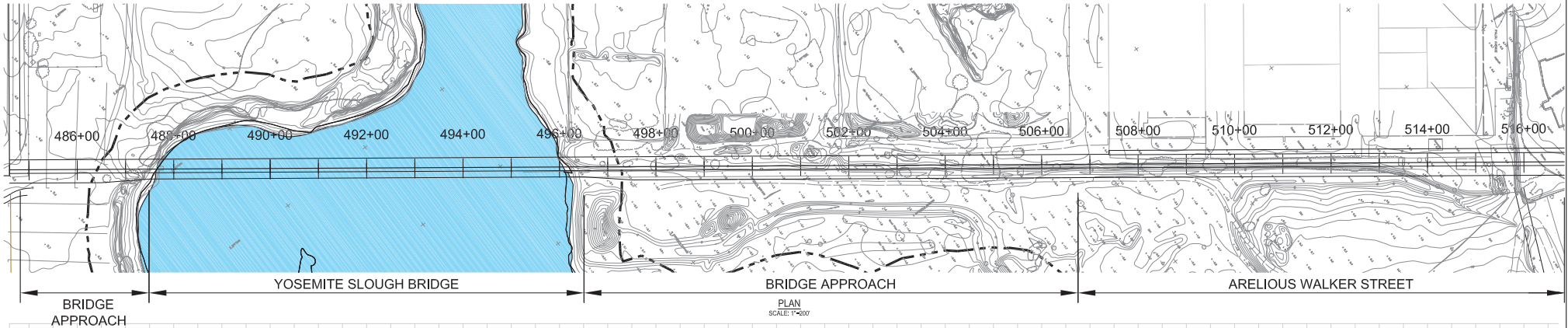
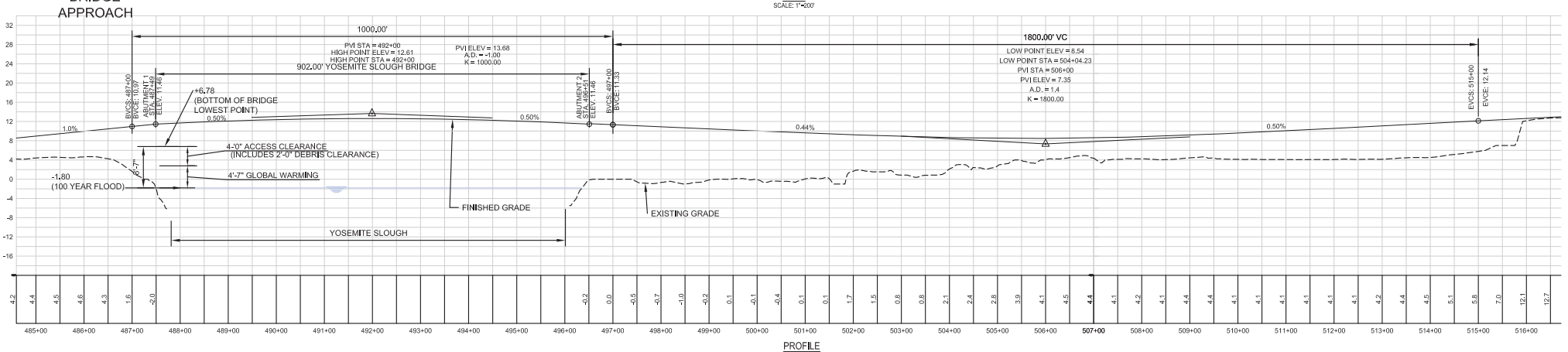
Appendix N2 MACTEC Yosemite Slough Bridge Plans Profiles and Sections, October 27, 2009

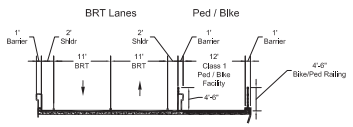


PLAN
SCALE: 1"=200'



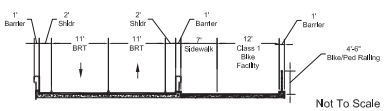
PROFILE
SCALE: HOR. 1"=200'
SCALE: VER. 1"=20'
VERTICAL DATUM IS CCSF

YOSEMITE SLOUGH BRIDGE TYPICAL SECTION
41 FEET



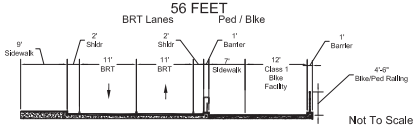
Not To Scale

BRIDGE APPROACH TYPICAL SECTION
48 FEET



Not To Scale

ARELIOUS WALKER STREET TYPICAL SECTION
56 FEET



Not To Scale

HORIZONTAL
100 0 100 200
SCALE IN FEET
VERTICAL
10 0 10 20
SCALE IN FEET

REFERENCE: *YOSEMITE SLOUGH ROAD PLAN, PROFILE AND SECTIONS,* FIG. P-1HP, DATED 09/17/08, WINZLER AND KELLY

PRELIMINARY DRAFT

NO.	DATE	REVISIONS	DRAWN:	PROJECT NO:
3	10-19-2009	ADJUST FOR CHANGE IN100 YEAR FLOOD ELEVATION TO -1.80.	JHD	4086097772
2	10-8-2009	ADJUST FOR ALLOWING DEBRIS AND ACCESS CLEARANCE, CHANGE 100 YEAR FLOOD ELEVATION TO -1.70.	ENGINEER:	SCALE: AS SHOWN
			CHECKED:	APPROVED:
			DATE: 10-27-09	DATE:

MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE (NON-STADIUM)
APPROACH AND ARELIOUS WALKER STREETS
PLAN, PROFILE & SECTIONS

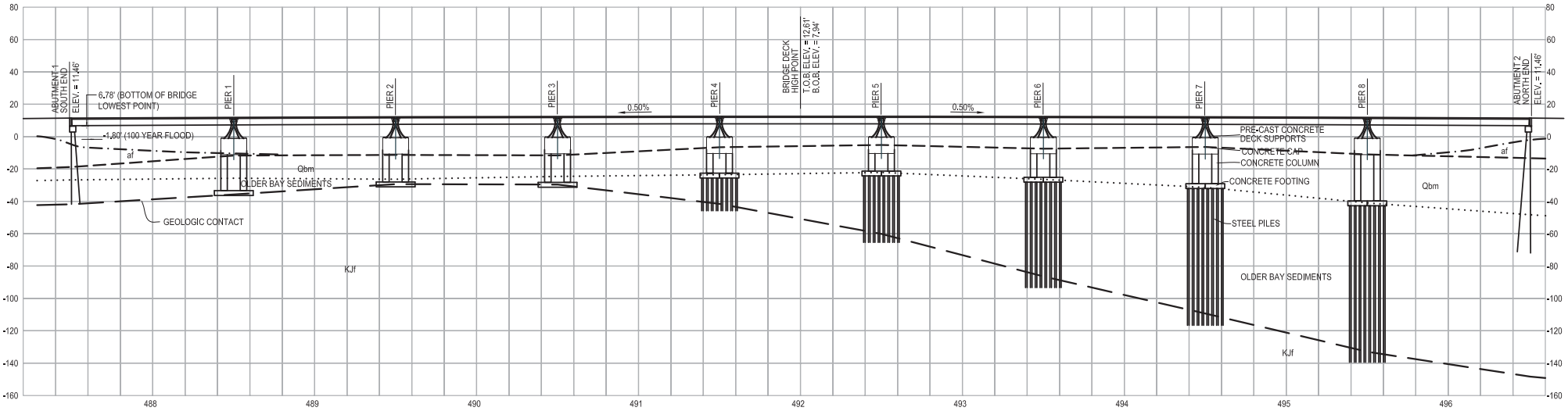
DRAWING: 1
SHEET: 1 OF 7

20091027--YSB_NS_FIG-1.DWG 300.0

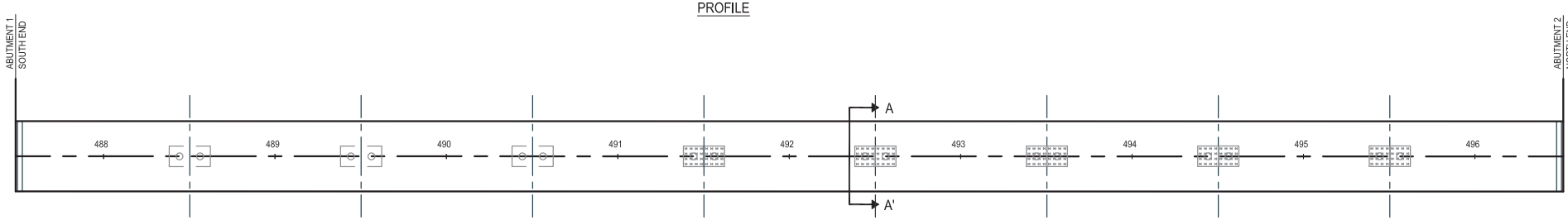
LEGEND

NOTE:
VERTICAL DATUM IS CCSF.

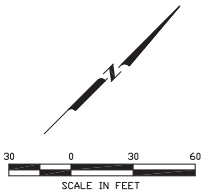
af	ARTIFICIAL FILL CONSISTING OF CLAY, SILT AND SAND WITH CONSTRUCTION DEBRIS SUCH AS CONCRETE AND WOOD DEBRIS	OLDER BAY SEDIMENTS — OLD BAY DEPOSIT CONSISTING OF CONSOLIDATED CLAY SILT AND SAND THAT MAY BE SUSCEPTIBLE TO MINOR CONSOLIDATION SETTLEMENT
Qbm	BAY MUD DEPOSIT CONSISTING OF HIGHLY COMPRESSIBLE SOFT CLAY AND SILT SUSCEPTIBLE TO CONSOLIDATION SETTLEMENT	KJf — FRANCISCAN COMPLEX ROCK
		496 — STATIONING BASED ON WINZLER AND KELLY FIGURE NUMBER P-1HP DATED 09-17-2008



PROFILE



PLAN VIEW



PRELIMINARY DRAFT

NO.	DATE	REVISIONS	DRAWN: JHD	PROJECT NO: 4086097772
3	10-19-2009	ADJUST FOR CHANGE IN100 YEAR FLOOD ELEVATION TO -1.80.	ENGINEER:	SCALE: AS SHOWN
2	10-8-2009	ADJUST FOR ALLOWING DEBRIS AND ACCESS CLEARANCE, CHANGE 100 YEAR FLOOD ELEVATION TO -1.70.	CHECKED:	APPROVED:
			DATE: 10-27-09	DATE:

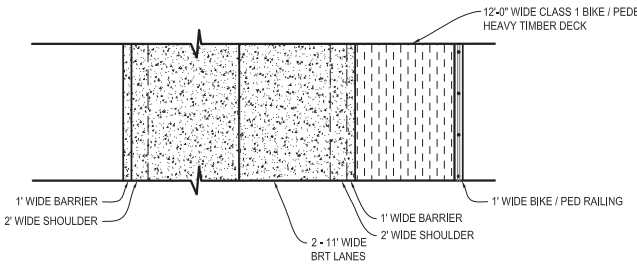
MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE
NON-STADIUM
PLAN AND PROFILE

DRAWING: 2
SHEET: 2 OF 4

20091027-YSB_NS_FIG_2-3.DWG 40.0
20091027.1800



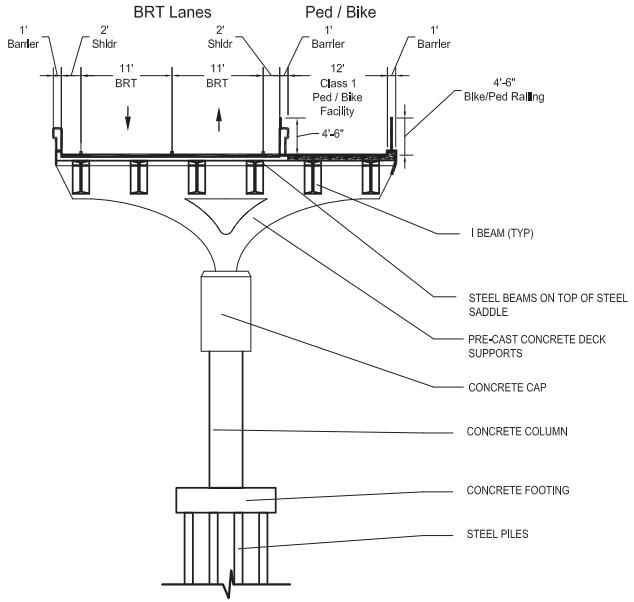
DETAIL

LEGEND

HEAVY TIMBER

CONCRETE

YOSEMITE SLOUGH BRIDGE
41 FEET



SECTION A-A'

PRELIMINARY DRAFT

NO.	DATE	REVISIONS	DRAWN: JHD	PROJECT NO: 4096097772
			ENGINEER:	SCALE: AS SHOWN
			CHECKED:	APPROVED:
			DATE: 10-27-09	DATE:

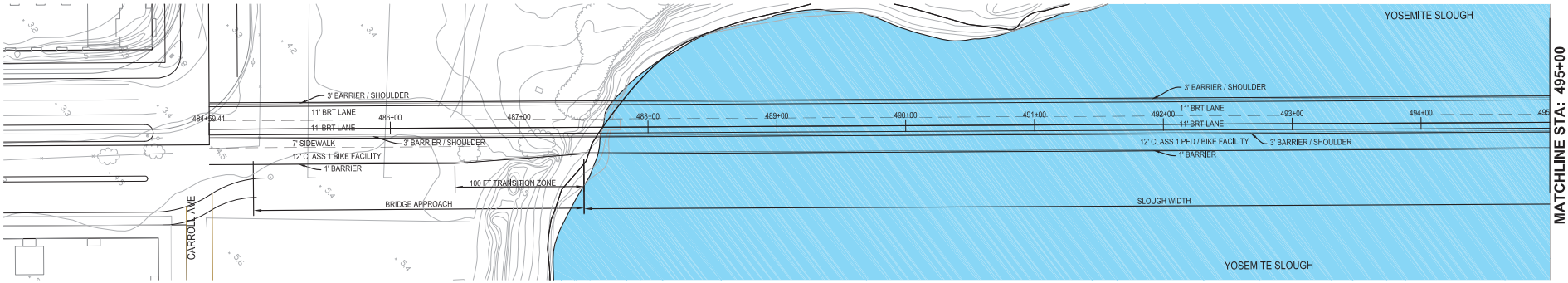
MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

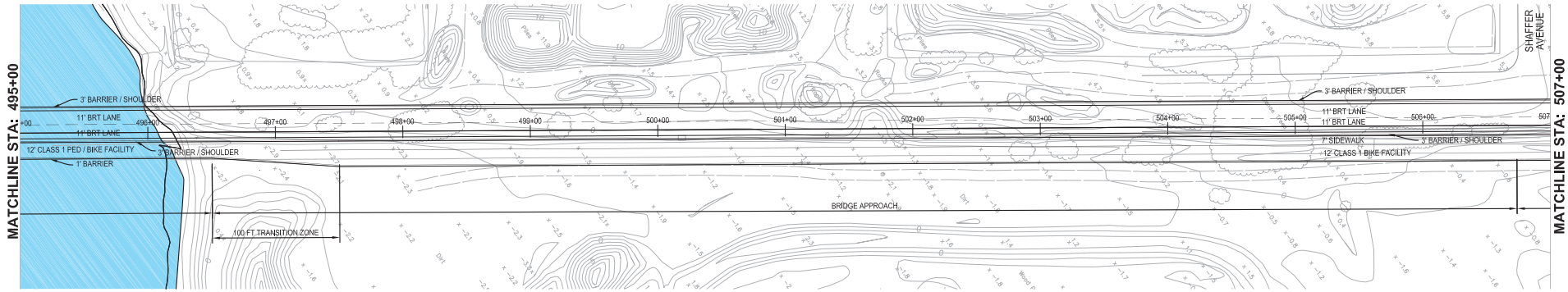
YOSEMITE SLOUGH BRIDGE
NON-STADIUM
SECTION AND DETAIL

DRAWING: 3
SHEET: 3 OF 4

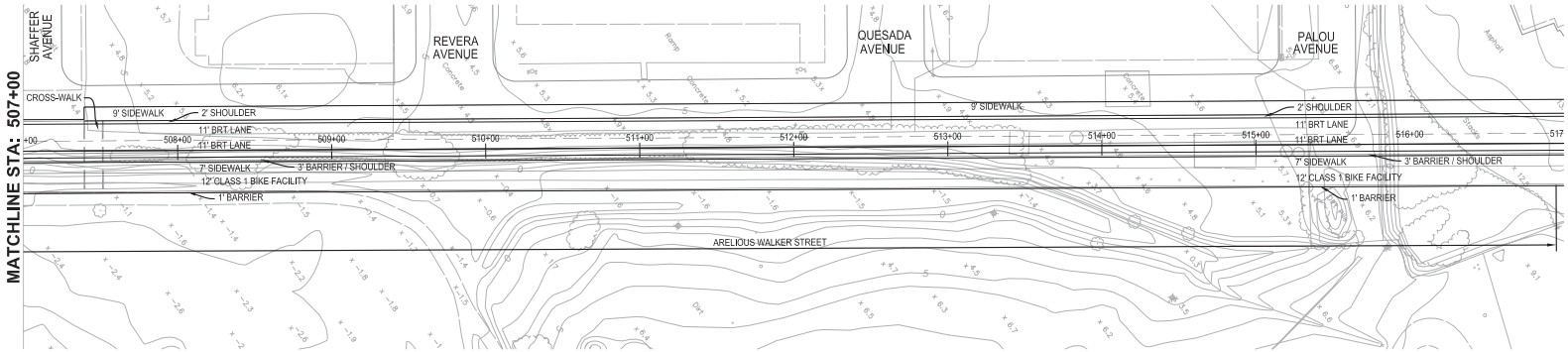
20090925-YSB_RWC_FIG-3.DWG 40.0
20090925:1819



PLAN VIEW

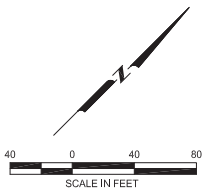


PLAN VIEW



PLAN VIEW

PRELIMINARY DRAFT



20091027-YSB_NS_FIG-4.DWG 300.0
20091027.1805

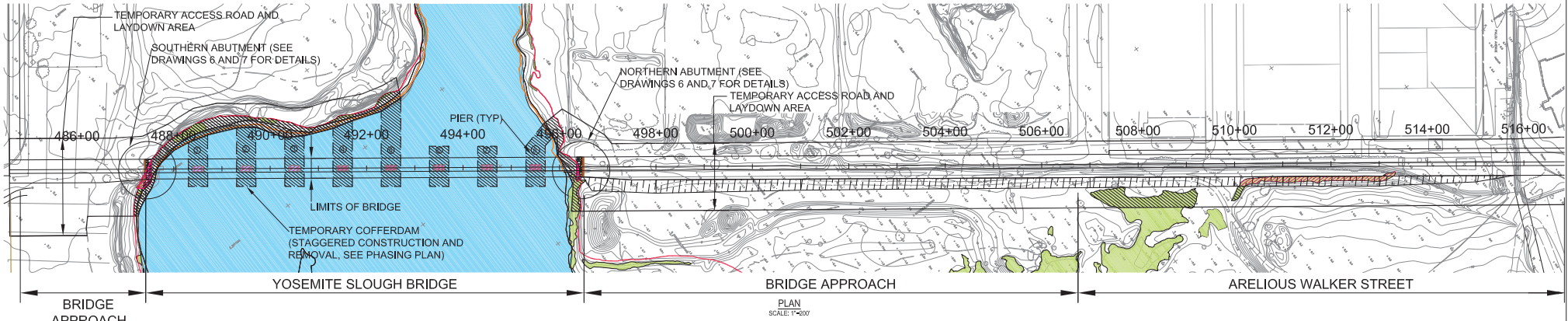
NO.	DATE	REVISIONS	DRAWN: JHD	PROJECT NO: 4096097772
			ENGINEER:	SCALE: AS SHOWN
			CHECKED:	APPROVED:
			DATE: 10-27-09	DATE:

MACTEC

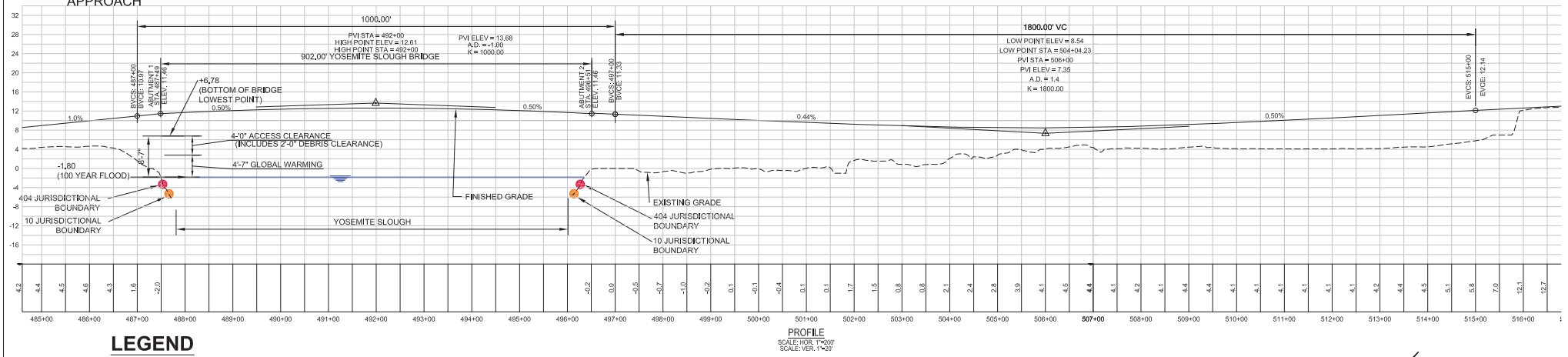
HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE (NON-STADIUM)
APPROACH & ARELIOUS WALKER
STREET PLAN VIEW

DRAWING: 4
SHEET: 4 OF 7



PLAN
SCALE: 1"=200'



PROFILE
SCALE: HOR. 1"=200'
SCALE: VER. 1"=20'

LEGEND

- PERMANENT IMPACT - JURISDICTIONAL WATERS OR WETLAND HABITAT AREAS
- TEMPORARY IMPACT - JURISDICTIONAL WATERS OR WETLAND HABITAT AREAS
- JURISDICTIONAL WETLANDS
- APPROACH AND ARELIOUS WALKER STREET EMBANKMENT
- SECTION 10 JURISDICTIONAL BOUNDARY
- SECTION 404 JURISDICTIONAL BOUNDARY (TIDAL)
- TEMPORARY ACCESS ROAD AND CONTRACTOR LAYDOWN AREA
- ① TEMPORARY COFFERDAMS AND NUMBER
- BCDC LIMIT (100 FT FROM SHORELINE)

Cofferdam Construction Phasing Plan

Phase	Cofferdam Constructed	Cofferdam Removed
A	①	
B	②	
C	③	①
D	④	②
E	⑤	③
F	⑥	④
G	⑧	⑤
H	⑦	
I		⑥ ⑦ ⑧

HORIZONTAL
100 0 100 200
SCALE IN FEET
VERTICAL
10 0 10 20
SCALE IN FEET

REFERENCE: *YOSEMITE SLOUGH ROAD PLAN, PROFILE AND SECTIONS, FIG. P-1HP, DATED 09/17/08, WINZLER AND KELLY*

PRELIMINARY DRAFT

NO.	DATE	REVISIONS
3	10-19-2009	ADJUST FOR CHANGE IN100 YEAR FLOOD ELEVATION TO -1.80.
2	10-8-2009	ADJUST FOR ALLOWING DEBRIS AND ACCESS CLEARANCE, CHANGE 100 YEAR FLOOD ELEVATION TO -1.70.

