required. In order to accommodate the additional weekday p.m. peak hour demand at 100 percent capacity utilization, between 15 and 22 additional buses would need to be provided (depending on whether 63-passenger or 94-passenger buses are used), and between 164 and 244 additional buses would be needed to accommodate the Saturday midday transit demand.[29]

TABLE 5.6-26
MUNI TRANSIT RIDERSHIP AND CAPACITY UTILIZATION
EXISTING PLUS AC34 2012 PROJECT AND
EXISTING PLUS AC34 2012 PROJECT WITH MITIGATION MEASURE M-TR-1B

	Existing plus AC34 2012			Existing plus AC34 2012 with Mitigation Measure M-TR-1B		
Peak Hour	**Capacity**	**Ridership**	**% Utilization**	**Capacity**	**Ridership**	**% Utilization**
Weekday PM						
Presidio/Crissy Field/Marina	**2,891**	**4,245**	**147%**	**3,521**	**4,245**	**121%**
Fisherman's Wharf	4,049	3,589	89%	4,613	3,589	78%
The Embarcadero	13,737	10,889	79%	14,087	10,889	77%
Treasure Island	252	125	50%	252	125	50%
	20,929	18,848	90%	22,473	18,848	84%
Saturday Midday						
Presidio/Crissy Field/Marina	**2,738**	**17,147**	**626%**	**3,872**	**17,147**	**443%**
Fisherman's Wharf	**3,119**	**4,016**	**129%**	3,683	**4,016**	**109%**
The Embarcadero	8,494	5,635	66%	9,558	5,635	59%
Treasure Island	189	131	70%	252	131	52%
	14,540	26,930	185%	17,365	26,930	155%

[a] Conditions exceeding 100 percent capacity utilization are highlighted in **bold.**

SOURCE: SFMTA, Planning Department, Adavant Consulting/LCW Consulting, 2011

[29] Additional service required to accommodate the shortfall in capacity was calculated assuming that more crowded conditions would be acceptable for the temporary special events (i.e., at 100 percent of capacity). Muni's capacity utilization standard is 85 percent or less of capacity.

Mitigation Measure M-TR-17: Additional Muni Transit Service

As part of the People Plan, the City shall develop and implement a transit operating plan to provide additional transit service to and from the Presidio, Crissy Field, and Marina venues accommodate peak transit demands on weekdays and weekends, and to and from Fisherman's Wharf on weekends. This transit service would need to be in addition to that identified in **Mitigation Measure M-TR-1b**.

Impacts of Mitigation Measure. While the identified mitigation measure would reduce transportation impacts, any increase in bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

While implementation of **Mitigation Measure M-TR-1b** would create additional capacity on Muni to accommodate transit riders generated by the AC34 2012 events, additional capacity would be required to and from the Presidio, Crissy Field, Marina and Fisherman's Wharf venues (**Mitigation Measure M-TR-17**). **Mitigation Measure M-TR-21** below (provision of additional Golden Gate Transit service that may be able to pick up and drop off local passengers within San Francisco at existing Golden Gate Transit and Muni bus stops) would serve to accommodate a portion of the demand traveling to and from the Presidio, Crissy Field, Marina and Fisherman's Wharf. Because additional Muni transit capacity would be required, and since full funding for **Mitigation Measure M-TR-1b** and **Mitigation Measure M-TR-17** has not yet been identified, their implementation remains uncertain. Accordingly, the AC34 2012 event impacts to Muni transit capacity would be temporary but *significant and unavoidable.*

Impact TR-18: Implementation of the AC34 2012 events would exceed the available transit capacity of PresidiGo shuttle service. (Significant and Unavoidable with Mitigation)

As presented in Table 5.6-14, the AC34 2012 events would generate a substantial number of transit trips destined to the Presidio, Crissy Field and the Marina Green (where the AC34 Village would be located), particularly on weekend days. It is anticipated that a portion of these trips

would utilize PresidiGo Downtown and PresidiGo Around the Park shuttle service. PresidiGo is free to the public between 10:00 a.m. and 3:00 p.m. on weekdays (it does not run on weekends or holidays), and the PresidiGo Around the Park is free to everyone and runs on a limited service schedule on weekdays and weekends. Since the shuttle service runs close to capacity utilization, the additional demand associated with the AC34 2012 events would result in the PresidiGo shuttles exceeding their capacity utilization, which would be considered a temporary but significant impact.

Mitigation Measure M-TR-18: Additional PresidiGo Shuttle Service

As part of the People Plan, the City shall work with the Presidio Trust, Golden Gate Transit, and SFMTA to develop and implement a transit operating plan to provide additional transit service linking Presidio destinations with Crissy Field and downtown regional service providers. Additional PresidiGo service could be provided by implementing PresidiGo on weekend days, and by providing an additional PresidiGo shuttle service between the Lombard Gate (near the terminus of the 41-Union and 45-Union-Stockton Muni bus lines) and Crissy Field on weekend days.

Impacts of Mitigation Measure. While the identified mitigation measure would reduce transportation impacts, any increase in bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

Since the provision of additional PresidiGo shuttle service is uncertain and full funding for additional service by the Presidio Trust has not yet been identified, implementation of **Mitigation Measure M-TR-18** remains uncertain. Accordingly, AC34 2012 events' impacts to PresidiGo capacity would be temporary but *significant and unavoidable.*

Impact TR-19: Implementation of the AC34 2012 events would exceed the available transit capacity of AC Transit lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 and Table 5.6-25, the capacity utilization for AC Transit service would be about 64 percent during the weekday p.m., and about 140 percent during the Saturday midday peak hour. Since capacity utilization of AC Transit's transbay buses during the Saturday midday peak hour would exceed AC Transit's capacity, the AC34 2012 events' impact to AC Transit capacity would be considered a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand, about two additional inbound buses would be required (currently there are about five inbound transbay buses during the Saturday midday peak hour). Temporary operational impacts to regional bus operators are discussed under Impact TR-26.

Mitigation Measure M-TR-19: Additional AC Transit Capacity

As part of the People Plan, the City shall work with AC Transit and other regional transit providers (i.e., BART, WETA) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 project events to and from the East Bay.

While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The additional AC Transit service could be provided by, but not be limited to, the following supplemental lines.

- *The Berkeley (F) Route*: This route provides service generally from UC Berkeley to the Temporary Transbay Terminal through Ashby BART and Emeryville.
- *The Oakland (NL) Route*: This route provides service generally from Mills College to the Temporary Transbay Terminal through MacArthur Boulevard and West Grand Avenue.
- *Alameda (O) Route*: This route provides service generally from Fruitvale to the Temporary Transbay Terminal through Alameda.[30]
- *Treasure Island Route*: This route would provide service generally from one of the BART Stations (MacArthur or West Oakland) to Treasure Island.
- *Crissy Field Route*: This route would provide service generally from the East Bay to Crissy Field without requiring East Bay passengers to transfer at the Temporary Transbay Terminal to Muni.

[30] The examples of the type and alignment of routes were formulated in partnership with AC Transit.

The supplemental routes described above are intended to illustrate the type and alignment of additional service that could be provided during the AC34 2012 events. However, the People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (specific routes, span of service, days of service, headways, types of buses, etc.) and could include different routes, service providers, or service schedules than what is described above. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events and ultimately during the AC34 2013 events.

Impacts of Mitigation Measure. While the identified mitigation measure would reduce transportation impacts, any increase in bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

Since the provision of additional East Bay transit service is uncertain and full funding for additional transit service by AC Transit has not yet been identified, implementation of **Mitigation Measure M-TR-19** remains uncertain. Accordingly, AC34 2012 events' impacts to AC Transit capacity would be temporary but *significant and unavoidable.*

Impact TR-20: Implementation of the AC34 2012 events would exceed the available transit capacity of BART lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24, during the weekday p.m. peak hour, the capacity utilization for BART service would be 87 percent for outbound East Bay service, and 66 percent for outbound South Bay service. The weekday p.m. peak hour capacity utilization would be within BART's peak hour load factor. As indicated in Table 5.6-25, during the Saturday midday peak hour, the capacity utilization for BART service would be 126 percent for inbound East Bay service, and 106 percent for inbound South Bay service, and would exceed the capacity utilization standard of 100 percent. Since the existing BART capacity would not be able to accommodate the projected AC34 ridership in 2012, AC34 impacts to BART capacity would be a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand additional BART service would need to be provided to accommodate an additional 2,088 passengers to the East Bay and 545 passengers to the South Bay.

Mitigation Measure M-TR-20: Additional BART Transit Service

As part of the People Plan, the City shall work with BART and other regional transit providers (i.e., AC Transit, WETA) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the East Bay and South Bay.

While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The additional East Bay BART service could be provided by, but not limited to, executing weekday service during the weekends or by operating longer trains. The People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (span of service, days of service, headways, etc.) and could include a different arrangement than providing weekday service on weekends.

Since the provision of additional East Bay transit service is uncertain and full funding for the service by BART has not yet been identified, implementation of **Mitigation Measure M-TR-20** remains uncertain. Accordingly, AC34 2012 events' impacts to BART transit capacity would be temporary but *significant and unavoidable*.

Impact TR-21: Implementation of the AC34 2012 events would exceed the available transit capacity of WETA ferry lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 and Table 5.6-25, the capacity utilization for WETA ferry service to the East Bay would be about 51 percent during the weekday p.m., and inbound from the East Bay would be about 176 percent during the Saturday midday peak hour. Since capacity utilization of WETA ferry service during the Saturday midday peak hour would exceed the ferry capacity, the AC34 2012 events' impact to WETA ferry capacity would be considered a temporary but significant impact.

In order to accommodate the Saturday midday peak hour ferry demand, an additional 525 passengers from the East Bay would need to be accommodated.

Mitigation Measure M-TR-21: Additional WETA Transit Service

As part of the People Plan, the City shall work with WETA and other regional transit providers (i.e., BART, AC Transit) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the East Bay.

While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The additional WETA ferry service could be provided by, but not be limited to, the following supplemental lines.

- *Vallejo Baylink Service*: This service operates from the terminal at the Vallejo waterfront west of downtown directly to the San Francisco Ferry Building and to Pier 41 in Fisherman's Wharf. One additional vessel with a capacity for 300 passengers could be added to the existing weekend service.[31]

- *Alameda/Oakland Bay Service (AOFS)*: This service operates from Main Street in Alameda and from Clay Street in Oakland to the San Francisco Ferry Building and to Pier 41 in Fisherman's Wharf. One additional vessel with a capacity of approximately 325 to 375 passengers could be added to the existing weekend service.[32]

- Additional midday off-peak service could also be provided between the Ferry Building and/or Piers 39-41, if there is sufficient capacity to berth the ferries.

The supplemental routes described above are intended to illustrate the type and alignment of additional service that could be provided during the AC34 2012 events.[33] However, the People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (specific routes, span of service, days of service, headways, types of ferries, etc.) and could include different routes or service schedules than what is described above. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events and ultimately during the AC34 2013 events.

Impacts of Mitigation Measure. While the identified mitigation measure would reduce transportation impacts, any increase in ferry or bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the

[31] The existing Vallejo Baylink Ferry Service offers nine weekend round trips, including a trip via AT&T Park during weekend games. In addition to the ferry service, the Vallejo Baylink service includes the Route 200 Bus service from the Vallejo terminal to the San Francisco Ferry Building. Route 200 buses have a capacity of 55 passengers and supplement the ferry service with one weekend round trip.

[32] The existing AOFS service offers six weekend round trips.

[33] The examples of the type and alignment of routes were formulated in partnership with WETA.

same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

Since the provision of additional East Bay transit service is uncertain and full funding for additional transit service by WETA has not yet been identified, implementation of **Mitigation Measure M-TR-21** remains uncertain. Accordingly, AC34 2012 events' impacts to WETA ferry capacity would be temporary but *significant and unavoidable.*

Impact TR-22: Implementation of the AC34 2012 events would exceed the available transit capacity of Golden Gate Transit bus and ferry lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 and Table 5.6-25, the capacity utilization for transit service to the North Bay (which includes Golden Gate Transit bus and ferry service, and Blue & Gold's ferry service to Sausalito and Tiburon) would be about 64 percent during the weekday p.m. peak hour for trips from San Francisco to the North Bay, and about 131 percent during the Saturday midday peak hour for trips from the North Bay to San Francisco. Since the capacity utilization of bus and ferry service to the North Bay during the Saturday midday peak hour would exceed the combined ferry and bus capacity, the AC34 2012 events' impact to Golden Gate Transit capacity would be considered a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand, additional Golden Gate Transit and Blue & Gold service would need to be provided for 867 passengers traveling inbound from the North Bay to San Francisco during the Saturday midday peak hour. The additional demand could be accommodated through a combination of ferry (Golden Gate Transit and Blue & Gold) and bus (Golden Gate Transit) service.

Mitigation Measure M-TR-22: Additional Golden Gate Transit Service

As part of the People Plan, the City shall work with Golden Gate Transit and other regional transit providers (i.e., WETA) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the North Bay.

While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The additional Golden Gate Transit bus service may be able to pick up local passengers within San Francisco at existing Golden Gate Transit and Muni bus stops. The bus service could be provided by, but not be limited to, the following supplemental lines.

- *Route 93*: This route would begin at the Golden Gate Bridge Toll Plaza and continue to the San Francisco Civic Center area via Lombard, Van Ness, Golden Gate, Hyde,

Eighth, and Mission Streets to Sixth and Howard Streets in the outbound direction, and via Seventh, McAllister, Van Ness, and Lombard to the Golden Gate Bridge Toll Plaza in the inbound direction.[34] A variation of this route could terminate at the Richardson/Francisco transfer point rather than at the Golden Gate Bridge Toll Plaza, provided sufficient turn-around space is available.

- *Route 4*: To supplement Route 93, a "short" Route 4 could operate between the Manzanita Park & Ride in Mill Valley to the Financial District. This route would travel on U.S. 101 through the Golden Gate Bridge Toll Plaza and continue to the San Francisco Financial District via Lombard, Van Ness, North Point, Polk, Beach, Embarcadero, and Battery, across Market Street to Howard, Eight and Harrison Streets in the inbound direction, and via Harrison, Ninth, Folsom, Fremont, Front, Pine, Sansome, The Embarcadero, North Point, Van Ness and Lombard to the Manzanita Park & Ride in the inbound direction.

The supplemental routes described above are intended to illustrate the type and alignment of additional service that could be provided during the AC34 2012 events.[35] However, the People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (specific routes, span of service, days of service, headways, types of buses, etc.) and could include different routes than what is described above. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events and ultimately during the AC34 2013 events.

Impacts of Mitigation Measure. While the identified mitigation measure would reduce transportation impacts, any increase in ferry or bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

Since the provision of additional North Bay transit service is uncertain and full funding for the service by Golden Gate Transit has not yet been identified, implementation of **Mitigation**

[34] In general, routes headed towards downtown San Francisco are considered inbound and routes heading away from downtown San Francisco are considered outbound. However, for Golden Gate Transit the terminology is reversed since the buses are leaving the yard to go to San Francisco (outbound) and returning to where they originated in Marin (inbound).

[35] The examples of the type and alignment of routes were formulated in partnership with Golden Gate Transit.

Measure M-TR-22 remains uncertain. Accordingly, AC34 2012 events' impacts to Golden Gate Transit's transit capacity would be temporary but *significant and unavoidable*.

Impact TR-23: Implementation of the AC34 2012 events would exceed the available transit capacity of Blue & Gold ferry lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 and Table 5.6-25, the capacity utilization for ferry service to the North Bay (which includes both Blue & Gold's ferry service to Sausalito and Tiburon and Golden Gate Transit service to Sausalito and Larkspur) would be about 58 percent during the weekday p.m. peak hour for trips from San Francisco to the North Bay, and about 131 percent during the Saturday midday peak hour for trips from the North Bay to San Francisco. Since the capacity utilization the ferry service to the North Bay during the Saturday midday peak hour would exceed the combined ferry capacity, the AC34 2012 events' impact to Blue & Gold's transit capacity would be considered a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand, additional Golden Gate Transit and Blue & Gold ferry service would need to be provided to accommodate an additional 792 passengers traveling inbound from the North Bay to San Francisco during the Saturday midday peak hour. As noted above, under Impact TR-22, this could be accommodated through a combination of ferry and bus service.

Mitigation Measure M-TR-23: Additional Blue & Gold Transit Service

As part of the People Plan, the City shall work with Blue & Gold and other regional transit providers (i.e., Golden Gate Transit) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the North Bay.

While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided by Blue & Gold and/or Golden Gate Transit ferry and bus service throughout the day, as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. Blue & Gold currently provides additional ferry service during special events – for example, additional evening service from Tiburon to San Francisco for the Fourth of July fireworks show. Similar additional service could be provided during the AC34 2012 events.

Impacts of Mitigation Measure. While the identified mitigation measure would reduce transportation impacts, any increase in ferry or bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality

analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

Because additional Blue & Gold transit capacity would be required, and since full funding for additional transit service by Blue & Gold has not yet been identified, implementation of **Mitigation Measure M-TR-23** remains uncertain. Accordingly, AC34 2012 events' impacts to Blue & Gold's transit capacity would be temporary but *significant and unavoidable.*

Impact TR-24: Implementation of the AC34 2012 events would exceed the available transit capacity of Caltrain service. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24, the capacity utilization for outbound Caltrain service to the South Bay service during the p.m. peak hour would be 68 percent, which would not exceed Caltrain's peak hour load factor of 100 percent. However, as shown on Table 5.6-25, during the Saturday midday peak hour, the capacity utilization for inbound Caltrain service would be close to 200 percent. Since capacity utilization of Caltrain trains during the Saturday midday peak hour would exceed Caltrain's capacity, the AC34 2012 events' impact to Caltrain capacity would be considered a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand additional Caltrain service would need to be provided for 638 passengers traveling inbound from the South Bay during the Saturday midday peak hour.

Mitigation Measure M-TR-24: Additional Caltrain Transit Service

As part of the People Plan, the City shall work with Caltrain and other regional transit providers (i.e., BART, SamTrans) to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the South Bay.

While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. The People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (span of service, days of service, headways, stop locations, etc.), if

any. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events, and ultimately during the AC34 2013 events.

Impacts of Mitigation Measure. While the identified mitigation measure would reduce transportation impacts, any increase in rail and bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

Since the provision of additional South Bay transit service is uncertain due to equipment maintenance and crew availability constraints, and full funding for the service by Caltrain has not yet been identified, implementation of **Mitigation Measure M-TR-24** remains uncertain. Accordingly, AC34 2012 events' impacts to Caltrain transit capacity would be temporary but *significant and unavoidable*.

Impact TR-25: Implementation of the AC34 2012 events would exceed the available transit capacity of SamTrans lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24, during the weekday p.m. peak hour, the capacity utilization for SamTrans service to the South Bay would be 66 percent, which would not exceed SamTrans' peak hour load factor of 100 percent. During the Saturday midday peak hour (Table 5.6-25), however, the capacity utilization for inbound service would be 190 percent. Since capacity utilization of SamTrans buses during the Saturday midday peak hour would exceed SamTrans' capacity, the AC34 2012 events' impact to SamTrans' transit capacity would be considered a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand additional SamTrans' service would need to be provided to accommodate an additional 36 passengers traveling inbound from the South Bay during the Saturday midday peak hour (about one additional inbound bus during the Saturday midday peak hour).

Mitigation Measure M-TR-25: Additional SamTrans Transit Service

As part of the People Plan, the City shall work with SamTrans and other regional transit providers (i.e., BART, Caltrain) to develop an operating plan that would accommodate peak transit demands during the AC34 events to and from the South Bay.

While the analysis above describes the capacity shortfall during the Saturday midday peak hour, additional capacity would need to be provided throughout the day as well as on Sundays. It is likely that the span of additional service would be from approximately 10:00 a.m. to 8:00 p.m. with varied levels of service throughout that time period. Whether the additional service could be provided by SamTrans is uncertain. However, additional service from and to the South Bay could be provided by, but not be limited to the following:

- *Supplemental BART Service*: BART could increase its service to and from the South Bay by providing service similar to that seen on weekdays or by operating longer trains (10 cars per train) to increase the capacity of the existing weekend service.

The People Plan is expected to develop a transit operating plan that would formalize the details of the additional service (span of service, days of service, headways, stop locations, etc.) and could include a different arrangement than providing described above. This would allow for the flexibility to adjust service in response to demand during the AC34 2012 events and ultimately during the AC34 2013 events.

Impacts of Mitigation Measure. While the identified mitigation measure would reduce transportation impacts, any increase in ferry or bus service would result in an increase in air quality emissions from those sources. However, those increases in emissions would be offset by a reduction in vehicle emissions associated with the reduction in vehicle traffic because of the increased availability of transit. The extent of the increase in emissions and any offset reduction are not quantified in this EIR because the results would not change the outcome of the air quality analysis described in Section 5.8. As described in Section 5.8, Air Quality, all feasible mitigation measures to reduce air quality emissions are recommended to provide the maximum feasible reduction in emissions. Even with implementation of those measures, the air quality impacts associated with criteria pollutant and precursor emissions, as well as associated health risk impacts, would remain significant and unavoidable. The incremental air quality impacts associated with the transportation mitigation measure would therefore not affect the conclusions of the air quality impacts, and all identified air quality mitigation measure would remain the same. Implementation of the transportation mitigation measure, to the extent that it would reduce air quality emissions from vehicular traffic, would augment the air quality mitigation measures in reducing air quality impacts.

Since the provision of additional South Bay transit service is uncertain and full funding for the service by Caltrain and BART has not yet been identified, implementation of **Mitigation Measure M-TR-25** remains uncertain. Accordingly, AC34 2012 events' impacts to SamTrans transit capacity would be temporary but *significant and unavoidable*.

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Impact TR-26: Implementation of the AC34 2012 events would have a potentially significant impact on transit operations related to additional congestion resulting from the project. (Significant and Unavoidable with Mitigation)

As discussed under Impacts TR-1 through TR-12 and under Impact TR-15, implementation of the AC34 2012 events would result in temporary unacceptable levels of service (LOS E or LOS F) at various intersections throughout the City. The congestion generated by this project would have the potential to adversely affect surface transit operations, including Muni and other regional transit providers such as Golden Gate Transit and SamTrans. Specifically, roadway congestion associated with increases in AC34 traffic, as well as diversions due to closure of The Embarcadero northbound and restricted access north of Bay and Chestnut streets, would slow down transit vehicles operating on such streets, resulting in increased transit travel times. Additionally, transit vehicles typically experience a delay when waiting for a gap to re-enter the flow of traffic after stopping at a transit stop to pick-up and drop-off passengers. As traffic volumes on the adjacent lanes increase, re-entering the flow of traffic becomes more difficult resulting in increased delay.

Muni bus routes traveling through intersections projected to operate at LOS E and LOS F conditions include 28-19th Avenue and 43-Masonic on Lombard Street, and 47-Van Ness, 49-Van Ness/ Mission, and 30X-Marina Express on Van Ness Avenue. Golden Gate Transit routes traveling on Lombard Street and Van Ness Avenue would also be affected. Restricted access north of Chestnut Street may result in increased congestion on Chestnut Street due to drivers unfamiliar with the access restrictions. This increased congestion could potentially impact 30-Stockton operations on Chestnut Street. Further, the potential northbound The Embarcadero roadway closure on high attendance event days is expected to redistribute traffic in the downtown area and could potentially result in additional congestion along, among others, Third/Fourth Streets, Main/Beale Streets, and Battery/Sansome Streets. Muni lines such as 1-California, 10-Townsend, 30-Stockton, and 45-Union-Stockton, and most of Golden Gate Transit lines that provide service on these streets could be adversely affected by the additional AC34 traffic.

AC Transit lines also travel on downtown streets and could potentially be affected by increased congestion. However, as part of the Temporary Transbay Terminal bus-only and restricted access lanes between the Bay Bridge and the temporary terminal have been provided on Folsom, Fremont, Main and Beale streets.[36] The bus-only lanes are in effect all day, on weekdays and weekends, and therefore potential impacts on AC Transit service would be limited. Similarly, at the westbound approach to the Bay Bridge toll plaza in the East Bay, the HOV bypass lanes are limited to buses only during weekday non-peak periods and all day on weekends, and would be available for AC Transit and other service providers (e.g., Golden Gate Transit's non-revenue service between the District's main garage in San Rafael and San Francisco).

[36] AC Transit bus access to the Temporary Transbay Terminal from the San Francisco-Oakland Bay Bridge westbound is via the Fremont/Harrison (left hand side) or Fremont/Folsom (right hand side) off-ramps; both intersections are signalized. An inbound bus/taxi-only lane, operational at all times including weekdays and weekends, is available on city streets from the end of both off-ramps to the terminal. Bus travel from the terminal to the San Francisco-Oakland Bay Bridge is via a single westbound lane on Folsom Street, between Main and Fremont streets, which coverts into a bus/taxi-only lane between Fremont and Essex streets. A bus/taxi-only lane is also provided between Essex Street and the on-ramp to the bridge at the intersection of Essex/Harrison. The outbound bus/taxi-only lane is operation at all times, weekdays and weekends.

The operation of the F-Market & Wharves line could also be adversely affected by the pedestrian congestion. The F-Market & Wharves line operates on Jefferson and Beach Streets between The Embarcadero and Jones Street in the Fisherman's Wharf area. It is possible that during high attendance events, pedestrians could overflow onto Jefferson, Jones and Beach streets creating an impediment to the operations of the F-Market & Wharves.[37] This could adversely affect the operations of the F-Market & Wharves line.

Mitigation Measure M-TR-26a: Barricade to Protect Transit Lanes

The AC34 2012 events have the potential to adversely impact the operations of the F-Market & Wharves line in the Fisherman Wharf area, particularly on Jefferson Street. As part of the People Plan, the City shall create a strategy for protecting the F-Market & Wharves right-of-way for safety and operational efficiency (i.e., to ensure delay to streetcar service is minimized. The strategy could include, but not be limited to, erecting removable barricades along the F-Market & Wharves tracks in order to contain pedestrian overflow and direct crossings to existing crosswalks.

Mitigation Measure M-TR-26b: Traffic Control Officers at Key Intersections

The AC34 2012 events have the potential to adversely impact the operations of Muni, Golden Gate Transit, and AC Transit service in downtown San Francisco. As part of the People Plan, the City shall develop a strategy for implementation of traffic control officers at intersections that key transit routes travel through.

The implementation of **Mitigation Measure M-TR-26a** and **Mitigation Measure M-TR-26b**, in addition to the Satellite Parking Facility Program and the Public Information Program that would be part of the People Plan, and **Mitigation Measure TR-1** would be expected to reduce the impacts to the F-Market & Wharves, other Muni transit routes, Golden Gate Transit routes, and AC Transit routes. However, the effectiveness of these programs to reduce congestion on City streets is unknown therefore, operational impacts to transit would be temporary but *significant and unavoidable*.

Impact TR-27: Implementation of the AC34 2012 events would disrupt regular scheduled ferry operations. (Significant and Unavoidable with Mitigation)

As described in Chapter 3, Project Description, and depicted in Figure 3-2, the race area is proposed to begin and end at Piers 27-29, with the race area generally following the northern San Francisco waterfront and west under the Golden Gate Bridge and along the southern Marin County coastline east to Treasure Island, south to the Bay Bridge, and returning to Piers 27-29; the specific race course would be determined at the time of the race events. As shown in Figure 5.6-6, a number of existing ferry routes could cross the race course. Additionally, a number of harbor cruises as well as general water traffic operate within the race course area.

[37] Pedestrians are not anticipated to compete with vehicles on these streets because on high attendance days it is anticipated that vehicular traffic north of Bay Street would be restricted.

During the AC34 2012 race events, vessel traffic across the race course would need to be temporarily interrupted. The U.S. Coast Guard Station and Sector Facility, through its Vessel Traffic Service (VTS) unit, coordinates the safe and efficient transit of vessels in San Francisco Bay in an effort to prevent accidents. It is anticipated that that vessel traffic across the race course would be coordinate by the U.S. Coast Guard. However, given that the races would take place between 1:00 and 5:00 p.m., it is possible that p.m. peak period commute vessel traffic could be affected by the races. Additionally, vessel traffic could also be interrupted during the Saturday midday peak period. This would be considered a temporary but *potentially significant* impact on ferry transit operations.

Mitigation: Implementation of **Mitigation Measure M-TR-1** (People Plan Specific Provisions).

Implementation of the People Plan, including **Mitigation Measure M-TR-1d**, Public Information Program, is anticipated to alert the public to the possibilities of delays as a result of the AC34 2012 events. However, the delays would still occur and as such, impacts to ferry operations on event days would not be reduced, and therefore operational impacts to other regularly scheduled ferry service would be temporary but *significant and unavoidable.*

Impact TR-28: Implementation of the AC34 2012 events would have less than significant impacts on transit operations at secondary viewing areas. (Less than Significant)

As described in Section 5.1, Impact Overview, the secondary viewing areas are expected to attract visitors and spectators due to their potential viewing opportunities for the AC34 races. These include the south side of Angel Island, overlooks in the Marin Headlands and at Fort Baker, and waterfront areas in Sausalito and possibly Belvedere and Tiburon. As part of protecting sensitive habitat and cultural resources within the Marin Headlands, the NPS may close Conzelman Road to vehicular access; this would be similar to NPS actions for other high visitor volume special events. (For more information, see Chapter 3, Project Description, regarding the Parks Event Operations Plan).