DRAWN: JHD | PROJECT NO: 4086097772
ENGINEER: | SCALE: AS SHOWN
CHECKED: | APPROVED:
DATE: 10-27-09 | DATE:

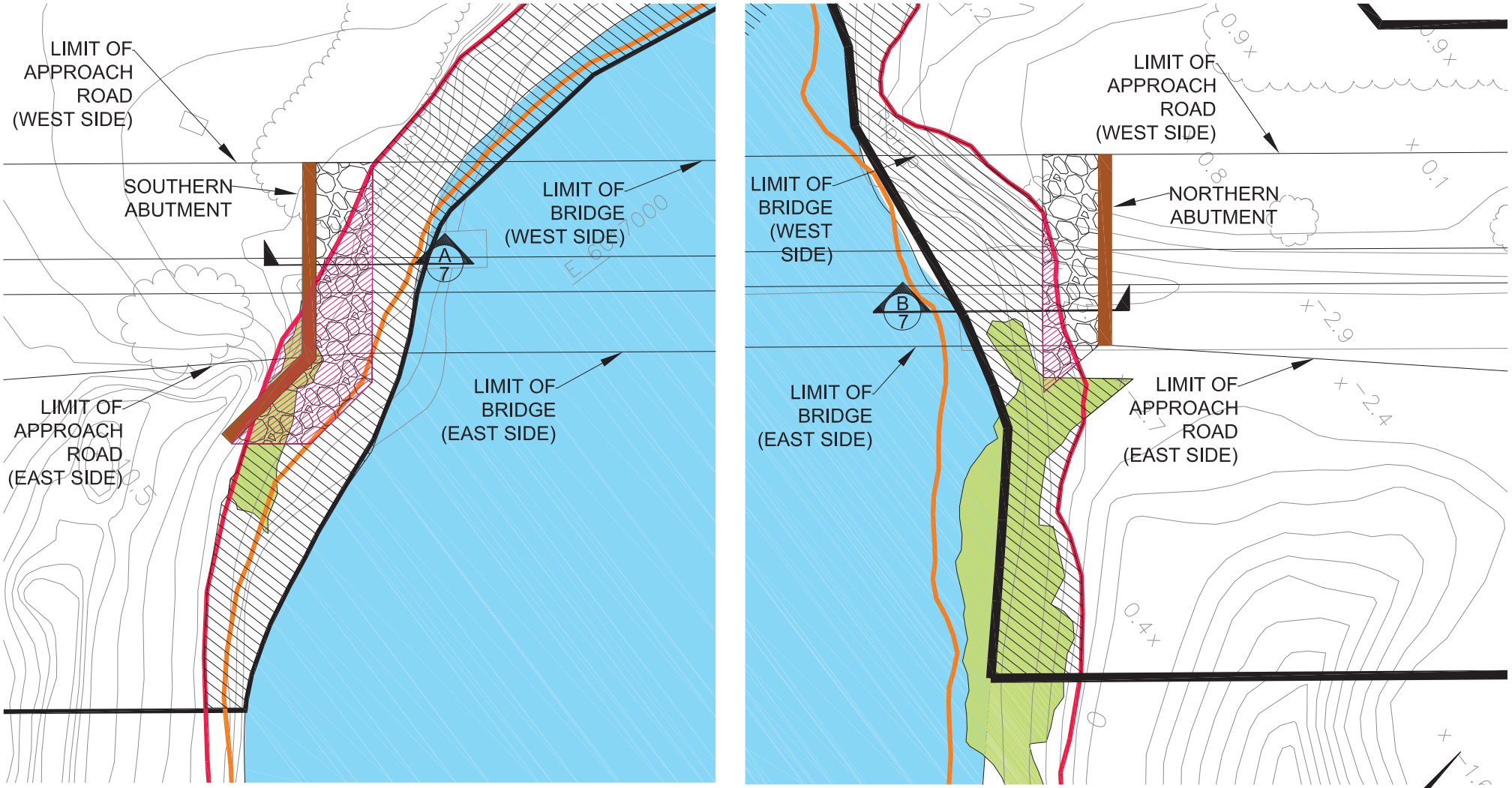
MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE (NON-STADIUM), JURISDICTIONAL IMPACTS PLAN AND PROFILE

DRAWING: 5
SHEET: 5 OF 7

2008127-155_MS_FIG-5.DWG 300.0



LEGEND

- SECTION 10 JURISDICTIONAL BOUNDARY
- SECTION 404 JURISDICTIONAL BOUNDARY (TIDAL)
- ABUTMENT
- A 7 — ABUTMENT AND RIPRAP CROSS-SECTIONS (SEE DRAWING 7)
- TEMPORARY ACCESS ROAD AND CONTRACTOR LAYDOWN AREA
- PROPOSED RIPRAP
- PERMANENT IMPACT - JURISDICTIONAL WATERS OR WETLAND HABITAT AREAS
- TEMPORARY IMPACT - JURISDICTIONAL WATERS OR WETLAND HABITAT AREAS
- JURISDICTIONAL WETLANDS

10 0 10 20
SCALE IN FEET

PRELIMINARY DRAFT

REFERENCE: *YOSEMITE SLOUGH ROAD PLAN, PROFILE AND SECTIONS,* FIG. P-1HP, DATED 09/17/08, WINZLER AND KELLY

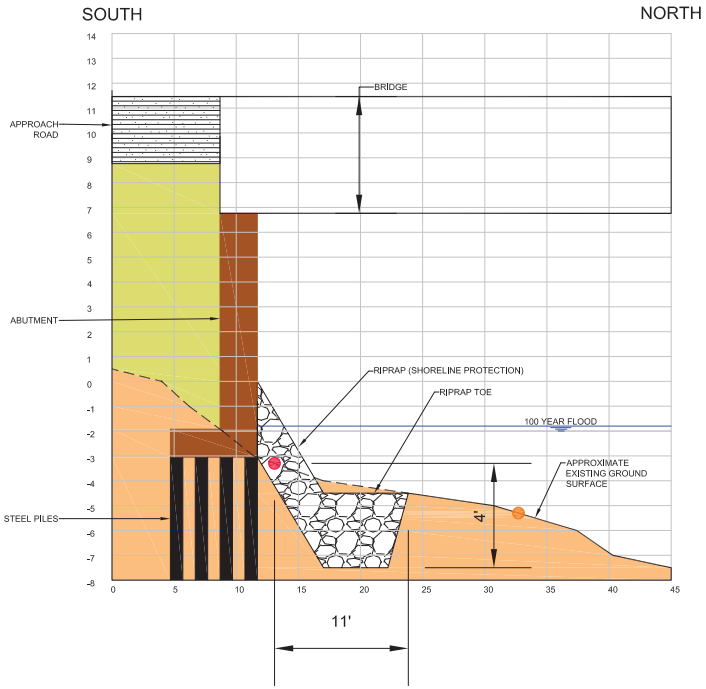
NO.	DATE	REVISIONS	DRAWN: JHD	PROJECT NO: 4066097772
			ENGINEER:	SCALE: AS SHOWN
			CHECKED:	APPROVED:
			DATE: 10-27-09	DATE:

MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

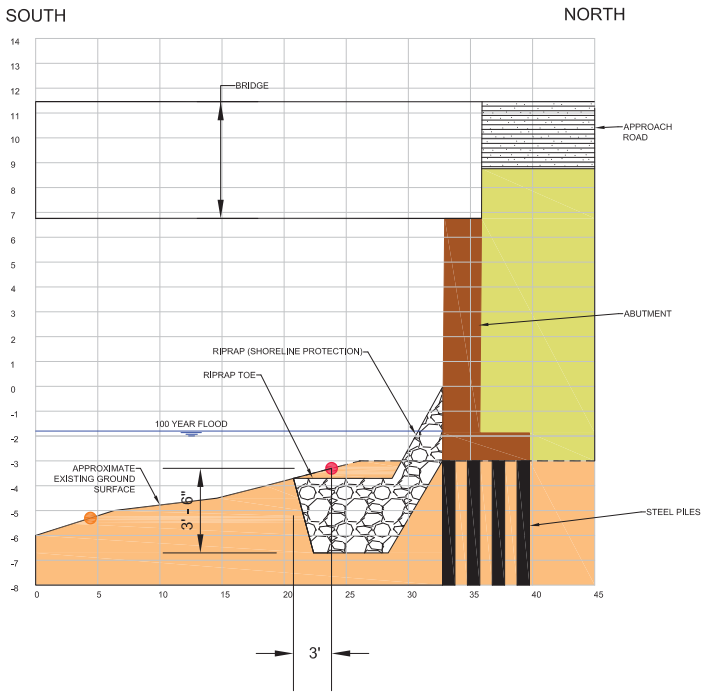
YOSEMITE SLOUGH BRIDGE (NON-STADIUM)
JURISDICTIONAL IMPACTS AND ABUTMENT PLAN VIEW

DRAWING: 6
SHEET: 6 OF 7



SOUTHERN ABUTMENT (A)

HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'



NORTHERN ABUTMENT (B)

HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'

LEGEND

- RIP-RAP
- EXISTING FILL
- NEW FILL
- ABUTMENT
- SECTION 10 JURISDICTIONAL BOUNDARY
- SECTION 404 JURISDICTIONAL BOUNDARY (TIDAL)

PRELIMINARY DRAFT

REFERENCE: *YOSEMITE SLOUGH ROAD PLAN, PROFILE AND SECTIONS,* FIG. P-1HP, DATED 09/17/08, WINZLER AND KELLY

NO.	DATE	REVISIONS
3	10-19-2009	ADJUST FOR CHANGE IN 100 YEAR FLOOD ELEVATION TO -1.80.
2	10-8-2009	ADJUST FOR ALLOWING DEBRIS AND ACCESS CLEARANCE, CHANGE 100 YEAR FLOOD ELEVATION TO -1.70.

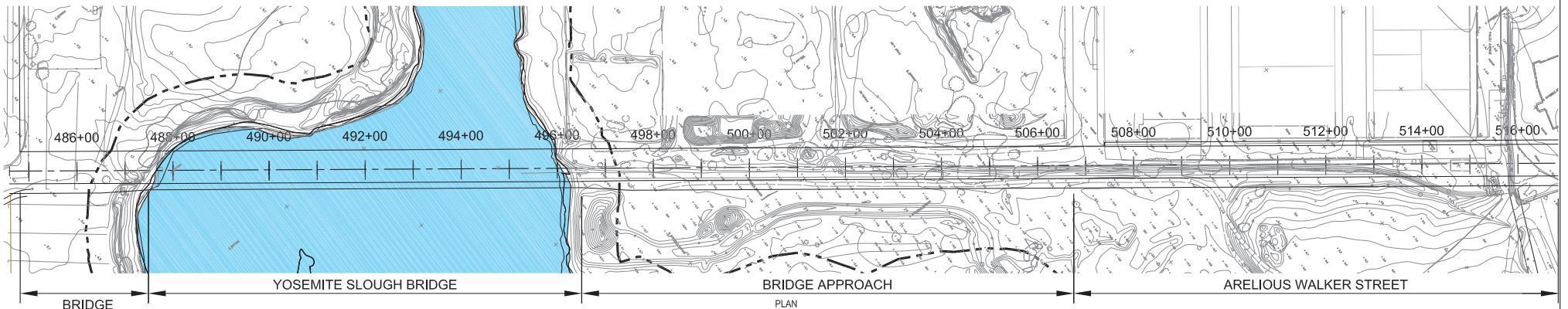
DRAWN: JHD | PROJECT NO: 4066097772
ENGINEER: | SCALE: AS SHOWN
CHECKED: | APPROVED:
DATE: 10-27-09 | DATE:

MACTEC

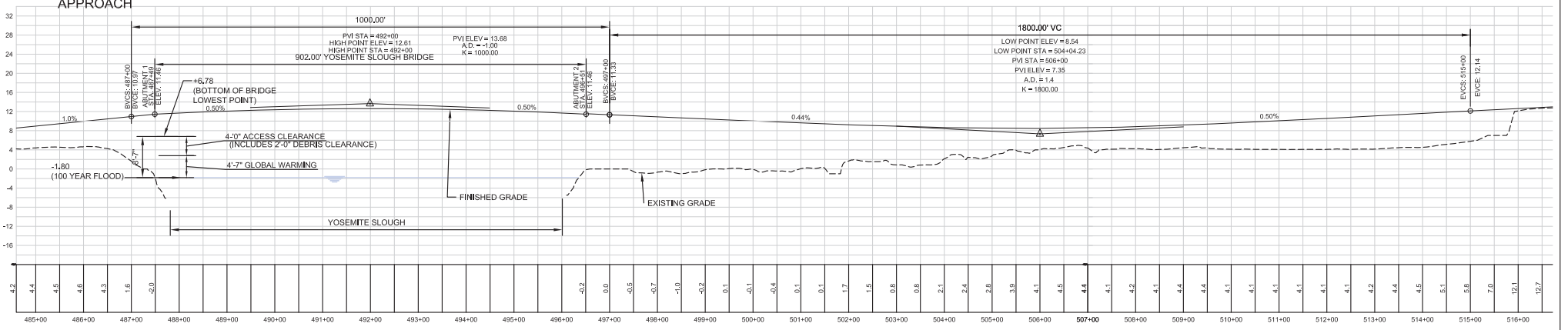
HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE (NON-STADIUM), JURISDICTIONAL IMPACTS AND ABUTMENT SECTION VIEW

DRAWING: 7
SHEET: 7 OF 7

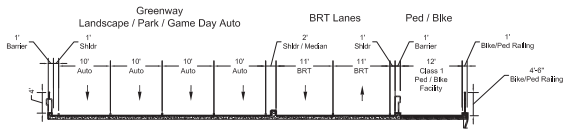


PLAN
SCALE: 1"=200'

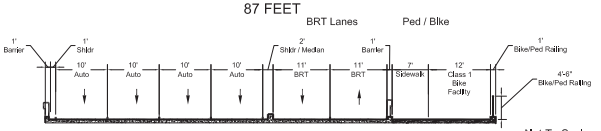


PROFILE
SCALE: HOR. 1"=200'
SCALE: VER. 1"=20'
VERTICAL DATUM IS CCSF

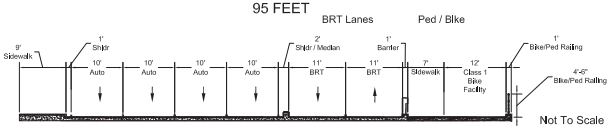
YOSEMITE SLOUGH BRIDGE TYPICAL SECTION
81 FEET

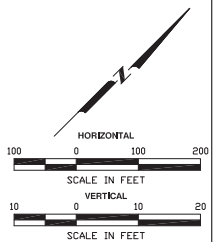


BRIDGE APPROACH TYPICAL SECTION
87 FEET



ARELIOUS WALKER STREET TYPICAL SECTION
95 FEET





REFERENCE: *YOSEMITE SLOUGH ROAD PLAN, PROFILE AND SECTIONS,* FIG. P-1HP, DATED 09/17/08, WINZLER AND KELLY

PRELIMINARY DRAFT

NO.	DATE	REVISIONS
3	10-19-2009	ADJUST FOR CHANGE IN100 YEAR FLOOD ELEVATION TO -1.80.
2	10-8-2009	ADJUST FOR ALLOWING DEBRIS AND ACCESS CLEARANCE, CHANGE 100 YEAR FLOOD ELEVATION TO -1.70.

DRAWN: JHD
ENGINEER:
CHECKED:
DATE: 10-27-09
PROJECT NO: 4096097772
SCALE: AS SHOWN
APPROVED:
DATE:

MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE,
APPROACH AND ARELIOUS WALKER STREETS
PLAN, PROFILE & SECTIONS

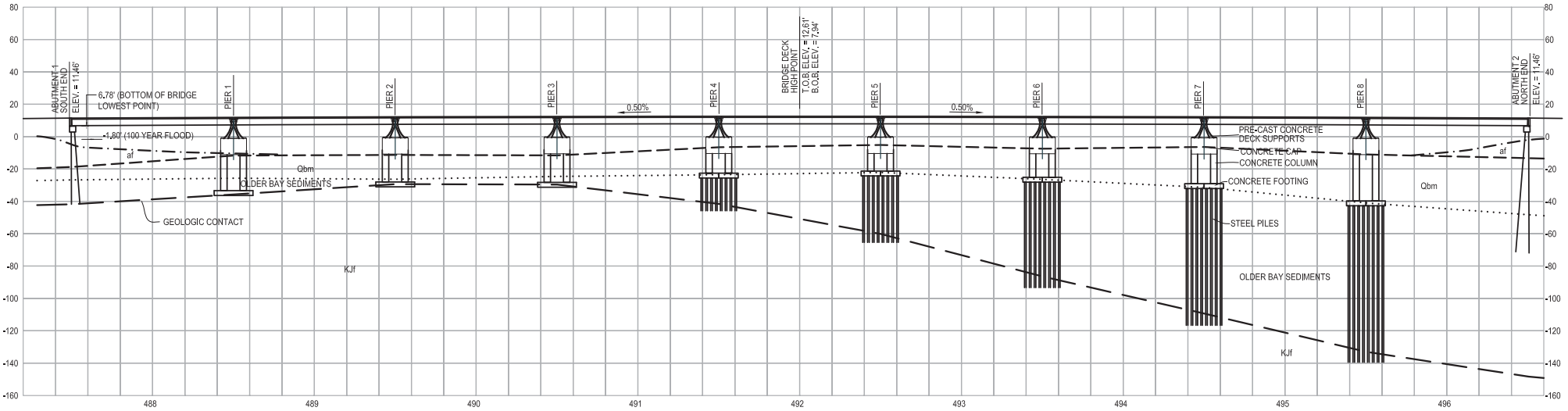
DRAWING: 1
SHEET: 1 OF 7

20091027_YSB_MLC_FIG-1.DWG 300.0

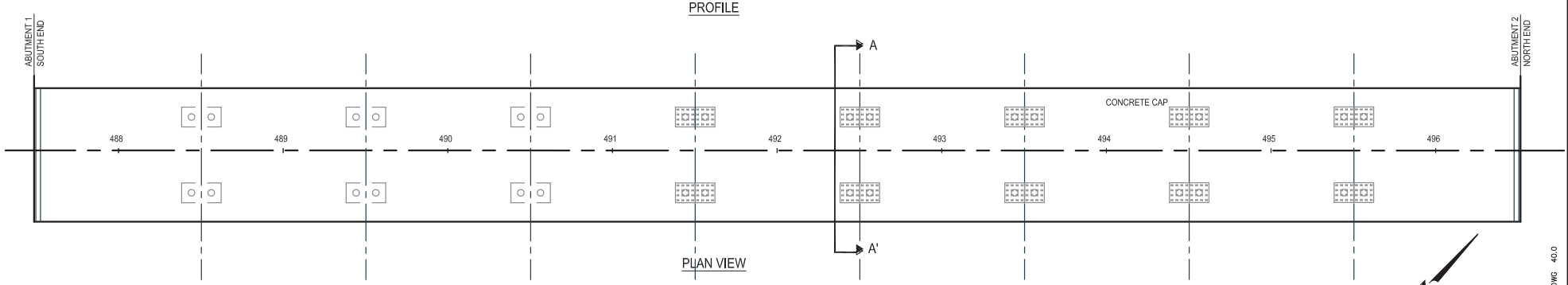
LEGEND

NOTE:
VERTICAL DATUM IS CCSF.

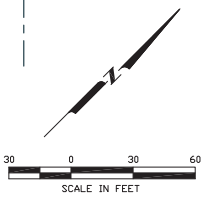
af	ARTIFICIAL FILL CONSISTING OF CLAY, SILT AND SAND WITH CONSTRUCTION DEBRIS SUCH AS CONCRETE AND WOOD DEBRIS	OLDER BAY SEDIMENTS — OLD BAY DEPOSIT CONSISTING OF CONSOLIDATED CLAY SILT AND SAND THAT MAY BE SUSCEPTIBLE TO MINOR CONSOLIDATION SETTLEMENT
Qbm	BAY MUD DEPOSIT CONSISTING OF HIGHLY COMPRESSIBLE SOFT CLAY AND SILT SUSCEPTIBLE TO CONSOLIDATION SETTLEMENT	KJf — FRANCISCAN COMPLEX ROCK
		496 — STATIONING BASED ON WINZLER AND KELLY FIGURE NUMBER P-1HP DATED 09-17-2008



PROFILE



PLAN VIEW



20091019_159-MLC_FIG-2-3.DWG 40.0
20091027:1159

PRELIMINARY DRAFT

NO.	DATE	REVISIONS
3	10-19-2009	ADJUST FOR CHANGE IN 100 YEAR FLOOD ELEVATION TO -1.80.
2	10-8-2009	ADJUST FOR ALLOWING DEBRIS AND ACCESS CLEARANCE, CHANGE 100 YEAR FLOOD ELEVATION TO -1.70.

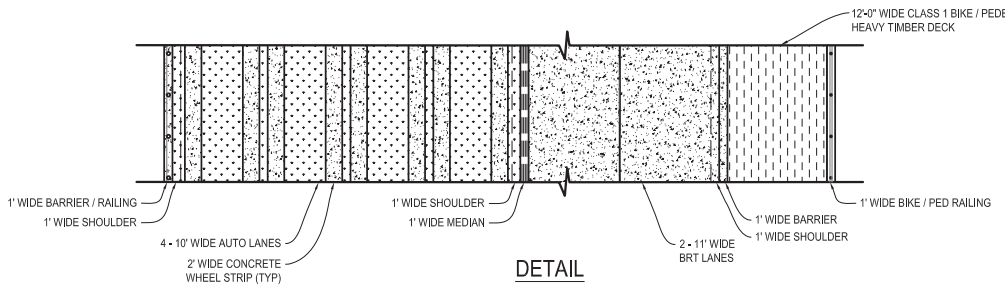
DRAWN: JHD | PROJECT NO: 4086097772
ENGINEER: | SCALE: AS SHOWN
CHECKED: | APPROVED:
DATE: 10-27-09 | DATE:

MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE
PLAN AND PROFILE

DRAWING: 2
SHEET: 2 OF 7



DETAIL

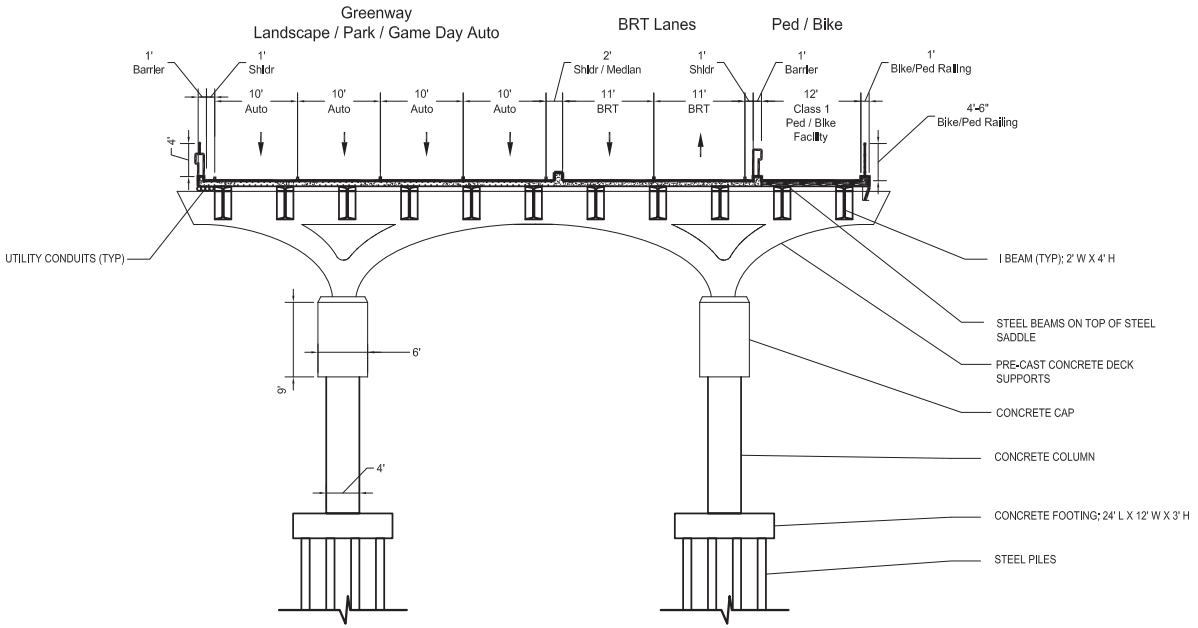
LEGEND

HEAVY TIMBER

GRASS TURF BLOCK

CONCRETE

YOSEMITE SLOUGH BRIDGE
81 FEET



SECTION A-A'

15 0 7.5 15
SCALE IN FEET

PRELIMINARY DRAFT

NO.	DATE	REVISIONS	DRAWN: JHD	PROJECT NO: 4096097772
			ENGINEER:	SCALE: AS SHOWN
			CHECKED:	APPROVED:
			DATE: 10-27-09	DATE:

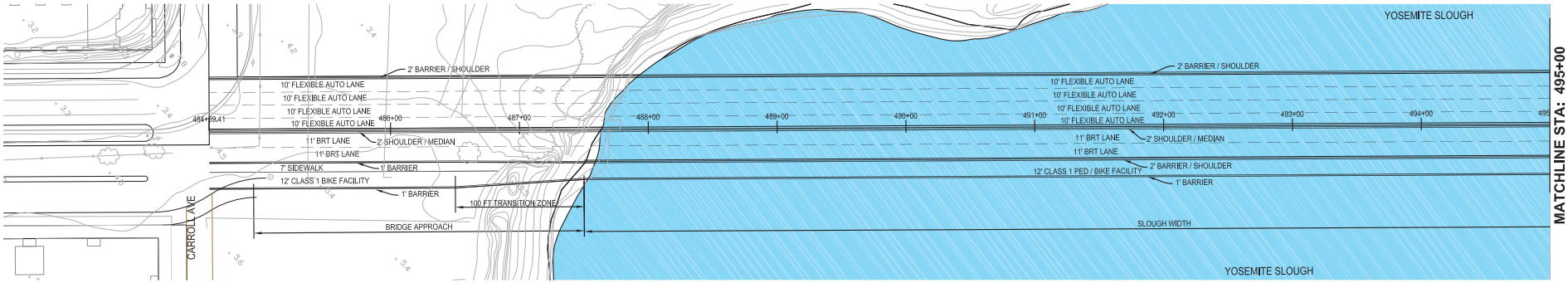
MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

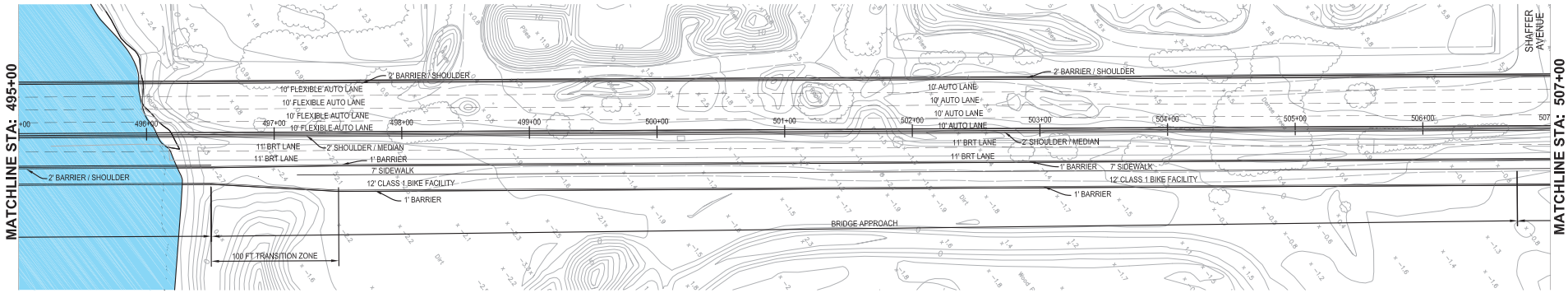
YOSEMITE SLOUGH BRIDGE
SECTION AND DETAIL

DRAWING: 3
SHEET: 3 OF 7

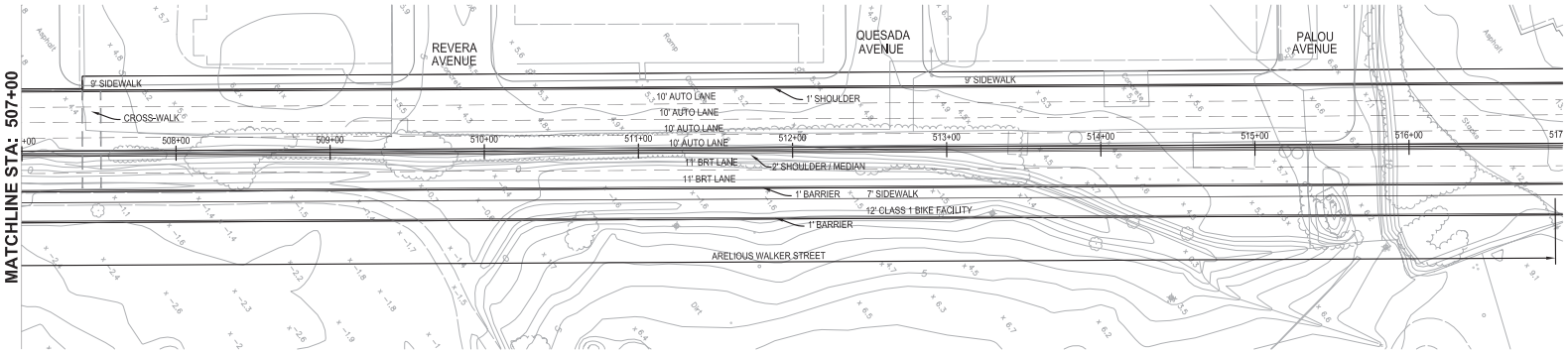
20090925_1SB_MLC_FIG-2-3.DWG 40.0
20090877.1056



PLAN VIEW

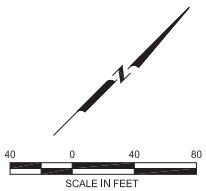


PLAN VIEW



PLAN VIEW

PRELIMINARY DRAFT



20091027-YSMT BRDG-MLC_FIG-4.DWG 300.0
20091027.1730

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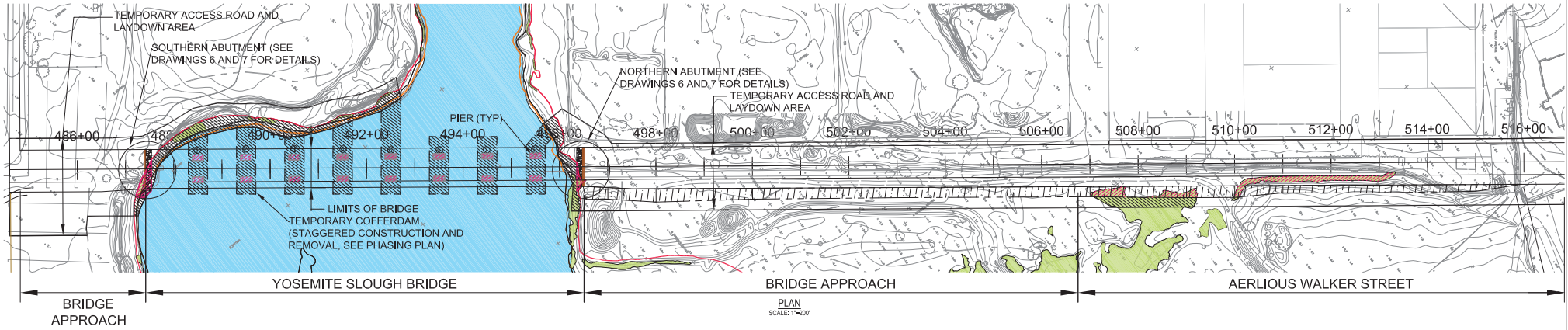
			ENGINEER:	SCALE: AS SHOWN
			CHECKED:	APPROVED:
			DATE: 10-27-09	DATE:

MACTEC

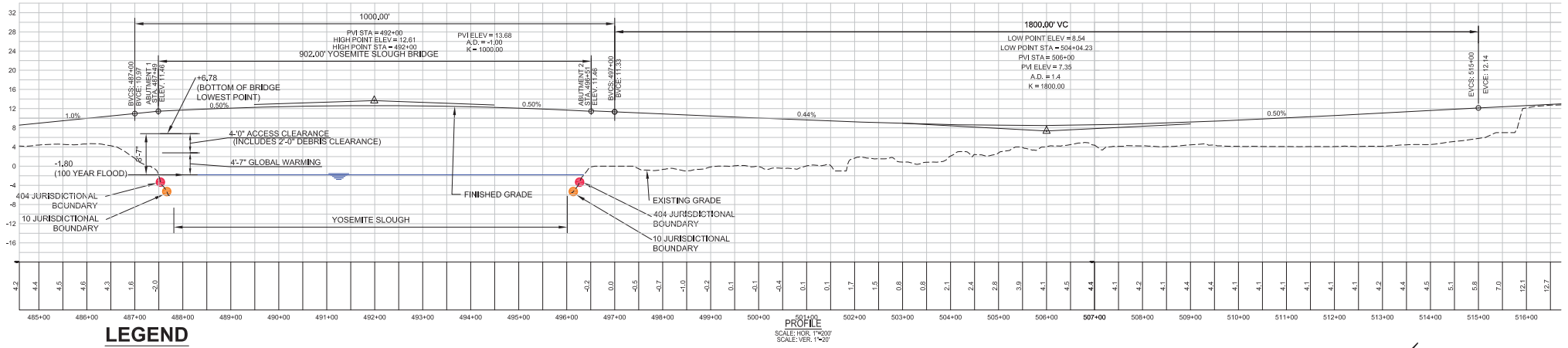
HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE APPROACH & ARELIOUS WALKER STREET PLAN VIEW

DRAWING: 4
SHEET: 4 OF 7



PLAN
SCALE: 1"=200'



PROFILE
SCALE: HOR. 1"=200'
SCALE: VER. 1"=20'

LEGEND

- PERMANENT IMPACT - JURISDICTIONAL WATERS OR WETLAND HABITAT AREAS
- TEMPORARY IMPACT - JURISDICTIONAL WATERS OR WETLAND HABITAT AREAS
- JURISDICTIONAL WETLANDS
- APPROACH AND ARELIOUS WALKER STREET EMBANKMENT
- SECTION 10 JURISDICTIONAL BOUNDARY
- SECTION 404 JURISDICTIONAL BOUNDARY (TIDAL)
- TEMPORARY ACCESS ROAD AND CONTRACTOR LAYDOWN AREA
- ① TEMPORARY COFFERDAMS AND NUMBER
- BCDC LIMIT (100 FT FROM SHORELINE)

Cofferdam Construction Phasing Plan

Phase	Cofferdam Constructed	Cofferdam Removed
A	①	
B	②	
C	③	①
D	④	②
E	⑤	③
F	⑥	④
G	⑧	⑤
H	⑦	
I		⑥ ⑦ ⑧

HORIZONTAL
100 0 100 200
SCALE IN FEET

VERTICAL
10 0 10 20
SCALE IN FEET

REFERENCE: *YOSEMITE SLOUGH ROAD PLAN, PROFILE AND SECTIONS, FIG. P-1HP*, DATED 09/17/08, WINZLER AND KELLY

PRELIMINARY DRAFT

NO.	DATE	REVISIONS
3	10-19-2009	ADJUST FOR CHANGE IN 100 YEAR FLOOD ELEVATION TO -1.80.
2	10-8-2009	ADJUST FOR ALLOWING DEBRIS AND ACCESS CLEARANCE, CHANGE 100 YEAR FLOOD ELEVATION TO -1.70.

DRAWN: JHD | PROJECT NO: 4086097772
ENGINEER: | SCALE: AS SHOWN
CHECKED: | APPROVED:
DATE: 10-27-09 | DATE:

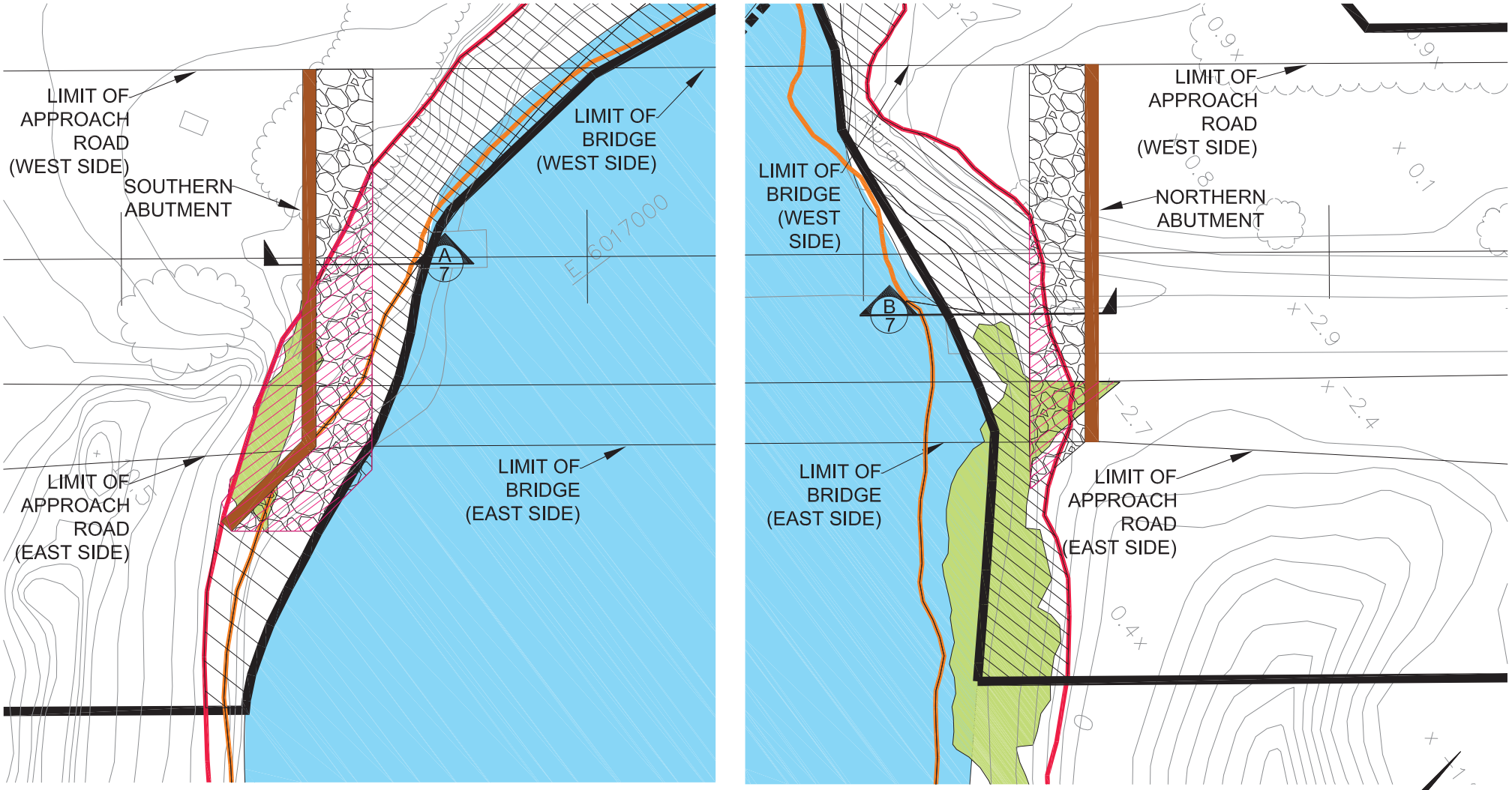
MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE, JURISDICTIONAL IMPACTS PLAN AND PROFILE

DRAWING: 5
SHEET: 5 OF 7

2008127-7158_MCC_FIG-5.DWG 300.0



LEGEND

- SECTION 10 JURISDICTIONAL BOUNDARY
- SECTION 404 JURISDICTIONAL BOUNDARY (TIDAL)
- ABUTMENT
- A 7 — ABUTMENT AND RIPRAP CROSS-SECTIONS (SEE DRAWING 7)
- TEMPORARY ACCESS ROAD AND CONTRACTOR LAYDOWN AREA
- PROPOSED RIPRAP
- PERMANENT IMPACT - JURISDICTIONAL WATERS OR WETLAND HABITAT AREAS
- TEMPORARY IMPACT - JURISDICTIONAL WATERS OR WETLAND HABITAT AREAS
- JURISDICTIONAL WETLANDS

10 0 10 20
SCALE IN FEET

PRELIMINARY DRAFT

REFERENCE: *YOSEMITE SLOUGH ROAD PLAN, PROFILE AND SECTIONS,* FIG. P-1HP, DATED 09/17/08, WINZLER AND KELLY

NO.	DATE	REVISIONS	DRAWN: JHD	PROJECT NO: 4086097772
			ENGINEER:	SCALE: AS SHOWN
			CHECKED:	APPROVED:
			DATE: 10-27-09	DATE:

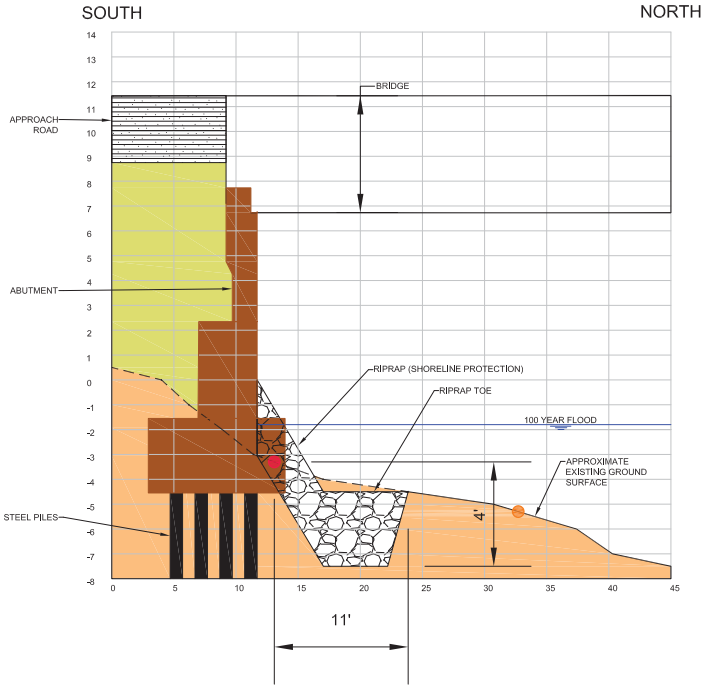
MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE, JURISDICTIONAL IMPACTS AND ABUTMENT PLAN VIEW

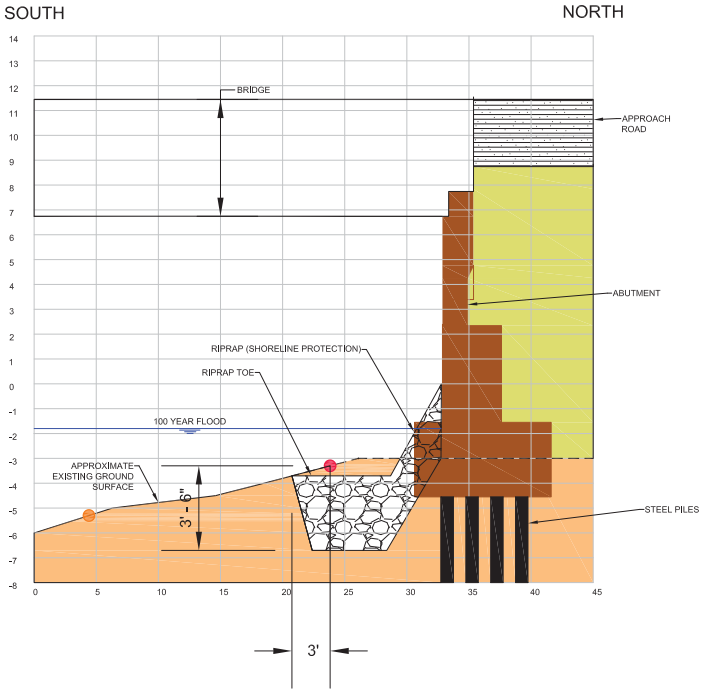
DRAWING: 6
SHEET: 6 OF 7

20091027_YSB_MLC_FIG-6-7.DWG 300.0



SOUTHERN ABUTMENT (A)

HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'



NORTHERN ABUTMENT (B)

HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'

LEGEND

- RIP-RAP
- EXISTING FILL
- NEW FILL
- ABUTMENT
- SECTION 10 JURISDICTIONAL BOUNDARY
- SECTION 404 JURISDICTIONAL BOUNDARY (TIDAL)

PRELIMINARY DRAFT

REFERENCE: *YOSEMITE SLOUGH ROAD PLAN, PROFILE AND SECTIONS,* FIG. P-1HP, DATED 09/17/08, WINZLER AND KELLY

NO.	DATE	REVISIONS
3	10-19-2009	ADJUST FOR CHANGE 100 YEAR FLOOD ELEVATION TO -1.80.
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DRAWN: JHD | PROJECT NO: 4086097772
ENGINEER: | SCALE: AS SHOWN
CHECKED: | APPROVED:
DATE: 10-27-09 | DATE:

MACTEC

HUNTERS POINT / CANDLESTICK POINT
SAN FRANCISCO, CALIFORNIA

YOSEMITE SLOUGH BRIDGE, JURISDICTIONAL IMPACTS AND ABUTMENT SECTION VIEW

DRAWING: 7
SHEET: 7 OF 7

EXHIBIT_YSB_JMC_FIG-6-7.DWG 300.0

Appendix N3 Draft Parks, Open Space, and Habitat Concept Plan, November 2009

DRAFT

Parks, Open Space, and Habitat Concept Plan

Candlestick Point and Hunters Point Shipyard Phase II
San Francisco, CA

November 03, 2009

LENNAR URBAN

R|H|A|A

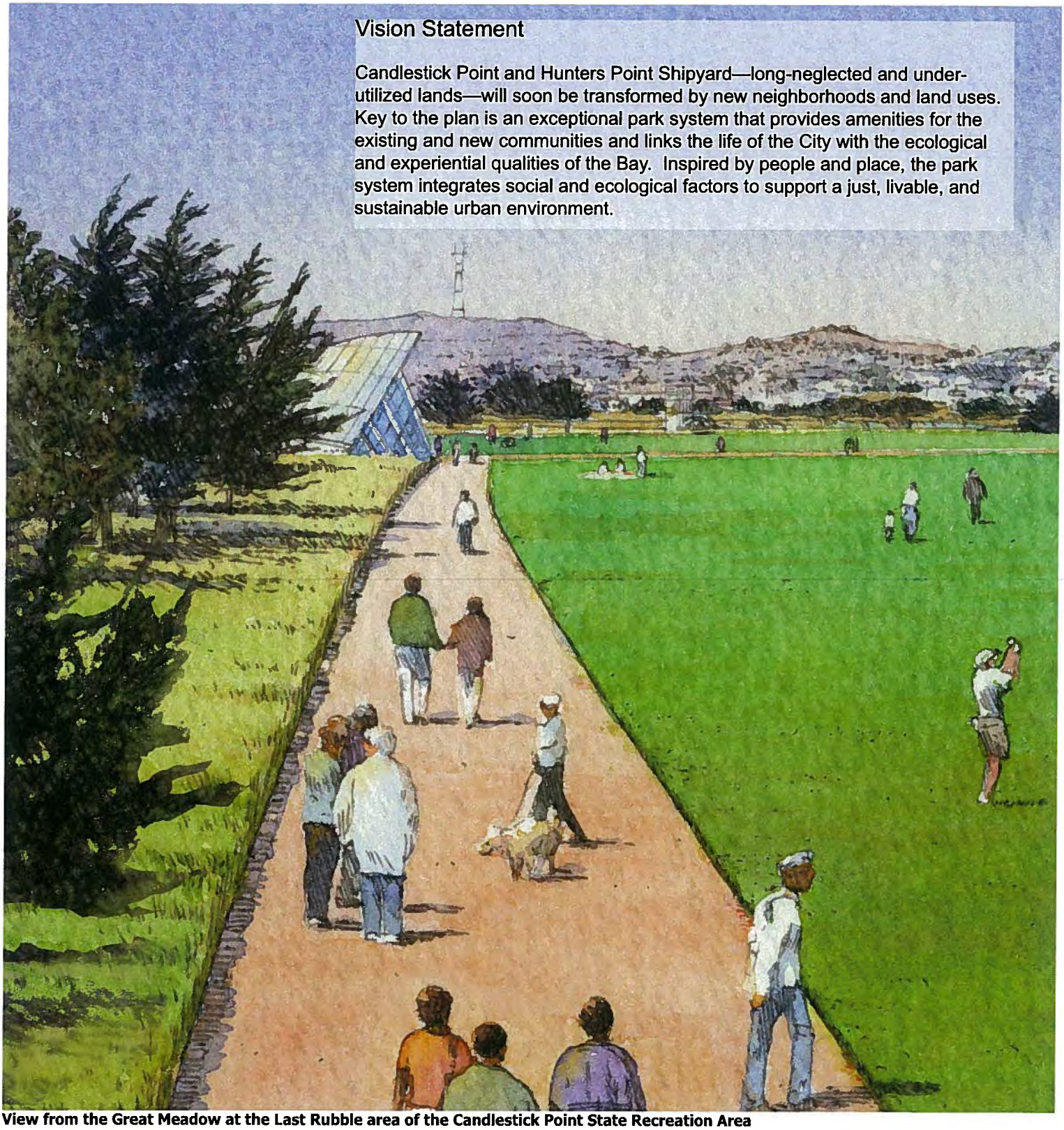
Cover image: View from The Neck area of the Candlestick Point State Recreation Area

Contents

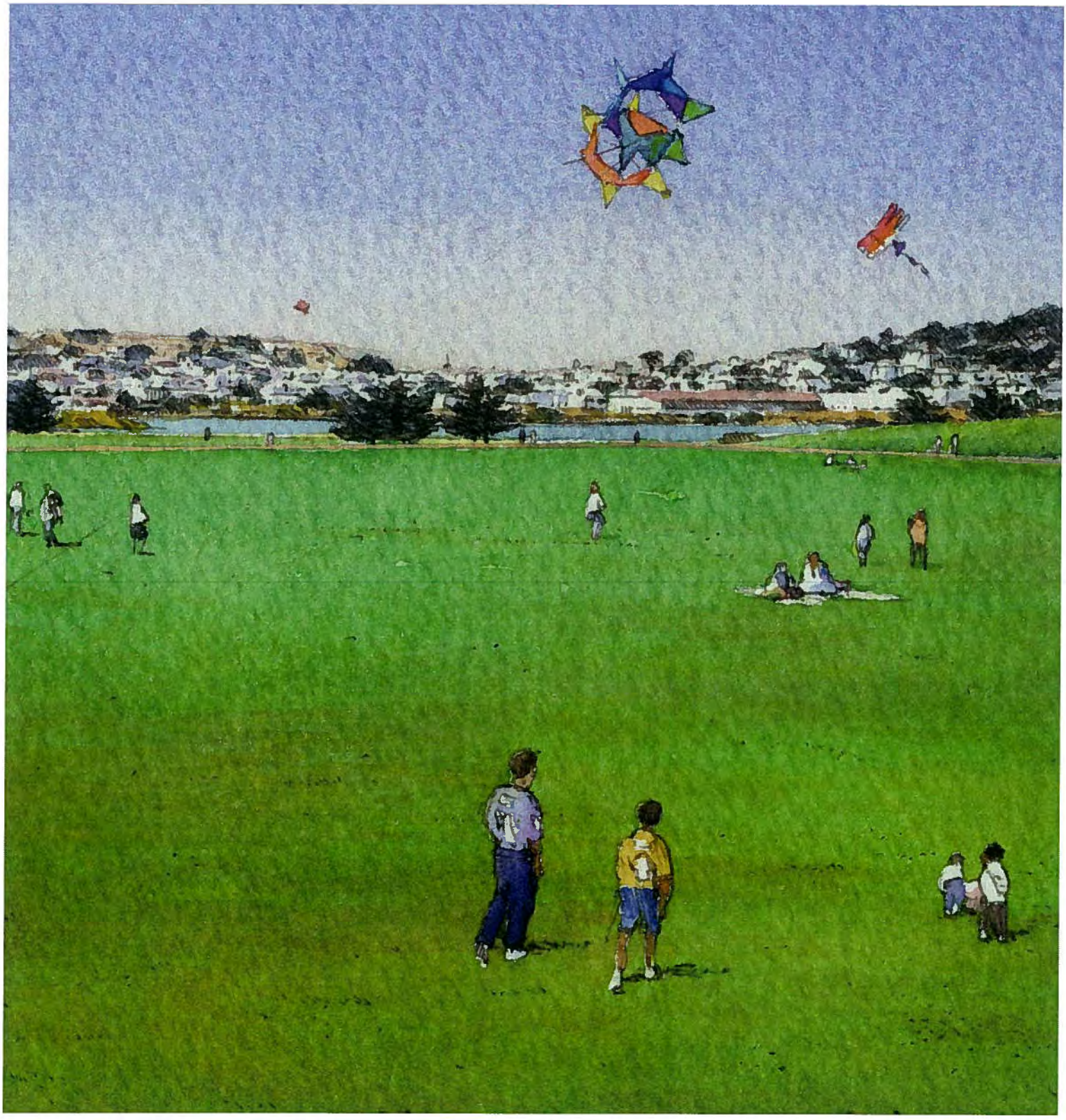
The Proposal

Vision Statement

Candlestick Point and Hunters Point Shipyard—long-neglected and under-utilized lands—will soon be transformed by new neighborhoods and land uses. Key to the plan is an exceptional park system that provides amenities for the existing and new communities and links the life of the City with the ecological and experiential qualities of the Bay. Inspired by people and place, the park system integrates social and ecological factors to support a just, livable, and sustainable urban environment.



View from the Great Meadow at the Last Rubble area of the Candlestick Point State Recreation Area



Plan Highlights

Extensive Parkland

Over 330 acres will be dedicated to new and improved parks, open space, and habitat areas. These areas cover over half the site's acreage and represent San Francisco's largest park development since Golden Gate Park.

Neighborhood Parks

New neighborhood parks will serve existing and future neighborhood residents with places for community gathering and a broad range outdoor recreation and leisure activities.

Sports Field Complex

A new Sport Field Complex will help to meet the City's unmet-demand for lit sports fields. The multi-use fields will accommodate youth, high-school, and adult intra-mural field sports and will be able to host regional tournaments.

Cultural Heritage Park

The Cultural Heritage Park will relate the history of Hunters Point to visitors from throughout the Bay Area and beyond. Historic buildings will be retained and may be used as museum spaces.

Trails Network

The San Francisco Bay Trail / San Francisco Blue Greenway will provide a continuous recreational multi-use trail along the Candlestick and Hunters Point waterfront filling a gap in the regional network planned to eventually encircle the entire Bay. Similarly, kayak and windsurf launch points will enhance access to the regionally-planned Bay Area Water Trail. For commuters and neighborhood cyclists, a secondary network of off-street multi-use trails will link parks and neighborhoods with the on-street bicycle network.

Candlestick Point State Recreation Area

Major renovation of the Candlestick Point State Recreation Area will transform it into the "Crissy Field" of southeast San Francisco with restored habitat areas and public access to the Bay.

Habitat Enhancements

New parks, open space, and habitat restoration areas will support the biodiversity and ecology of the San Francisco Bay shoreline. The plan features new native grasslands, wetlands, extensive planting of native trees and shrubs, and a net removal of bay fill.

Green Infrastructure and Urban Sustainability

Parks and open space will be designed as "green infrastructure" integrating urban design and infrastructure with natural systems. Elements of this system include, ecological stormwater treatment systems, vegetated parking, and streetside and median boulevard parks.

Parks, Open Space, and Habitat Plan

Introduction

Background

Purpose of the Document

The purpose of this draft document is to describe the intent of the parks and open space system of the Candlestick and Hunters Point Shipyard Phase II development project. Building on the *Candlestick Point/Hunters Point Shipyard Phase II Urban Design Plan*, and the *Draft Sustainability Plan*, the *Draft Parks, Open Space, and Habitat Master Plan* highlights aesthetic, social, recreational, and ecological opportunities and p rovides a framework for public parks, open spaces, and natural areas. A final version of this plan will be included as part of the Disposition and Development Agreement between the City of San Francisco, San Francisco Redevelopment Agency and Lennar.

Project Summary

The proposed Candlestick Point and Hunters Point Shipyard development project (CP HPS) is a 702-acre master-planned urban infill project proposed in the southeastern waterfront of San Francisco. The proposed development envisions two neighborhoods (Candlestick Point and Hunters Point Phase II) including housing, commercial, retail and office uses along with over 330 acres of parks and open space. Adjoining the existing Bayview and Hunters Point neighborhoods and bounded by San Francisco Bay, the plan emphasizes an extensive parks and open space system, including waterfront parks and trails along approximately 9 miles of shoreline.

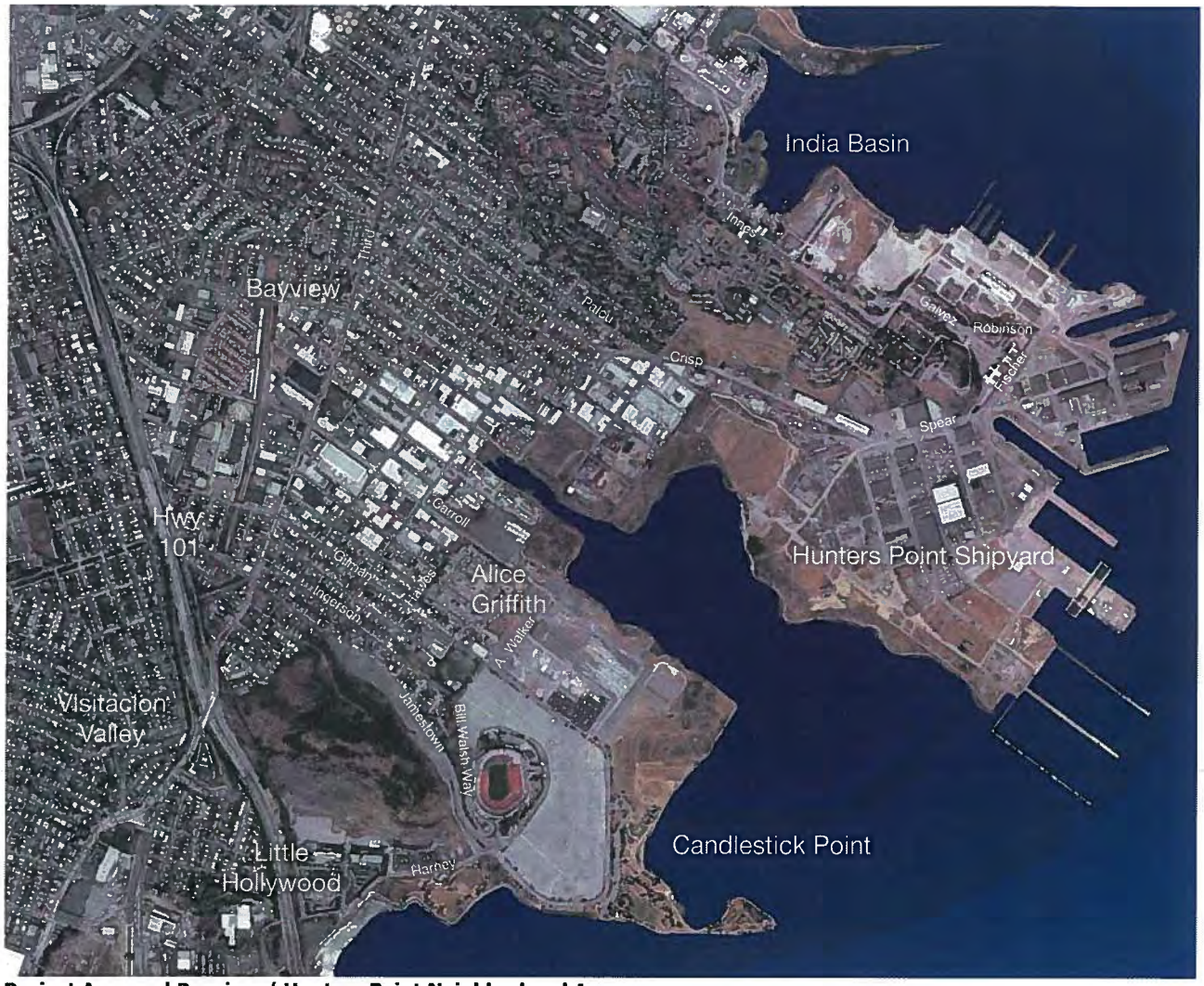
Setting

The Candlestick Point and Hunters Point Shipyard project site is located at the southeastern corner of the City of San Francisco, bounded by the San Francisco Bay to the east, India Basin to the north, Bayview Hill Park to the south, and the Hunters Point/Bayview community to the west. The site is the current location of Candlestick Park (the home of the San Francisco 49ers), Candlestick Park State Recreation Area and the former Hunters Point Naval Shipyards. The site is located in close proximity to Highway 101 (Bayshore Freeway) and is approximately 8 miles from downtown San Francisco.

Four major site adjacencies inform the future development of the Shipyard & Candlestick Point site. To the west, the Bayview Hunters Point neighborhood is a predominantly residential and industrial area and home to a diverse and transitioning population. The neighborhood grew dramatically during the second world war, as predominantly African American workers came to the shipyard for Navy-related jobs. The area has historically been under serviced.

To the east, the San Francisco Bay creates a well-defined natural edge to the project area.

Finally, both the Bayview Hill, and Hunters Point Hill create unique geographical limits to development. Bayview Hill is currently a city park area, with trails that wind to the top, overlooking the entire site. Hunters Point Hill is currently being developed as both the Hilltop and Hillside Phase I developments of Hunters



Project Area and Bayview / Hunters Point Neighborhood Area

Point Shipyard. The southeastern portion of the Hunters Point Hill is currently being developed as a park, which will link into the proposed Shipyard Phase II development.

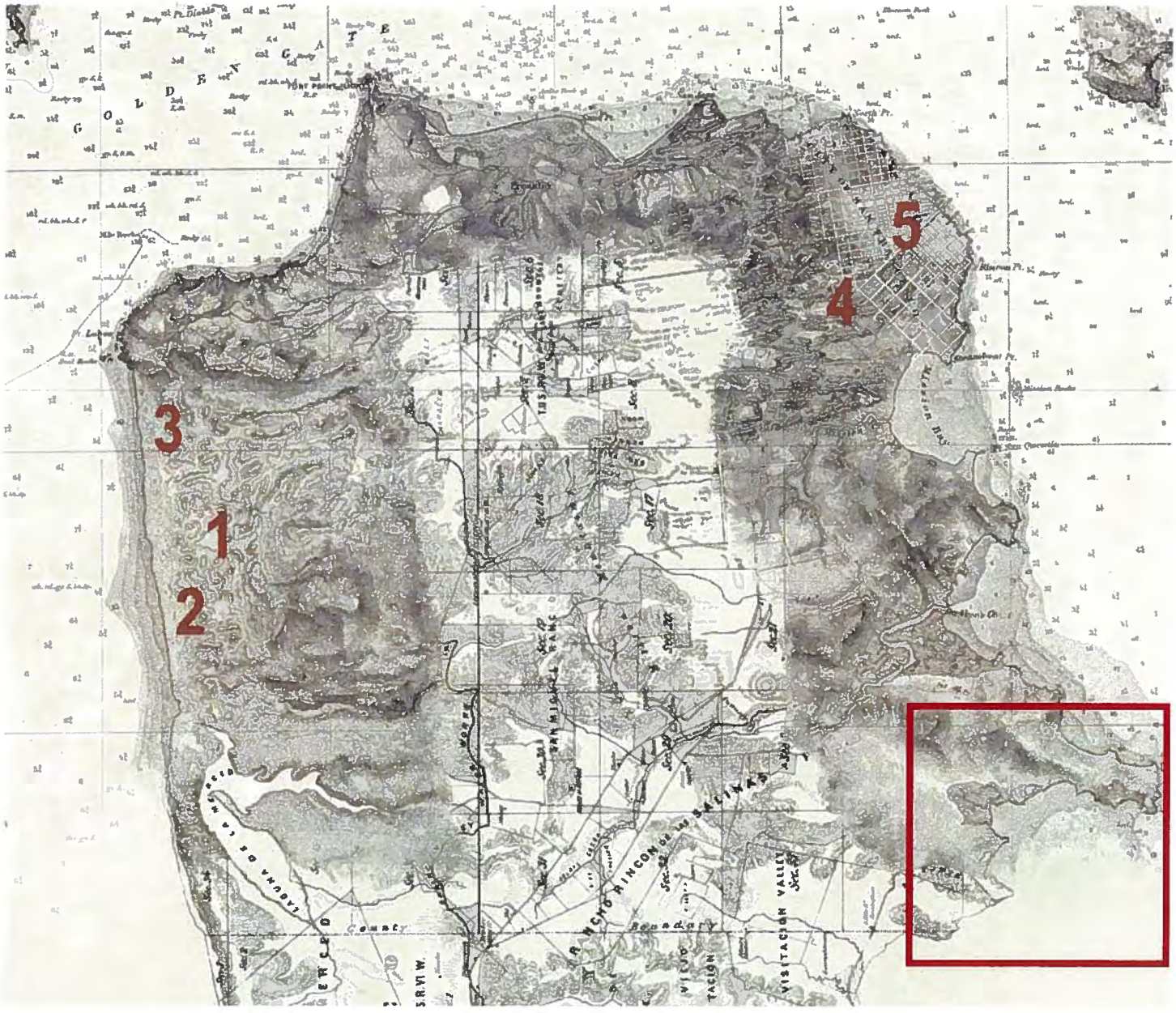
Planning Background and Development Program

The City's plan to revitalize the Hunters Point Shipyard and Candlestick Point is one of the most important development projects in the City's modern history because of both its scale and the scope of public benefits that it will deliver to a under-served community. For more than 30 years, both of these largely abandoned sites have done little to benefit the Bayview Hunters Point community or the City.

After more than a decade of planning efforts relating to these sites, in May 2007, the Mayor, the Board of Supervisors, the San Francisco Redevelopment

Agency Commission, and the two community-based advisory organizations with jurisdiction over these redevelopment project areas, the Hunters Point Shipyard Citizens Advisory Committee and the Bayview-Hunters Point Redevelopment Project Area Committee, endorsed a "Conceptual Framework" for the integrated redevelopment of Candlestick Point and the Hunters Point Shipyard. In June 2008, San Francisco voters overwhelmingly approved Proposition G, the Bayview Jobs, Parks and Housing Initiative which set forth guiding principles and an integrated development plan for the two sites, consistent with the Board and Mayor endorsed Conceptual Framework. In accordance with the Initiative, the proposed development program encompasses the following elements:

- Housing: Approximately 10,500 units throughout the site, including a mix of rental and for-sale homes, both below market-rate (about 32%) and market-rate. The affordable units will be built largely by the City's Redevelopment Agency to serve very-low to moderate-income households.
- Rebuild of the Alice Griffith Public Housing Development: This project will provide one-for-one replacement of existing units and will serve the same income levels as the current residents. This will ensure that eligible Alice Griffith occupants have the opportunity to move into new units.
- "Green" office space: Approximately 2.5 million sq. ft. of space for technology research is proposed for the Shipyard. The City intends to create a "green technology" cluster on this site. In addition, 150,000 sq. ft. of "green" office or other commercial space will be built on Candlestick Point.
- Regionally-focused retail: Approximately 635,000 sq. ft. on Candlestick Point.
- Neighborhood-focused retail: Approximately 125,000 sq. ft. on the Shipyard, including a retail town center, as well as an additional 125,000 sq. ft. on Candlestick Point.
- Hotel: 150,000 sq. ft. (220 rooms) on Candlestick Point.
- Artist studio space: Permanent new and renovated space for Shipyard artists.
- Parks: More than 330 acres of new and restored parks, open space and wildlife habitat.
- Marina: 300 slips on the Shipyard.
- Performance space: 10,000-seat venue on Candlestick Point.
- New stadium: Space for a new, 69,000-seat, world-class home for the 49ers and related "dual-use" active recreation fields and green parking areas on the Shipyard.