As many of these viewing areas are in sparsely populated areas, and do not have transit service connecting to major destinations, the number of spectators traveling to and from these sites by transit would be limited, and would be dispersed over numerous lines. Therefore, impacts on transit at secondary viewing areas would be less than significant.

Mitigation: Not required

Improvement Measure I-TR-28: Advance Ferry Ticket Sales

In order to ensure that demand for ferry service to secondary spectator viewing areas on Angel Island do not exceed the capacity of the ferry service, advance ticket sales could be required. As part of the People Plan, the City shall work with California State Parks, Blue &

Gold ferry service, and the Angel Island Tiburon Ferry service to develop a strategy for ferry access to Angel Island, including requiring advance ticket sales.

Impact TR-29: Implementation of the AC34 2012 events would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the project sites and adjoining areas. (Less than Significant)

Under AC34 2012 conditions, bicycle access along the waterfront would remain relatively unchanged. For up to 6 of the 20 events days in 2012, during peak weekend events, northbound The Embarcadero could be closed to vehicular traffic between Howard and Bay Streets, and the area north of Bay Street between The Embarcadero and Fillmore Street, and Chestnut Street between Fillmore and Lyon streets could be restricted to emergency vehicles, local residents and authorized vehicles. These closures would be planned to provide expanded bicycle and pedestrian access and circulation to race venues and viewing areas. At both locations bicycle access would not be substantially affected. During days that northbound The Embarcadero is closed to vehicular traffic, it is anticipated that conditions would be similar to Sunday Streets and that bicyclists would travel within the area closer to the center median.

In 2012, the AC Village is proposed to be located at the Marina Green, and would attract a substantial number of pedestrians and bicyclists to the area. This could increase the potential for bicycle-vehicle and pedestrian-bicycle interactions, particularly in locations where pedestrians and bicyclists would share the right-of-way such as on Herb Caen Way, along the closed northbound lanes of The Embarcadero, and bicycle path along Marina Green and Crissy Field. While the use of bicycle facilities would temporarily intensify, the AC34 2012 events would not create potentially hazardous conditions for bicyclists. On days when a substantial number of pedestrians are anticipated, the proposed vehicle restrictions north of Chestnut Street would serve to provide additional capacity for bicyclists and reduce the potential for pedestrian/bicycle conflicts. Additionally, during the large events, traffic and pedestrian management strategies, similar to those employed in San Francisco for other special events (e.g., Bay to Breakers, Independence Day, Fleet Week) would be implemented. These include strategies such as advance signage, installation of barricades, parking restrictions/prohibitions, volunteer Muni ambassadors, and Police Department and SFMTA parking control officers directing traffic.

For those spectators arriving to the spectator venues by bicycle, the People Plan includes the installation of temporary bicycle stations (e.g., similar to the service operated at AT&T Park for San Francisco Giants games) along the waterfront from Piers 30-32 to Crissy Field and at the Civic Center BART Station. The People Plan also anticipates an increase in the number of bicycle rental businesses, and would seek to expand the planned bicycle sharing pilot program to the northern waterfront and to the west into the Presidio.

At some locations, bicycle access may become more difficult, due to heavier vehicle and pedestrian volumes. However, bicycle access would be maintained, and impacts on bicyclists would therefore, be *less than significant.*

Mitigation: Not required

Impact TR-30: Implementation of the AC34 2012 events would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility at secondary viewing areas. (Less than Significant)

As described in Section 5.1, Impact Overview, the secondary viewing areas are expected to attract visitors and spectators due to their potential viewing opportunities for the AC34 races. These include the north and west sides of Treasure Island, the south side of Angel Island, overlooks in the Marin Headlands and at Fort Baker, and waterfront areas in Sausalito and possibly Belvedere and Tiburon.) The number of spectators traveling to these sites by bicycle would be low, although on peak event days on weekends with good weather, more spectators may select to bicycle to the viewing areas. These additional bicyclists would be accommodated within the existing roadway network. On high attendance days NPS may employ traffic management strategies at the Marin Headlands and Fort Baker such as those employed on Independence Day and Fleet Week weekend days to reduce potential conflicts between vehicles, pedestrians and bicyclists, (however, bicycle access would be maintained) and to protect park biological and cultural resources. This is under discussion with NPS as part of a Parks Event Operations Plan for AC34 (for more information, see Chapter 3, Project Description). Therefore, AC34 2012 event impact on bicyclists at secondary viewing areas would be *less than significant*.

Mitigation: Not required

Impact TR-31: Implementation of the AC34 2012 events would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the project site or adjoining areas. (Less than Significant)

The AC34 2012 events are projected to generate up to 197,000 spectators per day (for up to 4 of 20 event days in 2012). The spectators would generally be located at the planned spectator venues, including Crissy Field, Fort Mason, Aquatic Park, Alcatraz (private), Fort Baker Pier at Cavallo Point (private), and at the Marina Green, which would serve as the AC Village in 2012. In addition to the planned venues, spectators are anticipated to gather along the waterfront for viewing of the races. Pedestrians would include those spectators walking to/from the venues, walking from regional transit operator and Muni transit stops (many of the transit stops are located a couple of blocks from the waterfront venues), and walking from parking facilities. Pedestrian facilities in the vicinity of the spectator venues in San Francisco are adequate. Pedestrians would access the venue sites from multiple streets, and would therefore be distributed over a large area.

During event days there would be temporarily increased pedestrian demand, which would increase the potential for pedestrian-vehicle and pedestrian-bicycle conflicts, particularly in locations where pedestrians and bicyclists would share the right-of-way (i.e., on Herb Caen Way or along the closed northbound lanes of The Embarcadero). However, during the large events, traffic and pedestrian management strategies, similar to those employed in San Francisco for other special events (e.g., Bay to Breakers, Independence Day, Fleet Week) would be implemented. As noted above in Impact TR-29, these measures could include, but not be limited to, advance signage, installation of barricades, parking restrictions/prohibitions, volunteer Muni ambassadors, and Police Department and SFMTA parking control officers directing traffic. While the AC34 2012 events would result in increases in pedestrians during peak event days, these increases would be temporary and would not create hazardous conditions for pedestrians. Therefore, AC34 2012 event impact on pedestrians would be *less than significant*.

Mitigation: Not required

Impact TR-32: Implementation of the AC34 2012 events would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility at secondary viewing areas and Vicinity. (Less than Significant)

As described in Section 5.1, Impact Overview, the secondary viewing areas are expected to attract numerous visitors and spectators due to their potential viewing opportunities for the AC34 races. These include the north and west sides of Treasure Island, the south side of Angel Island, overlooks in the Marin Headlands and at Fort Baker, and waterfront areas in Sausalito and possibly Belvedere and Tiburon.) The number of spectators walking to these sites would be low, would be accommodated within the existing sidewalk and roadway network. On high attendance days the NPS may employ traffic management strategies at the Marin Headlands and Fort Baker such as those employed on Independence Day and Fleet Week weekend days to reduce potential conflicts between vehicles, pedestrians and bicyclists, however, pedestrian access would be maintained. As part of the Parks Event Operations Plan that would be a separate element of the People Plan (see Chapter 3, Project Description, regarding the Parks Event Operations Plan), GGNRA, NPS, and the Golden Gate Transit Highway and Transportation District would determine procedures for controlling pedestrian and bicycle access to Golden Gate Bridge viewing areas. Therefore, AC34 2012 event impacts on pedestrians at secondary viewing areas would be *less than significant*.

Mitigation: Not required

Impact TR-33: Implementation of the AC34 2012 events would not result in a loading demand during the peak hour of loading activities that could not be accommodated within the proposed loading supply or within on-street loading zones. (Less than Significant)

The loading demand associated with AC34 2012 event venues at the AC Village at the Marina Green and at other spectator venues has not been estimated, as the demand would vary depending on the attendance and the type of activities planned for the various event days. The temporary loading demand would include deliveries and service vehicle trips associated with temporary structures, stages, amplification systems, outdoor seating, sponsor displays, general merchandise, food, and beverage. At each venue, locations for deliveries and separate trash and recycling areas would be provided. In some instances, the adjacent curb parking lane would be reserved for loading/unloading similar to operations during special events throughout San Francisco.

Details regarding the space for discard collection containers have not been identified. A Waste Management Plan (see Chapter 3, Project Description) would be prepared and implemented as part of the proposed project. As plans are revised as part of the coordination of the event, the Event Authority would specify the proposed types and sizes of collection containers, and location for pickup by the disposal company. Deliveries and trash disposal would typically occur between 12:00 a.m. and 9:30 a.m. Since temporary accommodations for loading/unloading activities would be included in event planning, AC34 2012 event impacts on loading would be *less than significant.*

Mitigation: Not required

Impact TR-34: Implementation of the AC34 2012 events would not result in a significant emergency vehicle access impact. (Less than Significant)

During AC34 2012 events, emergency access to and from the AC34 venues and along the waterfront would remain similar to existing conditions. During peak spectator events on weekends, northbound The Embarcadero would be closed to vehicular traffic between Howard Street and Bay Streets to allow for additional pedestrian and bicycle circulation area, similar to what currently occurs during Sunday Streets. In addition, on high attendance days, the area north of Bay Street between The Embarcadero and Fillmore Street, and Chestnut Street between Fillmore and Lyon Streets would be restricted general vehicular traffic but would be accessible to emergency vehicles, local residents and authorized vehicles. The number of days that northbound The Embarcadero closure and restricted areas along the northern waterfront would be limited to about 6 of the projected 20 AC34 event days in 2012.

The closure of northbound The Embarcadero to private vehicles would not apply to emergency vehicles, which would continue to have access. Along The Embarcadero, emergency vehicles would also be able to access destinations along the closed portion by utilizing the center median. The People Plan would include provisions for review of the proposed street closures and

restricted access areas by the San Francisco Fire Department and ISCOTT.[38] Since emergency access routes would remain similar to existing conditions, the impact of AC34 2012 events on emergency vehicle access would be *less than significant*.

Mitigation: Not required

Impact TR-35: Implementation of the AC34 2012 events would not result in construction-related transportation impacts because of their temporary and limited duration. (Less than Significant)

Construction for AC34 2012 would be limited to installation of temporary facilities to prepare for the team bases, and at Marina Green for the America's Cup Village. In addition, temporary facilities would be installed at the various spectator venues. With the exception of limited in-water construction at Pier 80, Piers 30-32, and at the Marina Green, all construction/installations for the AC34 2012 facilities would occur on land. All construction activities are proposed to occur on Mondays through Fridays for up to 10 hours per day, from 8:00 a.m. to 6:00 p.m. Construction materials and equipment would be transported by truck and/or barge throughout the construction period. Table 3-9 in Chapter 3, Project Description, presents a summary schedule for construction that would be associated with AC34.

Piers 30-32, Brannan Street Wharf (Piers 32-36) Open Water Basin, Pier 26 and Pier 28 would serve as the proposed primary team bases under the preferred team base option. This option is predicated on completion of improvements at these locations in time for the 2012 event.

2012 Event Facilities

- Piers 30-32, Brannan Street Wharf Open Water Basin, Pier 26 and Pier 28 – Piers 30-32 would undergo a number of permanent upgrades and repairs to support full AC34 event access and team base operations. Construction would involve demolition, construction of a number of temporary facilities, and dredging. Additionally a number of floating docks would be installed, which would involve pile driving. Construction to prepare for the team bases on Piers 30-32 is estimated to last about 7 months, including installation of floating docks, and would generate about 430 one-way truck trips during the construction period. These facilities would remain in place for the AC34 2013 events.[39]

- Pier 80 – Pier 80 would serve as the ancillary team base for AC34 2012 for up to five teams. Construction activities at Pier 80 would generate a total of 426 one-way truck trips during

[38] ISCOTT (Interdepartmental Staff Committee on Traffic and Transportation) is a city staff committee that meets to discuss temporary street closures for special events.

[39] Under Team Base Option 1, Piers 30-32, Piers 32-36 Open Water Basin, and Pier 26 and Pier 28 sheds would serve as the preferred primary team bases, and Pier 80 would be used as the ancillary team bases, for AC34 2012. This assumes all proposed temporary and/or permanent improvements at these locations would be completed, and associated required permits would be secured, in time for the 2012 event. Otherwise, Team Base Option 2 would occur, in which case Pier 80 would serve as the primary team bases for AC34 2012, and Piers 30-32, Piers 32-36 Open Water Basin, Pier 26, and Pier 28 would not be used for the 2012 event.

the construction period. Construction activities related to team base facilities, including floating docks and moorings, would require about 4 to 8 weeks, and removal would take less time.

- Marina Green and Vicinity - The AC Village at the Marina Green would contain a range of facilities and services, including the AC34 Operations Office, a hospitality area for corporate and private functions, outdoor amphitheater event seating, and areas of sponsor displays, general merchandise and food and beverage sales. At the Marina Green set-up installations would require 3 to 6 weeks, and removal would take less time.

- Spectator venues at Aquatic Park, Crissy Field, Fort Mason, Alcatraz, Fort Baker Pier at Cavallo Point, and Live Sites would involve installation of bleacher seating, tents and canopies. Set-up installations would require 2 to 3 weeks, and removal would take less time.

Construction staging for improvements at Piers 30-32 would occur primarily within Piers 30-32, and access to the site would be via The Embarcadero. Construction staging for improvements at Pier 80 would occur primarily within Pier 80. Access to the site would be via Third Street and Cesar Chavez Street. Staging for temporary facilities at the Marina Green and other spectator venues would be on-site, although some deliveries, staging, and temporary facilities (e.g., trailers) may require temporary use of adjacent on-street parking lanes. If it is determined that temporary travel or parking lane closures would be required, the closure would take place in accordance with the City of San Francisco's Regulations for Working in San Francisco Streets (the Blue Book), including those regarding sidewalk and lane closures, and the sponsor would meet with SFMTA staff to determine if any special traffic permits would be required. In addition to the regulations in the Blue Book, the contractor would be responsible for complying with all City, state and federal codes, rules, and regulations. Construction activities conducted by barge would be regulated by the Coast Guard. All construction-related vessel traffic in San Francisco Bay is regulated by the Coast Guard under the Vessel Traffic Service (VTS) program. All vessel operators have to inform the VTS of marine traffic in the Bay, and where a significant amount of traffic is anticipated, appropriate Notices to Mariners need to be coordinated with the Harbor Safety Committee and the VTS.

Construction truck traffic would result in short-term increases in traffic volumes. Construction truck trips would be made throughout the day (with more trips made during the early morning), and trucks would remain in the area for a shorter duration. Construction worker travel would typically take place during the hours before and after the work shifts. The presence of construction truck traffic would temporarily reduce roadway capacities due to the slower travel speeds and larger turning radii of trucks. The impacts of construction traffic would be most noticeable in the immediate vicinity of the project sites and less noticeable farther away and on regional transportation facilities such as I-280 and U.S. 101.

Construction activities at Pier 80 would not substantially affect adjacent land uses, as Pier 80 is located in a predominantly industrial area with low pedestrian activity, and construction staging and activities would generally be restricted to the project site. While Piers 30-32 are located along The Embarcadero promenade would take about 7 months, construction activities are not anticipated to affect nearby uses, including the promenade. Construction staging and activities at

Piers 30-32 would generally be restricted to the project site. Construction activities associated with temporary event improvements at the Marina Green and other spectator venues that involve temporary sidewalk, parking lane and travel lane closures would likely inconvenience employees, residents, and visitors to the area, but temporary construction activities are typical in an urban setting and would be limited to 2-3 weeks. For these reasons, construction-related transportation impacts would be *less than significant.*

Mitigation: Not required

Impact TR-36: The AC34 2012 events would not result in significant transportation impacts in combination with ongoing and upcoming construction projects in the City and its vicinity. (Less than Significant)

In San Francisco and its vicinity, there are a number of infrastructure upgrades and development projects that are currently under construction or are expected to be under construction concurrently with the AC34 2012 events. The San Francisco Department of Public Works (DPW) coordinates the various street excavation, utility work paving and other construction projects (including sewer main replacement, paving and road construction, curb ramp construction, and sidewalk and curb repair) in the public right-of-way in order to minimize the impact of construction activities on the street system. As part of the development of the traffic management component of the People Plan, the construction schedules and traffic management plans of the major and minor projects would be coordinated. In many instances, construction activities would not occur on weekends, however, temporary detours such as those associated with the Doyle Drive project may be in place, depending on the particular construction phase at the time of the AC34 events.

The projects that may be under construction during the AC34 2012 events include the following major projects listed below and the projects listed in Chapter 5, Table 5.1-4:

- The Central Subway project, which would extend Muni's T-Third light rail line from the intersection of Fourth/King into Union Square and Chinatown. Utility relocation prior to tunnel boring is under way, and construction is scheduled to be completed by 2018.[40]

- Reconfiguration of Doyle Drive into the seismically improved Presidio Parkway near the Presidio which would create a regional gateway between the Golden Gate Bridge and the city of San Francisco and provide direct access to the Presidio. Project construction is currently underway.[41]

- Transbay Transit Center project, currently under construction, which would serve existing transit service at the temporary terminal, as well as Caltrain's Downtown Extension and possibly intercity high-speed rail.

[40] San Francisco Planning Department, *Draft North Beach Public Library and Joe DiMaggio Playground Master Plan Project*, Case No. 2008.0968E. August 25, 2010.

[41] http://www.presidioparkway.org, assessed on June 17, 2011, and Chapter 5, Table 5.1-4 of this EIR.

- Van Ness Avenue Bus Rapid Transit Project (BRT), would run two miles along Van Ness Avenue between Mission and Lombard Streets. Typical BRT improvements include travel lanes for exclusive transit use; wider sidewalks at bus stops; traffic signal priority for transit vehicles; full stations with passenger amenities; multi-door boarding at sidewalk-level platforms; pre-paid boarding areas; and real-time information systems. This project is currently under environmental review by the Transportation Authority with construction scheduled to start in the Fall of 2013.

- The California Pacific Medical Center (CPMC) Long Range Development Plan is CPMC's multi-phased strategy to meet State seismic safety requirements for hospitals (SB 1953) and create a 20-year framework and Institutional Master Plan for its four existing medical campuses (Pacific Campus at Sacramento and Buchanan Streets; California Campus at Maple and California Streets; Davies Campus at Castro and 14th Streets; and St. Luke's Campus at Cesar Chavez and Valencia Streets), and a proposed new medical campus (Cathedral Hill Campus at Van Ness Avenue and Geary Boulevard) in San Francisco.[42] The Cathedral Hill Campus includes construction of a pedestrian tunnel under Van Ness Avenue between the proposed hospital and medical office building components of the project. This project is currently under environmental review. The pedestrian tunnel would be constructed over an 18-month period, with 10 months of work affecting Van Ness Avenue. The Cathedral Hill Campus would be constructed over approximately 54 months, and construction is anticipated to start in 2012.

A number of the above projects include temporary road closures and rerouting of traffic.[43] The road closures and detours, such as for Reconfiguration of Doyle Drive and the San Francisco-Oakland Bay Bridge Seismic Safety Projects, are widely advertised through permanent and variable message signs and the media and thus, allow drivers to adjust their behavior accordingly (i.e., switch modes, travel outside peak periods, allocate more time for trips, etc). The traffic generated by the AC34 2012 events would be subject to the temporary road closures and detours associated with the projects described above. However, AC34 2012 spectators, like the general public, would be aware of the various road closures and detours through information provided by the respective projects as well as part of the People Plan's Public Information Program, and would be expected to adjust their behavior accordingly. Therefore, although a number of construction projects would occur in conjunction with AC34 2012 events, their effects would not be expected to adversely affect the transportation network beyond impacts that have been identified in this EIR. Thus, the AC34 2012 impacts on the transportation network in conjunction with ongoing and planned construction projects would be considered *less than significant.*

Mitigation: Not required

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[42] San Francisco Planning Department, *Draft Environmental Impact Report for California Pacific Medical Center (CPMC) Long Range Development Plan*, Planning Department Case No. 2005.0555E, July 21, 2010.

[43] A draft schedule of the AC34 2012 and 2013 events in combination with other major construction projects in the City is included in Appendix TR-8.6.

Impact TR-37: The AC34 2012 events would result in potentially significant impacts to the transportation network in combination with other special events occurring simultaneously in San Francisco. (Significant and Unavoidable with Mitigation)

Every year the City of San Francisco hosts a number of special events in or near the waterfront area that attract large groups of people. These special events would be coordinated as part of the People Plan, with respect to provision of additional transit service, and traffic and parking management strategies. Special events that could overlap with the AC34 2012 events include but are not limited to:

- San Francisco Giants baseball games at AT&T Park during baseball season which occur generally from April through September (about 81 total games during the season).[44]
- San Francisco 49ers pre-season and regular season football games at the 49ers home stadium at Candlestick Park in August and September (up to two pre-season games, and three regular season games).[45]
- San Francisco Theatre Festival at Fort Mason is expected to contain over 100 shows in over a dozen indoor and outdoor venues. It was formerly held at Yerba Buena Garden Performing Arts Center but was recently relocated to Fort Mason.[46]
- Outside Lands is a three-day music, food, wine and art festival located throughout Golden Gate Park. Historically, the concert takes place starting on a Friday and ending on a Sunday within the third of fourth weekend of August.[47]
- Sunday Streets creates miles of motorized vehicle free roads for people to get out and participate in active and diverse San Francisco neighborhoods.
- Ghirardelli Square Chocolate Festival is a street fair in the City's northern waterfront area that attracts local and regional visitors.[48]
- San Francisco LovEvolution (formerly San Francisco LoveFest) is a techno parade and festival that occurs annually in San Francisco in late September and early October.[49]
- Fourth of July Fireworks Events.

The other large events such as, the Folsom Street Fair, Fleet Week and the Treasure Island Music Festival would occur either before the AC34 2012 events begin or after they are completed.[50]

Annual special events are typical in San Francisco. Generally special events would lead to an increase in parking demand in their vicinity, as event attendees would try to park within walking distance of their final destination. Special events would also lead to a temporary increase in

44 Information available at event site, http://mlb.mlb.com/schedule/index.jsp?c_id=SF, accessed on 06/20/11.
45 Information available at event site, http://www.ticketsreview.com/football, accessed on 06/20/11.
46 http://www.fortmason.org/aboutus/visitor-information, accessed on June 20, 2011.
47 http://www.sfoutsidelands.com/festival/festival-map.php, accessed on June 20, 2011.
48 Ibid footnote 1.
49 Information available at event site, http://www.sflovevolution.org/home.php, accessed on 06/20/11.
50 A draft schedule of the AC34 2012 and 2013 events in combination with other major events in the City is included in Appendix TR.

vehicle trips associated with event attendees' travel behavior and a temporary increase in transit demand, as some people choose to use public transit as an alternate transportation mode. Since the AC34 2012 event would be spread over several days and weeks, some annual special events are expected to occur concurrently.

During certain special events, such as the San Francisco Giants home games, a number of transit agencies, including Muni, Golden Gate Transit, WETA, provide additional transit capacity. As such it is possible that during certain special events, particularly those occurring on the weekend, transit capacity could be stretched to its limits and could not absorb the combination of riders for the AC34 2012 events as well as another special event. For example, ridership on Caltrain prior to and after San Francisco Giants games increases substantially, resulting in a significant number of standees and very limited capacity to accommodate additional riders. The increase in transit ridership associated with AC34 and one or more other events, even with additional transit capacity provided for these events could result in a significant transit impacts and could adversely affect other modes, such as vehicles, due to overall high levels of congestion.

> **Mitigation:** Implementation of **Mitigation Measure M-TR-1** (People Plan Specific Provisions).

Implementation of the People Plan, including **Mitigation Measure M-TR-1d**, Public Information Program, is anticipated to alert the public to the possibilities of delays due to overlap of special events, including the AC34 2012 events. However, the delays would still occur and as such, impacts to traffic and transit operations on event days would not be reduced, and therefore impacts on traffic and transit would be *significant and unavoidable.*

America's Cup 2013

Impacts associated with the America's Cup 2013 events are presented below. The following are the topics addressed and the impacts analyzed for these topics:

- Traffic: Impacts TR-38 through TR-59
- Transit: Impacts TR-60 through TR-71
- Bicycle: Impacts TR-72 through TR-73
- Pedestrian: Impacts TR-74 through TR-75
- Loading: Impact TR-76
- Emergency Vehicle Access: Impact TR-77
- Construction: Impact TR-78 through TR-79
- Other Special Events: Impact TR-80

Proposed AC34 events in 2013 would include 85 event (race and non-race) days with the number of spectators per day projected to range from 18,000 (on non-race days) to 334,340 spectators (on peak race days). The Event Authority estimates about 62 to 67 events with between 18,000 and 50,000 spectators, and 23 to 28 events with between 95,530 and 334,340 spectators (which would

occur only on weekend and holidays such as Fourth of July or Labor Day). The transportation impact analysis was conducted assuming 50,000 spectators on a weekday, and 334,340 spectators on a Saturday, which represents a worst-case assessment of weekday and weekend conditions, respectively. As described in Section 5.6.3.2, Project Transportation Improvements Assumptions, a transportation management program (i.e., the People Plan) to coordinate and optimize local and regional transit service plans and traffic, pedestrian, and bicycle management measure to accommodate the AC34 travel demand would be implemented for AC34 2013 events.

Overview of Project Traffic Impacts associated with the America's Cup 2013 Events

The AC34 2013 events would generate new vehicle trips to the various AC34 venues as well as to secondary viewing areas during the 85 days of AC34 2013 events. While the AC34 2013 events would result in an increase in vehicle trips to the various AC34 venues, this increase would be temporary. The AC34 2013 events would result in temporary but significant and unavoidable impacts at 18 of the 44 study intersections, including:

- The Embarcadero/Beach
- The Embarcadero/Broadway
- The Embarcadero/Howard
- The Embarcadero/Folsom
- The Embarcadero/Harrison
- The Embarcadero/Bryant
- Fremont/Folsom
- King/Third
- King/Fourth
- Lombard/Divisadero
- Lombard/Fillmore
- Bay/Laguna
- Bay/Van Ness
- Bush/Van Ness
- Pine/Van Ness
- Lombard/Van Ness
- Lincoln/25th
- Lombard/Lyon

Mitigation Measure M-TR-1, which would require the People Plan to develop and implement strategies to manage traffic associated with visitors arriving by auto and to encourage use of alternate modes of transportation, would reduce, but not eliminate these temporary but significant and unavoidable impacts.

The AC34 2013 events would have less-than-significant impacts at the intersections of Jackson/Arguello, and Pacific/Presidio that would operate at LOS E or LOS F under Existing plus AC34 2013 conditions. Twenty-four of the 44 study intersections would operate at LOS D or better under Existing plus AC34 2013 events conditions, including:

- Beach/Columbus
- North Point/Columbus
- North Point/Stockton
- Bay/Columbus
- Bay/Stockton
- Bay/Kearny
- Broadway/Sansome
- Broadway/Battery
- The Embarcadero/N Point/Kearny
- The Embarcadero/Bay
- The Embarcadero/Green Street
- The Embarcadero/Washington
- The Embarcadero/Mission
- The Embarcadero/Brannan
- 16th/Third
- Cesar Chavez/Third
- Cesar Chavez/Illinois
- Lake/14th
- Lake/15th
- Bay/Hyde

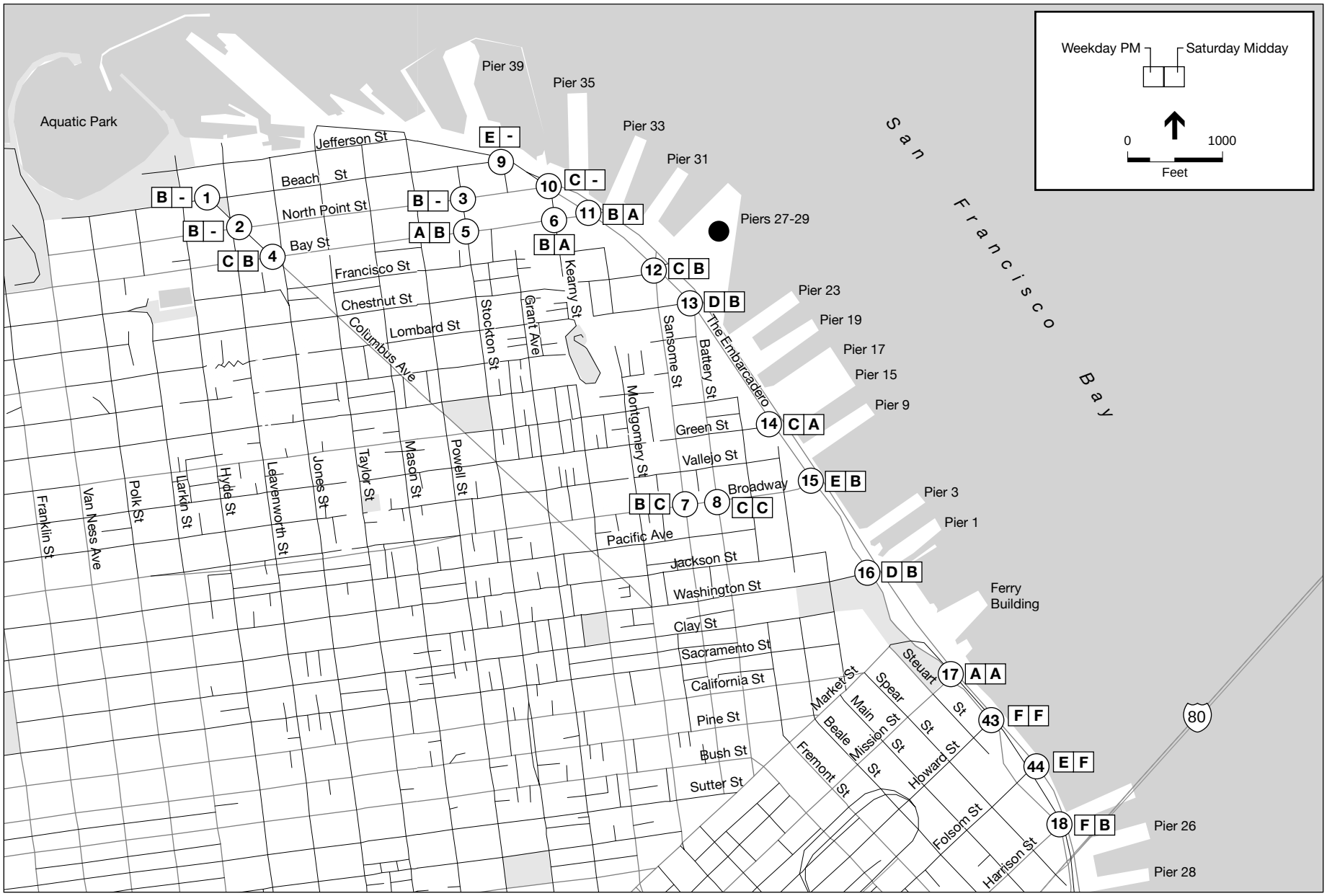
- The Embarcadero/Chestnut
- The Embarcadero/Lombard
- Alexander/Bunker (Marin Co.)
- Alexander/Ft. Baker-East (Marin Co.)