San Francisco Historic Map, 1860
Source: Creek & Watershed Map of San Francisco, SFPUC

Existing Resources & Setting

The places we know today as Candlestick Point and Hunters Point Shipyard have been shaped by many factors -- both natural and cultural. These existing resources inform the development plan which seizes the extraordinary opportunity for new and improved parks, open space, and habitat restoration.

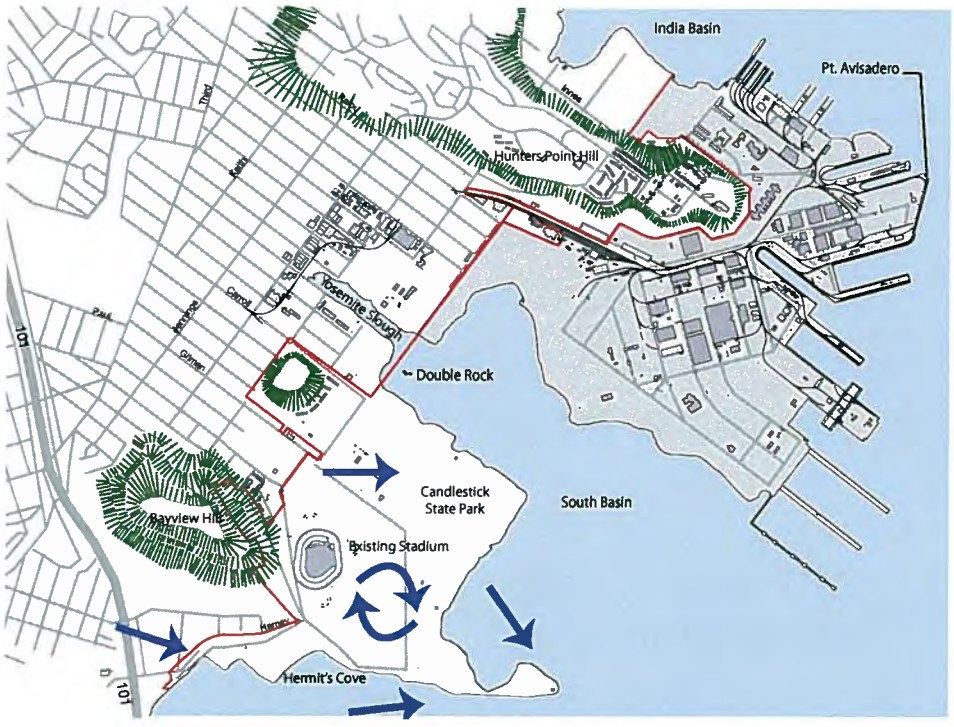
Natural & Cultural Resources

Land, Water and Climate

Geology & Groundwater Basins, circa 1850
Source: Creek & Watershed Map of San Francisco, SFPUC

Like many San Francisco neighborhoods, Candlestick Point and Hunters Point Shipyard are strongly defined by dramatic hills and the water's edge. Candlestick Point and Hunters Point are each peninsulas jutting out into the San Francisco Bay. Much of the area is bay fill surrounding the natural promontories of Bayview Hill and Hunters Point Hill. The fill areas are relatively flat and close to sea level. Bayview Hill, at over 400 above sea level is the most significant topographical feature in the southeast portion of the city. The south end of Hunters Point Hill rises to approximately 120 feet above sea level.

Between these peninsulas lies an open water area known as the South Basin. Yosemite Slough extends west of the South Basin and is the largest remnant of the extensive wetlands that existed along San Francisco's eastern shore prior to filling and urbanization. A small rock island called Double Rock sits at the southwest end of the South Basin near the mouth of Yosemite Slough.



Natural Features- land, water, & wind

The flatter lands of the site were largely constructed by filling of the Bay. The shoreline is major defining element of the site and is currently a mix of natural areas, most of which are part of the Candlestick Point State Recreation Area and industrial waterfront areas that are a remnant of the previous shipbuilding and naval activities of Hunters Point.

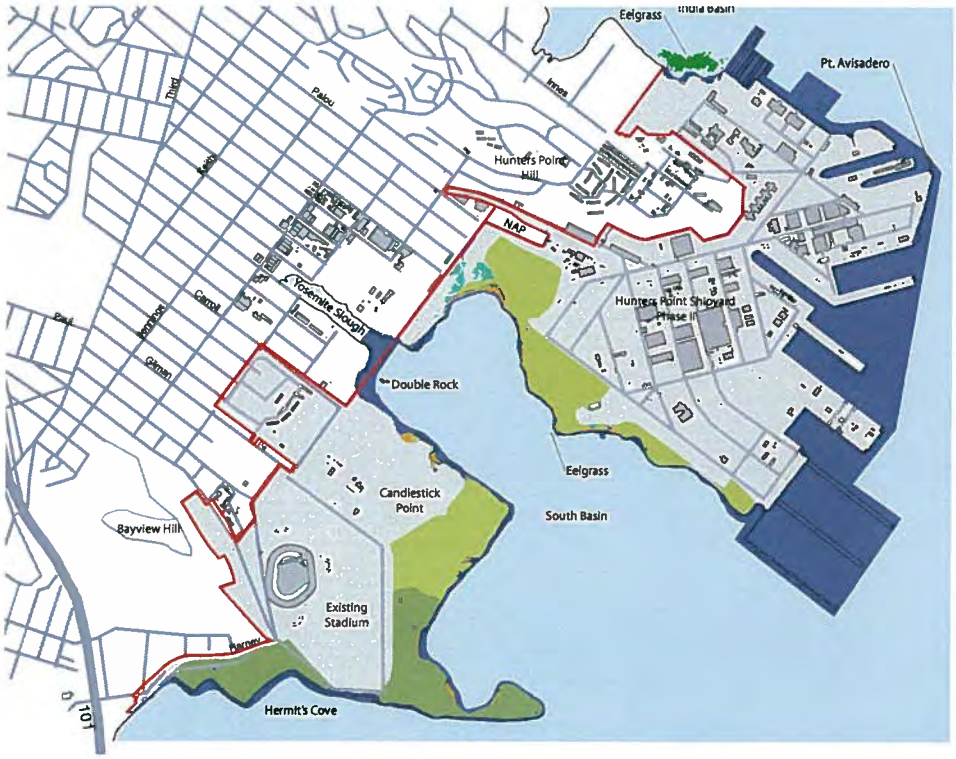
The form of the landscape contributes to the specific micro-climates – the south end of Candlestick Point is renowned for its winds which are funneled through gaps in the hills to the west. Hunters Point is more protected and is one of the warmer parts of the City.

Vegetation and Wildlife

Much of Candlestick Point and Hunters Point Shipyard are urbanized, and the areas with most natural vegetation and wildlife use are at the Candlestick Point State Recreation Area and the South Basin.

Candlestick Point State Recreation Area

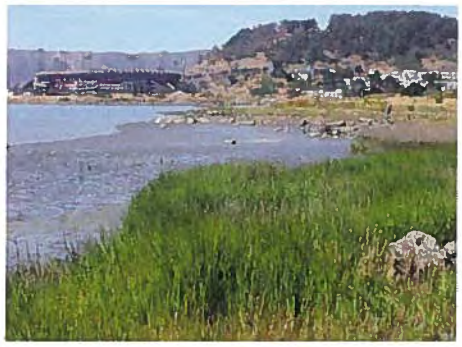
Trees at the Candlestick Point State Recreation Area, mostly Monterey pine and Monterey cypress, provide nesting and foraging habitat for birds. The majority of birds nesting in these trees are common, urban-adapted species. During spring and fall, small numbers of migrant songbirds have been recorded foraging in these trees. California ground squirrels are common in the ruderal (human-disturbed) habitats at Candlestick Point, and the surrounding waters provide foraging habitat for grebes, ducks, gulls, terns, double-crested cormorants, and California brown pelicans.



Study Area Habitats Map

South Basin

The South Basin provides aquatic foraging and loafing habitat for a number of species of waterbirds. Ducks, such as surf scoters, greater scaup, and lesser scaup, dive for shellfish and other benthic (bay-bottom) organisms, while western grebes, Clark's grebes, double-crested cormorants, California brown pelicans, and Caspian terns hunt for fish in these waters. Great blue herons and snowy egrets forage in the shallows. Intertidal mudflats are limited in extent, and occur primarily near the mouth of Yosemite Slough. These mudflats provide foraging habitat for many of the same shorebird species occurring in Yosemite Slough.

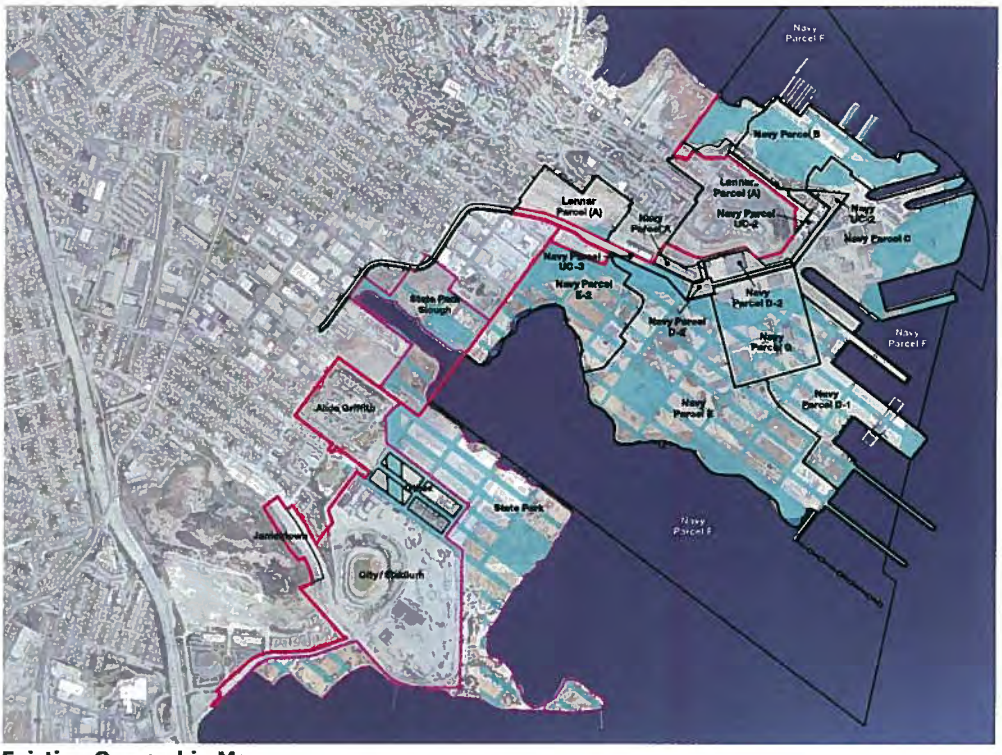


The small island known as "Double Rock" in the northwestern part of South Basin supports 10-15 pairs of nesting western gulls. Black oystercatchers forage, and may nest, on this island, and they feed on small rocky islands elsewhere along the edge of South Basin as well. Due to the presence of riprap and other debris along most of the shore of South Basin, beaches and tidal marsh are limited to small remnants. A few areas of tidal marsh, the broadest being along the Hunters Point shoreline north of the mouth of Yosemite Slough, are dominated by cordgrass, pickleweed, and marsh gumplant. These marsh remnants provide habitat for terrestrial garter snakes and foraging habitat for shorebirds and wading birds, but they are too small and isolated to support marsh-nesting species such as California clapper rails, salt marsh harvest mice, San Francisco common yellowthroats, and Alameda song sparrows.

History and Culture

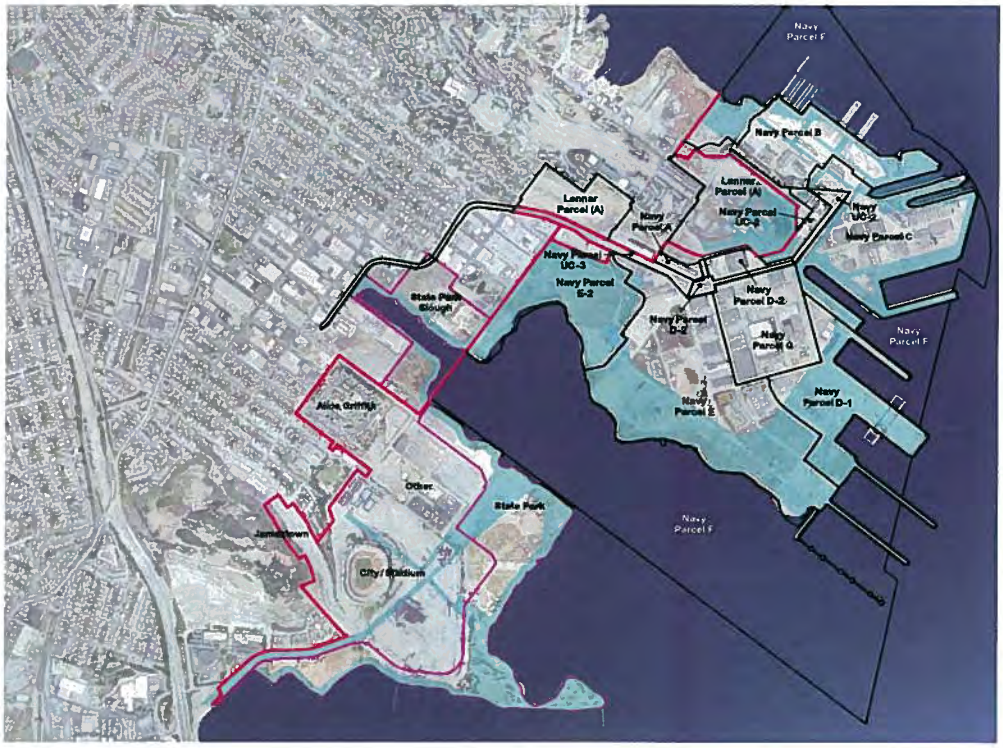
The Candlestick Point and Hunters Point Shipyard area has a rich history and a diversity of people have lived and worked here at the Bay's edge. The earliest known human presence in the Bay Area began nearly 12,000 years ago, and in the San Francisco area, nearly 6,000 years ago. The most common physical evidence of early indigenous culture is found in shellmounds, sites typically located at the Bay's edge near the mouth of streams where a variety of plant and animal resources were abundant. When the first Europeans arrived in the Bay Area, the project area was within the traditional territory of the indigenous Ohlone people.

When European settlement at Candlestick and Hunters Point began in the late 1840s/early 1950s the areas were primarily used as pastureland. The 1849 gold rush brought rapid growth to the City, and the City's maritime industry and boat building expanded south to India Basin. Italian and Chinese farmers moved into the Hunters Point area to farm vegetables to sell in the City center. The Chinese also established fish and shrimp farms along Hunters Point. By 1900, Hunters Point became established as a center for maritime activities and included shipyards and dry docks. The Navy's use of these facilities increased and it purchased the Bethlehem Steel dry docks in 1939. The Navy Shipyard expanded dramatically during World War II, leveling parts of Hunters Point Hill and filling the Bay to create new land between Hunters Point and Yosemite Creek. The existing African American community grew as many African Americans moved from the South to work at the shipyards. After World War II, the Shipyard became a center for the Navy's nuclear research. After it closed in 1974, the Naval Shipyard operated as a private ship-repair operation until 1986 when the Navy began current ongoing remediation efforts.



Legend
- Project Boundary
- Existing State Parks Boundary
- Existing State Trust Lands

Existing Ownership Map



Legend
- Project Boundary
- State Parks Boundary Reconfiguration
- State Trust Lands Reconfiguration

Existing Ownership Map with State Parks & State Trust Reconfiguration

Candlestick Point and Hunters Point Shipyard Today

Current Ownership and Land Uses

Hunters Point Shipyard (HPS)

The Hunters Point Shipyard Phase II area is currently under the jurisdiction of the US Navy, which is completing a clean-up of the site. Once complete, the Navy will convey the land to the City for development. For planning purposes, the Navy property has been sub-divided into smaller parcels (A-F), based on the time-line of the Navy clean up.

HPS includes 421 acres of dry land that contains several structures associated with World War II era uses: ship repair, storage and trucking, light manufacturing, construction, laboratories, scrap metal recycling, administrative and other former Navy uses. Several former Navy buildings are currently leased and occupied as studios by approximately 250 tenant artists. HPS Phase II also includes dry docks, piers and wharves, as well as repair berths.

Bordered by San Francisco Bay to the south, east, and north, land uses at India Basin to the west are varied. Light industry and residences adjoin Innes Avenue. To the southwest of the HPS Phase II area are neighborhoods with multi- and single-family housing. Land uses in the surrounding area—specifically the industrial uses along Crisp Road— historically provided a buffer between HPS activities and adjacent residential uses.

Candlestick Point

The 281-acres Candlestick Point Area is generally bounded by Hawes Street to the northwest, Candlestick Cove and the San Francisco Bay to the south, Jamestown Avenue to the southwest, and South Basin to the east. The site includes residences, public open space, and the Candlestick Park football stadium.

The area is bordered by two existing communities—Bayview to the north and Executive Park to the west. The Bayview community was developed during the 1950s and 1960s and is characterized by two and three-story single family and duplex dwellings west of Gilman and light industrial buildings generally east of Gilman. Gilman Park and Bayview Elementary School are located in the blocks between Gilman and Ingerson, north of Giants Drive. The Executive Park development began in 2004 and includes several office buildings and a four-story condominium project near Highway 101.

City Ownership

Several Candlestick Point parcels are currently owned and operated by departments of the City of San Francisco. The San Francisco Housing Authority owns and manages 256 units of public housing at the Alice Griffith site. The City's Department of Recreation and Parks manages the Candlestick Park Stadium. The 70,000-seat stadium and related surface parking lots are the home of the San Francisco 49ers professional football team. The facility is also used occasionally throughout the year for concerts and other performances.

Other City lands include the streets and right of ways managed by the Department of Public Works.

State Trust

Certain land and water areas within the project are "State Trust Lands." Early in its history, the California Legislature transferred tide and submerged lands in trust to cities and counties, which were then required to develop harbors to further state and national commerce. The State Lands Commission ensures that the areas held in trust by the City of San Francisco are available for the benefit of the people of California for uses that promote navigation, fisheries, waterborne commerce, natural resource protection, and water-related uses that attract the public to use and enjoy the waterfront. Recent state legislation, Senate Bill 792, provides for the reconfiguration of State Trust lands in the area.

State Parks

The 154-acre Candlestick Point State Recreation Area (CPSRA) is a part of the California State Parks System. The CPSRA contains approximately 72 developed acres along the shoreline with a network of paved and dirt paths, bathroom structures, picnic facilities, two fishing piers, paved lookout points, and a boat launch facility. The remaining acres have not been developed and are, in part, used for overflow stadium parking. Recent legislation, Senate Bill 792, authorized a reconfiguration of the CPSRA in exchange for project-provided park improvements and operating funding.

Private

Privately held lands include the Jamestown parcel and lands north of the stadium. The private parcels north of the stadium accommodate a 165-space RV site and an apartment block at Gilman Avenue and Arelious Walker Drive.

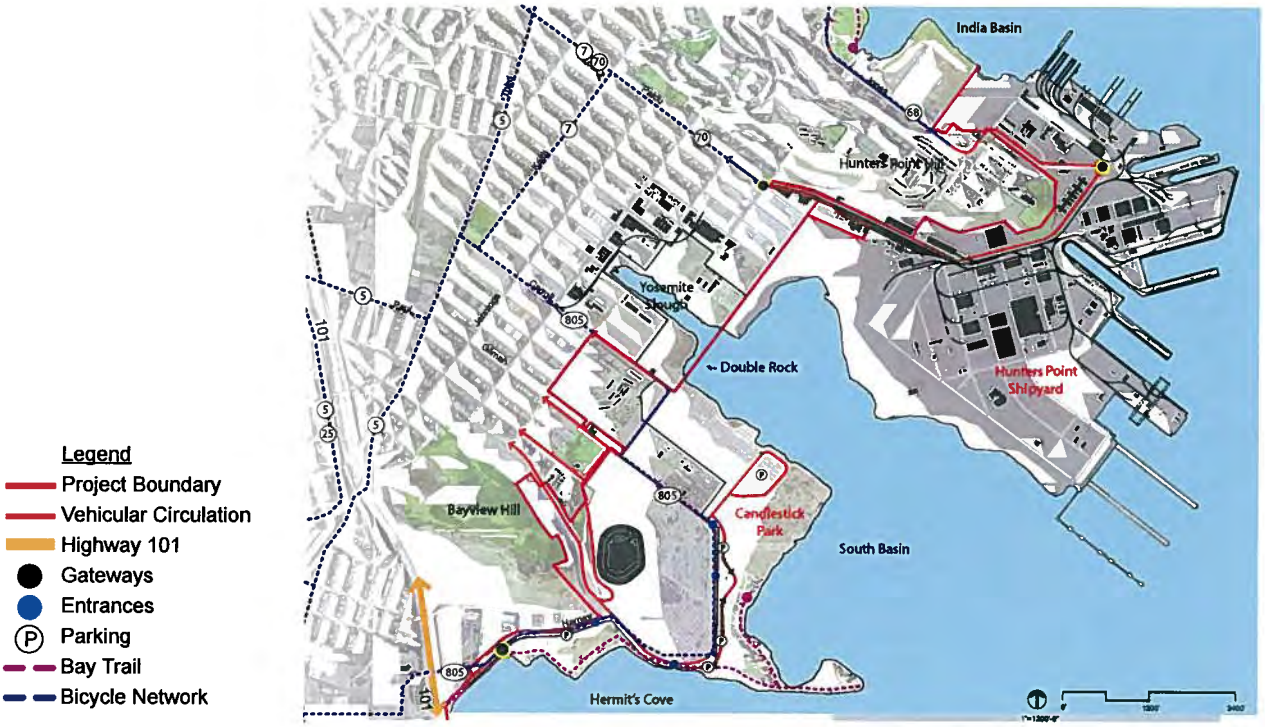
Access

Hunters Point Shipyard

Historically, access to the site was controlled for safety and security reasons, and most of the site remains fenced off, prohibiting public access from surrounding neighborhoods. Primary access to the southern portion of the site is provided by Crisp Road, Spear Avenue, and Fischer Avenue. Innes Avenue, Galvez Avenue, and Robinson Street provide access to the northern portion of the site. The HPS Phase II site lacks pedestrian amenities, such as sidewalks.

Candlestick Point

Access to most of Candlestick Point is limited to an arterial loop road (Gilman Avenue/Jamestown Avenue/Bill Walsh Way/Ingerson Avenue) that encircles the Candlestick Park stadium and parking lot. Carroll Avenue and Fitch Street provide access to the Alice Griffith housing complex. However, most non-arterial streets from the residential neighborhoods to the west of Candlestick Point reach a dead end before entering the site. Streets within the Alice Griffith housing complex are internally oriented, and for the most part, do not connect to surrounding streets. In addition, Bayview Hill creates a physical barrier to

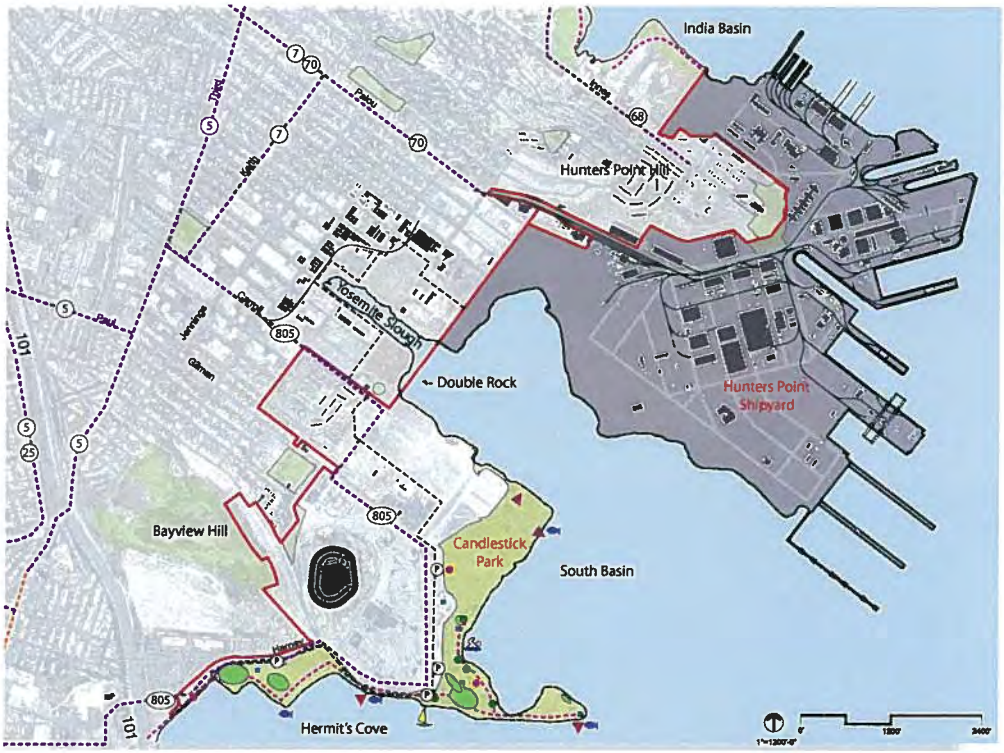


Existing Access and Circulation

the south, limiting access from this direction, except at Harney Way. The lack of street connectivity, combined with the site's large, barren parcels, lack of sidewalks, and low level of on-site activity, make Candlestick Point relatively unwelcoming to pedestrian traffic.

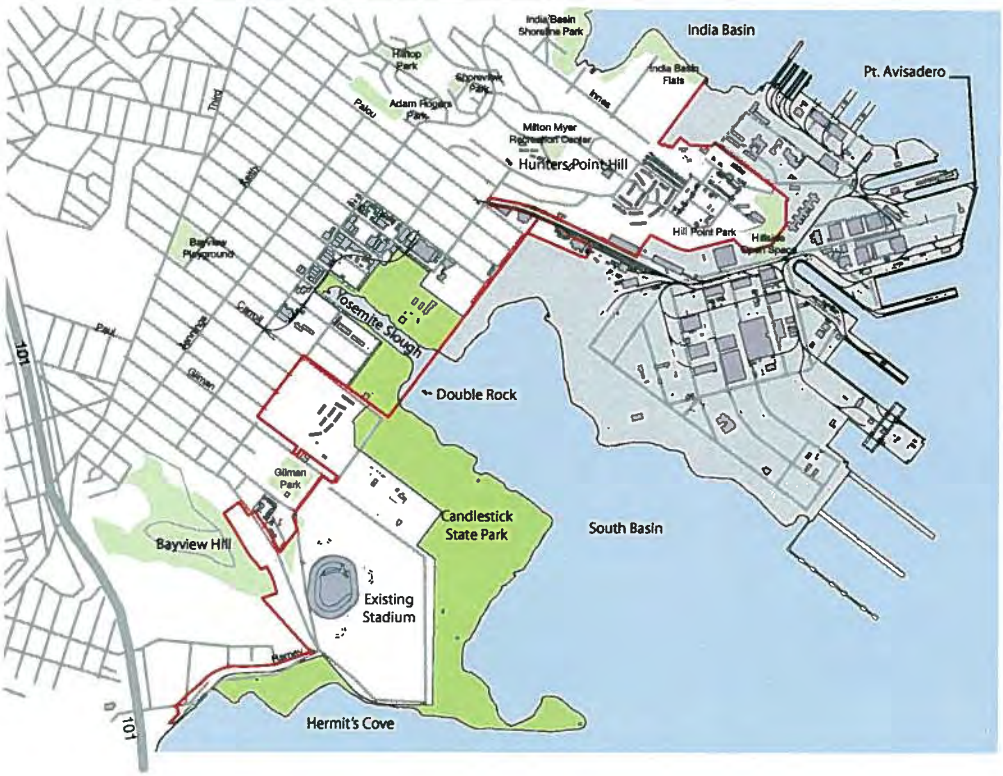
Parks and Recreation

In spite of its striking geographic location, much of the park acreage that exists at Candlestick Point is underutilized, un-completed, or in need of repair. Citywide, the ability to construct new parkland has been constrained by San Francisco's population density and small land area. Active recreation fields are in particularly high demand throughout the City and the City has identified a need for new fields. Give its size, the redevelopment of the Candlestick Point and Hunters Point Shipyard offers an extraordinary opportunity to contribute to new and revitalized parks that will benefit existing neighborhood residents, new residents, and larger community of San Francisco and the region.



Legend
- Project Boundary
- Lawn
- Passive Meadow
- Picnic Meadow
- Community Garden
- Restrooms
- Outlooks
- Outdoor Art
- Beach / Swimming
- Windsurf
- Fishing
- Parking
- Bay Trail
- Bicycle Network

Existing Park Uses



Legend
- Project Boundary
- Existing City Park
- Existing State Park

Existing Parks

Existing Parks

There are two existing parks within the project site – the Candlestick Point State Recreation Area (CPSRA), and the Candlestick Park Stadium. Existing users of these parks include the residents and employees in the Bayview Hunters Point neighborhood, as well as visitors from other parts of the City and the Bay Area. Recreational visitors from outside the neighborhood include 49ers football fans and other stadium event users, and windsurfers who use the CPRSA shoreline for Bay access.

CPSRA is a former landfill on the shoreline of Candlestick Point that was purchased by the State in 1977 for development as a State recreation area. CPSRA includes picnic areas, a fitness course for seniors, a bike path, shoreline access to the Bay for water-dependent recreation, and recreational trails. The CPSRA provides neighborhood residents with access to open space along the Bay, but the recreational and aesthetic potential of this park is constrained by the industrial character of adjacent land uses and the availability of state resources. Much of the land at the CPSRA is unimproved. For example, land to the north and east of the Candlestick Park stadium are currently being used for stadium parking. Other portions of the site contain construction rubble and debris. As a result, existing CPSRA facilities are not fully utilized to their full potential as places for recreation and habitat. The community has expressed strong support for the restoration of Yosemite Slough, and design for this restoration initiative is underway. While Yosemite Slough is part of the CPSRA, it is not within the area to be improved by this project.

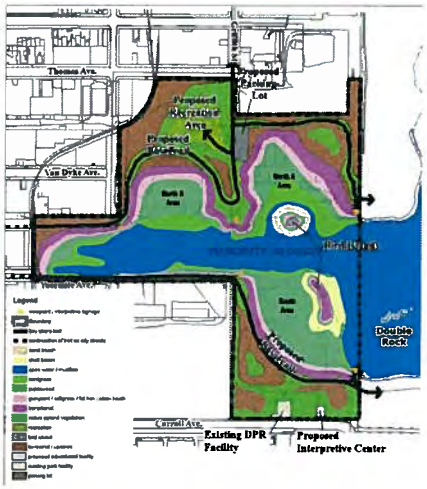
Hill Point Park rendering

Candlestick Park is the site of Candlestick Park stadium owned by the City Recreation and Parks Department and leased by the San Francisco 49ers National Football League team. The existing stadium, built in 1960, seats 70,000 and is used for football games and other non-football entertainment events. However, most of the year the stadium and it's parking lots are vacant and unused.

Other Parks Improvements and Initiatives

In addition to the CP-HPS Phase II improvements, a number of other projects are underway in the larger Bayview Hunters Point neighborhood and the City's southeast waterfront.

Hunters Point Shipyard Parcel 'A' is the first phase of improvements that is underway at the Shipyard. This project includes two sites on Hunters Point Hill, "Hilltop" and "Hillside," that will be linked with the overall CP-HPS parks system. Ramped pathways will connect Hilltop's Innes Court Park and Hillpoint Park with the HPS Phase II Boulevard Parks and Waterfront Promenade with connections to the greater parks system. At Hillside, ramped paths will descend from the neighborhood's Central Park and pocket parks, connecting with Crisp Road near the Phase II Grasslands Ecology Park.



Yosemite Slough Restoration Project Plan

With significant community involvement and support, the State Parks Foundations and the State Parks Department plan to restore the 34-acre Yosemite Slough area of the State Park, creating the largest contiguous wetland

area in San Francisco. The project will restore wildlife habitat, improve water quality, and prevent erosion along the shoreline of the mostly urbanized bay shoreline of San Francisco. The slough restoration project also enhance shoreline access from the Bayview community, providing opportunities for nature education and viewing of wildlife habitat.

The San Francisco Bay Trail is a regional multi-use recreational trail that, when complete, will encircle San Francisco and San Pablo Bays with a continuous 400-mile network of bicycling and hiking trails. Existing segments of the San Francisco Bay Trail run from Heron's Head Park around the India Basin Shoreline, with a gap in the middle of the segment to near the north side of Hunters Point Shipyard. In addition, a segment of the trail runs from southeastern end of Candlestick Park south to Highway 101. On the southeast waterfront of San Francisco, the Neighborhood Parks Council (NPC) is promoting a "Blue Greenways" program to coordinate development of the Bay Trail and other neighborhood linkages. The Blue Greenway project envisions a trail corridor that provides an easily accessible waterfront trail for recreation, bay access, and enjoyment of public art.

Planning Issues and Concerns

There are a number of key issues related to the parks planning that have been identified by the project team and through input from public meetings, community organizations, individuals, and coordination with public agencies.

Habitat and Ecology

Although much of the site is occupied by urban land uses, and more natural areas are dominated primarily by non-native vegetation, the site is located in an ecologically important location along the San Francisco Bay shoreline, and it currently supports a number of wildlife species. The design of parks and open space needs to protect the natural qualities of the site while enhancing conditions for native plants and animals. Park and open space design can help manage pollutants in stormwater runoff, minimize the use of potable water for irrigation, restore native-dominated plant communities, and enhance habitat conditions for wildlife. Key issues include management of invasive plants, incorporation of native vegetation in restoration and landscaping, creation of a diverse array of habitats, and protection of plants, animals, and ecological processes during construction, maintenance, and increased human use of the site.

History and Culture

History

There are many stories to be told about the history of the area. These include Native American life at the Bay's edge, settlement of the area after the arrival of Europeans, and the Chinese fishing and shrimp harvesting, and maritime development. The most visible history today is that of the maritime development and the Naval Shipyard, evidenced in historic buildings, drydocks, cranes, and other structures. The parks and open space plan should be coordinated with the Navy's closure so that the sense of this history is not erased. The project will make a special effort to preserve and rehabilitate historic structures and to incorporate interpretive elements and historic markers that highlight significant, structures, events and public figures. In particular features and materials such as light standards, rail spurs, crane tracks, dry docks, bollards, and cleats may be retained and incorporated or re-used in the design of parks and open spaces.

Neighborhood Identity

Also important to the neighborhood is the expression of its African American cultural heritage. As park designs are developed there should be opportunities for the community to engage with designers to incorporate these themes into the park designs. The Northside Park at Hunters Point Shipyard will be developed with space for the International African Market Place and the park design will need to be coordinated with the operational needs of the market.

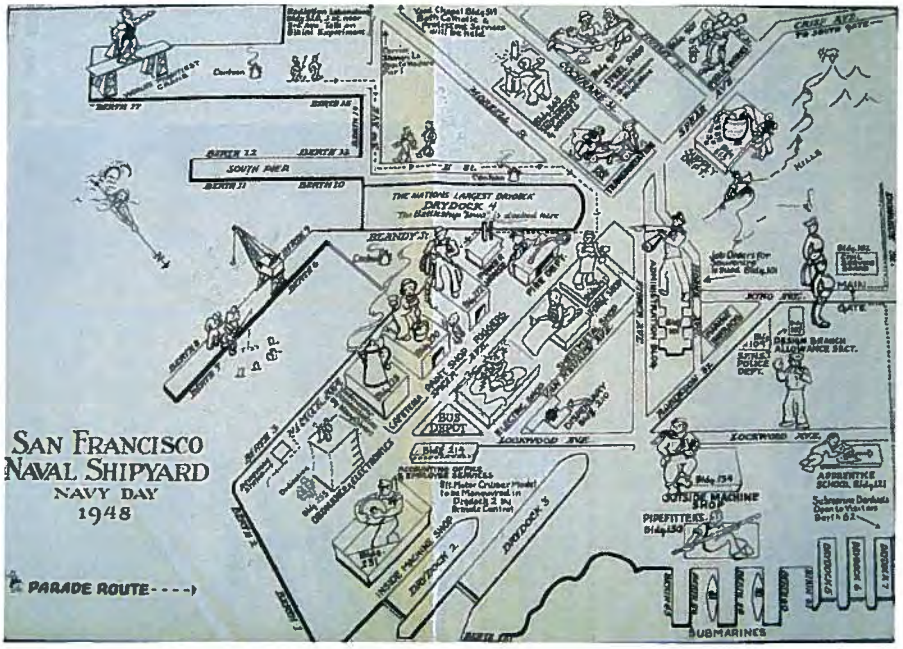
The Arts

With an outstanding landscape setting, a rich and layered history, and the thirty years presence of the Shipyard artist community, the parks and open spaces of Candlestick Point and Hunters Point Shipyard offer significant opportunities for public art. As the parks and open space plans develop, programs and opportunities for artists will be incorporated into the design of the parks. The City's Blue-Greenway Plan in particular has identified public art as a key component of the Bay Trail systems along the City's southeastern waterfront. The parks and open space design will also include spaces for outdoor performing arts such as music, dance, and theatre.

Programming and Partnerships

The development of parks, open space, and habitat areas will be enlivened by the participation of a variety of groups and organizations which may use these spaces. As park designs develop, there are opportunities for coordination and partnerships with organizations and projects such as the following:

- Community / neighborhood groups
- Outdoor field sports groups and leagues
- Marina operators
- Small boat, kayak and windsurf organizations
- Community ecology and restoration groups



- Bicyclists and skaters (rental, bike-sharing programs)
- Museums / historical societies
- Artists
- International African Marketplace
- Café / Restaurant / Cart vendors
- Community garden organizations
- Dog groups
- Local business
- Outdoor performance and event programmers

In addition to the types of community organizations listed above, the park design will also include coordination with a variety of public agencies, including the Bay Conservation and Development Commission (BCDC), the Association of Bay Area Governments Bay Trail Project, and California State Parks.

Planning for the Candlestick Point State Recreation Area will be tightly coordinated to create an interface between the State Parks system and the urban park and development that creates a synergy between them. While State Parks will produce a new master plan for the CPSRA, the development of the State Park and the other parks will be linked as part of a complete park system. For further discussion of this topic, see State Parks description under 'The Proposal' section.

Sea Level Rise

Recognizing the potential for sea level rise to impact project area in the future, a project specific study was undertaken to develop planning and design guidance through the various phases of the project. In planning for sea level rise at the park and shoreline edge, design considerations include: habitat, shoreline erosion, protection of park features, flooding, and the experiential quality of the Bay edge. The project's park sea level rise strategy is discussed in more detail in 'The Proposal' section of this document.

Hazardous Material Clean-up

The US Navy is responsible for the clean-up of its lands and state and federal regulators are responsible for making sure that the Navy's clean-up is safe for people and the environment. Coordination between the Navy's clean-up and the park programming and design will require ongoing coordination.

Relationship of this Plan with other Project Plans

There are a number of key issues and concerns that are not completely addressed in this document, but are more fully addressed in other project plans:

Sustainability

The design of the parks and open space system is closely related to many project-wide sustainability issues including: Economic Opportunity, Community Identity & Cohesion, Public Well-Being, Safety & Quality of Life, Accessibility & Transportation, Resource Efficiency, and Ecology. A framework for these issues, including goals, strategies, commitments and aspirational targets are fully discussed in the *Draft Sustainability Plan*.

Urban Design

Urban design, the form and shape and aesthetics of the development, have an important relationship to the design of the parks, open space, and habitat system. For more detail on these issues, refer to the forthcoming *Design for Development Plan*.

Transportation & Streetscape

Certain components of the park system such as bike and pedestrian trails and pathways are also a component of the transportation system. Conversely, some of the streets are designed with enhanced streetscapes which function as small linear "boulevard parks." Public transportation and automobile access are also important to the park system. A complete description of the project's transportation system is found in the *Transportation Plan*. The forthcoming *Streetscape Master Plan* will include more detail on the Boulevard Park Streets, and streetscape design features.

Utilities & Infrastructure

Some aspects of the park system are closely linked with infrastructure, for example: low-impact design stormwater treatment features and street design. More detail on the infrastructure system will be found in the forthcoming *Infrastructure Master Plan* and *Streetscape Master Plan*.

The Proposal

The Park System

Goals and Principles

The *Parks, Open Space, and Habitat Master Plan* has been developed to address the following goals and principles. These principles are organized by in relation to the by principles related to *planning*, *design*, and *process*.

Planning

These goals and principles relate to organization, size, shape, and arrangement of parks.

- **Connectivity**

  Create connections between parks and to regional open spaces including the state park and regional trail networks.

- **Walkability**

  Provide public open space within a short walking distance of all residents and employees.

- **Variety**

  Pursue opportunities to enhance existing and create new open spaces that include a variety of public plazas, courtyards and pocket parks in addition to larger public open spaces.

  De sign

These goals and principles relate to the form and program of individual parks

- **Flexibility**

  Develop a park layout that allows multiple outdoor opportunities to occur within the same space.

- **Diversity**

  Provide a contrast of open space scale, design and program so each open space is unique to the character of its context.

- **Character**

  Create unique spaces that reflect the character of the community, support family and neighborhood gatherings as well as informal socializing.

- **Resource efficiency**

  Use materials and resources efficiently to minimize environmental impact and cost.

Process

These goals and principles relate to adaptation, growth, and change, and the organic evolution of the plans.

- **Community Involvement**

  Provide opportunities to involve the community in the design process for individual parks and opportunities to accommodate community-based programs and partnerships.

- **Interpretation and Education**

  Provide park facilities and opportunities that support learning about cultural history, ecology, and urban sustainability.

- **Urban ecological infrastructure**

  Integrate urban infrastructure with natural process to support urban sustainability. Parks and open spaces are a part of the city's 'green infrastructure' and will help regulate climate, control storm water, cleanse air and water, and provide habitat

- **San Francisco Bay Ecology**

  Enhance wildlife habitat to support the ecology of the San Francisco Bay, its wetlands, and the adjacent uplands.

Park & Open Space Framework

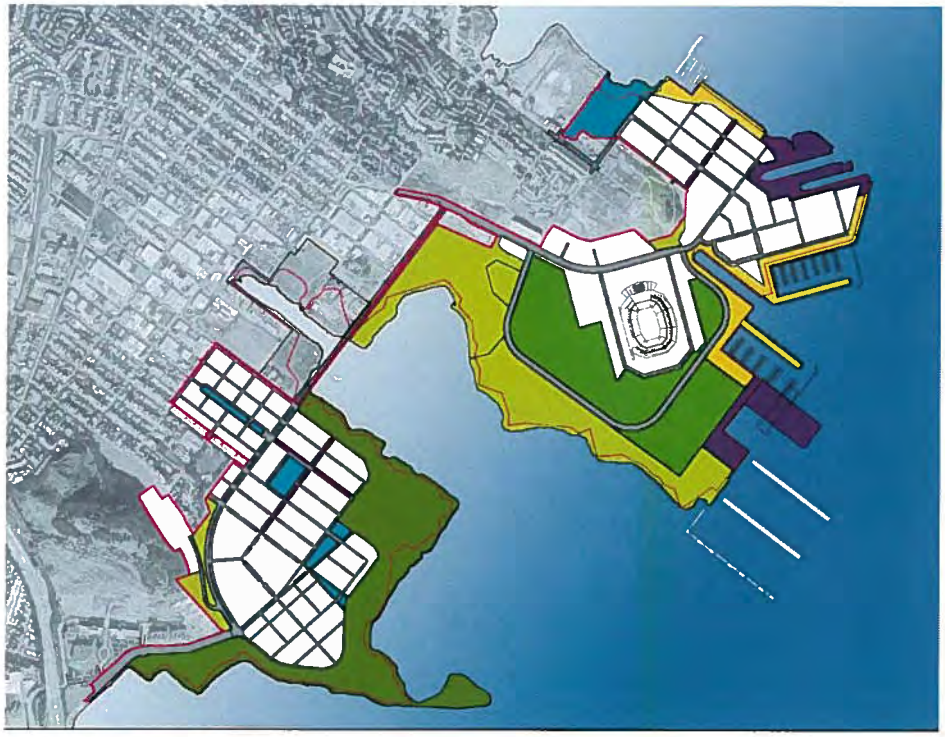
There are number of broad programmatic goals that are included in a complete park system. These include: recreation and leisure; historical remembrance, education, and celebration of culture; and stewardship and sustainability. Aspects of these broad park programs may be present in each park; however, based on opportunities, location, size, and needs, the park system has been designed to include the following eight components.

City Parks

City parks offer a mix of active and passive areas of open lawns, dog runs, play areas, community gardens, court games, and environmental education opportunities. These parks will serve the adjacent local neighborhood and will draw regular users from within a 10 minute walking radius. The City Parks adjacent to the waterfront will also attract visitors from other parts of San Francisco and beyond.

Cultural / Heritage Parks

The historical and cultural elements of these parks are designed to attract a broad range of visitors. In addition to regular neighborhood use, these parks draw visitors from throughout San Francisco, the Bay Area, and beyond.


Park & Open Space Framework
City Parks
Cultural / Heritage Parks
Waterfront Promenades
Sports & Multi-use Fields
Habitat and Ecology Parks/Open Space
Boulevard Parks and Streetscapes
State Recreation Area
Bay Trial
Project Boudnary

Waterfront Promenades

The waterfront promenades are linear, urban spaces along the waterfront. They offer continuous waterfront access connecting to other urban areas and larger parks. They also contain features for discovery and amenities for resting and gathering. In addition to passers-through, these places attract neighborhood residents and workers.

Sports & Multi-Use Fields

The sports fields serve organized play for youth, high-school, and adult intra-mural sports. While soccer may be the most popular use the fields can accommodate other sports such as football, ultimate, and cricket. Multi-use fields are designed for informal uses such as kite-flying and picnicking, as well as accommodating larger organized festivals and events.