Impact TR-38 – Impact TR-55: Implementation of the AC34 2013 events would result in significant impacts at 18 individual signalized and unsignalized intersections that would operate at LOS E or LOS F under Existing plus AC34 2013 conditions. (Significant and Unavoidable with Mitigation)

As discussed in Table 5.6-15, the AC34 2013 Events would generate about 4,610 vehicle trips during the weekday p.m. peak hour (1,150 inbound and 3,460 outbound), and about 25,000 vehicle trips during the Saturday midday peak hour (20,000 inbound and 5,000 outbound). Table 5.6-22 presents the intersection LOS conditions at the study intersections for Existing plus AC34 2013 events conditions for the weekday p.m. peak hour, while Table 5.6-23 presents the intersection LOS for the Saturday midday peak hour. The LOS conditions for weekday p.m. and Saturday midday peak hour for the study intersections analyzed for AC34 2013 events are presented in **Figures 5.6-11A** through **5.6-11C**.

During AC34 2013 events, the vehicle trips traveling to and from the spectator venues would degrade operations at both signalized and unsignalized intersections, and would result in temporary but significant impacts at the following 18 study intersections:

- Impact TR-38: The Embarcadero/Beach (LOS E during weekday p.m.)
- Impact TR-39: The Embarcadero/Broadway (LOS E during the weekday p.m.)
- Impact TR-40: The Embarcadero/Howard (LOS F during weekday p.m. and Saturday midday)
- Impact TR-41: The Embarcadero/Folsom (LOS E during the weekday p.m. and LOS F during Saturday midday)
- Impact TR-42: The Embarcadero/Harrison (LOS F during the weekday p.m.)
- Impact TR-43: The Embarcadero/Bryant (LOS E during the weekday p.m.)
- Impact TR-44: Fremont/Folsom (LOS F during the Saturday midday)
- Impact TR-45: King/Third (LOS F during weekday p.m.)
- Impact TR-46: King/Fourth (LOS E during weekday p.m. and Saturday midday)
- Impact TR-47: Lombard/Divisadero (LOS F during weekday p.m. and Saturday midday)
- Impact TR-48: Lombard/Fillmore (LOS F during weekday p.m. and Saturday midday)
- Impact TR-49: Bay/Laguna (LOS F during Saturday midday)
- Impact TR-50: Bay/Van Ness (LOS F during Saturday midday)
- Impact TR-51: Bush/Van Ness (LOS F during Saturday midday)
- Impact TR-52: Pine/Van Ness (LOS F during Saturday midday)
- Impact TR-53: Lombard/Van Ness (LOS F during weekday p.m. and Saturday midday)
- Impact TR-54: Lincoln/25th (LOS F during the Saturday midday)
- Impact TR-55: Lombard/Lyon (LOS F during weekday p.m. and Saturday midday)



SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

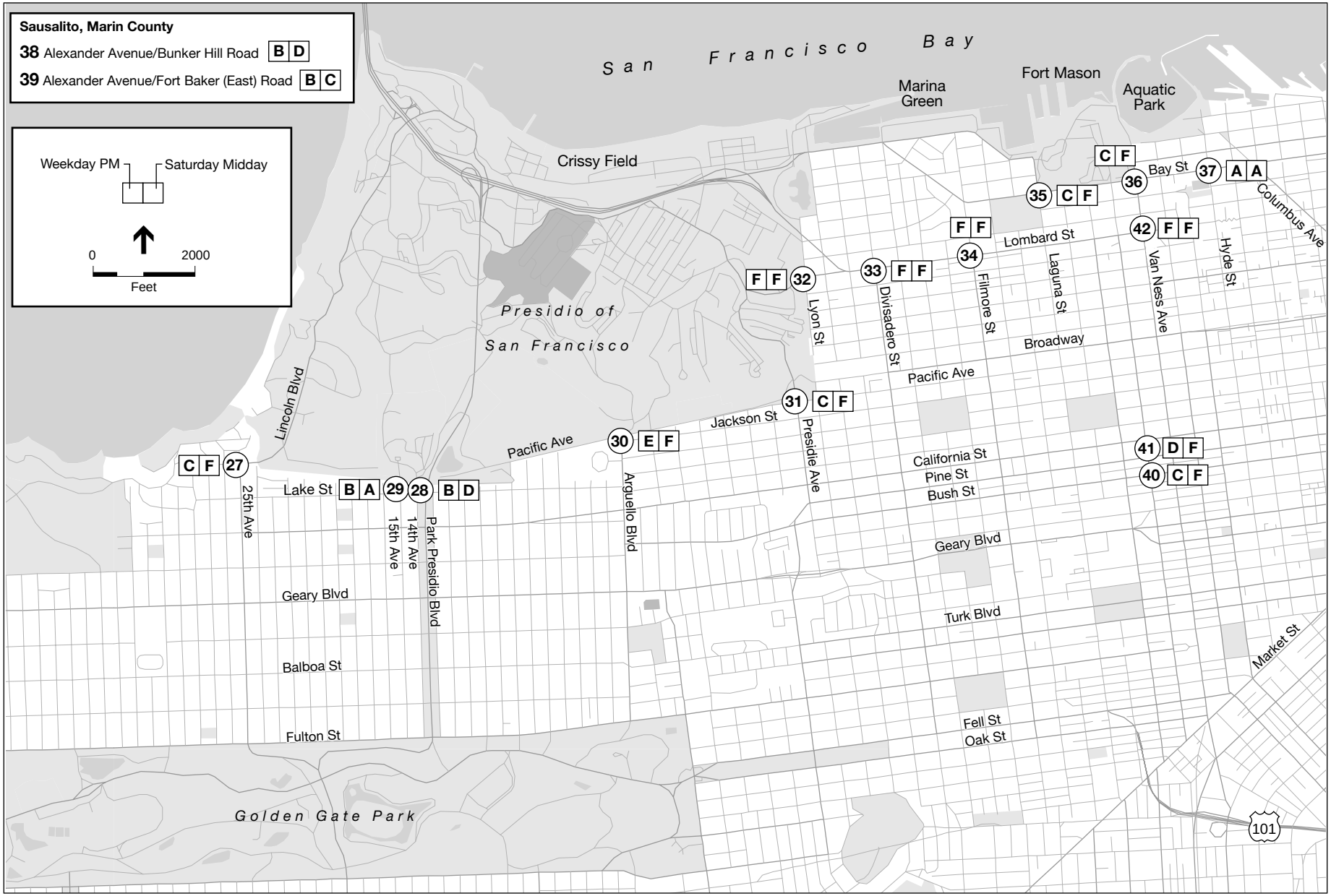
Figure 5.6-11A
Existing Plus AC34 2013 Intersection LOS-
Piers 27-29 Vicinity

* America's Cup Team Bases

SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-11B
Existing Plus AC34 2013 Intersection LOS-
South of Bay Bridge



SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-11C
Existing Plus AC34 2013 Intersection LOS-
Northwest San Francisco

Implementation of **Mitigation Measure M-TR-1a through M-TR-1d** (People Plan Specific Provisions) would serve to reduce vehicle trips to and from the northern waterfront, but the effectiveness of these measures to reduce vehicle trips and poor operating conditions at these intersections to LOS D or better is unknown, therefore resulting in temporary but *significant and unavoidable impacts.* The traffic impacts at these intersections would also be significant and unavoidable because funding for implementation of **Mitigation Measure M-TR-1b** is uncertain.

Impact TR-56: Implementation of the AC34 2013 events would have less than significant impacts at the two unsignalized intersections of Jackson/Arguello and Pacific/Presidio where the worst approach would operate at LOS E or LOS F under Existing plus AC34 2013 conditions. (Less than Significant)

Under AC34 2013 events conditions, the southbound approach at the intersection of Jackson/Arguello would operate at LOS E during the weekday p.m. peak hour, and the northbound approach would operate at LOS F during the Saturday midday peak hour. At the intersection of Pacific/Presidio, the northbound approach would operate at LOS F conditions during the Saturday midday peak hour. However, at both of these intersections, the peak hour signal warrants would not be met, and therefore AC34 2013 event traffic impacts at these intersections would be *less than significant.*

Mitigation: Not required

Impact TR-57: Implementation of the AC34 2013 events would have less than significant impacts at 24 study intersections that would operate at LOS D or better under Existing plus AC34 2013 conditions. (Less than Significant)

With implementation of the AC34 2013 events, the following 24 study intersections would continue to operate at LOS D or better during the weekday p.m. and Saturday midday peak hours, and therefore, traffic impacts at these locations would be *less than significant:*

- Beach/Columbus
- North Point/Columbus
- North Point/Stockton
- Bay/Columbus
- Bay/Stockton
- Bay/Kearny
- Broadway/Sansome
- Broadway/Battery
- The Embarcadero/North Point/Kearny
- The Embarcadero/Bay
- The Embarcadero/Chestnut
- The Embarcadero/Lombard
- The Embarcadero/Green Street
- The Embarcadero/Washington
- The Embarcadero/Mission
- The Embarcadero/Brannan
- 16th/Third
- Cesar Chavez/Third
- Cesar Chavez/Illinois
- Lake/14th
- Lake/15th
- Bay/Hyde
- Alexander/Bunker (Marin Co.)
- Alexander/Ft. Baker-East (Marin Co.)

Mitigation: Not required

Impact TR-58: Implementation of the AC34 2013 events would result in significant impacts at other signalized and unsignalized intersections in the project area within San Francisco in addition to impacts identified at the 44 study intersections. (Significant and Unavoidable with Mitigation)

In addition to impacts on the study intersections in San Francisco analyzed in Impacts TR-38 through TR-55 above, the new vehicle trips generated by the AC34 2013 events would affect traffic at adjacent signalized and unsignalized intersections. The increased congestion would be due to high vehicle volumes destined to and from the waterfront, detours associated with closure of the northbound The Embarcadero travel lanes, reroute of traffic to other local streets, and congestion in the vicinity of parking facilities. The increased traffic volumes would exacerbate congestion and likely reduce levels of service at numerous intersections. In addition, other areas of northern San Francisco with possible viewing opportunities of the AC34 races (i.e., secondary viewing areas) would be expected to experience increases in traffic, particularly on weekend race days; these areas include north-facing slopes of the Presidio, Pacific Heights, Russian Hill, and various vista points, such as Coit Tower and overlook locations in the Presidio. **Mitigation Measure M-TR-1**, which includes various measures to encourage transit use, and limit the use of private autos to access the spectator venues, would reduce, but may not mitigate impacts. Therefore, the temporary traffic impacts would remain *significant and unavoidable*.

Mitigation: Implementation of **Mitigation Measure M-TR-1** (People Plan Specific Provisions).

Impact TR-59: Implementation of the AC34 2013 events would result in significant impacts on traffic operations at secondary viewing areas outside of San Francisco. (Significant and Unavoidable with Mitigation)

As described in Section 5.1, Impact Overview, the secondary viewing areas are expected to attract numerous visitors and spectators due to their potential viewing opportunities for the AC34 races. These include the south side of Angel Island, overlooks in the Marin Headlands and at Fort Baker, and waterfront areas in Sausalito and possibly Belvedere and Tiburon. During the Saturday midday peak hour, the AC34 2013 peak events would result in a total of 1,650 vehicle trips (1,320 inbound and 330 outbound) vehicle trips destined to the various secondary viewing areas outside of San Francisco (not including trips to and from Treasure Island). These trips would be distributed among multiple locations, and could potentially exacerbate congestion and reduce levels of service at key intersections. During peak events, it is anticipated that spectators destined to Marin viewing areas would also travel to Sausalito and Tiburon, resulting in temporary increases in congestion that would be similar to conditions that occur during special events at these locations (e.g., during the Sausalito Art Festival). As described earlier, NPS would consider closing

Conzelman Road access to the Marin Headlands as part of a Parks Event Operations Plan (for more information, see Chapter 3, Project Description). **Mitigation Measure M-TR-1**, which includes various traffic management strategies, would reduce, but may not mitigate impacts to a less-than-significant level. Therefore, these temporary impacts would remain temporary but *significant and unavoidable.*

> **Mitigation:** Implementation of **Mitigation Measure M-TR-**1 (People Plan Specific Provisions).

Overview of Project Transit Impacts associated with the America's Cup 2013 Events

The proposed AC34 2013 events would result in a temporary increase in the number of transit trips to and from the various AC34 venues as well as to secondary viewing areas during the 85 days of AC34 2013 events. The AC34 2013 transit demand on Muni bus, light rail, and historic streetcar lines serving the AC34 venues would partially be accommodated during the weekday p.m., and would not be accommodated during the Saturday midday peak hours of analysis, exceeding 100 percent of Muni's capacity, thereby resulting in significant impacts on Muni operations. With implementation of **Mitigation Measure M-TR-1b** (Additional Muni Transit Service), the AC34 2013 transit demand during the weekday p.m. would be accommodated within Muni service from all venues except from Presidio/Crissy Field/Marina, where outbound transit capacity would continue to exceed 100 percent of Muni's capacity. During the Saturday midday peak hour, inbound transit capacity would be exceeded at all Muni screenlines, and a greater increase in transit service enhancements in the form of increased headways or supplemental transit routes would be required. The City would need to implement **Mitigation Measure M-TR-18** (Additional Muni Transit Service), which would require provision of transit service beyond that identified in **Mitigation Measure M-TR-1b**. However, since implementation of both mitigation measures is uncertain, AC34 2013 events' impacts to Muni service would remain significant and unavoidable. Increased transit demand within the Presidio would temporarily increase travel demand on the PresidiGo shuttle service which currently operates close to capacity. This would be considered a significant impact on PresidiGo operations, and shuttle service enhancements would be required. **Mitigation Measure M-TR-18** (Additional PresidiGo Shuttle Service) would require the City to work with the Presidio Trust to develop and implement an operating plan that would increase shuttle service during the AC34 events.

The AC34 2013 transit demand on regional transit services, including AC Transit, BART, Blue & Gold, WETA, Golden Gate Transit, Caltrain, and SamTrans, would be accommodated within the existing available capacity during the weekday p.m. peak hour. However, on Saturdays, when substantially less regional transit capacity into and out of San Francisco is provided, the AC34 2013 transit demand would exceed the available capacity, thereby resulting in significant impacts on AC Transit, BART, Blue & Gold, WETA, Golden Gate Transit, Caltrain, and SamTrans operations. Implementation of **Mitigation Measures M-TR-19** (Additional AC Transit Service), **M-TR-20** (Additional BART Service), **M-TR-21** (Additional WETA Service), **M-TR-22** (Additional Golden Gate Transit Service), **M-TR-23** (Additional Blue & Gold Service), **M-TR-24** (Additional

Caltrain Service), and **M-TR-25** (Additional SamTrans Service) would require the City to work with the various regional transit providers to develop and implement an operating plan that would accommodate peak transit demands during the AC34 events to and from the East Bay, North Bay, and South Bay. However, because full funding for additional regional transit service has not yet been identified, implementation of **Mitigation Measures M-TR-18** through **M-TR-25** remains uncertain. Accordingly, AC34 2013 events' temporary impacts to AC Transit, BART, Blue & Gold, WETA, Golden Gate Transit, Caltrain, and SamTrans transit capacity would remain significant and unavoidable.

As discussed under Impacts TR-38 through TR-55 and under Impact TR-58, implementation of the AC34 2013 events would result in unacceptable levels of service at numerous intersections throughout the City. The congestion generated by this project would have the potential to adversely affect ground transit operations, including Muni and other regional transit providers such as Golden Gate Transit and SamTrans. **Mitigation Measure M-TR-1** (People Plan Specific Provisions) would serve to reduce the amount of congestion by implementing a Traffic Monitoring and Management Program, a Transit Operating Plan, a Satellite Parking Facility Program, and a Public Information Program. However, the effectiveness of these programs to reduce congestion on City streets is unknown therefore, the temporary operational impacts to transit would remain significant and unavoidable.

Impact TR-60: Implementation of the AC34 2013 events would exceed the available transit capacity of Muni lines. (Significant and Unavoidable with Mitigation)

As presented in Table 5.6-15, the AC34 2013 events would generate a total of about 4,703 transit trips during the weekday p.m. peak hour, and 47,289 transit trips during the Saturday midday peak hour. Table 5.6-24 summarizes the outbound (i.e., away from the waterfront) weekday p.m. peak hour ridership and capacity utilization of the Muni line serving the areas along the waterfront (based on the screenline methodology), as well as for regional transit lines to the East Bay, North Bay, and the South Bay, while Table 5.6-25 presents this information for inbound (i.e., towards the waterfront) Saturday midday peak hour.

The total AC34 2013 transit demand on Muni buses and light rail would substantially exceed 100 percent of Muni's capacity at the Presidio/Crissy/Marina and Fisherman's Wharf screenlines during the weekday p.m. peak hour and at all screenlines during the Saturday midday peak hour. Since the utilization of Muni's bus and rail service would exceed 100 percent capacity utilization during the peak hours, the AC34 2013 events' impact to transit capacity would be considered a significant impact.

With implementation of **Mitigation Measure M-TR-1b**, additional Muni transit capacity would be provided during weekday and weekend conditions. **Table 5.6-27** presents the ridership and capacity for the screenlines assuming existing transit capacity, and additional transit capacity identified as part of **Mitigation Measure M-TR-1b**. With implementation of **Mitigation Measure M-TR-1b**, the AC34 2013 transit demand during the weekday p.m. would be accommodated within Muni service from all venues except from Presidio/Crissy Field/Marina, where outbound transit

TABLE 5.6-27
MUNI TRANSIT RIDERSHIP AND CAPACITY UTILIZATION
EXISTING PLUS AC34 2013 PROJECT AND
EXISTING PLUS AC34 2013 PROJECT WITH MITIGATION MEASURE M-TR-1B

	Existing plus AC34 2013			Existing plus AC34 2013with Mitigation Measure M-TR-1B		
Peak Hour	**Capacity**	**Ridership**	**% Utilization**	**Capacity**	**Ridership**	**% Utilization**
Weekday PM						
Presidio/Crissy Field/Marina	**2,891**	**3,578**	**124%**	**3,521**	**3,578**	**102%**
Fisherman's Wharf	4,049	3,621	89%	4,613	3,621	78%
The Embarcadero	13,737	11,104	81%	14,087	11,104	79%
Treasure Island	252	126	50%	252	126	50%
Total	20,929	18,428	88%	22,473	18,428	82%
Saturday Midday						
Presidio/Crissy Field/Marina	**2,738**	**17,930**	**665%**	**3,872**	**17,930**	**463%**
Fisherman's Wharf	**3,119**	**5,135**	**165%**	3,683	**5,135**	**139%**
The Embarcadero	8,494	7,991	94%	9,558	7,991	84%
Treasure Island	189	186	98%	252	186	74%
Total	14,540	**31,242**	**215%**	17,365	**31,242**	**180%**

[a] Bold indicates capacity utilization exceeding 100 percent.

SOURCE: Planning Department, Adavant Consulting/LCW Consulting, 2011

capacity would continue to exceed 100 percent of Muni's capacity. During the Saturday midday peak hour, inbound transit capacity would be exceeded at the Presidio/Crissy/ Marina and Fisherman's Wharf screenlines. In order to accommodate the additional weekday p.m. peak hour demand at 100 percent capacity utilization, between 8 and 11 additional buses would need to be provided (depending on whether 63-passenger or 94-passenger buses are used), and between 184 and 274 additional buses would be needed to accommodate the Saturday midday transit demand.

While implementation of **Mitigation Measure M-TR-17** would create additional capacity on Muni to accommodate transit riders generated by the AC34 2013 events, since full funding for **Mitigation Measure M-TR-17** has not yet been identified, its implementation remains uncertain. Accordingly, the AC34 2013 event impacts to Muni transit capacity would be *significant and unavoidable.*

Impact TR-61: Implementation of the AC34 2013 events would exceed the available transit capacity of PresidiGo. (Significant and Unavoidable with Mitigation)

As presented in Table 5.6-15, the AC34 2013 events would generate a substantial number of transit trips destined to the Presidio, Crissy Field and the Marina Green, particularly on weekend days. It is anticipated that a portion of these trips would utilize PresidiGo Downtown and PresidiGo Around the Park shuttle service. The additional demand associated with the AC34

2013 events would result in the PresidiGo shuttles exceeding their capacity utilization, which would be considered a temporary but significant impact.

With implementation of **Mitigation Measure M-TR-18** (Additional PresidiGo Capacity), additional PresidiGo shuttle capacity would be provided during weekend conditions. However, because plans to provide additional PresidiGo capacity have not been finalized and full funding for additional transit service by the Presidio Trust has not yet been identified, implementation of **Mitigation Measure M-TR-18** remains uncertain. Accordingly, AC34 2013 event impacts to PresidiGo capacity would be temporary but *significant and unavoidable.*

Impact TR-62: Implementation of the AC34 2013 events would exceed the available transit capacity of AC Transit lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 and Table 5.6-25 for Existing plus AC34 2013 conditions, the capacity utilization for AC Transit service would be about 65 percent during the weekday p.m., and about 200 percent during the Saturday midday peak hour. Since capacity utilization of AC Transit's transbay buses during the Saturday midday peak hour would exceed AC Transit's capacity, the AC34 2012 events' impact to AC Transit capacity would be considered a temporary but significant impact. Temporary operational impacts to regional bus operators are discussed under Impact TR-69.

In order to accommodate the additional Saturday midday transit demand, about five additional inbound buses would be required (currently there are about five inbound transbay buses during the Saturday midday peak hour).

With implementation of **Mitigation Measure M-TR-19** (Additional AC Transit Capacity), additional AC Transit bus capacity would be provided during weekend conditions. However, because plans to provide additional AC Transit capacity have not been finalized and full funding for additional transit service by AC Transit has not yet been identified, implementation of **Mitigation Measure M-TR-19** remains uncertain. Accordingly, AC34 2013 event temporary impacts to AC Transit bus capacity would be *significant and unavoidable.*

Impact TR-63: Implementation of the AC34 2013 events would exceed the available transit capacity of BART lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 for Existing plus AC34 2013 conditions, during the weekday p.m. peak hour, the capacity utilization for BART service would be 88 percent for outbound East Bay service, and 66 percent for outbound South Bay service. During the Saturday midday peak hour, the capacity utilization for inbound BART service would be about 181 percent for East Bay and 163 percent for South Bay service. Since capacity utilization of BART's East Bay and South

Bay trains during the Saturday midday peak hour would exceed BART's capacity, the AC34 2013 events' impact to BART capacity would be considered a temporary but significant impact.

With implementation of **Mitigation Measure M-TR-20** (Additional BART Transit Service), additional BART capacity would be provided during weekend conditions. However, because plans to provide additional BART transit capacity have not been finalized, and since full funding for additional transit service by BART has not yet been identified, implementation of **Mitigation Measure M-TR-20** remains uncertain. Accordingly, AC34 2013 event impacts to BART capacity would be temporary but *significant and unavoidable.*

Impact TR-64: Implementation of the AC34 2013 events would exceed the available transit capacity of WETA ferry lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 for Existing plus AC34 2013 conditions, during the weekday p.m. peak hour, the capacity utilization for ferry service provided by WETA to the East Bay and would be about 50 percent during the weekday p.m., and the projected AC34 transit ridership would be accommodated. However, as shown on Table 5.6-25 for Saturday midday peak hour conditions, the capacity utilization for inbound service from the East Bay would be about 243 percent. Since capacity utilization of WETA ferry service during the Saturday midday peak hour would exceed the ferry capacity, the AC34 2013 events' impact to WETA ferry capacity would be considered a temporary but significant impact. In order to accommodate the Saturday midday peak hour ferry demand, an additional 985 passengers from the East Bay would need to be accommodated.

With implementation of **Mitigation Measure M-TR-21** (Additional WETA Transit Service), additional WETA ferry capacity would be provided during weekend conditions. However, because plans to provide additional WETA transit capacity have not been finalized, and since full funding for additional transit service by WETA has not yet been identified, implementation of **Mitigation Measure M-TR-21** remains uncertain. Accordingly, AC34 2013 event impacts to WETA ferry capacity would be temporary but *significant and unavoidable.*

Impact TR-65: Implementation of the AC34 2013 events would exceed the available transit capacity of Golden Gate Transit bus and ferry lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 and Table 5.6-25, the capacity utilization for transit service to the North Bay (which includes Golden Gate Transit bus and ferry service, and Blue & Gold's ferry service to Sausalito and Tiburon) would be about 69 percent for buses and 58 percent for ferries during the weekday p.m. peak hour for trips from San Francisco to the North Bay, and about 216 percent for buses and 205 percent for ferries during the Saturday midday peak hour for trips from the North Bay to San Francisco. Since the capacity utilization of buses and ferry service to

the North Bay during the Saturday midday peak hour would exceed the combined ferry and bus capacity, the AC34 2013 events' impact to Golden Gate Transit capacity would be considered a significant impact.

In order to accommodate the additional Saturday midday transit demand additional Golden Gate Transit and Blue & Gold service would need to be provided to accommodate an additional 2,948 passengers traveling inbound from the North Bay to San Francisco during the Saturday midday peak hour. The additional demand could be accommodated through a combination of ferry (Golden Gate Transit and Blue & Gold) and bus (Golden Gate Transit) service.

With implementation of **Mitigation Measure M-TR-22** (Additional Golden Gate Transit Service), additional Golden Gate Transit bus and ferry capacity would be provided during weekend conditions. However, because plans to provide additional Golden Gate Transit service have not been finalized, and since full funding for additional transit service by Golden Gate Transit has not yet been identified, implementation of **Mitigation Measure M-TR-22** remains uncertain. Accordingly, AC34 2013 event's temporary impacts to Golden Gate Transit's transit capacity would be *significant and unavoidable.*

Impact TR-66: Implementation of the AC34 2013 events would exceed the available transit capacity of Blue & Gold ferry lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 and Table 5.6-25 for Existing plus AC34 2013 conditions, the capacity utilization for transit service to the North Bay via ferry (which includes Blue & Gold's ferry service to Sausalito and Tiburon and Golden Gate Transit ferry service to Sausalito and Larkspur) would be about 58 percent during the weekday p.m. peak hour for trips from San Francisco to the North Bay, and about 205 percent during the Saturday midday peak hour for trips from the North Bay to San Francisco. Since the capacity utilization of ferry service to the North Bay during the Saturday midday peak hour would exceed the combined ferry capacity, the AC34 2013 events' impact to Blue & Gold's transit capacity would be considered a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand additional Golden Gate Transit ferry and Blue & Gold ferry service would need to be provided to accommodate an additional 2,710 passengers traveling inbound from the North Bay to San Francisco during the Saturday midday peak hour.

With implementation of **Mitigation Measure M-TR-23** (Additional Blue & Gold Transit Service), additional Blue & Gold ferry capacity would need to be provided during weekend conditions. However, because plans to provide additional Blue & Gold ferry capacity have not been finalized, and since full funding for additional transit service by Blue & Gold has not yet been identified, implementation of **Mitigation Measure M-TR-23** remains uncertain. Accordingly, AC34 2013 event's impacts to Blue & Gold's transit capacity would be *significant and unavoidable*.