Habitat and Ecology Parks

These parks and open spaces facilitate the co-habitation of wildlife and humans in the city. While some areas may be designed to protect sensitive plants and wildlife, other sections may include trails, boardwalks, and overlooks, and provide facilities for nature education and picnicking.

Boulevard Parks and Streetscapes

Streets are important spaces in the life of the City. The boulevard parks are a special street type that includes expanded median or sidewalk areas that function as mini-parks -- providing spaces for neighborly socializing, games and play, and gardens. Streetscapes and boulevard parks will be described in greater detail in a separate *Streetscape Master Plan*.

State Recreation Area

Managed by the California State Parks Department, the State Recreation Area is focused on providing places for bay and nature-related outdoor recreation, education, and preservation and enhancement of natural habitats.

Bay Trail

While not a separate "park," the Bay Trail strings together the entire bayside park system, providing a linear park experience that is complete in itself; some users may experience the entire parkland mainly from the perspective of the trail. For others, the Bay Trail will provide points of entry into specific parks within the Candlestick Park and Hunters Point park system.

The Parks

The following descriptions provide a framework for and suggestion of the programmatic potential of the individual parks. It is, however, expected that the final park designs will evolve through a process of dialogue and engagement with existing and future residents. Program elements may be added or adjusted as needed, within the constraints of the individual sites.

Hunters Point Shipyard

Northside Park

Concept: Gathering of Community

Located at the north entry to the Shipyard, this park is a community meeting ground, linking the India Basin, Hilltop, and Shipyard communities with a place for sport, leisure, discovery, and sustenance. Celebrating the community's cultural heritage and promoting ethnic diversity and awareness, the theme of the African Diaspora may be expressed in stylized park structures, and interpretive feature and elements in paving, seat walls, or sculptural signage markers. The African Marketplace activates the center of the park with a "market street" promenade.

Activities & Program

The Northside Park provides a full set of active and passive uses. The most active park uses are located on stepping terraces at the southwestern side of the park. This area includes water-wise ornamental gardens, basketball, tennis, a children's playground, and restroom. The open-air African Marketplace forms and east-west promenade bringing visitors and activity into the heart of the park. A central lawn provides a flexible space multi-use space. The lower half of the park is within the State Trust lands, requiring more passive uses here. Along the Bay's edge, the park takes on a more natural character, with picnic/ barbeque areas and shade shelters and waterfront pathways.

Access & Circulation

The park has multiple entry points linking it with the adjacent neighborhoods. Extending from the intersection of the HPS neighborhood streets, a series of paths cross through the park. The Bay Trail connects the Waterfront Promenade to the south and will extend into the future India Basin Flats Park.

Connecting from Innes, pathways ramp down through gardens to the court games area. A possible future bike/pedestrian route through India Basin along the Hudson right of way may connect through the Northside Park creating another link between the India Basin and Hunters Point neighborhoods.

Sustainability Features

The park plan proposes native plantings near the bay's edge and ornamental, water-wise, demonstration gardens along the hillside.

1. Overlook Terrace with Lounge Chairs
2. Terraced Planting
3. Water-wise Ornamental Gardens
4. Seating Terrace
5. Tennis Courts
6. Basketball Courts
7. Playground
8. Restroom
9. Lawn Steps
10. Storage Pavilion
11. Information Kiosk / Pavilion
12. African Market
13. Flowering Gardens with Seating
14. Open Lawn
15. Group BBQ / Picnic Shade Pavilions
16. Picnic Meadow
17. Terraced Viewing Mound
18. Boardwalk at top of Revettment
19. City View Cafe

Northside Park
Park Area: 12.8 acres

N

0' 200' 400'

Scale: 1" = 200'

Waterfront Promenade North

Concept: Weaving Urban Neighborhoods with the Bay-front Promenade

The design of this park space weaves two primary influences: the continuity of the Bay Trail and the new Shipyard neighborhoods. This once active industrial waterfront will become a sequential landscape of outdoor urban rooms. Renovation of the existing wharf and the retention of industrial artifacts along the promenade will reinforce the historic qualities of the waterfront. Meanwhile, new landscape features such as small tree groves and native grassland and stormwater gardens will interlace a sense of the past with the present as residents and visitors walk, run, ride a bike, sit, play and reflect.

Activities & Program

In addition to the cycling, strolling or skating along the waterfront, the Northern Waterfront Promenade will provide places for rest, gathering, and leisure activities. Between the urban backdrop and the open bay, these spaces may include open lawns, gardens, seating areas, plaza spaces, and picnic/barbeque areas, and places for informal recreation and games.

Access & Circulation

Access to the waterfront is provided at small plazas at the terminus of perpendicular streets and pedestrian mews, bringing pedestrian movement toward the waterfront. The grandest of these connections is at the Hunters Point Boulevard Parks. Extending from Galvez Street, the pedestrian paths and stormwater gardens of the Boulevard Parks terminate here at the Waterfront Park's central plaza space, and merge with the circulation of the waterfront promenade. Circulation along the promenade consists of series of main pathways running parallel to the water's edge: a Class 1 bicycle and pedestrian pathway adjacent to the urban edge, the Bay Trail closer to bay edge, and paths along the wharf.

Sustainability Features

The Northern Waterfront Promenade connects with the stormwater gardens system in the Boulevard Parks, detaining and cleansing street stormwater runoff before it reaches the Bay. The design of these features may include interpretive features that highlight the integration of urban and natural process. Reducing waste and consumption of new materials, the park design will seek to re-use and re-purpose historic materials and structures to the extent feasible. Plantings will focus on native and climate-adapted species that require minimal irrigation and provide habitat for insects and birds.

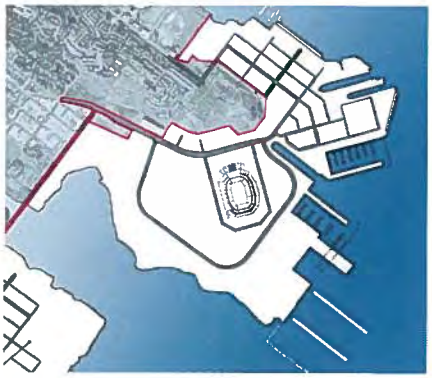
Waterfront Promenade North
Park Area: 7.1 acres

N

0' 200' 400'

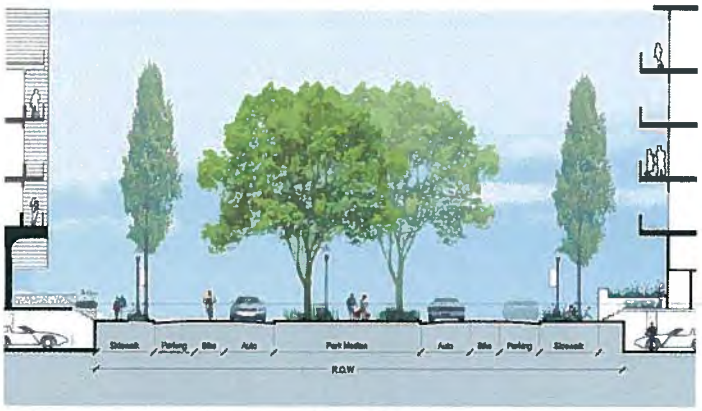
Scale: 1" = 200'

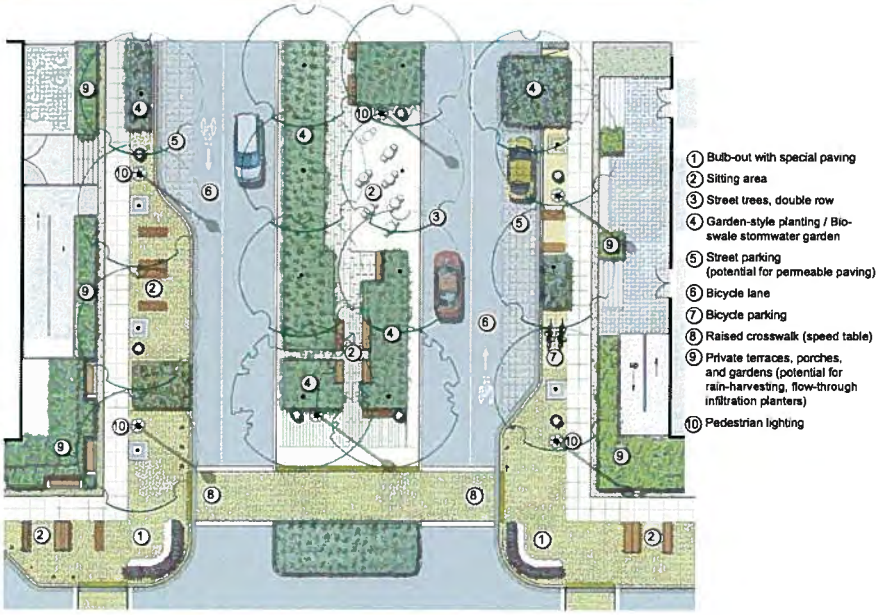
Hunters Point Boulevard Parks



Concept: The Street as a Neighborhood Living Room

A hybrid of street and park, the Boulevard Park Streets bring broad fingers of green space into the urban neighborhoods, linking interior parks with bay-front parks. The Hunters Point Boulevard Park Streets connect the Hunters Point Hilltop community with the waterfront Park. The streets has a strong pedestrian scale and quality, and serves as public 'front yards' and 'living rooms' for the neighborhood. In the center of a grand pedestrian-oriented street, large median spaces are designed as mini-parks with garden seating areas offering places for neighbors to meet and socialize. These parks also serve as 'ecological infrastructure,' bands of trees cleanse the air, while bioswales slow and cleanse storm-water before it enters the bay. The Boulevard Park Streets will be described in greater detail in the forthcoming *Streetscape Master Plan*.





Hunters Point Boulevard Parks
Park Area: 0.6 acres

N

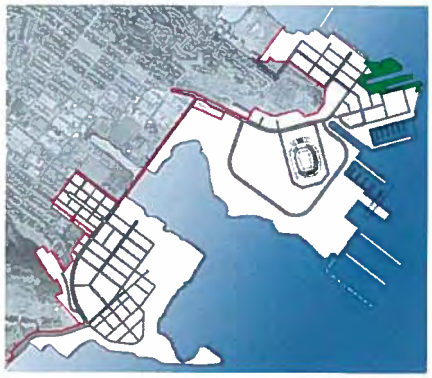
0' 200' 400'

Scale: 1" = 200'

Cultural Heritage Park

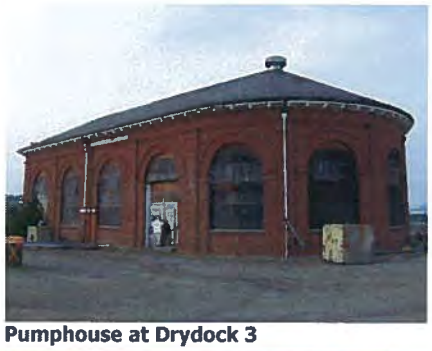
Concept: The Heart of Shipyard / Life and Work on the Waterfront

At the end of the Fisher Street neighborhood commercial corridor, and the nexus between the Hunters Point North Neighborhood and the Green Research and Development Center, the Cultural Heritage Park is the heart of the Shipyard. Here, the working history of the waterfront is evident in the historic structures and the grand scale of Drydocks 2 and 3. The park is a place to recognize the shipyard's importance to the people who worked there, and its significance to the nation, San Francisco, and the Bayview Hunters Point neighborhood. There are many stories that can be told here: stories of the Bay and its first people, the Chinese fishing communities, the shipyard and its workers, and the site's long Navy history. The design of this park will retain and reuse historic buildings, structures and materials as much as possible to preserve the spirit and essence of the place, and new design elements will have a modern, industrial character.



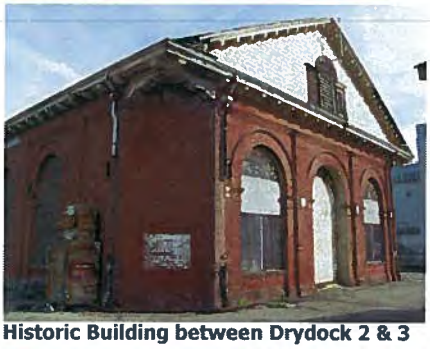
Activities & Program

The park's main program is for educational and cultural activity related to the site's history and the park will attract visitors from throughout the Bay Area and beyond. Users of the park can orient themselves to experience a specific historical use, scale, and aesthetic of the waterfront at the shipyard. Sculptural interpretive signage and kiosks, and other landscape elements may be used to describe this history in outdoor setting. Play areas for children will be interpretive and educational in nature. The historic buildings may be used for visitor centers, museums, or cafes, giving the park a distinct character and linking past and present uses. Space for a docked historical ship would further support the maritime experience.



Pumphouse at Drydock 3

Plaza spaces adjacent to the urban development can support a variety of outdoor event events and gatherings. A number of platform spaces support performance, gathering, informal seating and other spontaneous uses to occur simultaneously. Areas of open lawn provide flexible spaces and maintain open views to the grand scale of the dry docks which are the central feature of the park.



Historic Building between Drydock 2 & 3

Access & Circulation

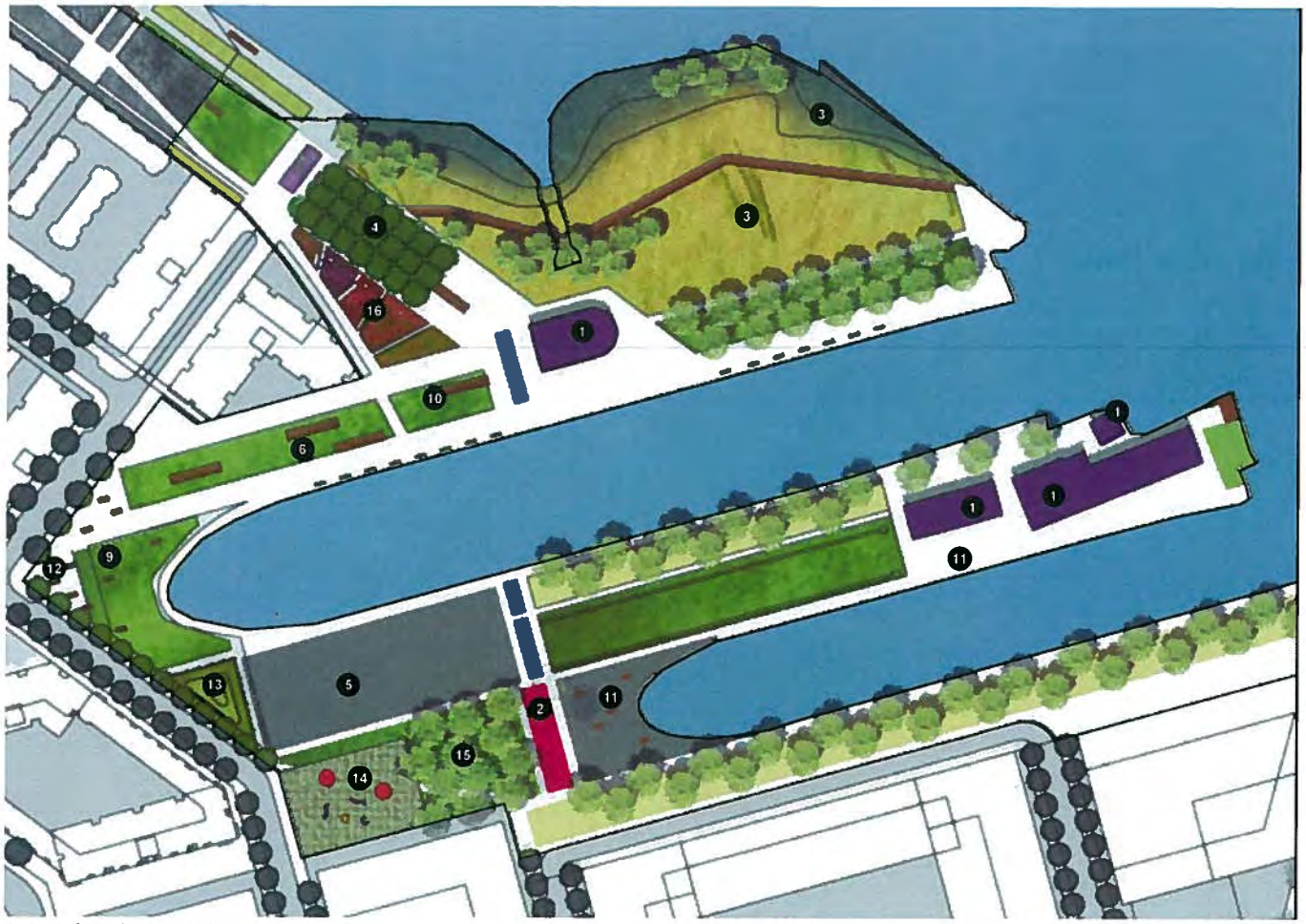
Access into the Cultural Heritage Park is multidirectional and accentuated by the meeting of two opposing city street grids at the Park's entrance. From the Bayview neighborhood, primary access to the park is by way of Crisp and Fisher, the HPS neighborhood commercial street and from Crisp and Spear through the Green Research and Development Center. Access from within HPS is possible via streets that terminate at the northeast and eastern boundaries of the park. The Bay Trail and Waterfront Promenades are integrated with the circulation of the Heritage Park and link it to other parks along the San Francisco Bay.

Precedent image

1. Historic Building/Visitor Center
2. Kiosk/Pavilion
3. Grassland / Naturalize Shoreline
4. Tree Grove
5. Multi-use event area
6. Lawn with seating plinths
9. Seating Plinth Lounging Terrace
10. Monolithic Timber Platforms
11. Interpretive Plaza
12. Entry Signage Pylon
13. Sculptural Landform
14. Playground
15. Tree Grove in Recycled Concrete and Gravel Paving
16. Gardens

Sustainability Features

The design of the park will preserve and re-use historic structures and materials such as paving and rails as much as possible. The ground plane may incorporate existing concrete slabs or recycled broken or crushed concrete. These features support the site's industrial character while diverting waste from landfills. Beyond these environmentally sustainable features, the park's central sustainable feature is about cultural sustainability – supporting the remembrance of the past with an understanding of how lives, land, and water, were shaped and reshaped here.



Cultural Heritage Park
Park Area: 15.6 acres

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Scale: 1" = 200'

Waterfront Promenade South

Concept: Mingling and Promenade

The promenade is a place for interweaving of activities and visitors along the waterfront. The promenade is a sequential series of outdoor rooms, ecological gardens (raised planting beds emphasizing a native horticultural aesthetic and beauty), small tree groves, sculpture gardens, and sloped lawn panels for lounging and picnicking. Adjacent to the Green R&D center, the landscape program may highlight green-tech features in the landscape.

Activities & Program

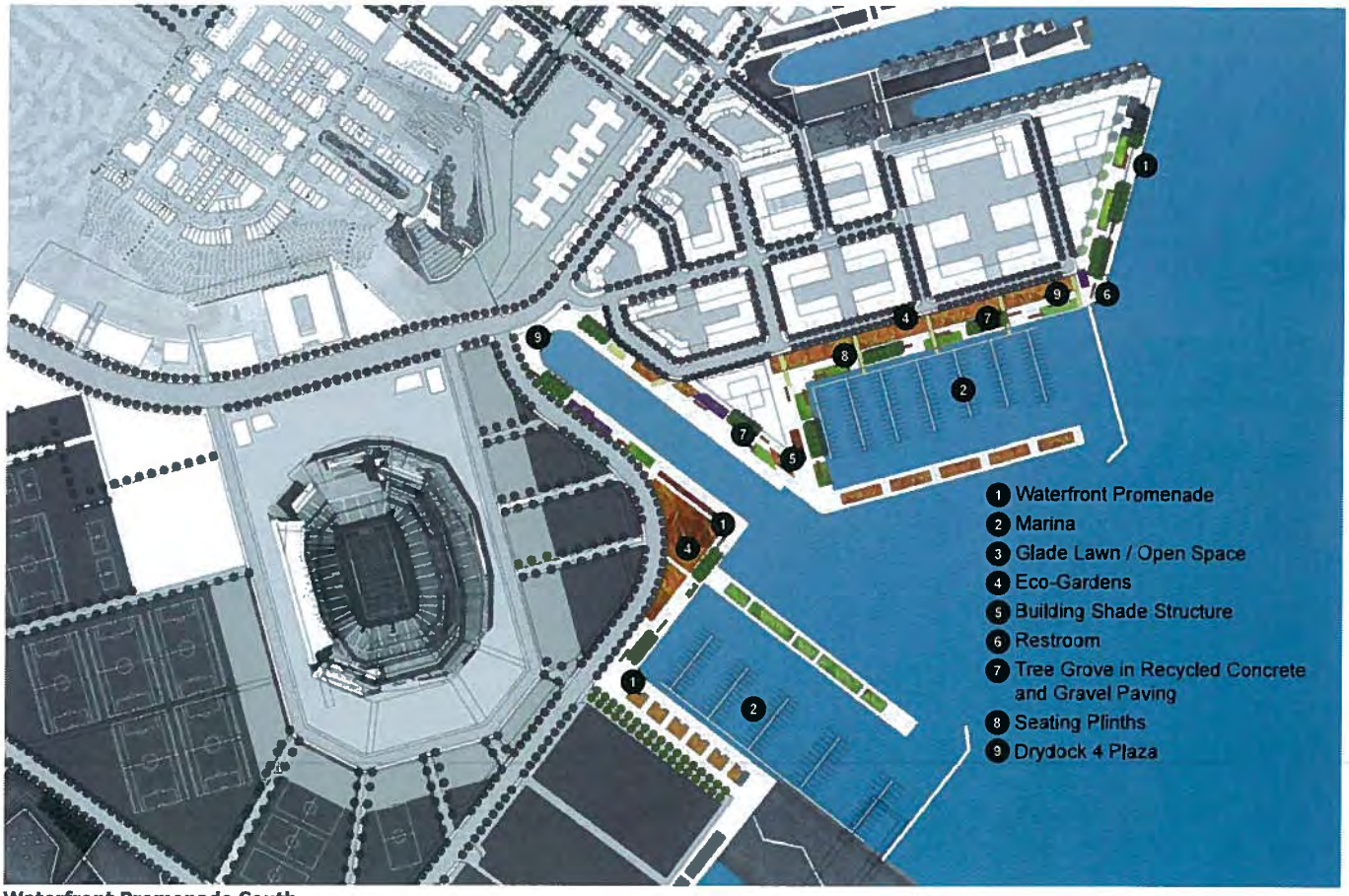
Uses and visitors in this area are diverse. Here one encounters researches from the Green R&D campus walking or sitting along promenade during lunch hours, breaks, or for inspiration, or at the start of an after-work jog. Sailors and maintenance crews socialize near entries to the marinas. Visitors, and hotel guests, exploring neighborhood streets and shopping along Fischer Avenue stroll along the Promenade or to an event at the Cultural Heritage Park. Soccer families, spectators, and those looking for a pick-up game, migrate to the Sports Field Complex along the promenade, and run into friends from the neighborhood. The variety of adjacent uses, beauty of the site, and comfortable places for seating and gathering accommodate serendipitous and spontaneous interaction among unlikely groups and friends, creating a truly successful urban place.