Impact TR-67: Implementation of the AC34 2013 events would exceed the available transit capacity of Caltrain service. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 for Existing plus AC34 2013 conditions, the capacity utilization for outbound Caltrain service to the South Bay service during the p.m. peak hour would be 67 percent, which would not exceed Caltrain's peak hour load factor of 100 percent. As shown on Table 5.6-25, however, during the Saturday midday peak hour, the capacity utilization for inbound Caltrain service would be about 279 percent. Since capacity utilization of Caltrain trains during the Saturday midday peak hour would exceed Caltrain's capacity, the AC34 2013 events' impact to Caltrain capacity would be considered a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand additional Caltrain service would need to be provided to accommodate an additional 1,161 passengers traveling inbound from the South Bay during the Saturday midday peak hour.

As part of **Mitigation Measure M-TR-24** (Additional Caltrain Transit Service) the People Plan is expected to develop a transit operating plan that would formalize the details of the additional service, if any. However, because plans to provide additional Caltrain transit capacity have not been finalized, and since full funding for additional transit service by Caltrain has not yet been identified, implementation of **Mitigation Measure M-TR-24** remains uncertain. Accordingly, AC34 2013 events' temporary impacts to Caltrain transit capacity would be *significant and unavoidable.*

Impact TR-68: Implementation of the AC34 2013 events would exceed the available transit capacity of SamTrans lines. (Significant and Unavoidable with Mitigation)

As indicated on Table 5.6-24 for Existing plus AC34 2013 conditions, during the weekday p.m. peak hour, the capacity utilization for SamTrans service to the South Bay would be 67 percent, which would not exceed SamTrans' peak hour load factor of 100 percent. During the Saturday midday peak hour, however, the capacity utilization for inbound service would be about 262 percent (see Table 5.6-25). Since capacity utilization of SamTrans buses during the Saturday midday peak hour would exceed SamTrans' capacity, the AC34 2013 events' impact to SamTrans transit capacity would be considered a temporary but significant impact.

In order to accommodate the additional Saturday midday transit demand, additional SamTrans service would need to be provided to accommodate an additional 65 passengers traveling inbound from the South Bay during the Saturday midday peak hour (about two additional inbound buses during the Saturday midday peak hour).

With implementation of **Mitigation Measure M-TR-25** (Additional SamTrans Transit Service), additional transit capacity to the South Bay would be provided during weekend conditions. However, because plans to provide additional SamTrans or BART capacity have not been finalized, and since full funding for additional transit service by SamTrans has not yet been

identified, implementation of **Mitigation Measure M-TR-25** remains uncertain. Accordingly, AC34 2013 events' temporary impacts to SamTrans transit capacity would be *significant and unavoidable.*

Impact TR-69: Implementation of the AC34 2013 events would have a potentially significant impact on transit operations related to additional congestion generated by the project. (Significant and Unavoidable with Mitigation)

As discussed under Impacts TR-38 through TR-55 and under Impact TR-58, implementation of the AC34 2013 events would result in unacceptable levels of service (LOS E or LOS F) at various intersections throughout the City. The congestion generated by this project would have the potential to adversely affect surface transit operations, including Muni and other regional transit providers such as Golden Gate Transit, SamTrans and AC Transit. Specifically, roadway congestion associated with increases in AC34 2013 event traffic would slow down transit vehicles operating on such streets, resulting in increased transit travel times. Additionally, transit vehicles typically experience a delay when waiting for a gap to re-enter the flow of traffic after stopping at a transit stop to pick-up and drop-off passengers. As traffic volumes on the adjacent lanes increase, re-entering the flow of traffic becomes more difficult resulting in increased delay.

Muni bus routes traveling through intersections projected to operate at LOS E and LOS F conditions include 28-19th Avenue and 43-Masonic on Lombard Street, and 47-Van Ness, 49-Van Ness/Mission, and 30X-Marina Express on Van Ness Avenue. Golden Gate Transit routes traveling on Lombard Street and Van Ness Avenue would also be affected. Restricted access north of Chestnut Street may result in increased congestion on Chestnut Street due to drivers unfamiliar with the access restrictions. This increased congestion could potentially impact 30-Stockton operations on Chestnut Street. Further, the potential northbound The Embarcadero roadway closure on high attendance event days is expected to redistribute traffic in the downtown area and could potentially result in additional congestion along, among others, Third/Fourth Streets, Main/Beale Streets, and Battery/Sansome Streets. Muni lines such as 1-California, 10-Townsend, 30-Stockton, and 45-Union-Stockton, AC transit lines, and most of Golden Gate Transit lines that provide service on these streets could be adversely affected by the additional AC34 2013 event traffic.

As under AC34 2012 conditions discussed in Impact TR-26, the operation of the F-Market & Wharves line could also be adversely affected by the pedestrian congestion. The F-Market & Wharves line operates on Jefferson and Beach Streets between The Embarcadero and Jones Street in the Fisherman's Wharf area. It is possible that during high attendance events, pedestrians could overflow onto Jefferson, Jones and Beach streets creating an impediment to the operations of the F-Market & Wharves line. This could adversely affect the operations of the F-Market & Wharves line.

Mitigation Measure M-TR-1 (People Plan Specific Provisions) would serve to reduce the amount of congestion by implementing a Traffic Monitoring and Management Program, a Transit

Operating Plan, a Satellite Parking Facility Program, and a Public Information Program. In addition, **Mitigation Measures M-TR-26a** (Barricade to Protect Transit Lanes) and **M-TR-26b** (Traffic Control Officers at Key Intersections) would serve to facilitate transit operations within areas where pedestrian and traffic congestion could affect transit operations. However, the effectiveness of these measures to reduce congestion on City streets is unknown therefore, operational impacts to transit would be *significant and unavoidable*.

Impact TR-70: Implementation of the AC34 2013 events would disrupt regular ferry operations (Significant and Unavoidable with Mitigation).

As under AC34 2012 event conditions discussed in Impact TR-27, vessel traffic across the race course would need to be interrupted and the number of race days would increase to 45 (of a total of 85 event days during AC34 2013). The U.S. Coast Guard Station and Sector Facility, through its Vessel Traffic Service (VTS) unit, coordinates the safe and efficient transit of vessels in San Francisco Bay in an effort to prevent accidents. It is anticipated that vessel traffic across the race course would be coordinate by the U.S. Coast Guard. However, given that the races would take place between 1:00 p.m. and 5:00 p.m., it is possible that p.m. peak period commute vessel traffic could be affected by the races. Additionally, vessel traffic could also be interrupted during the Saturday midday peak period. This would be considered a potentially significant impact on ferry transit operations.

> **Mitigation:** Implementation of **Mitigation Measure M-TR-1** (People Plan Specific Provisions). Implementation of the People Plan, including **Mitigation Measure M-TR-1d** (Public Information Program) is anticipated to alert the public to the possibilities of delays as a result of the AC34 2012 events. However, the delays would still occur and as such, impacts to ferry operations would not be reduced, and the operational delays to ferries would be *significant and unavoidable.*

Impact TR-71: Implementation of the AC34 2013 events would have less than significant impacts on transit operations at secondary viewing areas. (Less than Significant)

As described in Section 5.1, Impact Overview, the secondary viewing areas are expected to attract visitors and spectators due to their potential viewing opportunities for the AC34 races. These include the north and west sides of Treasure Island, the south side of Angel Island, overlooks in the Marin Headlands and at Fort Baker, and waterfront areas in Sausalito and possibly Belvedere and Tiburon. As many of these viewing areas are in sparsely populated areas, and do not have transit service connecting to major destinations, the number of spectators traveling to and from these sites by transit would be limited, and would be dispersed over numerous lines. Therefore, impacts on transit at secondary viewing areas would be *less than significant*. As part of **Improvement Measure I-TR-28** (Advance Ferry Ticket Sales), the City shall work with the

California State Parks, Blue & Gold ferry service, and the Angel Island Tiburon Ferry service to develop a strategy for ferry access to Angel Island.

Mitigation: Not required

Impact TR-72: Implementation of the AC34 2013 events would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the project site and adjoining areas. (Less than Significant)

Under AC34 2013 conditions, bicycle access along the waterfront would remain relatively unchanged. For 23 to 28 of the projected 85 event days in 2013, northbound The Embarcadero could be closed to vehicular traffic between Howard and Bay Streets, and the area north of Bay Street between The Embarcadero and Fillmore Street, and Chestnut Street between Fillmore and Lyon Streets could be restricted to emergency vehicles, local residents and authorized vehicles. At both locations bicycle access would not be substantially affected. During days that northbound The Embarcadero is closed to vehicular traffic, it is anticipated that conditions would be similar to Sunday Streets; bicyclists would travel within the area closer to the center median.

In 2013, the AC Village is proposed to be located at Pier 27, and would attract a substantial number of pedestrians and bicyclists to the area. This could increase the potential for bicycle-vehicle interactions and pedestrian-bicycle interactions, particularly in locations where pedestrians and bicyclists would share the right-of-way, such as on Herb Caen Way, along the closed northbound lanes of The Embarcadero, and bicycle path along Marina Green and Crissy Field. While the use of bicycle facilities would intensify, the AC34 2013 events would not create potentially hazardous conditions for bicyclists. Additionally, during large events, traffic and pedestrian management strategies, similar to those employed in San Francisco, for other special events (e.g., Bay to Breakers, Independence Day, Fleet Week) would be implemented. These include strategies such as advance signage, installation of barricades, parking restrictions and/or prohibitions, volunteer Muni ambassadors, and Police Department and SFMTA parking control officers directing traffic.

For those spectators arriving by bicycle, the People Plan includes the installation of temporary bicycle stations (e.g., similar to the service operated at AT&T Park for San Francisco Giants games) along the waterfront from Piers 30-32 to Crissy Field and at the Civic Center BART Station. The People Plan also anticipates an increase in the number of bicycle rental businesses, and would seek to expand the planned bicycle sharing pilot program to the northern waterfront and to the west into the Presidio.

At some locations, bicycle access may become more difficult, due to heavier vehicle and pedestrian volumes. However, bicycle access would be maintained, and impacts on bicyclists would therefore be *less than significant.*

Mitigation: Not required

Impact TR-73: Implementation of the AC34 2013 events would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility at secondary viewing areas. (Less than Significant)

As described in Section 5.1, Impact Overview, the secondary viewing areas are expected to attract visitors and spectators due to their potential viewing opportunities for the AC34 races. These include the north and west sides of Treasure Island, the south side of Angel Island, overlooks in the Marin Headlands and at Fort Baker, and waterfront areas in Sausalito and possibly Belvedere and Tiburon.

The number of spectators traveling to these sites by bicycle would be low, although on peak event days on weekends with good weather, more spectators may select to bicycle to the viewing areas. These additional bicyclists would be accommodated within the existing roadway network. On high attendance days NPS may employ traffic management strategies at the Marin Headlands and Fort Baker such as those employed on Independence Day and Fleet Week weekend days to reduce potential conflicts between vehicles, pedestrians and bicyclists, however, bicycle access would be maintained.[51] Therefore, AC34 2013 event impact on bicyclists at secondary viewing areas would be *less than significant*.

Mitigation: Not required

Impact TR-74: Implementation of the AC34 2013 events would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the project site or adjoining areas. (Less than Significant)

The AC34 2013 events are projected to generate up to 334,000 spectators per day (for up to 5 of 85 event and non-event days in 2013). The spectators would generally be located at the planned spectator venues, including Crissy Field, Fort Mason, Aquatic Park, Alcatraz (private), Fort Baker Pier at Cavallo Point (private), the Marina Green, and at Piers 27-29, which would serve as the AC Village. In addition to the planned venues, spectators are anticipated to gather along the waterfront for viewing of the races. Pedestrians would include those spectators walking to/from the venues, walking from regional transit operator and Muni transit stops (many of the transit stops are located a couple of blocks from the waterfront venues), and walking from parking facilities. Pedestrians would access the venue sites from multiple streets, and would therefore be distributed over a large area. Pedestrian facilities in the vicinity of the spectator venues in San Francisco are adequate.

[51] Press release June 28, 2010 and October 4, 2010, NPS, included in Appendix TR-8.6.

During event days there would be temporarily increased pedestrian demand, which would increase the potential for pedestrian-vehicle and pedestrian-bicycle interactions, particularly in locations where pedestrians and bicyclists would share the right-of-way (i.e., on Herb Caen Way or along the closed northbound lanes of The Embarcadero). However, during the large events, traffic and pedestrian management strategies, similar to those employed in San Francisco for other special events (e.g., Bay to Breakers, Independence Day, Fleet Week) would be implemented. As noted above in Impact TR-72, these measures could include, but not be limited to, advance signage, installation of barricades, parking restrictions/prohibitions, volunteer Muni ambassadors, and Police Department and SFMTA parking control officers directing traffic. While the AC34 2013 events would result in increases in pedestrians during peak event days, these increases would be temporary and would not create hazardous conditions for pedestrians. Therefore, AC34 2013 event impact on pedestrians would be *less than significant*.

Mitigation: Not required

Impact TR-75: Implementation of the AC34 2013 events would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility at secondary viewing areas. (Less than Significant)

As described in Section 5.1, Impact Overview, the secondary viewing areas are expected to attract visitors and spectators due to their potential viewing opportunities for the AC34 races. These include the north and west sides of Treasure Island, the south side of Angel Island, overlooks in the Marin Headlands and at Fort Baker, and waterfront areas in Sausalito and possibly Belvedere and Tiburon. The number of spectators walking to these sites would be relatively low and would be accommodated within the existing sidewalk and roadway network. On high attendance days the NPS may employ traffic management strategies at the Marin Headlands and Fort Baker such as those employed on Independence Day and Fleet Week weekend days to reduce potential conflicts between vehicles, pedestrians and bicyclists, however, pedestrian access would be maintained. As part of the Parks Event Operations Plan that would be a separate element of the People Plan (see Chapter 3, Project Description, regarding the Parks Event Operations Plan), GGNRA, NPS, and the Golden Gate Transit Highway and Transportation District would determine procedures for controlling pedestrian and bicycle access to Golden Gate Bridge viewing areas. Therefore, AC34 2013 event impacts on pedestrians at secondary viewing areas would be *less than significant*.

Mitigation: Not required

Impact TR-76: Implementation of the AC34 2013 events would not result in a loading demand during the peak hour of loading activities that could not be accommodated within the proposed loading supply or within on-street loading zones. (Less than Significant)

The loading demand associated with AC34 2013 event venues at the AC Village at Pier 27-29 and at other spectator venues has not been estimated, as the demand would vary depending on the attendance and the type of activities planned for the various event days. The temporary loading demand would include deliveries and service vehicle trips associated with temporary structures, stages, amplification systems, outdoor seating, sponsor displays, general merchandise, food, and beverage. At each venue, location for deliveries and separate trash and recycling areas would be provided. In some instances, the adjacent curb parking lane would be reserved for loading/unloading similar to operations during special events throughout San Francisco.

Details regarding the space for discard collection containers have not been identified. A Waste Management Plan (see Chapter 3, Project Description) would be prepared and implemented as part of the proposed project. As plans are revised as part of the coordination of the event, the Event Authority would specify the proposed types and sizes of collection containers, and location for pickup by the disposal company. Main deliveries and trash disposal would occur between 12:00 a.m. and 9:30 a.m.; trash can emptying and restroom servicing would occur throughout the event day. Since temporary accommodations for loading/unloading activities would be included in event planning, AC34 2013 event impacts on loading would be *less than significant.*

Mitigation: Not required

Impact TR-77: Implementation of the AC34 2013 events would not result in a significant emergency vehicle access impact. (Less than Significant)

During AC34 2013 events, emergency access to and from the AC34 venues and along the waterfront would remain similar to existing conditions. As described in Impact TR-34 for AC34 2012 conditions, during peak spectator events on weekends, northbound The Embarcadero would be closed to vehicular traffic between Howard and Bay Streets, and the area north of Bay Street between The Embarcadero and Fillmore Street, and Chestnut Street between Fillmore and Lyon Streets would be restricted to general vehicular traffic but would be accessible to emergency vehicles, local residents and authorized vehicles. The number of days that northbound The Embarcadero closure and restricted areas along the northern waterfront would be limited to about 23 to 28 of the projected 85 event days in 2013.

The closure of northbound The Embarcadero to private vehicles would not apply to emergency vehicles, which would continue to have access. Along The Embarcadero, emergency vehicles would also be able to access destinations along the closed portion by utilizing the center median. The People Plan would include provisions for review of the proposed street closures and restricted access areas by the San Francisco Fire Department and ISCOTT. Since emergency access

routes would remain similar to existing conditions, the impact of AC34 2013 events on emergency vehicle access would be *less than significant.*

Mitigation: Not required

Impact TR-78: Implementation of the AC34 2013 events would not result in construction-related transportation impacts because of their temporary and limited duration. (Less than Significant)

Construction activities that would be associated with the AC34 2013 events are expected to occur more or less continuously at various locations primarily along the waterfront for approximately 2 years. Construction activities and duration at each location would vary depending on the needs of the project site and may include site preparation, placement of infrastructure, placement of foundations for structures, and fabrication of structures. Table 3-9 in Chapter 3, Project Description, presents a summary schedule for construction that would be associated with AC34.

On-land construction activities for AC34 2013 would occur at all of the proposed event facilities and spectator venue sites. Construction work at the piers, conducted in conjunction with the in-water construction activities, would last from 1 to 4 months in 2012 or 2013, depending on the specific location and extent of construction required; the longest duration of construction would be at Piers 30-32 and Piers 27-29 where seismic upgrades and the AC Village, respectively, would be constructed. All construction activities are proposed to occur on Mondays through Fridays for up to 10 hours per day, from 8:00 a.m. to 6:00 p.m. Construction materials and equipment would be transported by truck and/or barge throughout the construction period.

Construction-related vehicle trips would include construction workers traveling to and from project sites, haul truck trips associated with materials and equipment deliveries, and haul truck trips associated with the transport of demolition materials. The number of construction-related vehicles traveling to and from the project area would vary on a daily basis depending on the construction phase, planned activity, and materials needs. Construction traffic would result in short-term increases in traffic volumes. Construction truck trips would be made throughout the day (with more trips made during the early morning), and trucks would remain in the area for a shorter duration. Construction worker travel would typically take place during the hours before and after the work shifts. The presence of construction truck traffic would temporarily reduce roadway capacities due to the slower travel speeds and larger turning radii of trucks. The impacts of construction traffic would be most noticeable in the immediate vicinity of the project sites and less noticeable farther away and on regional transportation facilities such as I-280 and U.S. 101.

2013 Event Facilities

- Piers 27-29 – The AC Village at Piers 27-29 would be the hub of hospitality, entertainment and spectator viewing of the sailing races in 2013, and would generate the greatest amount of construction activity. The improvements required to support the AC Village use would be coordinated with the phased development of the proposed cruise terminal at Pier 27.

Phase 1 would demolish the Pier 27 shed in its entirety, along with a portion of the Pier 29 shed, to create an area for a proposed expansive temporary public viewing platform. The Pier 27 Annex office building would also be demolished. A new Pier 27 shed east and corner wall would be constructed. Phase 1 would also construct the cruise terminal core building and shell. Other permanent improvements would include repairing the Pier 28 apron and fendering; and repairing the Pier 29 marginal wharf and Piers 27-29 substructure, if needed. Demolition activities would generate about 14 truck trips per day, as well as an additional 80 truck trips per week over a four-week period for off-haul of demolition materials.

- Pier 23 would serve as the media operations location. Temporary structures and installations would be constructed at this location.

- Pier 19 and 19½ would contain temporary cafeteria, a volunteer center; and ancillary office and storage. Pier 19½ would be used for truck loading, deliveries and parking.

- Piers 30-32 would support team base operations, and assuming construction would be completed in time for the AC 34 2012 events, no further construction would be required (discussed in Impact TR-35).

- Pier 80 would be used as an ancillary team base for AC34 2013. No additional construction beyond that conducted for the AC34 2012 events (discussed in Impact TR-35) is foreseen.

- Temporary floating docks anchored by pilings in open water areas along San Francisco piers would require pile driving. Construction activities associated with floating docks would generate between 3 and 12 truck trips per day for installation, and between 2 and 16 truck trips per day for removal, depending on the location and number of floating docks provided. Construction activities for floating docks at all locations except for Piers 30-32 and Brannan Street Wharf Open Water Basin would require about 16 weeks to complete.

- Spectator venues at Aquatic Park, Crissy Field, Fort Mason, Alcatraz, Fort Baker Pier at Cavallo Point, and Live Sites would involve installation of bleacher seating, tents and canopies. Set-up installations would require 2 to 3 weeks, and removal would take less time.

Construction activity for AC34 2013 may overlap with the construction activity of other proposed projects in the vicinity of events facilities (e.g., the Exploratorium at Piers 15-17). The construction activities associated with these projects would affect access, traffic operations, and pedestrian movements. It is anticipated that the construction manager for each project would work with the various departments of the City to develop a detailed and coordinated plan that would address construction vehicle routing, traffic control, and pedestrian movements adjacent to the construction area for the duration of the overlap in construction activity to minimize construction disruption.

Construction activities would likely inconvenience employees, residents, and visitors to the area, but construction activities are typical in an urban setting and would be temporary in nature. For these reasons, construction-related transportation impacts would be *less than significant.*

Mitigation: Not required

Impact TR-79: The AC34 2013 events would not result in significant transportation impacts in combination with ongoing and upcoming construction projects in the City and its vicinity (Less than Significant)

In San Francisco and its vicinity, there are a number of infrastructure upgrades and development projects that are currently under construction or are expected to be under construction concurrently with the AC34 2013 events. These projects include the following major projects listed below and the projects listed in Chapter 5, Section 5.1, Table 5.1-4:

- San Francisco-Oakland Bay Bridge Seismic Safety Projects currently are seismic improvements to the Bay Bridge including construction of a new approach and seismic improvements to the west span of the bridge, reconstruction of the two-mile long east span, a new transition structure on Yerba Buena Island, among other improvements.[52]

- Central Subway which would extend Muni's T-Third light rail line from the intersection of Fourth/King into Union Square and Chinatown. Utility relocation prior to tunnel boring is under way, and construction is scheduled to be completed by 2018.[53]

- Reconfiguration of Doyle Drive into the seismically improved Presidio Parkway near the Presidio which would create a regional gateway between the Golden Gate Bridge and the city of San Francisco and provide direct access to the Presidio. Project construction is currently underway.[54]

- Transbay Transit Center project, currently under construction, which would serve existing transit service at the temporary terminal, as well as Caltrain's Downtown Extension and possibly intercity high-speed rail.

- Van Ness Avenue Bus Rapid Transit Project (BRT), would run two miles along Van Ness Avenue between Mission and Lombard Streets. Typical BRT improvements include travel lanes for exclusive transit use; wider sidewalks at bus stops; traffic signal priority for transit vehicles; full stations with passenger amenities; multi-door boarding at sidewalk-level platforms; pre-paid boarding areas; and real-time information systems. This project is currently under environmental review by the Transportation Authority with construction scheduled to start in the Fall of 2013.

- The California Pacific Medical Center (CPMC) Long Range Development Plan is CPMC's multi-phased strategy to meet State seismic safety requirements for hospitals (SB 1953) and create a 20-year framework and Institutional Master Plan for its four existing medical campuses (Pacific Campus at Sacramento and Buchanan Streets; California Campus at Maple and California Streets; Davies Campus at Castro and 14th Streets; and St. Luke's Campus at Cesar Chavez and Valencia Streets), and a proposed new medical campus (Cathedral Hill Campus at Van Ness Avenue and Geary Boulevard) in San Francisco.[55] The Cathedral Hill Campus includes construction of a pedestrian tunnel under Van Ness Avenue between the proposed hospital and medical office building components of the

52 Chapter 5, Table 5.1-4 of this EIR.
53 San Francisco Planning Department, *Draft North Beach Public Library and Joe DiMaggio Playground Master Plan Project*, Case No. 2008.0968E. August 25, 2010.
54 http://www.presidioparkway.org, assessed on June 17, 2011, and Chapter 5, Table 5.1-4 of this EIR.
55 San Francisco Planning Department, *Draft Environmental Impact Report for California Pacific Medical Center (CPMC) Long Range Development Plan*, Planning Department Case No. 2005.0555E, July 21, 2010.

project. This project is currently under environmental review. The pedestrian tunnel would be constructed over an 18-month period, with 10 months of work affecting Van Ness Avenue. The Cathedral Hill Campus would be constructed over approximately 54 months, and construction is anticipated to start in 2012.

A number of the above projects include temporary road closures and rerouting of traffic.[56,57] The road closures and detours, such as for Reconfiguration of Doyle Drive and the San Francisco-Oakland Bay Bridge Seismic Safety Projects, are widely advertised through permanent and variable message signs and the media and thus, allow drivers to adjust their behavior accordingly (i.e., switch modes, travel outside peak periods, allocate more time for trips, etc). The traffic generated by the AC34 2013 events would be subject to the temporary road closures and detours associated with the projects described above. However, AC34 2013 spectators, like the general public, would be aware of the various road closures and detours through information provided by the respective projects as well as part of the People Plan's Public Information Program, and would be expected to adjust their behavior accordingly. Therefore, although a number of construction projects would occur in conjunction with AC34 2013 events, their effects would not be expected to adversely affect the transportation network beyond impacts that have been identified in this EIR. Thus, the AC34 2013 impact's on the transportation network in conjunction with ongoing and planned construction projects would be considered *less than significant.*

Impact TR-80: The AC34 2013 events would result in potentially significant impacts to the transportation network in combination with other special events occurring simultaneously in San Francisco. (Significant and Unavoidable with Mitigation)

Every year the City of San Francisco hosts a number of special events in or near the waterfront area that attract large groups of people. These special events would be coordinated as part of the People Plan, with respect to provision of additional transit service, and traffic and parking management strategies. Special events that could overlap with the AC34 2013 events include but are not limited to:

- San Francisco Giants baseball games at AT&T Park during baseball season which occur generally from April through September (about 81 total games during the season).[58]
- San Francisco 49ers pre-season and regular season football games at the 49ers home stadium at Candlestick Park in August and September (up to two pre-season games, and three regular season games).[59]

[56] A draft schedule of the AC34 2012 and 2013 events in combination with other major construction projects in the City is included in Appendix TR-8.6.
[57] The San Francisco/Oakland Bay Bridge Seismic Safety Project is expected to temporarily close the San Francisco/Oakland Bay Bridge during the AC34 2013 events. The exact date of this closure is currently unknown but could occur on a weekend during which the AC34 2013 attendance is expected to be high.
[58] Information available at event site, http://mlb.mlb.com/schedule/index.jsp?c_id=SF, accessed on 06/20/11.
[59] Information available at event site, http://www.ticketsreview.com/football, accessed on 06/20/11.

- San Francisco Theatre Festival at Fort Mason is expected to contain over 100 shows in over a dozen indoor and outdoor venues. It was formerly held at Yerba Buena Garden Performing Arts Center but was recently relocated to Fort Mason.[60]

- Outside Lands is a three-day music, food, wine and art festival located throughout Golden Gate Park. Historically, the concert takes place starting on a Friday and ending on a Sunday within the third of fourth weekend of August.[61]

- Sunday Streets creates miles of motorized vehicle free roads for people to get out and participate in active and diverse San Francisco neighborhoods.

- Ghirardelli Square Chocolate Festival is a street fair in the City's northern waterfront area that attracts local and regional visitors.[62]

- San Francisco LovEvolution (formerly San Francisco LoveFest) is a techno parade and festival that occurs annually in San Francisco in late September and early October.[63]

- Fourth of July Fireworks Events.

The other large events such as the Folsom Street Fair, Fleet Week and the Treasure Island Music Festival would occur either before the AC34 2012 events begin or after they are completed.[64]

Annual special events are typical in San Francisco. Generally special events would lead to an increase in parking demand in their vicinity as event attendees would try to park within walking distance of their final destination. Special events would also lead to a temporary increase in vehicle trips associated with event attendees' travel behavior and a temporary increase in transit demand, as some people choose to use public transit as an alternate transportation mode. Since the AC34 2013 event would be spread over several days and weeks, some annual special events are expected to occur concurrently.

During certain special events, such as the San Francisco Giants home games, a number of transit agencies, including Muni, Golden Gate Transit, WETA, provide additional transit capacity. As such it is possible that during certain special events, particularly those occurring on the weekend, transit capacity could be stretched to its limits and could not absorb the combination of riders for the AC34 2013 events as well as another special event. For example, ridership on Caltrain prior to and after San Francisco Giants games increases substantially, resulting in a significant number of standees and very limited capacity to accommodate additional riders. The increase in transit ridership associated with AC34 and one or more other events, even with additional transit capacity provided for these events could result in a significant transit impact and could adversely affect other modes, such as vehicles, due to overall high levels of congestion.

60 http://www.fortmason.org/aboutus/visitor-information, accessed on June 20, 2011.
61 http://www.sfoutsidelands.com/festival/festival-map.php, accessed on June 20, 2011.
62 Ibid footnote 1.
63 Information available at event site, http://www.sflovevolution.org/home.php, accessed on 06/20/11.
64 A draft schedule of the AC34 2012 and 2013 events in combination with other major events in the City is included in Appendix TR.

Mitigation Measure M-TR-1 (People Plan Specific Provisions) would serve to reduce the amount of congestion by implementing a Traffic Monitoring and Management Program, a Transit Operating Plan, a Satellite Parking Facility Program, and a Public Information Program. Additionally, the People Plan would provide for a strategy to coordinate the AC34 2012 events with other special events. However, implementation of the People Plan is uncertain as it relates to guaranteeing a particular amount of transit, the impacts of the AC34 2013 events in combination with other special events would be considered *significant and unavoidable*.

Cruise Terminal Project

Impacts associated with the proposed Cruise Terminal project are presented below. The transportation impact analysis assesses the impact of a 3,000-passenger cruise ship at the proposed cruise ship terminal at Piers 27-29. As indicated in Section 5.6.3.3, Section 5.6.3.3 under "Travel Demand Methodology and Results," at the existing Pier 35 cruise terminal, there is an average of 57 cruise ship calls per year during the cruise ship season between May and September, with an average cruise ship size of 1,640 passengers. Therefore, the conditions associated with cruise ship operations currently occur at Pier 35. However, the transportation analysis was conducted assuming all new travel demand in order to reflect conditions that would occur at the new location and project site configuration.[65] The following are the topics addressed and the impacts analyzed for these topics:

- Traffic: Impacts TR-81 through TR-83
- Transit: Impacts TR-84 through TR-85
- Bicycle: Impacts TR-86
- Pedestrian: Impacts TR-87
- Loading: Impact TR-88
- Emergency Vehicle Access: Impact TR-89
- Construction: Impact TR-90

Overview of Project Traffic Impacts associated with the Cruise Terminal

The proposed Cruise Terminal project would generate new vehicle trips and increase the number of vehicles and average delay per vehicle at the 22 study intersections during the weekday a.m. and p.m. peak hours, and the Saturday midday peak hour. However, the Cruise Terminal project would not result in significant traffic impacts at the study intersections. In addition, analysis of operations at the entry to the proposed Cruise Terminal indicates that during weekday and weekend conditions, the vehicle trips destined to and from the proposed Cruise Terminal would not result in vehicle queues extending into the upstream intersections. Impacts of the Cruise Terminal project on traffic operations would be *less than significant*.

[65] Existing traffic operating conditions in Table 5.6-1 reflect existing conditions when a cruise ship is not in port.

Impact TR-81: Implementation of the Cruise Terminal project would have a less than significant impacts at two study intersections that would operate at LOS F under Existing plus Cruise Terminal project conditions. (Less than Significant)

The Cruise Terminal project would be determined to have a significant impact at an intersection if project-generated trips would cause an intersection operating at LOS D or better under Existing conditions to operate at LOS E or LOS F, or intersection operating at LOS E under Existing conditions to deteriorate to LOS F conditions. At intersections that currently operate at LOS E or LOS F conditions, and would continue to operate at LOS E or LOS F under Existing plus Cruise Terminal conditions, the increase in project vehicle trips were reviewed to determine whether the increase would contribute considerably to critical movements operating at LOS E or LOS F.[66]

The Cruise Terminal project would generate 205 vehicle trips during the weekday a.m. peak hour (109 inbound and 96 outbound), 85 vehicle trips during the weekday p.m. peak hour (36 inbound and 49 outbound), and 565 vehicle trips during the Saturday midday peak hour (291 inbound and 274 outbound). **Table 5.6-28**, **Table 5.6-29**, and **Table 5.6-30** present the intersection LOS for the 22 study intersections for the weekday a.m., weekday p.m., and Saturday midday peak hours, respectively. **Figure 5.6-12** presents the intersection LOS results for the 22 study intersections. In general, the addition of project-generated vehicle trips would result in small increases in the average delay per vehicle at the study intersections, and intersections would continue to operate at LOS D or better. It should be noted that at some of the study intersections, the average delay per vehicle would remain the same or decrease slightly during the weekday a.m. and p.m. peak hours. The decrease in delay would be due primarily to a reduction in traffic volumes at some of the study intersections. Since the proposed Cruise Terminal project would eliminate the public parking facility on Pier 27, the vehicles traveling to and from this facility (approximately 120 vehicles during the weekday a.m. and p.m. peak hours, and 80 vehicles during the Saturday midday peak hour) were reassigned to other facilities west of The Embarcadero, resulting in a net reduction in traffic volumes at some of the key movements at intersections along The Embarcadero, with the intersection of The Embarcadero/Lombard, where the entrance to the Pier 27 parking facility is located, being the most affected.[67]

The intersections of The Embarcadero/Beach/Grant and The Embarcadero/North Point/Kearny are expected to operate at unacceptable LOS F under Existing as well as Existing plus Cruise Terminal Project conditions during the Saturday midday peak hour.

[66] At an intersection, the critical movements are the traffic movements that operate with the highest volume-to-capacity ratio. In other words, the critical movements are the most congested movements.

[67] Using the HCM methodology, the level of service is calculated based on an average of the total vehicular delay per approach, weighted by the number of vehicles at each approach. Increases in traffic volumes usually result in increases in the overall intersection delay, and reduction in traffic volume usually result in decreases in the overall intersection delay. However, if there are increases in the number of vehicles at movements with low delays, the average weighted delay per vehicle may remain the same or decrease.

TABLE 5.6-28
INTERSECTION LEVEL OF SERVICE - EXISTING, EXISTING PLUS CRUISE TERMINAL PROJECT, AND 2035 CUMULATIVE CONDITIONS - WEEKDAY AM PEAK HOUR

#	Intersection		Existing		Existing plus Cruise Terminal Project		2035 Cumulative	
			Delay[a,b]	LOS	Delay[a,b]	LOS	Delay[a,b]	LOS
1	Beach Street	Columbus Avenue	9.8 (nb)	A	9.8 (nb)	A	9.9 (nb)	A
2	North Point Street	Columbus Avenue	11.9	B	12.9	B	13.2	B
3	North Point Street	Stockton Street	11.7	B	12.2	B	13	B
4	Bay Street	Columbus Avenue	30.1	C	30.1	C	38.7	D
5	Bay Street	Stockton Street	10	B	10.9	B	11.6	B
6	Bay Street	Kearny Street	4	A	9.6	A	10.6	B
7	Broadway	Sansome Street	19.4	B	20.2	C	54	D
8	Broadway	Battery Street	18.7	B	30.3	C	**>80/1.07**	**F**
9	The Embarcadero	Beach Street	20.9	C	35.7	D	37.0	D
10	The Embarcadero	North Point Street	27.7	C	28.2	C	31.7	C
11	The Embarcadero	Bay Street	18.9	B	16.5	B	18.4	B
12	The Embarcadero	Chestnut Street	14.2	B	14.6	B	16.2	B
13	The Embarcadero	Lombard Street	21.7	C	17.3	B	21.4	C
14	The Embarcadero	Green Street	19.6	B	20	C	28.3	C
15	The Embarcadero	Broadway	32.9	C	36.3	D	**>80/1.02**	**F**
16	The Embarcadero	Washington Street	34.9	C	35.9	D	**>80/0.79**	**F**
17	The Embarcadero	Mission Street	25.4	C	28.9	C	**>80/1.00**	**F**
43	The Embarcadero	Howard Street	25	C	43.7	D	**>80/0.85**	**F**
44	The Embarcadero	Folsom Street	48.4	D	47.8	D	**>80/1.06**	**F**
18	The Embarcadero	Harrison Street	25.7	C	26.7	C	**>80/1.03**	**F**
19	The Embarcadero	Bryant Street	30	C	30.1	C	**>80/1.92**	**F**
20	The Embarcadero	Brannan Street	28.7	C	27.2	C	**>80/0.76**	**F**

[a] Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ( ).

[b] Intersections operating at LOS E or LOS F conditions highlighted in bold, and overall intersection volume-to-capacity (v/c) ratio is presented for LOS F conditions.

SOURCE: Adavant Consulting/LCW Consulting, 2011.

TABLE 5.6-29
INTERSECTION LEVEL OF SERVICE - EXISTING, EXISTING PLUS CRUISE TERMINAL PROJECT AND 2035 CUMULATIVE CONDITIONS - WEEKDAY PM PEAK HOUR

#	Intersection		Existing		Existing plus Cruise Terminal Project		2035 Cumulative	
			Delay[a,b]	LOS	Delay[a,b]	LOS	Delay[a,b]	LOS
1	Beach Street	Columbus Avenue	10 (nb)	B	10 (nb)	B	13.6 (nb)	B
2	North Point Street	Columbus Avenue	13.8	B	13.8	B	13.8	B
3	North Point Street	Stockton Street	11.9	B	11.8	B	11.9	B
4	Bay Street	Columbus Avenue	21.2	C	21.2	C	21.1	C
5	Bay Street	Stockton Street	9.4	A	9.3	A	9.6	A
6	Bay Street	Kearny Street	10	B	10.1	B	10.8	B
7	Broadway	Sansome Street	14.3	B	14.3	B	40.8	D
8	Broadway	Battery Street	18.8	B	18.9	B	34.0	C
9	The Embarcadero	Beach Street	51.2	D	45.6	D	**57.5**	**E**
10	The Embarcadero	North Point Street	28.8	C	31	C	36.8	D
11	The Embarcadero	Bay Street	14.7	B	14.9	B	16.4	B
12	The Embarcadero	Chestnut Street	18	B	18.4	B	20.6	C
13	The Embarcadero	Lombard Street	32.7	C	28.9	C	54.0	D
14	The Embarcadero	Green Street	19.2	B	19.3	B	34.4	C
15	The Embarcadero	Broadway	31.8	C	31.7	C	**>80/0.94**	**F**
16	The Embarcadero	Washington Street	32.9	C	33	C	**>80/0.84**	**F**
17	The Embarcadero	Mission Street	30.5	C	33.6	C	**>80/1.10**	**F**
43	The Embarcadero	Howard Street	46.4	D	46.7	D	**>80/0.97**	**F**
44	The Embarcadero	Folsom Street	45.2	D	44.7	D	**>80/1.01**	**F**
18	The Embarcadero	Harrison Street	33.4	C	33.6	C	**>80/1.06**	**F**
19	The Embarcadero	Bryant Street	32.4	C	31.4	C	**>80/1.09**	**F**
20	The Embarcadero	Brannan Street	28.6	C	28.2	C	**>80/0.81**	**F**

[a] Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ( ).

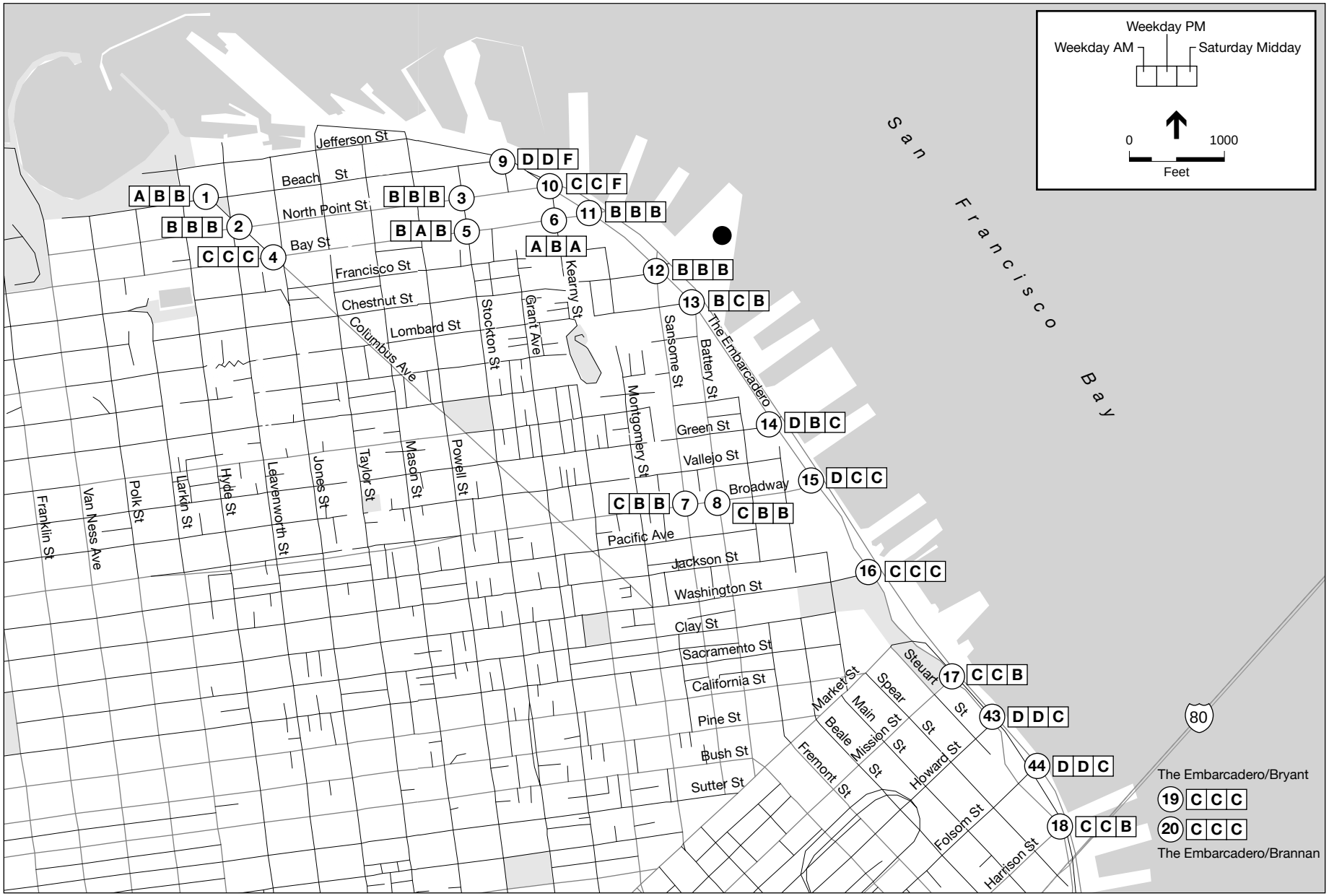
[b] Intersections operating at LOS E or LOS F conditions highlighted in bold, and overall intersection volume-to-capacity (v/c) ratio is presented for LOS F conditions.

SOURCE: Adavant Consulting/LCW Consulting, 2011.

TABLE 5.6-30
INTERSECTION LEVEL OF SERVICE - EXISTING, EXISTING PLUS CRUISE TERMINAL PROJECT, AND 2035 CUMULATIVE CONDITIONS - SATURDAY MIDDAY PEAK HOUR

			Existing		Existing plus Cruise Terminal Project		2035 Cumulative	
#	Intersection		Delay[a,b]	LOS	Delay[a,b]	LOS	Delay[a,b]	LOS
1	Beach Street	Columbus Avenue	11.3 (nb)	B	11.3 (nb)	B	18.5 (nb)	C
2	North Point Street	Columbus Avenue	11	B	14.7	B	14.8	B
3	North Point Street	Stockton Street	10	B	13.2	B	13.4	B
4	Bay Street	Columbus Avenue	16.8	B	24.8	C	24.3	C
5	Bay Street	Stockton Street	9.4	A	10.3	B	10.0	A
6	Bay Street	Kearny Street	8.6	A	8.9	A	10.0	B
7	Broadway	Sansome Street	11.9	B	12.4	B	15.2	B
8	Broadway	Battery Street	17.2	B	17.5	B	20.5	C
9	The Embarcadero	Beach Street	**>80/0.56**	**F**	**>80/0.56**	**F**	**>80/0.72**	**F**
10	The Embarcadero	North Point Street	**>80/0.76**	**F**	**>80/0.79**	**F**	**>80/1.37**	**F**
11	The Embarcadero	Bay Street	11.6	B	12.1	B	13.8	B
12	The Embarcadero	Chestnut Street	16.2	B	18.2	B	20.3	C
13	The Embarcadero	Lombard Street	21.5	C	17.7	B	21.6	C
14	The Embarcadero	Green Street	17.9	B	20	C	29.1	C
15	The Embarcadero	Broadway	27.9	C	32.2	C	**>80/0.83**	**F**
16	The Embarcadero	Washington Street	29.6	C	32.5	C	**>80/0.56**	**F**
17	The Embarcadero	Mission Street	13.1	B	17.4	B	**56.9**	**E**
43	The Embarcadero	Howard Street	20.3	C	30.6	C	**>80/0.83**	**F**
44	The Embarcadero	Folsom Street	19.9	B	24	C	**75.9**	**E**
18	The Embarcadero	Harrison Street	12.1	B	14.6	B	36.8	D
19	The Embarcadero	Bryant Street	22.9	C	23.3	C	51.3	D
20	The Embarcadero	Brannan Street	19.8	B	20.3	C	31.1	C

[a] Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ( ).
b Intersections operating at LOS E or LOS F conditions highlighted in bold, and overall intersection volume-to-capacity (v/c) ratio is presented for LOS F conditions.



SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-12

Existing Plus Cruise Terminal Intersection LOS Conditions-
Piers 27-29 Vicinity

The increase in Cruise Terminal project-generated vehicle trips at the intersection of The Embarcadero/Beach/Grant was reviewed to determine whether the project's increase would contribute considerably to critical movements operating at LOS F at this intersection. Based on this examination, the project's contributions (13 vehicles) were determined to be less than significant. At this intersection, the existing northbound left turn vehicle demand exceeds the travel lane capacity, resulting in queues that spill back upstream to the intersection of The Embarcadero/North Point/Kearny. Since the proposed Cruise Terminal project would not contribute considerably to the poor operating conditions, the Cruise Terminal project-related traffic impact at the intersection of The Embarcadero/Beach/Grant would be *less than significant.*

The increase in Cruise Terminal project-generated vehicle trips at the intersection of The Embarcadero/North Point/Kearny was reviewed to determine whether the project's increase would contribute considerably to critical movements operating at LOS F at this intersection. Based on this examination, the project's contributions (145 vehicles) were determined to be less than significant. At this intersection, the Cruise Terminal project would contribute vehicles primarily to movements that operate acceptably. Since the proposed Cruise Terminal project would not contribute considerably to the poor operating conditions, the Cruise Terminal project-related traffic impact at the intersection of The Embarcadero/North Point/Kearny would be *less than significant.*

Mitigation: Not required

Impact TR-82: Implementation of the Cruise Terminal project would have less than significant impacts at 20 study intersections that would operate at LOS D or better under Existing plus Cruise Terminal project conditions. (Less than Significant)

With implementation of the Cruise Terminal project, the following 20 study intersections would continue to operate at LOS D or better during the weekday a.m., weekday p.m., and Saturday midday peak hours and, therefore, traffic impacts at these locations would be *less than significant.*

- Beach/Columbus
- North Point/Columbus
- North Point/Stockton
- Bay/Columbus
- Bay/Stockton
- Bay/Kearny
- Broadway/Sansome
- Broadway/Battery
- The Embarcadero/Bay
- The Embarcadero/Chestnut
- The Embarcadero/Lombard
- The Embarcadero/Green
- The Embarcadero/Broadway
- The Embarcadero/Washington
- The Embarcadero/Mission
- The Embarcadero/Howard
- The Embarcadero/Folsom
- The Embarcadero/Harrison
- The Embarcadero/Bryant
- The Embarcadero/Brannan

The Northeast Wharf Plaza would not generate any new vehicle trips, and would therefore not affect traffic volumes or operating conditions at the study intersections. The Northeast Wharf

Plaza would be expected to increase public use in the immediate vicinity of the project, redistributing existing levels of public uses currently occurring along the waterfront, but it would not substantially increase the overall number of visitors to the San Francisco waterfront. With implementation of the Northeast Wharf Plaza, intersections would continue to operate the same as under Existing conditions, and impact to traffic operations would be *less than significant.*

Mitigation: Not required

Impact TR-83: Implementation of the Cruise Terminal project could affect traffic operations on The Embarcadero. (Less than Significant with Mitigation)

The vehicular access into the proposed Cruise Terminal would be located about 100 feet south of the intersection of The Embarcadero/Chestnut/Sansome. Since vehicles destined to and from the cruise terminal would need to cross The Embarcadero promenade at an uncontrolled crossing, a traffic simulation analysis was conducted to assess the impact of the proposed cruise terminal on northbound The Embarcadero between the intersection of The Embarcadero/Chestnut/ Sansome and The Embarcadero/Lombard/Battery. The simulation traffic analysis was also conducted to assess the adequacy of the on-site passenger loading/unloading within the Cruise Terminal GTA. As described in the Project Description, the analysis assumes that vehicle and pedestrian flows along The Embarcadero promenade at the entrance to the cruise terminal would be controlled by Transportation Monitors. This function would be similar to conditions at the existing cruise terminal at Pier 35, where pedestrians on the promenade are stopped to allow for trucks to access Pier 35. The Transportation Monitors would alternate stopping vehicles driving into and out of the proposed cruise terminal and northbound/southbound pedestrian and bicyclists along the promenade, similar to how a signal would operate. Only the travel lane adjacent to the curb, in which vehicles would queue to access the cruise terminal, would be affected by the manual traffic control by the Transportation Monitors.

The simulation analysis was conducted for the 8-hour period between 8:00 a.m. and 4:00 p.m. for weekday and Saturday conditions. The temporal distribution of arriving and departing vehicles over the 8-hour period was based on surveys of trucks, taxis, and private vehicles at the existing terminal (see Section 5.6.3.3 under "Travel Demand Methodology and Results," for additional information related to surveys at the existing cruise terminal). The simulation analysis therefore, accounts for the variations in hourly traffic volumes on northbound The Embarcadero during the 8:00 a.m. to 4:00 p.m. period, and reflects the projected number of inbound versus outbound vehicles on an hourly basis.

The simulation analysis indicates that the 95th percentile vehicle queue at the northbound approach of The Embarcadero to Chestnut/Sansome would increase over existing non-cruise ship day conditions starting at about 8:00 a.m., and would extend upstream of the entrance to the

terminal (i.e., towards Lombard and Battery streets) between 9:00 a.m. and 2:00 p.m. on weekdays, and between 9:00 a.m. and 3:00 p.m. on Saturdays.[68]

- At the intersection of The Embarcadero/Chestnut/Sansome, the maximum queue would occur between 11:00 and 12:00 p.m. on Saturdays, and would be about 280 feet. There are about 340 feet between the intersection of The Embarcadero/Chestnut/Sansome and The Embarcadero/Lombard/Battery and therefore, the maximum queue would not extend into the intersection of The Embarcadero/Lombard/Battery. Proposed Cruise Terminal project operations would not result in queues extending upstream into the intersection of The Embarcadero/Lombard/Battery.

- At the intersection of The Embarcadero/Lombard/Battery, the 95th percentile queue would be similar to existing conditions on weekdays. On weekends, the queue would start to increase over Existing conditions at about 10:00 a.m. and the maximum queue of about 1,060 feet would occur between 12:00 and 1:00 p.m. There are about 1,470 feet between the intersection of The Embarcadero/Lombard/Battery and The Embarcadero/Green, and therefore, the queue would also not extend upstream into the intersection of The Embarcadero/Green.

Vehicles exiting the cruise terminal would be required to turn right onto northbound The Embarcadero. Some vehicles desiring to travel southbound on The Embarcadero, would be able to access the northbound left turn pocket at Chestnut/Sansome to make a U-turn. Since the distance between the terminal driveway and the stop bar is limited, some vehicle exiting the cruise terminal may not be able to completely access the left turn pocket and may block the adjacent through travel lane. This would be a potential safety hazard, and a potential significant impact on The Embarcadero.

Mitigation Measure M-TR-83: Relocate Cruise Terminal Vehicular Access

The Port shall relocate the vehicular access to the cruise terminal about 30 feet to the south to provide for additional distance for vehicles to access the northbound left turn pocket at the approach to Chestnut/Sansome without blocking the adjacent travel lanes.

With implementation of **Mitigation Measure M-TR-83**, potential impacts of cruise terminal operations on The Embarcadero would be *less than significant.*

Improvement Measure I-TR-83: Transportation Management Plan

The Port shall prepare, in consultation with SFMTA, a transportation management plan for the operation of the cruise terminal, including, but not limited to, procedures for vehicular, truck and bus access, protocols for Transportation Monitors, directional signage, distribution of information on drop-off and pick-up procedures for cruise terminal passengers as well as information on alternatives to vehicular access. The transportation management plan shall be flexible and differentiate between the size of cruise ship and type of cruise ship call (e.g., home-port, transit call, etc.).

[68] The 95th percentile queue is the length of queue that has a probability of 5 percent or less of being exceeded during the analysis hour.

Impact TR-84: Implementation of the Cruise Terminal project would not cause a substantial increase in transit demand at the Muni Downtown and the Regional Transit Screenlines that could not be accommodated by adjacent transit service, or cause a substantial increase in transit delays or operating costs. (Less than Significant)

The Cruise Terminal project would generate 113 new transit trips during the weekday a.m. peak hour, 77 new transit trips during the weekday p.m. peak hour, and 214 new transit trips during the Saturday midday peak hour, as shown in Table 5.6-18. These transit trips to and from the Cruise Terminal site would utilize the nearby Muni lines and regional transit lines, and may include transfers to other Muni bus and light rail lines or other regional transit providers. In order to assess the impact of the project-generated transit trips on Muni and on regional transit service providers, a screenline analysis at the downtown San Francisco and regional screenlines was performed.[69]

Muni Screenlines. Transit trips to and from the proposed Cruise Terminal would utilize the nearby Muni bus lines, and may include transfers to other Muni bus and light rail lines, or other regional transit providers. **Table 5.6-31** and **Table 5.6-32** summarize the screenline capacity utilization analysis for the four downtown screenlines for the weekday a.m. and p.m. peak hours, respectively. The additional transit demand could be accommodated during the weekday a.m. and p.m. peak hours, and all four corridors would continue to operate at less than capacity utilization standard with the exception of the subway lines sub-corridor in the southwest screenline, which would operate at 87 percent of capacity during the a.m. and p.m. peak hours (or 2 percent above the 85 percent capacity threshold). The Cruise Terminal project would add 3 trips to the subway line sub-corridor during the a.m. peak hour and 2 trips during the p.m. peak hour. The additional transit trips utilizing this sub-corridor would not cause a change to the sub-corridor utilization because under Existing conditions, the sub-corridor utilization is also 87 percent. Therefore, the additional Cruise Terminal project impacts on Muni capacity utilization at the screenlines would be *less than significant*.

Regional Screenlines. Similar to Muni, the analysis of regional transit screenlines assess the effect of project-generated transit-trips on transit conditions in the inbound direction during the weekday a.m. peak hour, and in the outbound direction during the weekday p.m. peak hour. Based on the origins/destinations of the transit trips generated by the Cruise Terminal, the regional transit trips were assigned to the three regional transit screenlines. It was estimated that during the a.m. peak hour there would be 22 transit trips destined to San Francisco from the East Bay, North Bay and South Bay, while during the p.m. peak hour there would be 9 transit trips to the East Bay, North Bay and South Bay.

[69] As noted in Section 5.6.3.3, since transit trips into and out of downtown San Francisco are greatest during the weekday a.m. and p.m. commute periods, they represent the most congested transit conditions in the City. Therefore, for a conservative assessment of transit impacts, the Planning Department assesses impacts of development projects on weekday peak commute conditions. During the Saturday midday period, transit ridership and capacity utilization of lines into and out of downtown is substantially less, and impacts of projects would generally be less. For these reasons, additional analysis of downtown screenlines for Saturday conditions was determined not to be necessary.

TABLE 5.6-31
MUNI DOWNTOWN AND REGIONAL TRANSIT SCREENLINES
EXISTING AND EXISTING PLUS CRUISE TERMINAL PROJECT CONDITIONS
AM PEAK HOUR

Screenline / Transit Provider		Existing			Existing plus Cruise Terminal		
		Ridership	Capacity	Capacity Utilization	Project Trips	Total Ridership	Capacity Utilization
Muni Downtown Screenlines							
Northeast	Kearny/Stockton Corridor	1,138	1,947	58%	3	1,141	59%
	All Other Lines	744	1,834	41%	2	746	41%
	Subtotal	*1,882*	*3,781*	*50%*	*5*	*1,887*	*50%*
Northwest	Geary Corridor	1,697	2,704	63%	2	1,699	63%
	California	1,598	2,351	68%	2	1,600	68%
	Sutter/Clement	616	1,134	54%	1	617	54%
	Fulton/Hayes	992	1,386	72%	1	993	72%
	Balboa	809	1,405	58%	1	810	58%
	Chestnut/Union	1,722	2,457	70%	2	1,724	70%
	Subtotal	*7,434*	*11,437*	*65%*	*8*	*7,442*	*65%*
Southeast	Third Street	505	833	61%	1	506	61%
	Mission Street	1,221	1,880	65%	2	1,223	65%
	San Bruno/Bayshore	1,460	1,880	*78%*	2	1,462	*78%*
	All Other Lines	1,062	1,708	62%	2	1,064	62%
	Subtotal	*4,248*	*6,301*	*67%*	*7*	*4,255*	*68%*
Southwest	Subway Lines	5,350	6,188	***86%***	3	5,353	***87%***
	Haight/Noriega	1,029	1,951	53%	1	1,030	53%
	All Other Lines	248	560	44%	0	248	44%
	Subtotal	*6,627*	*8,699*	*76%*	*4*	*6,631*	*76%*
	Total All Muni Screenlines	***20,191***	***30,218***	***67%***	***24***	***20,215***	***67%***
Regional Transit Screenlines							
East Bay	BART	19,391	24,150	80%	10	19,401	80%
	AC Transit	1,670	3,058	55%	1	1,671	55%
	Ferries	667	1,186	56%	0	667	56%
	Subtotal	*21,728*	*28,394*	*77%*	*11*	*21,739*	*77%*
North Bay	Golden Gate Transit Buses	1,510	2,655	57%	2	1,512	57%
	Golden Gate Transit Ferries	949	1,700	56%	1	950	56%
	Subtotal	*2,459*	*4,355*	*56%*	*3*	*2,462*	*57%*
South Bay	BART	10,841	16,800	65%	6	10,847	65%
	SamTrans	2,128	3,250	65%	1	2,129	66%
	Caltrain	686	1,060	65%	0	686	65%
	Ferries	--	--	0%	--	--	0%
	Subtotal	*13,655*	*21,110*	*65%*	*8*	*13,663*	*65%*
	Total All Regional Screenlines	***37,842***	***53,859***	***70%***	***22***	***37,864***	***70%***

SOURCE: AECOM, Adavant Consulting/LCW Consulting, 2011.

TABLE 5.6-32
MUNI AND REGIONAL TRANSIT SCREENLINES
EXISTING AND EXISTING PLUS CRUISE TERMINAL PROJECT CONDITIONS
PM PEAK HOUR

Screenline / Transit Provider		Existing			Existing plus Cruise Terminal		
		Ridership	Capacity	Capacity Utilization	Project Trips	Total Ridership	Capacity Utilization
Muni Downtown Screenlines							
Northeast	Kearny/Stockton Corridor	1,129	2,010	56%	1	1,130	56%
	All Other Lines	757	1,589	48%	1	758	48%
	Subtotal	*1,886*	*3,599*	*52%*	*2*	*1,888*	*52%*
Northwest	Geary Corridor	1,684	2,230	76%	1	1,685	76%
	California	1,413	2,050	69%	1	1,414	69%
	Sutter/Clement	565	1,008	56%	0	565	56%
	Fulton/Hayes	861	1,260	68%	0	861	68%
	Balboa	615	1,247	49%	0	615	49%
	Chestnut/Union	1,483	2,328	64%	1	1,484	64%
	Subtotal	*6,621*	*10,123*	*65%*	*3*	*6,624*	*65%*
Southeast	Third Street	554	714	78%	0	554	78%
	Mission Street	1,254	2,350	53%	1	1,255	53%
	San Bruno/Bayshore	1,671	2,256	*74%*	1	1,672	*74%*
	All Other Lines	1,189	1,708	70%	1	1,190	70%
	Subtotal	*4,668*	*7,028*	*66%*	*3*	*4,671*	*66%*
Southwest	Subway Lines	5,883	6,783	***87%***	2	5,885	***87%***
	Haight/Noriega	1,247	2,140	58%	0	1,247	58%
	All Other Lines	304	700	43%	0	304	43%
	Subtotal	*7,434*	*9,623*	*77%*	*2*	*7,436*	*77%*
	Total All Muni Screenlines	***20,609***	***30,373***	***68%***	***10***	***20,619***	***68%***
Regional Transit Screenlines							
East Bay	BART	20,067	24,150	83%	4	20,071	83%
	AC Transit	2,517	4,193	60%	1	2,518	60%
	Ferries	702	1,519	46%	0	702	46%
	Subtotal	*23,286*	*29,862*	*78%*	*5*	*23,291*	*78%*
North Bay	Golden Gate Transit Buses	1,397	2,205	63%	1	1,398	63%
	Golden Gate Transit Ferries	906	1,700	53%	0	906	53%
	Subtotal	*2,303*	*3,905*	*59%*	*1*	*2,304*	*59%*
South Bay	BART	10,202	16,800	61%	3	10,205	61%
	SamTrans	1,986	3,250	61%	1	1,987	61%
	Caltrain	575	940	61%	0	575	61%
	Ferries	--	--	0%	--	--	0%
	Subtotal	*12,763*	*20,990*	*61%*	*4*	*12,767*	*61%*
	Total All Regional Screenlines	***38,352***	***54,757***	***70%***	***10***	***38,362***	***70%***

SOURCE: AECOM, Adavant Consulting/LCW Consulting, 2011.

Table 5.6-31 and Table 5.6-32 also present the Existing plus Cruise Terminal project screenline analysis for the regional transit carriers. In general, the addition of project-related passengers would not have a substantial effect on the regional transit providers during the weekday a.m. or p.m. peak hours, as the capacity utilization for all screenlines would remain similar to those under Existing conditions. In addition, the capacity utilization for all regional transit providers would be under their capacity utilization standards. Therefore, Cruise Terminal project impacts on regional transit service providers would be *less than significant.*

Implementation of the Northeast Wharf Plaza would not generate any new transit trips, or affect transit operating on The Embarcadero. The Northeast Wharf Plaza would be expected to increase public use in the immediate vicinity of the project, redistributing existing levels of public uses currently occurring along the waterfront, but it would not substantially increase the overall number of visitors to the San Francisco waterfront. Therefore, the impact on transit would be *less than significant.*

Mitigation: Not required

Impact TR-85: Implementation of the Cruise Terminal project would contribute to existing exceedance of capacity utilization standard on the F-Market & Wharves historic streetcar line. (Significant and Unavoidable with Mitigation)

The impact of the proposed project on Muni transit service on The Embarcadero, namely the F-Market & Wharves historic streetcar line, was evaluated to determine whether the additional trips generated by the Cruise Terminal project would substantially affect capacity utilization of the F-Market & Wharves. The impact assessment was conducted for two scenarios: for conditions which added the cruise terminal project trips to the existing Muni ridership on the F-line, and for conditions which added only the increase in trips associated with a larger vessel (i.e., the net-new trips). The analysis was conducted both ways because the existing Muni ridership data was based on July and August 2008 surveys (during which nine cruise ships were at port at Pier 35 during this two-month period), and therefore could include cruise ship passengers. To avoid the potential for double-counting the project trips in the analysis, the net-new trips were calculated and these represent the difference between the project's 3,000-passenger ship and the 2003-2011 average cruise ship size of 1,640 passengers.[70]

Table 5.6-33 presents the ridership, capacity and capacity utilization for Existing and Existing plus Cruise Terminal project conditions for the weekday a.m., weekday p.m. and Saturday midday peak hours. As shown in the table, on those instances where the F-Market & Wharves line operates below Muni's capacity utilization policy standard (i.e., 85 percent or less) it would continue to do so with the implementation of the Cruise Terminal project under both analysis scenarios.

[70] The analysis of the additional vehicle trip was for the total cruise ship vehicular demand because traffic data at the study intersections was collected in 2011 intentionally when a cruise ship was not in port.

TABLE 5.6-33
F-MARKET & WHARVES CAPACITY UTILIZATION ANALYSIS
EXISTING AND EXISTING PLUS CRUISE TERMINAL PROJECT CONDITIONS

Analysis Period/ Direction on The Embarcadero	Existing			Existing plus 3,000-Passenger Cruise Ship			Existing plus Net-New Project Trips		
	Rider-ship	Capacity	Capacity Utili-zation	Project Trips	Total Ridership	Capacity Utili-zation	Project Trips	Total Ridership	Capacity Utili-zation
Weekday AM									
Northbound	**601**	**700**	**86%**	**31**	**632**	**90%**	**29**	**630**	**90%**
Southbound	157	770	22%	24	181	26%	22	179	26%
Weekday PM									
Northbound	**635**	**700**	**91%**	**27**	**662**	**95%**	**26**	**661**	**94%**
Southbound	**933**	**770**	**121%**	**11**	**944**	**123%**	**11**	**944**	**123%**
Saturday Midday									
Northbound	**693**	**630**	**110%**	**53**	**746**	**118%**	**49**	**742**	**118%**
Southbound	359	630	57%	50	409	65%	46	405	64%

[a] Ridership and capacity at Maximum Load Point (MLP)
[b] Northbound towards Fisherman's Wharf and southbound towards the Castro
[c] Bold highlight indicates that value exceed Muni's capacity utilization standard of 85 percent
[d] Northbound towards Fisherman's Wharf and southbound towards the Castro
[e] Project alightings (northbound) and boardings (southbound) at The Embarcadero/Lombard stop.
[f] Net-new trips represent the difference between the project's 3,000-passenger ship and the 2003-2011 average cruise ship size of 1,640 passengers.

SOURCE: SFMTA, Adavant Consulting/LCW Consulting, 2011

The net-new increase in Cruise Terminal project-generated transit riders on the F-Market & Wharves line (i.e., reflecting the difference between a 3,000 passenger ship and the 2003-2011 average cruise ship size of 1,640 passengers) was reviewed to determine whether the project's increase would contribute considerably to those instances where the line already operates with capacity utilization above 85 percent. Based on this examination, the project's contributions in the northbound direction during the weekday a.m. and p.m. peak hours (4.6 percent and 3.9 percent of the total ridership, respectively) were determined to be less than significant. The project's contributions in the southbound direction during the weekday p.m. peak hour (1.2 percent of the total ridership) was also determined to be less than significant.

During the Saturday midday peak hour, the F-Market & Wharves currently operates at more than 85 percent capacity utilization in the northbound direction, and would continue to do so under Existing plus Cruise Terminal project conditions. The project's contribution to the F-Market & Wharves ridership in the northbound direction during the Saturday midday peak hour (6.6 percent of the total ridership) was determined to be significant. Therefore, the Cruise Terminal project impact on the F-Market & Wharves would be significant.

A sensitivity analysis was also conducted to determine if the provision of the TEP proposed E-Embarcadero service (i.e., every 15 minutes per the TEP) between Caltrain and Fisherman's

Wharf, combined, with the F-Market & Wharves service would result in capacity utilization of less than 85 percent for Existing plus Cruise Terminal project conditions. With the two streetcar routes, the capacity utilization would still exceed the 85 percent standard, and the Cruise Terminal project's impact on transit capacity would remain significant.

As indicated in Section 5.6.3.3, under "Travel Demand Methodology and Results," San Francisco currently functions as both a home-port (meaning cruise ship calls originate and end in San Francisco) and transit port (meaning that calls do not originate or end in San Francisco). In general, the majority of cruise ship calls are home-based cruise ship calls, and therefore the analysis of the cruise terminal was conducted for a home-based cruise ship call. Transit cruise ship calls, in general, have a less pronounced peaking than home-based calls. The greatest numbers of passengers leave the ship around 9:30 a.m. (about 12 percent of trips leaving the ship during the day), and there is a steady increase in passengers returning to the ship after 1:00 p.m. While there is an overlap in returning passengers with the evening commute period, the direction of travel is in the reverse peak direction. Therefore, the number of transit trips on the F-Market & Wharves is not expected to be substantially different than that identified above for the home-port analysis.[71]

Mitigation Measure M-TR-85: Additional F-Market & Wharves or E-Embarcadero Service

The Port shall, to the extent feasible and consistent with annual budget appropriations, financially compensate the SFMTA for the cost of services designed to address the increased demands on the F-line (and if/when applicable, the E-line) resulting from the project. The amount and schedule for payment and commitment to application of service needs shall be set forth in a Transit Mitigation Agreement between the Port and SFMTA.

The payment identified in **Mitigation Measure M-TR-85** would reduce the Cruise Terminal project's impact on the operation of the F-Market & Wharves to a less than significant level. However, because the Port cannot commit to future funding appropriations in perpetuity and because the ability of SFMTA to provide the additional service on this line needed to accommodate the project is uncertain (e.g., the availability of streetcars to put into service, signal timing constraints to reduce time between trains), the feasibility of the mitigation measure is unknown. Therefore, the Cruise Terminal project's impact on the operation of the F-Market & Wharves historic streetcar would remain *significant and unavoidable.*

Improvement Measure I-TR-85: F-Market & Wharves Stop Ambassador

To ensure that the F-Market & Wharves streetcar operations are not delayed due to cruise terminal passengers asking information from the streetcar operator and paying fares on board, an on-street transit ambassador could be stationed at the F-Market & Wharves streetcar stop on The Embarcadero at Lombard Street (one ambassador for both directions

[71] The bus and vehicle trip rate for transit cruise ship calls per 1,000 passengers (including private passenger vehicles, taxis, shuttles, and buses) is substantially lower (i.e., 1/5 to 1/4) than for a home-port cruise ship call. Walk and transit trip rates per 1,000 passengers are higher than for a home-port cruise ship call, however, the split between transit and walk is not known. Based on field observations, the majority of those trips were walk trips along The Embarcadero, rather than trips destined to the F-Market & Wharves historic streetcar.

of travel). On days when a transit cruise ship is in port, the ambassador would provide directional guidance to use of the streetcar to cruise ship passengers, support pre-sale of tickets/passes, as well as provide directional guidance to walking, bicycling and transit access to other parts of the City.

Impact TR-86: Implementation of the Cruise Terminal would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the project site and adjoining areas. (Less than Significant)

Bicycle Route 5 runs along The Embarcadero and is a Class II facility (on-street bicycle lanes) adjacent to the proposed Cruise Terminal project site. As noted previously, bicyclists utilize this facility, as well as the promenade to travel along The Embarcadero. While the proposed project would eliminate the existing parking facility at Pier 27, it would introduce a new driveway that would be heavily utilized on days when a cruise ship is in port. As noted in Impact TR-83, in order to facilitate the efficient and safe access between The Embarcadero travel lanes and the cruise terminal, the cruise terminal operator would employ Transportation Monitors to alternate pedestrian and bicycle flows along The Embarcadero promenade with vehicles traveling across the promenade between the cruise terminal and The Embarcadero. This traffic control would be required between 7:00 a.m. and 5:00 p.m. to protect pedestrians and bicyclists on the promenade and to ensure that vehicles destined into the Cruise Terminal do not block The Embarcadero travel lanes and that queues do not spill back upstream of the intersection with Lombard/Battery (see Impact TR-83 for discussion of traffic operations).

During times when a cruise ship is not in port, conditions for bicyclists within the bicycle and bicyclists riding on the promenade would improve, as potential bicycle/vehicle conflicts at the existing Pier 27 driveway would be reduced.

Per the Planning Code (Section 155.3 and 155.4) the proposed Cruise Terminal would be required to provide 12 bicycle parking spaces for visitors and employees. In addition, the proposed project would be required to provide four showers and eight clothing lockers for employees. Bicycle parking racks accommodating 12 bicycles would be provided within the Cruise Terminal building for employees and visitors. In addition, bicycle racks would be provided on the Northeast Wharf Plaza for visitors. Exact bicycle parking locations and type of facility would be determined as part of the Port and BCDC design review approval process.[72] The employee bicycle parking, showers, and clothing lockers would be located within the Cruise Terminal building.

[72] Per the San Francisco Planning Code, Class 1 bicycle parking facilities protect the entire bicycle, its components and accessories against theft and against inclement weather, including wind driven rain. Examples of Class 1 spaces include lockers, check-in facilities, monitored parking, restricted access parking, and personal storage. Class 2 bicycle parking spaces include bicycle racks which permit the locking of the bicycle frame and one wheel to the rack and which support the bicycle in a stable position without damage to wheels, frame or components.

The Cruise Terminal project would generate new bicycle trips when a cruise ship is in port; however, these new trips (primarily anticipated to be employees bicycling to and from work) would be relatively small in number compared to existing bicycle ridership and would be accommodated on the existing bicycle network.

In summary, by providing Transportation Monitors to control vehicle, bicycle, and pedestrian flows along The Embarcadero promenade at the entrance to the cruise terminal, the Cruise Terminal project would not create any potentially hazardous conditions for bicyclists or substantially interfere with bicycle access, and the Cruise Terminal project impacts to the bicycle network and bicycle accessibility would be *less than significant.*

Implementation of the Northeast Wharf Plaza would not generate any new bicycle trips, or result in potentially hazardous conditions for bicyclists or otherwise interfere with bicycle accessibility. The Northeast Wharf Plaza would be expected to increase public use in the immediate vicinity of the project, redistributing existing levels of public uses currently occurring along the waterfront, but it would not substantially increase the overall number of visitors to the San Francisco waterfront. Therefore, the impact on bicycles would be *less than significant*.

Improvement Measure I-TR-86: Bicycle Lane Improvements

To facilitate efficient and safe intersections between vehicle using cruise terminal driveway when a cruise ship is in port and bicyclists traveling northbound on Bicycle Route 5, the project shall add the following design features: (a) stencil a bicycle symbol within the bicycle lane adjacent to Piers 27-29; and (b) install appropriate signage at the curb. The stencil of the bicycle symbol and signage would increase driver awareness of the presence of the bicycle lane.

Mitigation: Not required

Impact TR-87: Implementation of the Cruise Terminal would not result in substantial overcrowding on public sidewalks, create hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the project site or adjoining areas. (Less than Significant)

Development of the Cruise Terminal project would add new pedestrian demand to the crosswalks and sidewalks, primarily when a cruise ship is in port. This new demand would include walk-only trips, pedestrians en-route to and from transit stops, and pedestrians en route to and from parking facilities. In general, the highest numbers of pedestrian trips generated by the project would occur during the midday period, when there is an overlap between late departing and early arriving passengers. The Cruise Terminal project would generate 198 new pedestrian trips during the weekday a.m. peak hour, 177 new pedestrian trips during the weekday p.m. peak hour, and 433 new pedestrian trips during the Saturday midday peak hour. As noted above, these totals include walk-only trips, trips to and from transit stops, and walk trips to and from parking facilities. Since all passenger loading/unloading would occur within the pier, only a portion of the

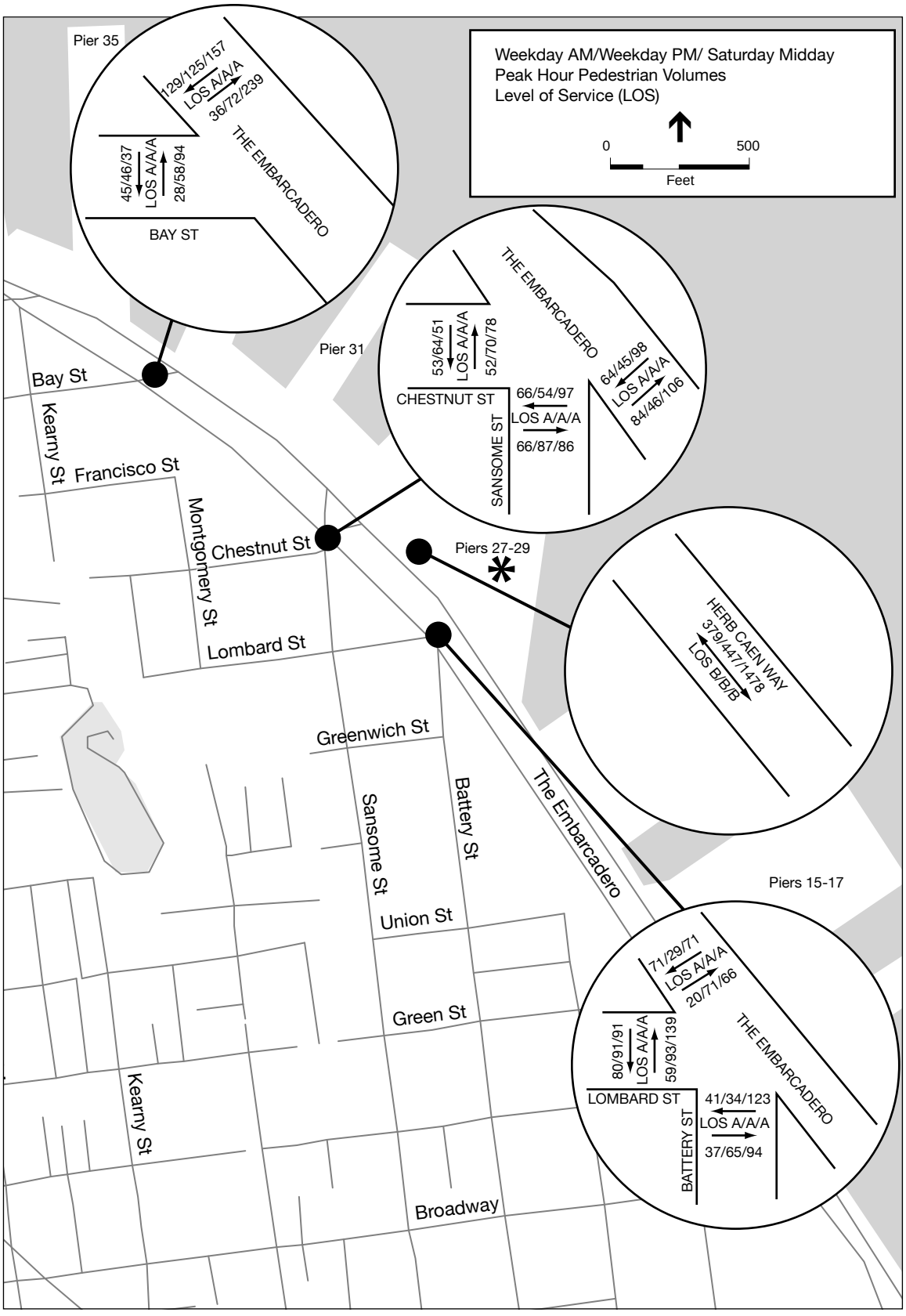
person trips by auto would result in walk trips outside of Piers 27-29. **Figure 5.6-13** shows the peak hour pedestrian volumes at intersection crosswalks and LOS conditions.

Table 5.6-34 presents the results of the pedestrian LOS analyses for the weekday a.m. and p.m., and Saturday midday peak hour for the Existing plus Cruise Terminal project conditions. As shown in the table, the addition of project-generated pedestrian traffic would not significantly affect conditions at any of the study locations. As pedestrian volumes increase, the average space available for pedestrians would be reduced, although not significantly. As defined by San Francisco standards, the operational impact on crosswalk and sidewalks is considered significant if a project results in overcrowded conditions or interferes with pedestrian accessibility to the site and adjoining areas.

The addition of the pedestrian trips to the sidewalk adjacent to the proposed cruise terminal would not substantially change existing pedestrian operations. Under Existing plus Cruise Terminal project conditions, the promenade would operate at LOS B conditions.

The safety conditions for pedestrians crossing The Embarcadero at Chestnut/Sansome and Lombard/Battery were considered as part of the pedestrian evaluation. The Embarcadero is about 125 feet wide from curb to curb, including the exclusive streetcar median and two pedestrian refuge islands. With the addition of project-generated trips, the crosswalks would continue to operate at LOS A conditions. The current signal timings at Chestnut/Sansome and Lombard/Battery allow pedestrians to cross the entire width of The Embarcadero in a single phase during normal traffic signal operation. In those instances when the F-Market & Wharves streetcars modify the normal signal cycle shortening the walk phase, pedestrians have been observed to utilize the designated pedestrian refuge areas. No pedestrians have been observed stranded on the streetcar tracks or on the roadway.

During times when a cruise ship is in port, conditions for pedestrians walking along the Herb Caen Way (part of the Bay Trail) would be primarily affected at the vehicular entrance to the cruise terminal. In order to facilitate the efficient and safe access between The Embarcadero travel lanes and the cruise terminal, the cruise terminal operator would employ Transportation Monitors to alternate pedestrian and bicycle flows along The Embarcadero promenade with vehicles traveling across the promenade between the cruise terminal and The Embarcadero. This traffic control would be required between 7:00 a.m. and 5:00 p.m. to protect pedestrians and bicyclists on the promenade. Stopping pedestrians to allow for vehicular flow across the promenade would delay pedestrians. The use of the Transportation Monitors would allow for flexibility regarding the length of time dedicated to pedestrians and bicyclists versus vehicles, and would be responsive to the changing pedestrian volumes along the promenade and vehicle demands associated with cruise terminal operations. While the Cruise Terminal project would result in delays for pedestrians on the promenade, the delays would not be substantially different than those experienced by pedestrians at signalized intersections. Therefore, impacts of cruise terminal operations on pedestrians on the promenade would be *less than significant.*



*Cruise Terminal and Northeast Wharf Plaza

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

SOURCE: Adavant Consulting/LCW Consulting

Figure 5.6-13
Existing Plus Cruise Terminal Pedestrian Conditions-
Cruise Terminal Vicinity

TABLE 5.6-34
PEDESTRIAN LEVEL OF SERVICE
EXISTING AND EXISTING PLUS CRUISE TERMINAL PROJECT CONDITIONS

	Existing			Existing plus Cruise Terminal Project		
	Pedestrians per Hour	MOE[a]	LOS	Pedestrians per Hour	MOE[a]	LOS
Weekday AM Peak Hour						
Crosswalks						
The Embarcadero/Bay						
North (The Embarcadero	156	338	A	166	318	A
West (Bay)	63	362	A	73	313	A
The Embarcadero/Chestnut/Sansome						
North (The Embarcadero	119	169	A	149	135	A
South (Sansome)	103	493	A	133	381	A
West (Chestnut)	96	795	A	106	721	A
The Embarcadero/Lombard/Battery						
North (The Embarcadero)	71	490	A	91	382	A
South (Sansome)	38	379	A	78	185	A
West (Chestnut)	99	676	A	139	482	A
Sidewalk						
The Embarcadero Promenade[b]	181	0.3	A	379	0.6	B
Weekday PM Peak Hour						
Crosswalks						
The Embarcadero/Bay						
North (The Embarcadero)	188	280	A	197	268	A
West (Bay)	95	240	A	104	219	A
The Embarcadero/Chestnut/Sansome						
North (The Embarcadero)	64	315	A	91	222	A
South (Sansome)	114	445	A	141	360	A
West (Chestnut)	125	610	A	134	569	A
The Embarcadero/Lombard/Battery						
North (The Embarcadero)	82	424	A	100	348	A
South (Sansome)	64	225	A	99	144	A
West (Chestnut)	149	448	A	184	361	A
Sidewalk						
The Embarcadero Promenade[b]	270	0.4	A	447	0.7	B
Saturday Midday Peak Hour						
Crosswalks						
The Embarcadero/Bay						
North (The Embarcadero)	374	200	A	396	132	A
West (Bay)	109	209	A	131	174	A
The Embarcadero/Chestnut/Sansome						
North (The Embarcadero)	139	144	A	204	98	A
South (Sansome)	118	429	A	183	275	A
West (Chestnut)	107	713	A	129	592	A
The Embarcadero/Lombard/Battery						
North (The Embarcadero)	94	369	A	137	253	A
South (Sansome)	130	110	A	217	65	A
West (Chestnut)	143	467	A	230	289	A
Sidewalk						
The Embarcadero Promenade [b]	1,045	1.6	B	1,478	2.2	B

[a] The measure of effectiveness for crosswalks is density – pedestrians per square foot. The measure of effectiveness for sidewalks is the flow rate – pedestrians per minute per foot.
[b] The Embarcadero Promenade between Lombard Street and Chestnut Street.

SOURCE: Adavant Consulting/LCW Consulting, 2011

During times when a cruise ship is not in port, conditions for pedestrians walking along the Herb Caen Way in front of the project site would improve due to the elimination of the public parking facility located on Pier 27. There would be fewer vehicles crossing the promenade and, therefore, there would be less opportunity for conflicts between pedestrians and vehicles.

Passenger loading/unloading for private vehicles, taxis, shuttle buses, and buses would occur completely within the on-site GTA and not at the curb on The Embarcadero (as currently occurs at the existing cruise terminal at Pier 35). Pedestrian flows within the GTA, and in particular at the two internal crosswalks connecting the cruise terminal building with the taxi and bus loading areas would be controlled by Transportation Monitors. In addition, baggage handlers, etc would be available to assist passengers and to reduce the private vehicle dwell times at the curb.

In summary, the addition of the Cruise Terminal project-generated pedestrian trips would not result in overcrowding on sidewalks and intersection crosswalks in the project vicinity, and impacts of the Cruise Terminal project on pedestrians would be *less than significant.*

Implementation of the Northeast Wharf Plaza would not generate new pedestrian trips. The improvements associated with the plaza would not create potentially hazardous conditions, but would rather be expected to enhance pedestrian access to open space. The Northeast Wharf Plaza would be expected to increase public use in the immediate vicinity of the project, redistributing existing levels of public uses currently occurring along the waterfront, but it would not substantially increase the overall number of visitors to the San Francisco waterfront. Therefore, the impact to pedestrians would be *less than significant.*

Mitigation: Not required

Impact TR-88: Implementation of the Cruise Terminal project would not result in a loading demand during the peak hour of loading activities that could not be accommodated within the proposed loading supply, or within on-street loading zones. (Less than Significant)

Freight Deliveries/Loading

Under Planning Code Section 152, the Cruise Terminal project would be required to provide two off-street freight loading spaces. The loading demand generated by the cruise terminal and retail uses would be 49 delivery and service vehicles when cruise ships are in port (48 vehicles associated with the cruise terminal operations, and 1 vehicle with the 5,000 square foot retail space). As indicated in Section 5.6.3.3, under "Travel Demand Methodology and Results," the cruise terminal loading demand includes autos/SUV (13 percent), pickups/vans (34 percent), single-unit trucks (23 percent) and tractor-trailers (30 percent). The average hour truck trip generation results in a demand for 11 loading spaces, while the peak loading space demand would be 28 spaces. Because of the high volume of deliveries, deliveries to the terminal may be scheduled.

The Cruise Terminal project proposes to provide three truck loading spaces to the west of the cruise terminal building (see Chapter 3, Figure 3-33), and would therefore meet the Planning Code loading requirements. In addition, the ground transportation area would include seven parking spaces for Customs and Border Patrol (CBP) vehicles (CBP vehicles are included in the freight and service vehicle demand of 49 vehicles), and two truck stacking lanes that could accommodate between seven and ten vehicles, depending on vehicle type. In addition a truck and bus staging area would be located in the vicinity of the three loading spaces that could accommodate a minimum of 12 trucks. In total, the project site would accommodate between 29 and 32 delivery and service vehicles at one time. The loading supply would therefore, accommodate the proposed peak loading demand.

Prior to accessing the loading facility, trucks would be required to go through a Transportation Security Administration checkpoint. It is anticipated that the average time for a truck to clear the checkpoint would be less than 5 minutes, although some trucks would take longer. Since a substantial portion of the trucks arrive prior to 7:00 a.m., it is not anticipated that the checkpoint procedures would impact circulation within the GTA.

It is anticipated that loading/unloading associated with deliveries and trash removal for the retail uses near The Embarcadero promenade would be conducted along the on-site car/taxi drop off that would be located adjacent to the proposed ancillary commercial/recreation service uses. Due to the limited amount of retail uses (5,000 square feet), the car/taxi drop off zone would adequately accommodate the loading demand.

As noted in Chapter 3, Project Description, up to 100 shared use events could occur at the cruise terminal site annually, primarily on days when cruise ships are not in port. It is expected that loading/unloading associated with deliveries and trash removal for the shared use events would be conducted within the GTA, and that contract specifications for use of the GTA for special events would require accommodations for delivery vehicles.

Passenger Loading

A simulation traffic analysis was conducted to assess the adequacy of the on-site passenger loading/unloading facilities. As indicated in Chapter 3, Project Description, the existing ingress/egress at Pier 27 would be removed, and vehicular access to the cruise terminal would be located about 100 feet south of the intersection of The Embarcadero/Battery/Chestnut. Within the GTA, passenger vehicles, taxis and buses would have separate loading/unloading areas. Directly adjacent to the cruise terminal building would be two lanes of passenger loading/unloading for private autos, which would accommodate 34 vehicles (a third adjacent bypass lane would also be provided). A separate taxi loading/unloading area would be provided, which would accommodate 24 taxis at one time. In addition to the passenger vehicle and taxi drop off and pickup lanes, designated parking for 14 buses would be provided within the central area, and additional overflow parking for 6 buses and staging for 4 buses along Pier 29 would be provided, for a total on-site capacity of 24 buses and/or shuttles. An on-site staging for buses and buses has been identified at the tip of Piers 27-29 in the event that the demand for bus parking within the

GTA exceeds 24. When the bus parking within the GTA is fully occupied, buses would be diverted to the staging area until a bus parking space becomes available.

A simulation model of the GTA and adjacent roadway network was developed, and conditions with a 3,000-passenger cruise ship were assessed. Based on the daily and peak hour travel demand estimates presented in Section 5.6.3.3, the number of inbound and outbound vehicles (by type of vehicle) were distributed over the 8-hour period between 8:00 a.m. and 4:00 p.m. Similar to the discussion in Impact TR-86 for bicyclists, when a cruise ship comes to port, the new driveway would be heavily utilized and would require a minimum of four Transportation Monitors to regulate pedestrian, bicycle and vehicle flows on and across The Embarcadero promenade. On days when one set of passengers disembark in the morning and a new set arrives in the afternoon for evening departure, traffic control across The Embarcadero promenade would be required between about 7:00 a.m. and 5:00 p.m. If a home-based cruise ship remains in port for a longer period (i.e., a couple of days) there would not be any passengers on-board, and therefore traffic control on The Embarcadero may only be required during the peak freight loading/unloading periods. If a transit cruise ship remains in port for a longer period, some traffic control would be required to guide taxis and shuttle buses across the promenade, however, the vehicle activity would be substantially less than for a home-based cruise ship where one set of passengers disembark in the morning and a new set arrives in the afternoon for evening departure.

The purpose of the detailed simulation analysis was to determine whether sufficient capacity would be provided for the various vehicle modes (i.e., taxis, buses, shuttles, trucks, and private vehicles) so that queuing associated with passenger pick up and drop off does not block access, thereby resulting in gridlock within the GTA.

- The simulation analysis indicated that the taxi queuing space would be adequate to accommodate the peak demand, which would occur between 8:00 and 9:00 a.m. (i.e., taxis arriving and waiting for passengers to disembark a recently-arrived cruise ship). The private vehicle drop off area would also be adequate to accommodate the peak private vehicle demand, which would occur between 12:00 and 1:00 p.m.

- Queuing from the taxi and passenger loading/unloading areas would not block access into the bus parking area located to the south of the taxi and private vehicle queuing area.

- The queue associated with exiting vehicles (which, as noted above, would be regulated by Transportation Monitors) was also examined, and it was determined that the maximum queue exiting the GTA would occur between 11:00 a.m. and 12:00 p.m. Since the exiting vehicles would extend beyond the bus parking area, the Transportation Monitor would be required to maintain a keep clear zone at the exit from the bus parking area.

In summary, the truck delivery and service vehicle demand associated with the Cruise Terminal operations would be adequately accommodated within the proposed configuration of the GTA. Impacts of the Cruise Terminal project on loading would be *less than significant.*

Implementation of the Northeast Wharf Plaza would not generate any loading demand. Therefore, the impact on loading operations in the vicinity would be *less than significant.*

Mitigation: Not required

Impact TR-89: Implementation of the Cruise Terminal project would not result in a significant emergency vehicle access impact. (Less than Significant)

Implementation of the Cruise Terminal project would not change emergency vehicle access along The Embarcadero. Emergency vehicles would continue to access Piers 27-29 similar to existing conditions, however, instead of accessing at Pier 27 near the intersection of The Embarcadero/ Lombard/Battery, access would be provided at a new location, about 100 feet south of the intersection of The Embarcadero/Chestnut/Sansome. Two inbound travel lanes would accommodate emergency vehicle access to the piers. Therefore, the impact on emergency vehicle access would be *less than significant*.

Implementation of the Northeast Wharf Plaza would not change emergency vehicle access along The Embarcadero. Emergency vehicles would be able to access the plaza if necessary. The Northeast Wharf Plaza would be expected to increase public use in the immediate vicinity of the project, redistributing existing levels of public uses currently occurring along the waterfront, but it would not substantially increase the overall number of visitors to the San Francisco waterfront. Therefore, the impact on emergency vehicle access would be *less than significant.*

Mitigation: Not required

Impact TR-90: Implementation of the Cruise Terminal project would not result in construction-related transportation impacts because of their temporary and limited duration. (Less than Significant)

Construction of the Cruise Terminal Project would be carried out in two phases. Phase 1 would be coordinated with the development of the proposed AC Village at Piers 27-29. Phase 1 would demolish the Pier 27 shed in its entirety, along with a portion of the Pier 29 shed, to create an area for a proposed expansive temporary public viewing platform. The Pier 27 Annex office building would also be demolished. A new Pier 27 shed east and corner wall would be constructed. Phase 1 would also construct the cruise terminal core building and shell. After the conclusion of the AC34 race events, and removal of all temporary facilities at Piers 27-29, the construction of Phase 2 would be initiated. Phase 2 would include completion of certain interior spaces (e.g., the Customs and Border Protection offices), interior building equipment (e.g., screening facilities) and exterior maritime equipment (e.g., mobile gangway, bollards, and fendering) required for cruise terminal operations. Construction of Phase 1 would be conducted in 2012 to early 2013 while construction associated with Phase 2 would be following the completion of the AC34 2013

events and removal of the AC Village facilities in late 2013 and completed in 2014 (cruise terminal would be operational in 2014). All construction activities are proposed to occur on Mondays through Fridays for up to 10 hours per day, from 8:00 a.m. to 6:00 p.m.

Construction staging for the cruise terminal project would occur primarily within the project site and on barges in the water adjacent to the project site. Pedestrian circulation along The Embarcadero would be maintained throughout the construction duration. It is not expected that any lane closures along The Embarcadero to accommodate construction staging would be required. However, if such a need does arise, for example for delivery of equipment or materials, the closure would be short‐term (e.g., less than a day). If it is determined that any temporary traffic lane, parking lane or sidewalk closures would be needed, the closures would be coordinated with the City in order to minimize the effects on local traffic and circulation. In general, lane and sidewalk closures are subject to review and approval by the Department of Public Works (DPW) and the San Francisco Municipal Transportation Agency (SFMTA). Since there are no Muni bus stops along the project frontage, it is not anticipated that any Muni bus stops would need to be relocated during construction of the project. Construction activities would not affect the F-Market & Wharves historic streetcar operating within the median of The Embarcadero.

During the construction period, there would be a flow of construction-related trucks into and out of the project site. It is anticipated that a majority of the construction trucks would use I‐80/ U.S. 101, plus Harrison Street and The Embarcadero for access to and from the project site. Truck trips to the North Bay would use Bay Street and Lombard Street.

Construction truck trips would be made throughout the day (with more trips made during the early morning), and trucks would remain in the area for a shorter duration. Construction worker travel would typically take place during the hours before and after the work shifts. The impact of construction truck traffic would be a temporary lessening of the capacities of local streets due to the slower movement and larger turning radii of trucks, which may affect traffic and transit operations. It is not anticipated that the addition of worker-related vehicle- or transit-trips would substantially affect transportation conditions.

The number of construction workers at the project site at any given time would vary, depending on the construction phase. The trip distribution and mode split of construction workers are not known, however, because of good transit access to downtown and the project site, it is anticipated that many of the workers would travel to the site via transit. Construction workers that drive to the site would be able to park on-site, and could also park at nearby commercial parking facilities (such as the Golden Gateway Garage located at Washington and Front streets).

Construction activities would likely inconvenience employees, residents, and visitors to the area, but construction activities are typical in an urban setting and would be temporary in nature. For these reasons, construction-related transportation impacts would be *less than significant*.

The Northeast Wharf Plaza would be constructed as part of the Phase 2 construction at Piers 27-29. Construction activities associated with the plaza would include deliveries of supplies, and installation of hardscape (pavers, concrete seating/steps and planters), and multi-use recreational

space proposed to consist of a natural turf underlaid by a soil bed and base drain mat. As described above for the overall Phase 2 construction, construction-related transportation impacts would be *less than significant.*

Mitigation: Not required

5.6.3.5 Future Long-Term Development Impacts and Mitigation Measures

Impact LT-TR: Long-Term Development under the Host Agreement would result in significant traffic and transit impacts. (Significant and Unavoidable with Mitigation)

As described in Chapter 3, long-term development rights under the Host Agreement could result in development of Piers 26, 28, 30-32, 19, 19½, 23, 29, and Seawall Lot 330. For the purposes of this EIR, it is assumed that this development would consist of about 250 residential dwelling units, 261,800 square feet of retail uses, 533,000 square feet of office uses, and 264,000 square feet of entertainment and assembly/commercial uses. The long-term development sites would be located along The Embarcadero between Piers 30-32 and Pier 29; roughly between Brannan Street and Battery Street. In addition, the assumptions for long-term development under the Host Agreement allows for two cruise ship berths at Piers 30-32 as backup for the new cruise terminal at Piers 27-29, and two marinas within the Brannan Street Wharf and Rincon Point (Piers 14-22½) Open Water Basins.

Buildout of the long-term development potential that would be part of the Host Agreement would result in net-new travel demand to and from the development sites, including new pedestrian, bicycle, transit and vehicle trips. The travel demand associated with the overall assumed long-term development scenario was estimated based on the *SF Guidelines* methodology (see discussion in Section 5.6.3.3). On days when cruise ships are not berthed at Piers 30-32, buildout of the assumed long-term development scenario would result in a total of about 57,000 daily person trips. During the weekday p.m. peak hour, the assumed long-term development scenario would generate about 6,200 person trips and about 1,000 vehicle trips.

When a second or third cruise ship would berth at the cruise ship facility at Piers 30-32 that would be developed as part of long-term development under the Host Agreement, the number of daily person trips would increase by between 4,100 person trips (e.g., berthing of one 1,000-passenger ship) to 16,400 person trips (e.g., berthing of one 1,000-passenger ship and a 3,000-passenger ship), depending on the number and size of ship. As indicated in Section 5.6.3.3, of the days that cruise ships are in port, a single cruise ship is in port about 88 percent of the time, two ships are in port about 10 percent of the time, and three ships are in port about 2 percent of the time. In general, impacts associated with two or more ships in port in San Francisco would not be considered significant, as they would potentially occur less than 12 percent of the days that ships are in port (on average, less than two percent of the days in a year).

With the addition of the 1,000 vehicle trips associated with the buildout of the assumed long-term development scenario to the local roadway network, the average delay per vehicle would increase and LOS operating conditions would worsen at intersections in the vicinity of the development sites. During the p.m. peak hour, a number of intersections along The Embarcadero between Brannan and Battery streets currently operate at LOS C or LOS D conditions, and the additional vehicle trips could deteriorate operating conditions to LOS E or LOS F, thereby resulting in significant impacts on traffic conditions. In addition, vehicle trips associated with the long-term development could contribute considerably to intersections in downtown and at the approaches to and from I-280 and U.S. 101 that currently operate at LOS E or LOS F conditions (e.g., First/Harrison/I-80 Eastbound on-ramp, Fourth/Bryant/I-80 Eastbound off-ramp, King/ Fourth Street). Therefore, implementation of the long-term development projects as part of the Host Agreement would result in *significant* traffic impacts at one or more intersections in the vicinity of the potential development sites.

Transit

During the weekday p.m. peak hour, the long-term development would generate about 1,700 inbound and outbound transit trips that would utilize Muni and regional transit providers. Overall, the addition of the outbound transit trips to downtown San Francisco and regional screenlines would not substantially increase the peak hour capacity utilization. It is expected that capacity utilization for Muni screenlines would remain similar to existing conditions, at below the 85 percent capacity utilization threshold, with the exception of the subway lines within the Southwest screenline, which currently operate at 87 percent. It should be noted that some transit trips generated by the long-term development would remain in downtown (e.g., trips to Union Square), and would not cross the screenlines (and would therefore not add transit riders at the maximum load point). In addition, it is expected that the capacity utilization for all regional transit providers would be under their capacity utilization standards. Overall, the impact of long-term development on Muni downtown and regional screenlines would be *less than significant.*

Since the long-term development sites would be located along the waterfront, it is expected that a portion of the transit trips to and from the long-term development sites would travel on the F-Market & Wharves historic streetcar, which currently operates at capacity along The Embarcadero. The addition of transit trips associated with the long-term development would increase the capacity utilization, and the impact on the F-Market & Wharves historic streetcar would be considered significant. Since Muni service along The Embarcadero operates within an exclusive right-of-way within the center median, it is not expected that the additional vehicle trips generated by the long-term development would affect Muni operating on The Embarcadero. Overall, the impact of long-term development on Muni screenline capacity utilization and on the F-Market & Wharves would be *significant.*

Mitigation Measure M-LT-TR: Transportation Mitigation Measures for Long-Term Development

Mitigation measures to mitigate significant traffic and transit impacts to less than significant levels could include but not be limited to:

- Roadway widening to provide for additional travel lane capacity;
- Restriping to provide for additional travel lanes;
- Implementation of tow-away restrictions to provide for additional travel lane capacity;
- Signal timing changes to reallocate green time to approaches experiencing high delays;
- Implementation of Transportation Demand Management Programs;
- Financial contributions to SFMTA to cover the cost of providing additional F-Market & Wharves historic streetcar and/or planned E-Embarcadero service; and
- Financial Contributions to SFgo, SFMTA's Integrated Transportation Management System to install changeable message signs, video cameras, and other traffic control devices.

Improvements to increase the number of travel lanes may not be feasible because they may require narrowing of sidewalks to substandard width, elimination of bicycle lanes, or changes to passenger boarding island for Muni, and/or demolition of buildings adjacent to the impacted streets. Signal timing adjustments may improve intersection operations, but also may not be feasible due to transit, pedestrian, or traffic signal timing requirements. Implementation of a Travel Demand Management Program for larger developments to discourage the use of private automobile would reduce the number of vehicles, however, the feasibility and extent of such a program to reduce impacts is not known. A detailed analysis would be required to identify the impacts at specific intersections and develop appropriate mitigation measures. Therefore, the ability of the potential mitigation measures to reduce long-term development impacts to less-than-significant is uncertain and the feasibility of the mitigation measures is unknown. Therefore impacts of the long-term development on traffic and transit operations would be *significant and unavoidable.*

As discussed below, the impacts of long-term development on bicycles, pedestrians, loading, and emergency vehicle access, and construction-related transportation impacts, would be less than significant.

Bicycles

The new bicycle trips generated by the long-term development would utilize the existing and planned system of bicycle routes. In the vicinity of the potential development sites, bicycle lanes are provided on Howard, Folsom, and Townsend Streets for east-west travel, and on The Embarcadero for north-south travel. As bicycling continues to increase throughout San Francisco, the number of bicyclists on the area bicycle routes and lanes also is anticipated to increase.

While the bicycle facilities in downtown San Francisco are well-utilized by bicyclists, it is not expected that the added bicycle trips associated with the long-term development would result in significant impacts on bicyclists. However, depending on the design of the new development projects, there may be increased conflicts with vehicular access across the bicycle lanes along The Embarcadero. Individual development projects would need to comply with provisions of the *Planning Code* pertaining to providing bicycle parking spaces, and other support facilities, such as

showers and lockers. Therefore, the impact of long-term development on bicycling would be *less than significant.*

Pedestrians

Travel demand associated with the long-term development would add pedestrian trips to the surrounding streets, including walk trips, and trips to the transit stops. Trips to and from the transit stops, and to and from parking facilities would result in an increase in pedestrian volumes on the study area sidewalks. Increases in pedestrian volumes would be most noticeable in the immediate vicinity of the individual development projects. In general, the new pedestrian trips would be accommodated on the existing sidewalks, and would not substantially affect pedestrian operations on the nearby sidewalks and crosswalks. Therefore, the impact of long-term development on pedestrians would be *less than significant.*

Loading

In general, the analysis of loading impacts are specific to individual development projects, and includes a comparison of proposed loading space supply to the *Planning Code* requirements and the estimated loading demand during the peak hour of loading activities. To the extent that loading demand is not accommodated on-site, and could not be accommodated within existing or new on-street loading zones, double-parking, illegal use of sidewalks and other public space is likely to occur with associated disruptions and impacts to traffic and transit operations as well as to bicyclists and pedestrians. For the purposes of this EIR, it is assumed that the long-term development projects would include off-street loading spaces consistent with the requirement of the *Planning Code,* and the loading demand could also be accommodated within existing and new on-street loading supply**.** Therefore, the impact of long-term development on loading would be *less than significant.*

Emergency Vehicle Access

It is not expected that long-term development would change travel lanes or result in street closures, and emergency vehicle access to the waterfront would remain unchanged from existing conditions. Therefore, the impact of long-term development on emergency vehicle access would be *less than significant.*

Construction

In general, the analysis of construction impacts are specific to individual development projects, and include a discussion of temporary roadway and sidewalk closures, relocation of bus stops, effects on roadway circulation due to construction trucks, and the increase in vehicle trips, transit trips and parking demand associated with construction workers. Potential impacts associated with individual development projects are not generally considered significant because they are temporary and of short-term duration. Therefore, the construction-related transportation impacts would be *less than significant.*

5.6.3.6 Parking Information

San Francisco does not consider parking supply as part of the permanent physical environment and therefore, does not consider changes in parking conditions to be environmental impacts as defined by CEQA. The San Francisco Planning Department acknowledges, however, that parking conditions may be of interest to the public and the decision makers. Therefore, this section presents a parking analysis for information purposes.

Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact (*CEQA Guidelines* Section 15131(a)). The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service in particular, would be in keeping with the City's "Transit First" policy. The City's Transit First Policy, established in the City's Charter Article 8A, Section 8A.115 provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of the proposed project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

Summary. In summary, changes in parking conditions are considered to be social impacts rather than impacts on the physical environment. Accordingly, the following parking assessment is presented for informational purposes only.

America's Cup Events – 2012 and 2013

As indicted in **Section 5.6.3.2**, Project Transportation Improvement Assumptions, as part of the People Plan, SFMTA would develop a program for notifying visitors of availability of parking facilities, including public and private off-street facilities, on-street parking, and satellite parking facilities that would be required on high-spectator event days.

Table 5.6-35 presents the publicly-available parking supply within the study area defined on Figure 5.6-8B, and the parking demand for weekday and weekend events analyzed for 2012 and 2013 conditions. In addition to the publicly-available parking supply, there are a number of off-street facilities that provide customer parking or permit parking only, that may be available during peak event days to accommodate the AC34 parking demand. The availability of larger off-street parking facilities would be assessed as part of the People Plan effort, and would be incorporated into the public information plan. Other informal arrangements would also likely occur, although it is not anticipated that they would accommodate a substantial amount of the parking demand. Since the parking supply identified in Table 5.6-35 accommodates existing uses in these study areas and would not be completely available for AC34 event uses, for weekday and weekend conditions, for both AC34 2012 and AC34 2013 events, the associated parking demand would not be accommodated within the supply. For the most part, the shortfall in parking supply would primarily be for the viewing areas between the Presidio/Crissy Field and Aquatic Park, and would occur predominantly on weekends.

TABLE 5.6-35
COMPARISON OF PUBLIC PARKING SUPPLY TO ESTIMATED PARKING DEMAND BY AREA FOR AC34 2012 AND 2013 PEAK EVENT DAYS

Study Area	Public Parking Supply	AC34 2012 Parking Demand[a]		AC34 2013 Parking Demand[a]	
		Weekday	Weekend	Weekday	Weekend
Presidio and Crissy Field	2,031[b]	2,030	8,085	2,270	8,610
Marina and Fort Mason to Aquatic Park	2,175	3,351	6,300	1,632	6,510
Fisherman's Wharf	5,432	621	1,671	692	2,625
The Embarcadero	19,636[c]	816	1,575	2,759	11,225
Downtown	6,385[d]	0	0	0	1,260
Other San Francisco[e]	NA	0	315	0	525
Total	*35,659*	*6,818*	*17,946*	*7,353*	*30,756*
Treasure Island	NA	414	1,050	478	2,290
Marin County[f]	2,500[g]	207	1,584	237	2,195

[a] Parking demand associated with 45,000 spectators on a weekday and 197,300 spectators on weekend day in 2012, and 50,000 spectators on a weekday and 334,00 0 spectators on a weekend day in 2013.
[b] Does not include public parking available in the Main Post area which totals approximately 1,100 spaces. Approximately half of the supply is located along Crissy Field, Mason Street and the Palace of Fine Arts and might not be available during AC34 events.
[c] Includes Ballpark parking lots in the Mission Bay Area with combined supply of about 2,500 parking spaces.
[d] Includes Sutter-Stockton (1,865 spaces), Union Square (985 spaces), Ellis-O'Farrell (950 spaces), and Fifth-Mission (2,585 spaces) City-owned garages.
e Includes parking demand for trips destined to Alcatraz Island.
f Includes parking demand for trips destined to Angel Island.
g Approximate number of parking spaces available at Fort Baker and the Marin Headlands.

SOURCE: SFMTA, NPS, Adavant Consulting/LCW Consulting, 2011

In 2012, the AC Village would be located at the Marina Green, and the parking demand generated during both the weekday and weekend peak events would exceed the parking supply between the Presidio/Crissy Field and Aquatic Park. The parking shortfall would be greatest during weekend events, which are projected to attract a substantially greater number of visitors. The parking demand associated with visitors destined to Fisherman's Wharf and the Northeast Embarcadero would generally be accommodated within the total parking supply in those areas.

In 2013, the AC Village would be located at Piers 27-29, and the focus of the spectator viewing would shift to The Embarcadero. During weekdays, the parking demand generated by visitors to the Presidio and Crissy Field areas would exceed the available supply, although not to the extent as during the 2012 events, and it is anticipated that parking supply at all other areas would adequately accommodate the projected supply. On peak weekend events, however, the parking demand generated would exceed the parking supply for the viewing areas between the Presidio/Crissy Field and Aquatic Park.

As indicated above, as part of the People Plan, SFMTA would develop a program for notifying visitors of availability of parking facilities, including public and private off-street facilities, on-street parking, and satellite parking facilities that would be required on high-spectator event days. The provision of satellite parking facilities, and shuttles to the Presidio, Crissy Field, Marina Green, Fort Mason, and Aquatic Park would serve to reduce the expected parking shortfall.

As part of its "transit first" policy, the City and County of San Francisco does not require that the supply of parking spaces equals the demand. As a result of parking shortfalls, individuals who would prefer to drive may use transit because the perceived convenience of driving is lessened by a shortage of parking. This shortage is not considered a significant environmental effect because it implements a policy intended to reduce citywide traffic congestion and air quality effects. Even with a shortage of off-street parking, measures often are implemented that result in more efficient use of the parking spaces provided. By providing for satellite parking facilities, promoting carpooling, allowing for the shared use of parking, providing valet service, the parking supply would likely be more efficiently utilized during the event days. Since the proposed parking supply in the areas affected by AC34 would not meet demand, it is possible that some drivers may seek available parking in adjacent residential areas to the south. While residential streets in the vicinity of the waterfront are currently subject to RPP parking restrictions, in some locations these restrictions are not in effect on Saturdays and Sundays, and residents arriving to these areas on weekends after drivers have started arriving for the AC34 events would have difficulty parking unless they have already reserved on-street parking. The extent of spillover into the nearby residential neighborhoods to the south could be limited by extension of RPP regulations to include event days, and increased enforcement that would be implemented as part of the People Plan.

As indicated in Table 5.6-35, an increase in parking demand would also be anticipated within other areas of San Francisco related to the secondary viewing areas. The increase in parking demand would be in the vicinity of streets that allow for unobstructed viewing, and also on

streets where spectators would view the events from private residences, primarily in the Telegraph Hill, Russian Hill, Nob Hill, and Pacific Heights neighborhoods. Since all of these streets are subject to RPP parking regulations ("A", "A", "C" and "G", respectively) which are enforceable on weekdays and Saturdays, the extent to which a substantial number of spectators attempt to park in these areas would be limited. On streets that are not subject to RPP regulations, extension of the regulations to include event days, would limit the extent of AC34 spectators driving to secondary viewing areas.

Parking in the Marin Headlands and in Fort Baker during peak AC34 events would be extremely limited. The NPS would be expected to close access roads such as Conzelman Road and Fort Baker roadways to vehicle traffic, making most of the parking spaces unavailable except for early arrivals. Parking conditions in downtown Sausalito and Tiburon are generally full on summer weekends, and AC34 spectators arriving by auto may decide to continue through the downtowns, rather than search for parking.

Implementation of the People Plan's transportation system management strategies would require temporary parking restrictions on selected streets to facilitate bus travel, provide additional vehicular capacity, provide for pedestrian-only streets, and reduce localized congestion in the vicinity of the spectator venues. The extent of parking restrictions would vary for AC34 2012 and AC34 2013 by the number of spectators projected to attend the events. For the majority of the event days, parking restrictions would be limited to the vicinity of the AC34 venues in order to discourage vehicle travel to these areas. On peak weekend days, the extent of parking restrictions would be greatest. Examples of the types of temporary parking restrictions on peak event days include:

- Van Ness Avenue between Market Street and Bay Street to facilitate the augmented Muni (Supplemental 30L-Marina and Supplemental 47L-Van Ness) and Golden Gate Transit bus service traveling on and picking up and dropping off passengers. On-street parking restrictions on both sides of the street would affect about 425 parking spaces, with the majority of these spaces being short-term metered spaces.

- Civic Center Streets – The People Plan includes a supplemental 47L-Van Ness Limited route that would connect the Civic Center BART/Muni station with Fisherman's Wharf (via Van Ness Avenue). On-street parking restrictions would be required to provide for on-street bus loading and staging areas. These restrictions would temporarily eliminate up to 10 parking spaces on the north side of Grove Street between Hyde and Larkin streets, and up to 41 parking spaces on the north and south sides of Grove Street between Larkin and Polk Streets.

- Both sides of North Point and Beach streets between Powell Street and Van Ness Avenue, as well as selected cross-streets on higher attendance days when The Embarcadero northbound closure and restricted access north of Bay and Chestnut streets are not implemented.

- One or both sides of Bay Street between The Embarcadero and Van Ness Avenue on higher attendance days when The Embarcadero northbound closure and restricted access north of Bay and Chestnut streets are not implemented (temporarily eliminating up to 500 parking spaces).

- The Embarcadero northbound between Howard Street and Bay Street.
- The south side of Marina Boulevard between Fillmore and Baker streets.

The temporary parking restrictions would reduce vehicular travel on the affected streets, and would displace the existing parking demand to off-street facilities or other streets in the nearby vicinity. As noted above, lack of available on-street parking may result in drivers looking for a parking space in nearby areas with limited parking availability. However, this would likely be offset by a reduction in vehicle trips due to others who would be aware of constrained parking conditions. As part of the People Plan, SFMTA would develop a program for notifying residents and visitors of on-street parking restrictions that would be required on high-spectator event days.

James R. Herman Cruise Terminal

The Planning Code requires off-street parking for all uses within the M-1 (Light Industrial) zoning district. Piers 27-31 also fall within the Waterfront Special Use District #1, and special allowances are made for parking provisions in this district. Planning Code Sections 240.1 allow parking requirements to be modified pursuant to Section 161(f) for projects within the Waterfront Special Use District #1. Section 161 (f) permits the Planning Department or Planning Commission to reduce the off-street parking requirements in recognition of the following: policies set forth in the Northeastern Waterfront Plan, the unique nature of the area, and the difficulty in providing vehicular access to the area.

The Cruise Terminal project would generate a parking demand of 154 parking spaces (59 long-term parking spaces and 94 short-term parking spaces), which would be accommodated both on-street (i.e., for short-term parking) and within existing parking facilities in the vicinity of Piers 27-29 (i.e., for both short-term and long-term parking demand). These facilities have adequate capacity to accommodate the Cruise Terminal parking demand. The total parking supply of the off-street facilities in the Cruise Terminal project parking study area is approximately 1,300 spaces on weekdays and 1,000 spaces on weekends, and parking occupancy is 83 percent during the weekday midday peak period and 46 percent during the weekend midday peak period.

As discussed in Impact TR-88, a portion of the loading demand associated with the Cruise Terminal would include trips by Border Control. About six parking within the GTA would be provided for these uses (see Figure 3-33). In addition, the GTA would include accommodation for 20 buses (including shuttles and tour buses) to load and unload passengers, as staffing for four buses along Pier 29, for a total on-site capacity of 24 buses. An on-site staging area for buses and trucks has been identified at the tip of Pier 27-29 (to the west of the GTA) in the event that the demand for bus parking within the GTA exceeds 24. When the bus parking within the GTA is fully occupied, buses would be diverted to the bus and truck staging area until a bus parking space becomes available.

Parking demand associated with special events at the Cruise Terminal would vary depending on the type of event and the number of persons attending the event. The event parking demand would be accommodated within the existing off-street and on-street parking supply. It is

anticipated that the majority of the events would occur during the evening, when parking occupancy at off-street facilities are lower. On-street parking supply is also generally available within the study area.

Northeast Wharf Plaza

The Northeast Wharf Plaza would be expected to increase public use in the immediate vicinity of the project, redistributing existing levels of public uses currently occurring along the waterfront, but it would not substantially increase the overall number of visitors to the San Francisco waterfront. Therefore, no additional parking demand is anticipated to be generated by the Northeast Wharf Plaza.

Long-Term Development Options under the AC34 Project

Individual long-term development projects would be required to comply with the *Planning Code* requirements for parking, including the number of parking spaces, provision of car-sharing spaces, and the separation of parking costs from housing costs in new residential buildings.

Residential and non-residential development associated with the long-term development project would generate long-term residential parking demand, and long-term and short-term non-residential/commercial demand. Generally, the amount of off-street parking permitted under the Planning Code is less than the demand generated by the proposed uses, therefore with development of the long-term development projects there would be a shortfall in parking spaces provided relative to the projected demand. It is anticipated that a portion of the shortfall would be accommodated on-street, particularly the overnight residential parking demand, and a portion of the shortfall could potentially be accommodated off-street in public parking facilities serving daytime non-residential parking demand. As a result of the parking shortfall, some drivers may circle around the neighborhood in search of parking, which would add traffic congestion to the local street network. The expectation is also that some drivers, frustrated by the shortage of available parking would shift to public transit or other modes (such as bicycling), while others would search out alternative parking within reasonable distance of their destination. For non-residential development, it is anticipated that the parking demand would be substantially accommodated within the permitted parking supply associated with development, and on-street at metered parking spaces.

5.6.3.7 Cumulative Impacts

As indicated in Section 5.6.3.3, under "Approach to Impact Analysis Methodology," the future year 2035 was selected for analysis of the cumulative transportation impacts. The 2035 cumulative analysis assesses the long-term impacts of the Cruise Terminal project in combination with other development. The AC34 project is not included in this cumulative analysis, with the exception of the long-term development rights under the Host Agreement, because none of the construction and operational impacts of the AC34 project would occur beyond 2013. Cumulative

impacts associated with near-term project occurring during the construction and operational period of the AC34 project are discussed above under AC34 Events and Cruise Terminal impacts.

The geographic context for the analysis of cumulative transportation impacts is the local roadway network along The Embarcadero in the vicinity of Piers 27-29, and transit operations within San Francisco. Proposed Cruise Terminal project impacts related to bicycle and pedestrian circulation, parking and loading supply and demand, and construction would be localized and site specific and would not contribute to impacts from other development and infrastructure projects within San Francisco.

The following are the topics addressed and the cumulative impacts analyzed for those topics:

- Traffic: Impacts C-TR-1 through C-TR-7
- Transit: Impacts C-TR-8 through C-TR-10

Overview of Cumulative Traffic Impacts associated with the Cruise Terminal

The proposed project would generate new vehicle trips and increase the number of vehicles and average vehicle delays at the 22 study intersections. Under the 2035 Cumulative conditions, at 11 of the 22 study intersections, the LOS of would either deteriorate from acceptable to unacceptable LOS (Broadway/Battery, The Embarcadero/Broadway, The Embarcadero/Washington, The Embarcadero/Mission, The Embarcadero/Harrison, The Embarcadero/Bryant, The Embarcadero/ Brannan, The Embarcadero/Howard, The Embarcadero/Folsom) or would continue to be at unacceptable LOS (The Embarcadero/Beach and The Embarcadero/North Point during at least one of the study periods. At 5 of the 11 study intersections that would operate at LOS E or LOS F under 2035 Cumulative conditions, the Cruise Terminal project would contribute considerably to the critical movements that operate poorly, and, since feasible mitigation have not been identified, would result in significant and unavoidable impacts (The Embarcadero/Washington, The Embarcadero/Washington, The Embarcadero/Mission, The Embarcadero/Howard, The Embarcadero/Folsom). At six study intersections that would operate poorly under 2035 cumulative conditions, the project's contributions to the poor operating conditions would be less than significant (Broadway/Battery, The Embarcadero/Beach/Grant, The Embarcadero/North Point/Kearny, The Embarcadero/Harrison, The Embarcadero/Bryant, and The Embarcadero/ Brannan). Eleven of the 22 study intersections would continue to operate at LOS D or better under 2035 cumulative conditions (Beach/Columbus, North Point/Columbus, North Point/Stockton, Bay/Columbus, Bay/Stockton, Bay/Kearny, Broadway/Sansome, The Embarcadero/Bay, The Embarcadero/Chestnut, The Embarcadero/Lombard, and The Embarcadero/Green).

Impact C-TR-1: Implementation of the Cruise Terminal project would result in significant project and cumulative impacts at the intersection of The Embarcadero/Broadway. (Significant and Unavoidable)

Under 2035 cumulative conditions, proposed project impacts were assessed by calculating the project-generated traffic contributions at intersections that are projected to operate at LOS E or LOS F under 2035 cumulative conditions. At intersections that are projected to operate at LOS E

or LOS F under 2035 cumulative conditions, the increase in proposed project vehicle trips was reviewed to determine whether the increase would contribute considerably to critical movements operating at LOS E or LOS F. In addition, at intersections where project-specific impacts were identified for Existing plus Project conditions, the proposed project would also be considered to result in a cumulative impact under 2035 cumulative conditions. Supporting documentation regarding Cruise Terminal project contributions to intersections operating at LOS E or LOS F under 2035 cumulative conditions is included in Appendix TR-4.

Table 5.6-28, Table 5.6-29, and Table 5.6-30 present the comparison of intersection LOS for 2035 cumulative conditions for the weekday a.m., weekday p.m., and Saturday midday peak hours, respectively. The intersection LOS results are presented in **Figure 5.6-14**.

The results of the 2035 cumulative analysis indicate that 11 of the 22 study intersections would operate at LOS E or LOS F during at least one of the three analysis hours.

- The proposed project would contribute considerably to critical movements at 5 of the 11 study intersections that would operate at LOS E or LOS F during the Saturday midday peak hour, resulting in project impacts (Impact C-TR-1 through Impact C-TR-5).

- The proposed project would have less than significant contributions at 6 of the 11 study intersections that would operate at LOS E or LOS F under 2035 cumulative conditions (Impact C-TR-6).

Under 2035 cumulative conditions, the intersection of The Embarcadero/Broadway would operate at LOS F conditions during the weekday a.m. and p.m., and Saturday midday peak hours. Based on the assessment of the project-generated vehicle trips, the proposed project would contribute considerably to critical movements operating at LOS E or LOS F only during the Saturday midday peak hour, resulting in significant project and cumulative impacts.

Impacts could be minimized by providing additional northbound and southbound travel lane capacity at this intersection. However, the existing street configuration along The Embarcadero is restricted as a result of the transit median and promenade, and cannot be modified without compromising the pedestrian environment or transit facilities and service. Providing additional travel lanes would require elimination of bicycle lanes and/or narrowing of the promenade (for northbound capacity) or sidewalk (for southbound capacity) that would increase the pedestrian crossing distance across The Embarcadero. Removal of bicycle lanes and sidewalk reductions along The Embarcadero would be inconsistent with the transit, pedestrian and bicycle environment encouraged by the City of San Francisco, and could potentially result in impacts on other resources (such as recreational resources).

Signal timing adjustments to reduce intersection delays were considered but determined infeasible. Traffic signals on The Embarcadero are coordinated to allow for efficient vehicle and transit progression through the corridor, and generally allow pedestrians to cross The Embarcadero without having to wait through a signal cycle on the median. Signal timing changes may result in some reduction in delays, but due to the transit and pedestrian signal timing needs, would not be adequate to mitigate intersection operations to less than significant levels. For these

● Cruise Terminal and Northeast Wharf Plaza

SOURCE: Adavant Consulting/LCW Consulting

Case No. 2010.0493E: AC34 / Cruise Terminal and Northeast Wharf Plaza (210317)

Figure 5.6-14
2035 Cumulative Intersection LOS Conditions-
Piers 27-29 Vicinity

reasons, no feasible mitigation measure was identified, and the cumulative, long-term traffic impact at the intersection of The Embarcadero/Broadway was determined to be *significant and unavoidable.*

It is important to note that this significant impact at the intersection of The Embarcadero/Broadway would materialize only if the recommendations of the Northeast Embarcadero Study that reduce the number of northbound left turn lanes from The Embarcadero onto Broadway were implemented. Impacts of the Cruise Terminal project at this intersection in 2035 would be less-than-significant if reduction in travel lanes and the associated changes to the intersection of The Embarcadero/Broadway were not to occur.

Impact C-TR-2: Implementation of the Cruise Terminal project would result in a significant project and cumulative impacts at the intersection of The Embarcadero/Washington. (Significant and Unavoidable)

Under 2035 cumulative conditions, the intersection of The Embarcadero/Washington would operate at LOS F conditions during the weekday a.m. and p.m., and Saturday midday peak hours. Based on the assessment of the project-generated vehicle trips, the proposed project would contribute considerably to critical movements operating at LOS E or LOS F only during the Saturday midday peak hour, resulting in significant project and cumulative impacts.

Impacts could be minimized by providing additional northbound and southbound travel lane capacity at this intersection. However, the existing street configuration along The Embarcadero is restricted as a result of the transit median and promenade, and cannot be modified without compromising the pedestrian environment or transit facilities and service. Providing additional travel lanes would require elimination of bicycle lanes and/or narrowing of the promenade (for northbound capacity) or sidewalk (for southbound capacity) or the Plaza in front of the Ferry Building that would increase the pedestrian crossing distance across The Embarcadero. Removal of bicycle lanes and sidewalk reductions along The Embarcadero would be inconsistent with the transit, pedestrian and bicycle environment encouraged by the City of San Francisco, and could potentially result in impacts on other resources (such as recreational resources). Signal timing adjustments to reduce intersection delays were considered but determined insufficient to reduce impacts to less than significant levels when feasible. Therefore, no feasible mitigation measures have been identified to reduce cumulative project impacts to less-than-significant levels. For these reasons, the cumulative, long-term traffic impact at the intersection of The Embarcadero/Washington was determined to be *significant and unavoidable.*

It is important to note that this significant impact at the intersection of The Embarcadero/ Washington would materialize only if the recommendations of the Northeast Embarcadero Study that reduce the number of northbound left turn lanes from The Embarcadero onto Washington Street were implemented. Impacts of the Cruise Terminal project at this intersection in 2035 would be less-than-significant if reduction in travel lanes and the associated changes to the intersection of The Embarcadero/Washington were not to occur.

Impact C-TR-3: Implementation of the Cruise Terminal project would result in a significant project and cumulative impacts at the intersection of The Embarcadero/Mission. (Significant and Unavoidable)

Under 2035 cumulative conditions, the intersection of The Embarcadero/Mission would operate at LOS F conditions during the weekday a.m. and p.m., and Saturday midday peak hours. Based on the assessment of the project-generated vehicle trips, the proposed project would contribute considerably to critical movements operating at LOS E or LOS F only during the Saturday midday peak hour, resulting in significant project and cumulative impacts.

For the same reasons as described for the adjacent intersection of The Embarcadero/Washington (**Impact C-TR-2** above), no feasible mitigation measures have been identified to reduce cumulative project impacts to less-than-significant levels at this intersection. For these reasons, the cumulative, long-term traffic impact at the intersection of The Embarcadero/Mission was determined to be *significant and unavoidable.*

Impact C-TR-4: Implementation of the Cruise Terminal project would result in a significant project and cumulative impacts at the intersection of The Embarcadero/Howard. (Significant and Unavoidable)

Under 2035 cumulative conditions, the intersection of The Embarcadero/Howard would operate at LOS F conditions during the weekday a.m. and p.m., and Saturday midday peak hours. Based on the assessment of the project-generated vehicle trips, the proposed project would contribute considerably to critical movements operating at LOS E or LOS F only during the Saturday midday peak hour, resulting in significant project and cumulative impacts.

For the same reasons as described for the nearby intersection of The Embarcadero/Washington (**Impact C-TR-2**), no feasible mitigation measures have been identified to reduce cumulative project impacts to less-than-significant levels at this intersection. For these reasons, the cumulative, long-term traffic impact at the intersection of The Embarcadero/Howard was determined to be *significant and unavoidable.*

Impact C-TR-5: Implementation of the Cruise Terminal project would result in a significant project and cumulative impacts at the intersection of The Embarcadero/Folsom. (Significant and Unavoidable)

Under 2035 cumulative conditions, the intersection of The Embarcadero/Folsom would operate at LOS F conditions during the weekday a.m. and p.m., and Saturday midday peak hours. Based on the assessment of the project-generated vehicle trips, the proposed project would contribute considerably to critical movements operating at LOS E or LOS F only during the Saturday midday peak hour, resulting in significant project and cumulative impacts.

For the same reasons as described for the nearby intersection of The Embarcadero/Washington (**Impact C-TR-2**), no feasible mitigation measures have been identified to reduce cumulative project impacts to less-than-significant levels at this intersection. For these reasons, the cumulative, long-term traffic impact at the intersection of The Embarcadero/Folsom was determined to be *significant and unavoidable.*

Impact C-TR-6: Implementation of the Cruise Terminal project would have less than significant impacts at six study intersections that would operate at LOS E or LOS F under 2035 cumulative conditions. (Less than Significant)

At 6 of the 11 study intersections that would operate at LOS E or LOS F under 2035 cumulative conditions, the proposed project contributions at the critical movements was examined. Based on this assessment, it was determined that proposed project vehicle trips would represent a less than cumulatively considerable contribution to LOS E or LOS F operating conditions, and therefore, cumulative, long-term traffic impacts would be less than significant at the following intersections:

- Broadway/Battery
- The Embarcadero/Beach/Grant
- The Embarcadero/North Point/Kearny
- The Embarcadero/Harrison
- The Embarcadero/Bryant
- The Embarcadero/Brannan

The poor operating conditions at these study intersections would be due to traffic volume increases associated with other developments in downtown San Francisco and along the waterfront. Since the Cruise Terminal project would not result in considerable contribution to the poor operating conditions, proposed project impacts at these intersections would be less than significant.

Mitigation: Not required

Impact C-TR-7: Implementation of the Cruise Terminal project would have less than significant impacts at 11 study intersections that would operate at LOS D or better under 2035 cumulative conditions. (Less than Significant)

Under 2035 cumulative conditions, the following 11 study intersections would continue to operate at LOS D or better during the weekday a.m., weekday p.m., and Saturday midday peak hours, and therefore, cumulative, long-term traffic impacts at these locations would be less than significant.

- Beach/Columbus
- North Point/Columbus
- North Point/Stockton
- Broadway/Sansome
- The Embarcadero/Bay
- The Embarcadero/Chestnut

- Bay/Columbus
- Bay/Stockton
- Bay/Kearny
- The Embarcadero/Lombard
- The Embarcadero/Green

Mitigation: Not required

Overview of Cumulative Transit Impacts associated with the Cruise Terminal

The proposed project would generate new transit riders that would be dispersed over multiple Muni and regional transit lines. The additional transit riders would not substantially affect the peak direction capacity utilization of Muni and the regional transit providers under either the a.m. or p.m. peak hours, and therefore, proposed project impacts on cumulative transit conditions would be less than significant. The proposed project would result in significant project and cumulative impacts on the F-Market & Whaves historic streetcar. Because the ability of SFMTA to provide the additional service on this line needed to accommodate the project is uncertain (e.g., the availability of streetcars to put into service, signal timing constraints to reduce time between trains), the feasibility of the **Mitigation Measure M-TR-85** is unknown, and the project's impact on the operation of the F-Market & Wharves historic streetcar would remain significant and unavoidable.

Impact C-TR-8: The proposed project's contribution to cumulative transit trips would not contribute considerably to exceeding Muni's capacity utilization standard at the Downtown screenlines during the weekday a.m. and p.m. peak hours. (Less than Significant)

As indicated in Section 5.6.3.3, under "Development of 2035 Cumulative Traffic and Transit Forecast Methodology," the analysis of cumulative conditions for transit operators considers likely changes to transit service between the existing year and the future year 2035. Included in the analysis are changes to Muni service following implementation of the TEP recommendations, introduction of new ferry routes as part of the Water Emergency Transportation Authority (WETA) ferry network, electrification of Caltrain, and other proposed changes identified in the short-range transit plan (SRTP) documents of the various agencies.

Table 5.6-36 and **Table 5.6-37** present the Muni screenline analysis for 2035 cumulative conditions for the weekday a.m. and p.m. peak hours, respectively. During the a.m. peak hour (i.e., inbound towards downtown), the Northeast, Southeast and Southwest screenlines would operate at overall capacity utilization standard of less than 85 percent, although individual corridors in the Southwest and Southeast screenlines would exceed the 85 percent standard. The Northeast screenline would operate at capacity utilization of 86 percent, and the Geary, California, and Sutter/Clement corridors would exceed Muni's capacity utilization standard of 85 percent. During the p.m. peak hour (i.e., outbound from downtown), the Northwest, Southeast and Southwest screenlines would exceed Muni's capacity utilization standard of 85 percent.

The proposed project contribution to cumulative ridership on peak hour Muni screenlines and corridors would not represent a considerable contribution. During the a.m. peak hour, there would be a total of 23 transit trips compared with a 2035 cumulative transit ridership across all

TABLE 5.6-36
MUNI DOWNTOWN AND REGIONAL TRANSIT SCREENLINES
EXISTING AND 2035 CUMULATIVE CONDITIONS
AM PEAK HOUR

Screenline / Transit Provider		Cruise Terminal Trips	Existing			2035 Cumulative		
			Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization
Muni Downtown Screenlines								
Northeast	Kearny/Stockton Corridor	3	1,138	1,947	58%	1,350	1,640	82%
	All Other Lines	2	744	1,834	41%	1,710	2,250	76%
	Subtotal	*5*	*1,882*	*3,781*	*50%*	*3,060*	*3,890*	*79%*
Northwest	Geary Corridor	2	1,697	2,704	63%	2,620	2,860	92%
	California	2	1,598	2,351	68%	2,700	2,490	108%
	Sutter/Clement	1	616	1,134	54%	970	910	107%
	Fulton/Hayes	1	992	1,386	72%	1,380	1,700	81%
	Balboa	1	809	1,405	58%	880	1,410	62%
	Chestnut/Union	2	1,722	2,457	70%	1,890	2,770	68%
	Subtotal	*8*	*7,434*	*11,437*	*65%*	*10,440*	*12,140*	*86%*
Southeast	Third Street	1	505	833	61%	3,770	3,780	100%
	Mission Street	2	1,221	1,880	65%	1,570	3,350	47%
	San Bruno/Bayshore	2	1,460	1,880	*78%*	2,430	2,840	*86%*
	All Other Lines	2	1,062	1,708	62%	1,610	1,700	95%
	Subtotal	*7*	*4,248*	*6,301*	*67%*	*9,380*	*11,670*	*80%*
Southwest	Subway Lines	3	5,350	6,188	***86%***	6,740	8,450	*80%*
	Haight/Noriega	1	1,029	1,951	53%	1,360	1,430	95%
	All Other Lines	0	248	560	44%	320	560	57%
	Subtotal	*4*	*6,627*	*8,699*	*76%*	*8,420*	*10,440*	*81%*
	Total All Muni Screenlines	***24***	***20,191***	***30,218***	***67%***	***31,300***	***38,140***	***82%***
Regional Transit Screenlines								
East Bay	BART	10	19,391	24,150	80%	35,370	30,740	115%
	AC Transit	1	1,670	3,058	55%	12,600	6,280	201%
	Ferries	0	667	1,186	56%	2,580	2,800	92%
	Subtotal	*11*	*21,728*	*28,394*	*77%*	*50,550*	*39,820*	*127%*
North Bay	Golden Gate Transit Buses	2	1,510	2,655	57%	3,070	2,440	126%
	Golden Gate Transit Ferries	1	949	1,700	56%	1,930	1,700	114%
	Subtotal	*3*	*2,459*	*4,355*	*56%*	*5,000*	*4,140*	*121%*
South Bay	BART	6	10,841	16,800	65%	13,520	22,090	61%
	SamTrans	1	2,128	3,250	65%	5,370	7,470	72%
	Caltrain	0	686	1,060	65%	840	1,060	79%
	Ferries	0	--	--	0%	150	300	50%
	Subtotal	*8*	*13,655*	*21,110*	*65%*	*19,880*	*30,920*	*64%*
	Total All Regional Screenlines	***22***	***37,842***	***53,859***	***70%***	***75,430***	***74,880***	***101%***

SOURCES:AECOM, Environmental Science Associates, data from Muni and regional transit providers, and the *2002 Guidelines*

TABLE 5.6-37
MUNI AND REGIONAL TRANSIT SCREENLINES
EXISTING AND 2035 CUMULATIVE CONDITIONS
PM PEAK HOUR

Screenline / Transit Provider		Cruise Terminal Trips	Existing			2035 Cumulative		
			Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization
Muni Downtown Screenlines								
Northeast	Kearny/Stockton Corridor	1	1,129	2,010	56%	1,380	1,630	85%
	All Other Lines	1	757	1,589	48%	1,780	2,190	81%
	Subtotal	*2*	*1,886*	*3,599*	*52%*	*3,160*	*3,820*	*83%*
Northwest	Geary Corridor	1	1,684	2,230	76%	2,710	2,820	96%
	California	1	1,413	2,050	69%	2,540	2,050	124%
	Sutter/Clement	0	565	1,008	56%	930	930	100%
	Fulton/Hayes	0	861	1,260	68%	1,220	1,740	70%
	Balboa	0	615	1,247	49%	650	1,340	49%
	Chestnut/Union	1	1,483	2,328	64%	1,790	1,950	92%
	Subtotal	*3*	*6,621*	*10,123*	*65%*	*9,840*	*10,830*	*91%*
Southeast	Third Street	0	554	714	78%	4,090	3,910	105%
	Mission Street	1	1,254	2,350	53%	1,620	2,240	72%
	San Bruno/Bayshore	1	1,671	2,256	*74%*	2,730	3,210	*85%*
	All Other Lines	1	1,189	1,708	70%	1,790	1,850	97%
	Subtotal	*3*	*4,668*	*7,028*	*66%*	*10,230*	*11,210*	*91%*
Southwest	Subway Lines	2	5,883	6,783	***87%***	7,750	8,270	***94%***
	Haight/Noriega	0	1,247	2,140	58%	1,600	1,840	87%
	All Other Lines	0	304	700	43%	360	880	41%
	Subtotal	*2*	*7,434*	*9,623*	*77%*	*9,710*	*10,990*	*88%*
	Total All Muni Screenlines	***10***	***20,609***	***30,373***	***68%***	***32,490***	***36,850***	***89%***
Regional Transit Screenlines								
East Bay	BART	4	20,067	24,150	83%	29,870	30,740	97%
	AC Transit	1	2,517	4,193	60%	9,990	7,320	136%
	Ferries	0	702	1,519	46%	2,840	3,100	92%
	Subtotal	*5*	*23,286*	*29,862*	*78%*	*42,700*	*41,160*	*104%*
North Bay	Golden Gate Transit Buses	1	1,397	2,205	63%	2,980	2,210	135%
	Golden Gate Transit Ferries	0	906	1,700	53%	1,930	1,700	114%
	Subtotal	*1*	*2,303*	*3,905*	*59%*	*4,910*	*3,910*	*126%*
South Bay	BART	3	10,202	16,800	61%	11,590	22,090	52%
	SamTrans	1	1,986	3,250	61%	4,820	7,470	65%
	Caltrain	0	575	940	61%	380	940	40%
	Ferries	0	--	--	0%	80	300	27%
	Subtotal	*4*	*12,763*	*29,990*	*61%*	*16,870*	*30,800*	*55%*
	Total All Regional Screenlines	***10***	***38,352***	***54,757***	***70%***	***64,480***	***75,870***	***85%***

SOURCES: AECOM, Environmental Science Associates, data from Muni and regional transit providers, and the *2002 Guidelines*

screenlines of 31,300, and during the p.m. peak hour, there would be a total of 10 transit riders compared with a 2035 cumulative transit ridership across all screenlines of 32,490. Overall, the proposed project's impacts on cumulative Muni conditions would be *less than significant*.

Mitigation: Not required

Impact C-TR-9: The proposed project's contribution to cumulative transit conditions on the F-Market & Wharves historic streetcar line would be considerable, and would result in significant project and cumulative impacts on the F-Market & Wharves historic streetcar. (Significant and Unavoidable with Mitigation)

As described in Impact TR-85, during the Saturday midday peak hour, the F-Market & Wharves currently operates at more than 85 percent capacity utilization in the northbound direction, and would continue to do so under Existing plus Cruise Terminal project conditions. The project's contribution to the F-Market & Wharves ridership in the northbound direction during the Saturday midday peak hour was determined to be significant. Since the Cruise Terminal project would result in a significant impact on the F-Market & Wharves operations under Existing plus Project conditions, it would also be considered to result in a significant impact on 2035 cumulative transit conditions.

The payment of the fee identified in **Mitigation Measure M-TR-85** would reduce the Cruise Terminal project's impact on the operation of the F-Market & Wharves to a less than significant level. However, because the Port cannot commit to future funding appropriations in perpetuity and because the ability of SFMTA to provide the additional service on this line needed to accommodate the project is uncertain (e.g., the availability of streetcars to put into service, signal timing constraints to reduce time between trains), the feasibility of the mitigation measure is unknown. Therefore, the Cruise Terminal project's impact on the operation of the F-Market & Wharves historic streetcar would remain *significant and unavoidable.*

Impact C-TR-10: The proposed project's contribution to cumulative transit trips on AC Transit, BART, Caltrain, Golden Gate Transit, SamTrans, and other ferry lines would not contribute considerably to the capacity utilization at the regional screenlines during the weekday a.m. and p.m. peak hours. (Less than Significant)

As discussed in Impact TR-84, a portion of the new transit trips generated by the Cruise Terminal would take regional transit operators to and from the project site. Similar to the impact assessment presented for the Muni downtown screenlines under 2035 cumulative conditions, the number of project-generated transit riders would be small, and would not substantially affect the screenlines for regional transit providers.

As indicated in Table 5.6-36 and Table 5.6-37, under 2035 cumulative conditions, transit ridership on regional transit lines is projected to exceed the available capacity at several corridors. During the a.m. and/or p.m. peak hours, the capacity utilization standards would not be met for BART to and from the East Bay, AC Transit, and Golden Gate Transit bus and ferry lines. The proposed project's contribution to cumulative ridership on these regional transit operators would not represent a considerable contribution. During the a.m. peak hour, there would be a total of 22 transit trips compared with a 2035 cumulative regional transit ridership across all screenlines of 74,880, and during the p.m. peak hour, there would be a total of 10 transit trips compared with a 2035 cumulative regional transit ridership across all screenlines of 64,480.

Since the proposed project-generated transit riders would be limited and dispersed over multiple operators and lines, the additional trips would not substantially affect the peak direction capacity utilization of regional providers. Therefore, under 2035 cumulative conditions, impacts to regional transit operator capacity, including AC Transit, BART, Caltrain, Golden Gate Transit, SamTrans, and other ferry lines would be *less than significant*.

Mitigation: Not required