Access & Circulation

The Southern Waterfront Promenade creates a continuous link between the Cultural Heritage Park, Green Research & Development Campus, the Northern and Southern Marinas, the neighborhood commercial activity of Fischer Street, and the Sports Field Complex and Stadium. A main entry point onto the promenade is located at a plaza at the intersection of Spear, Fischer, and Crisp. Connections to the promenade also occur at adjacent streets and blocks. These intersections connect with that a series of pathway spaces parallel to the waterfront -- bicycle and pedestrian paths, and the Bay Trail.

Sustainability Features

Sustainable features include native plant design, stormwater gardens, and the reuse of existing materials as much as possible.



Waterfront Promenade South
Park Area: 22.4 acres

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Scale: 1" = 700'

Community Sports Field Complex and Multi-Use Fields

Concept: 'Green' Stadium

Maximizing the use of limited urban land for recreation, the Sports Field Complex will provide much-needed community sports fields, while also accommodating game-day parking for the 49ers football stadium. The 'dual-use' of this area is an efficient and ecologically preferable use of land, eliminating the need for scores of acres dedicated to asphalt parking. A specially-designed soil and sub-grade will promote healthy, living grass while supporting game-day vehicular use. To prevent rutting and damage to the fields, the design will employ a fiber-reinforcement system that is incorporated into fast-draining, sandy soils. This system is commonly used to stabilize both professional and amateur football, soccer, and baseball fields, equestrian race tracks, and golf course greens.

Activities & Program

The sports fields will serve organized play for youth, high-school, and adult intra-mural sports. While soccer may be the most popular use the fields can accommodate other sports such as football, ultimate, and cricket. The facilities will also include warm-up fields, a field house, restrooms and food concessions. The multi-use fields are designed for informal uses such as kite-flying and picnicking, as well as accommodating larger organized festivals and events. The critical mass of the fields in combination with the adjacent waterfront parks, trails, picnic and barbeque areas and other leisure offerings make this an ideal sporting complex. During the 49ers football season and other major events at the stadium, the same site will host parking and tail-gating.

Murray Field Stadium, Scotland

Access & Circulation

In addition to the efficient vehicular circulation provided by its location on Crisp Avenue, the stadium site is also served by three parking structures. Circulation within the site is primarily organized around the Ring Road, which acts as a buffer between the Stadium/ Sports Complex and the Hunters Point Shipyard Parkland. On non-stadium game days, street parking is also possible along Ring Road, serving both the stadium area and the adjacent Grasslands Ecology Park sites.

Sustainability Features

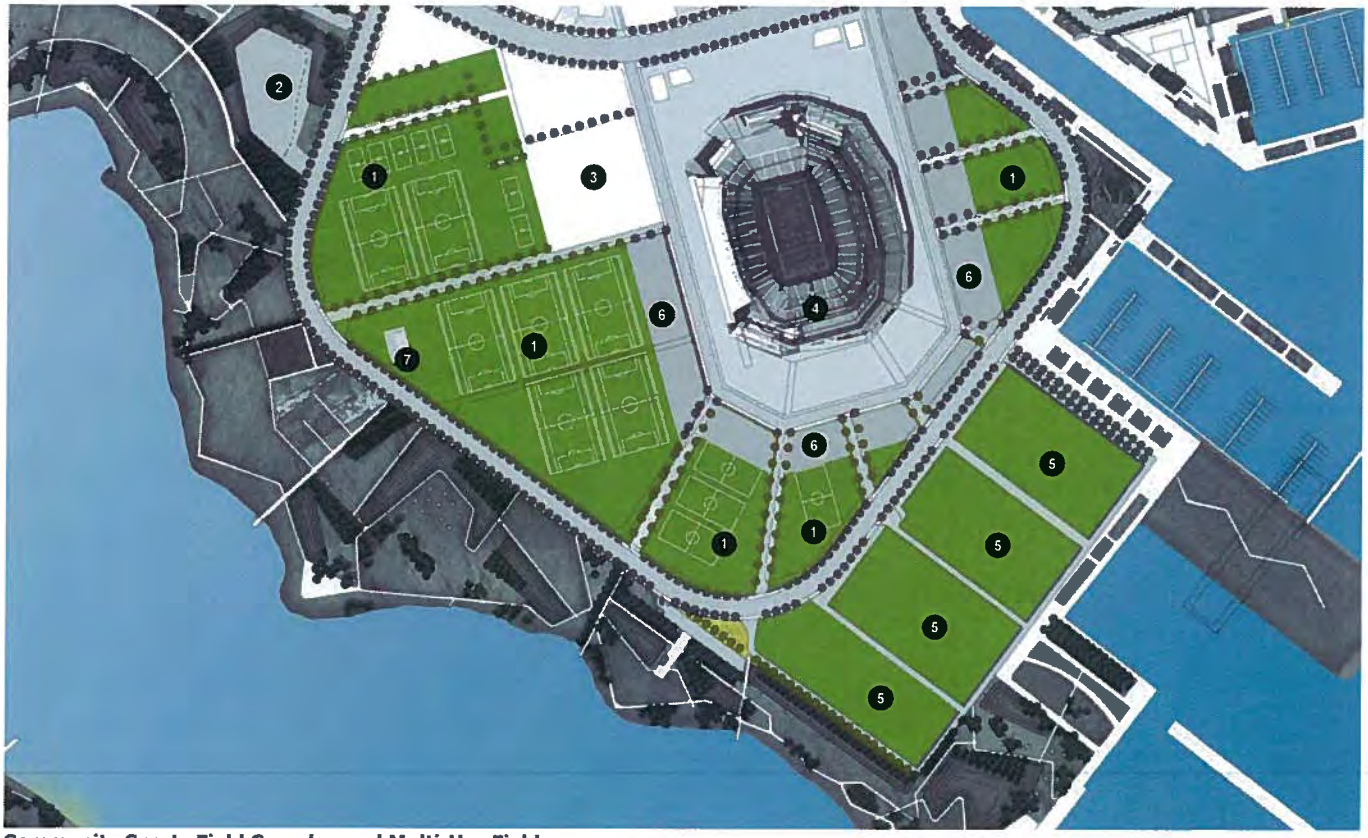
The primary sustainability feature is the efficient, dual use of the site. Additionally, the minimization of paved parking areas accomplishes the following:

Eliminates exclusive use of large spaces for vehicular-only uses.

Reduces both urban heat island effect

In addition, the site strategy provides reduces runoff, treats and detaining stormwater.

Crissy Field, San Francisco



Community Sports Field Complex and Multi-Use Fields
Park Area: 84.9 acres (59.7 acres Sports Fields Complex, 25.2 acres Multi-Use Fields)

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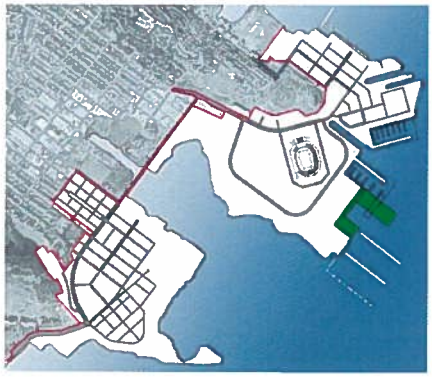
Scale: 1" = 700'

1. Sports fields (Game-Day Parking)
2. CP-HPS Parks Maintenance Yard
3. Parking Structure
4. Stadium
5. Multi-Use Lawn (Game-Day Parking)
6. Accessible / Permanent Parking
7. Stadium Restroom & Rec Center

Murray Field Stadium, Scotland

Waterfront Recreation and Education / Re-Gunning Crane Habitats



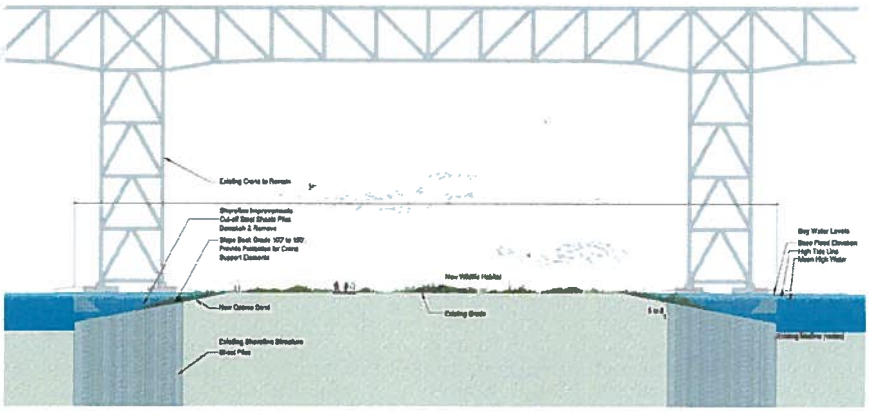
Concept: Landmark Resurgence of Nature

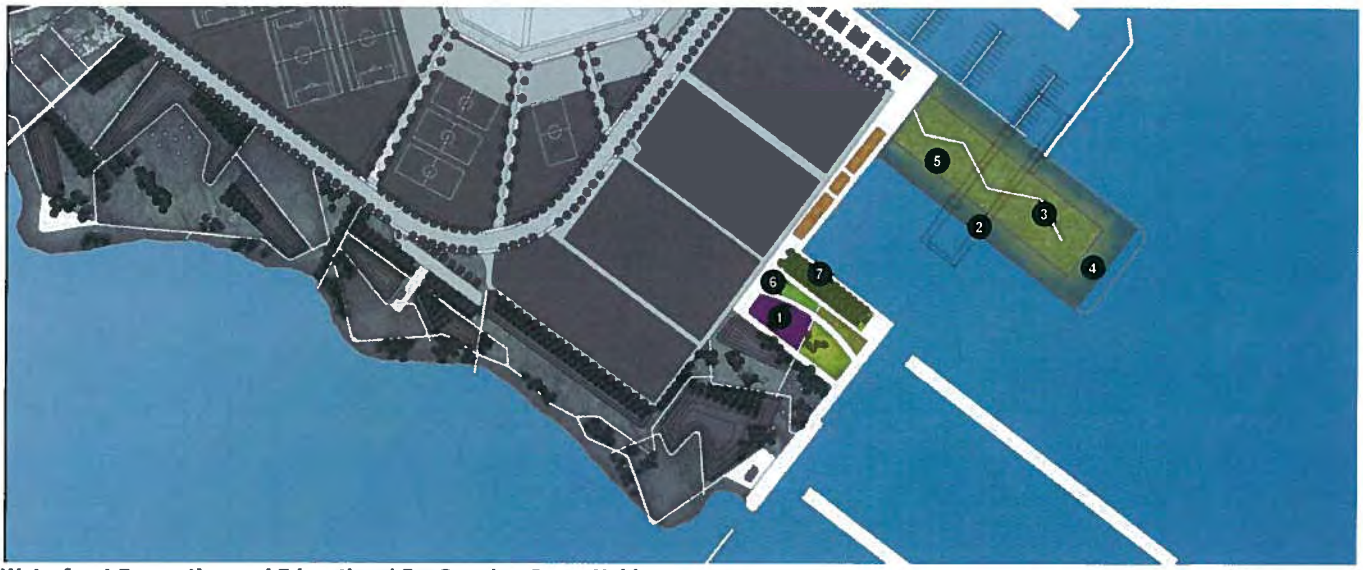
Focused on the spectacular 'Re-Gunning Crane' that forms the most powerful landmark in the cultural landscape of the shipyard, the Waterfront Recreation and Education Park is a knuckle in the park system plan. The park is designed to integrate the past industrial uses of the site, with future ecological processes that will gradually 'colonize' this area. While the Re-Gunning Crane will be left in place, the pier that surrounds it will be eroded – its walls removed and the ground will be laid back to allow water to create a fluid boundary for the former pier. As tidal wetlands and upland habitats take hold the Crane will seem to emerge from the water, and the giant machine will become a "gateway" to the bay and its ecology. The landmark Re-Gunning Crane provides a dramatic juxtaposition of the site's industrial history with the resurgence of nature at the Bay's edge.

Activities & Program

The primary activity of the site is educational. A trail will meander across the pier in a manner that off-sets the rectangular geometry of the pier, leading visitors under and through the crane to overlook points providing visitors with opportunities to view Bay wildlife. Interpretive displays will explain the history of the shipyard, and the ecology of the bay that was filled to create this man-made landmass. The site is intended to be used by small classes of students as well as introspective visitors. The waterfront educational area will also hold a small teaching marina, a boat house and classroom building where sailing and water related sports can be taught.

The re-gunning pier will be modified to produce a mixture of new open water, tidal wetlands, and upland habitats. The walls of the pier will be removed down to the existing mudline and the ground will be laid back to provide a gentle gradient consisting of open water and intertidal areas. Along portions of the shoreline protected from wind-wave action, wetland soils will be placed at appropriate elevations. Although native tidal salt marsh vegetation will likely colonize the site naturally, some planting with native salt marsh species will be





Waterfront Recreation and Education / Re-Gunning Crane Habitats
Park Area: 16.2 acres
(6.7 acres Waterfront Recreation and Education, 9.5 acres Re-Gunning Crane Habitats

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Scale: 1" = 700'

1. Waterfront / Boat Learning Center
2. Re-Gunning Crane
3. Trail / Boardwalk
4. Tidal Wetlands
5. Upland Habitats
6. Open Lawn
7. Tree Grove and Seating

performed to increase the rate of marsh establishment. Portions of the pier subject to greater wave action will remain un-vegetated, providing substrate for benthic organisms such as oysters and foraging habitat for black oystercatchers and other shorebirds of rocky intertidal zones. The salt marsh/rocky intertidal zones will transition upward to a mosaic of dune sub-shrub, scrub, and grassland vegetation that will be planted on upland surfaces of the pier after appropriate soils are imported. These target plant communities consist of short-statured species that have low water use requirements to facilitate water conservation and that will provide habitat for sparrows and other landbirds, as well as some small mammals. The Re-Gunning Crane will be left in place and will continue to provide a nesting site for peregrine falcons, which have nested on the crane for several years.

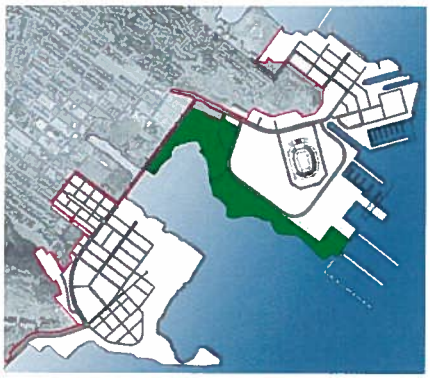
Access & Circulation

The Waterfront Recreation and Education Area will form a gateway in two directions. On one side will be the natural grasslands and wetlands of Parcel E. One the other will be the end of the Waterfront Promenades. This area will be easily accessible from the ring road surrounding the Sports Fields and Multi-use Lawn.

Sustainability Features

This Park area focuses on the use of native plants of the Bay and displays reconstructed habitats. The site's most important cultural feature – the Crane – is saved and showcased as a monument to the past uses of the land. Nearby, Piers 1, 2, and 3 will be cut off from the mainland providing a roosting place for waterbirds safe from predators.

Grasslands Ecology Park



Concept: Grasslands Ecology

Building on the planned restoration project at Yosemite Slough, the Grasslands Ecology Park will transform contaminated Navy lands on the north shore of the South Basin with vast new habitat areas, supporting biodiversity and the Bay ecosystem. Sculptural landforms, native grasslands, freshwater wetlands, shoreline mudflats and tidal wetlands, coastal scrub, and tree groves add to the diversity of habitats. The existing natural landscape is supplemented by designed landscape components such as clustered windbreaks and viewing mounds, shoreline overlooks and a sinuous network of pathways that support passive recreation uses. In addition, an interpretive eco-garden (a more formal planting of native species) designed to accommodate large outdoor classes creates a setting for the study of bayside habitats and ecology. These landscape strategies provide places from which to seek respite from the intensity of the City and connect with nature at the Bay's edge.

Activities & Program

The Grasslands Ecology Park provides overlapping environmental and programmatic benefits to the open space system at Hunters Point. Human activity here is programmed for passive recreation use: walking and bike riding along the Bay Trail, sitting aside windbreaks, and observation and study along the naturalized water edge. An area adjacent to the Stadium Ring Road may also include a large dog park, and dedicated picnic areas.

Within the Grasslands Ecology Park, at least 43 acres of native grassland will be restored by the removal of non-natives and planting of native grass and forb species. Trail setbacks, habitat fencing, screening, and signage will be used where needed to protect sensitive wildlife habitat and flora. Although trees and shrubs may be planted elsewhere within the Grasslands Ecology Park to provide a mosaic of habitats, woody plants that are planted or allowed to establish naturally within the grasslands will be limited to a few small, scattered patches of low-growing coastal scrub plants such as coyote brush, which will provide cover for wildlife that may otherwise forage in the grasslands.

Access & Circulation

Access into this park is facilitated by a parking lot on the east end of the park and ample off-street parking along the Stadium Ring Road. Another parking lot serves the west end near Crisp and the Stadium Ring Road. The multiple parking and access points allow for a variety of user scenarios: from families traveling to the Park and unloading bicycles for use along the Bay Trail to elderly visitors needing accessible waterfront connections to functional access for park maintenance crews.

The entrances to the park are informal in character, with numerous paths extending from the Ring Road sidewalk and continuing in multiple directions. Park users can choose a direct path toward the waterfront or a route that encompasses the organic layout of the Park. The Bay Trail experience is characterized by wetlands and the shoreline edge, bringing park users within close view of Bay wildlife and offering a discernibly less urban park condition.

Sustainability Features

A main focus of this park is to create new habitat areas and bring the experience nature to urban dwellers and to support nature education. Native plantings will also minimize the need for irrigation.

Grasslands Ecology Park
Park Area: 82.1 acres
(44.9 acres at Parcel E, 37.2 acres at Parcel E-2)

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Scale: 1" = 700'

Candlestick Point

Alice Griffith Neighborhood Park

Concept: Neighborhood Commons

Alice Griffith Neighborhood Park serves as the community commons for the renewed Alice Griffith neighborhood. It is designed to become the outdoor living room of the community, where neighbors get to know each other, socialize and celebrate their commonalities and differences. The park's east-west orientation is purposeful – it acts as a link between the existing Bayview neighborhoods and the rebuilt Alice Griffith housing development, and it is hoped that the existing adjacent community will use this open space to connect with their new neighbors.

Access & Circulation

Centrally located to allow the neighborhood streets system to intersect the park in an even rhythm, the park is approachable and accessible from all sides. Entrances are highlighted at each intersection with invitational benches and shade groves, and a continuous E-W path links the park sections that span four blocks.

Activities & Program

Similar in width to the very successful South Park, it has a key mix of uses that will draw users of all ages and interests. The park offers a mix of active and passive uses including two multi-purpose open lawn areas, a play ground and tot lot, a fenced running area for small dogs, a shade pavilion with barbeques and picnic tables, and a basketball court.

Sustainability Features

The park also serves and ecological function for the new neighborhood. New streets are designed to drain to the park, where bio-swale storm water gardens will filter storm water before it reached the bay. These gardens have the opportunity to educate the residents about the impacts of urbanization on natural watersheds, and how designed interventions can mitigate some of that impact. Other key sustainability features at the park include a section for community gardens.

Alice Griffith Neighborhood Park
Park Area: 1.4 acres

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0' 200' 400'

Scale: 1" = 200'

1. Low Wall
2. Specimen Tree
3. Playground / Tot Lot
4. Flowering Tree Grove with Seating
5. Bioswale
6. Lawn
7. Pathway
8. Gardens
9. Community Gardens
10. Dog Run
11. Basketball Court
12. Tool Shed

Candlestick Point Neighborhood Park

Concept: Neighborhood Recreation

Candlestick Point Neighborhood Park is designed to become the focal point of the new Candlestick North neighborhood. It is seen as the common "backyard' of the high density development that will surround it, where recreation and socialization are key community offerings.

Access & Circulation

The park is centrally located and can be reached by a few minute walk from anywhere within the CP North neighborhood. Adjacent Boulevard Park Streets provide connections to Alice Griffith Neighborhood Park two blocks to the west, and the State Park, two blocks to the north, and also two blocks to the east.

Activities & Program

The Neighborhood Park offers a mix of active and passive areas for users of diverse ages and interests; it includes a large multipurpose open lawn, available for Frisbee, soccer, and kite flying, playgrounds for tots and school age children, community gardens, seating areas, basketball courts and garden beds. A shade pavilion with adjacent picnic tables and BBQs will also be provided. A perimeter walk with benches will also allow a more passive interaction with park, where it will be possible to enjoy the outdoors in a more introspective and quiet fashion.

Sustainability Features

A central organizing feature of the park is a storm water garden that filters on site and adjacent street water. Climate-adapted garden beds can be organized as water wise demonstration gardens. Community garden plots give urban dwellers a place to get their hands dirty and enjoy the pleasures of growing fresh food and flowers.

Candlestick Point Neighborhood Park
Park Area: 3.1 acres

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Scale: 1" = 200'

1. Open Lawn
2. Bio-swale
3. Playground
4. Shade Pavilion
5. Volleyball Courts
6. Basketball Courts
7. Monolithic Wood Seating Plinths
8. Community Gardens
9. Seating Terrace under Tree Groves
10. Perimeter Garden
11. Park Entry Pylon on Each Corner

Bayview Gardens / Wedge Park

Concept: "Central Square"

The Bayview Gardens/Wedge Park is the "Central Square" for Candlestick Point. Opening up from the Harney Way retail street, it provides dramatic views of Hunters Point and the Bay and provides a strong link between the urban development and the State Park.

Access & Circulation

Located at the seam of the two urban grids of the new development the Wedge Park can be easily accessed from all directions. The park is a key feature of the urban plan that stitches the urban neighborhoods together with the state park. This interface brings urbanity to the park core, and the park to the urban heart of the new development.

Activities & Program

The parks uses are primarily meant to encourage community gathering and neighborhood socializing. While tot lots and play grounds delight the children, the park also offers a comfortable and sophisticated place for the older generations – a central square where one comes to promenade, socialize, and people watch. A café and an interactive play fountain are the pivot point of the park, while ornamental gardens, and storm water rain gardens provide a sense of enclosure on the west side. Lawn areas with edge paths allow the set up of community fairs, farmers markets, music festivals, and art and food festivals. The design is intended as a flexible canvas that will encourage a variety of programs.

Sustainability Features

All parks within the new development, including most importantly this central square, will integrate sustainability in their design and maintenance. To facilitate this, several features are provided – such as storm water gardens, drought tolerant garden beds, shaded seating areas and use of lawn only where large gatherings are to be held.

Bayview Gardens / Wedge Park
Park Area: 2.5 acres

1. Plaza
2. Cafe / Information Kiosk
3. Tot Lot
4. Lawn
5. Shade Structures
6. Ornamental Gardens

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0' 200' 400'

Scale: 1" = 200'

Mini-Wedge Park

Concept: Bayfront Connection

The Mini-Wedge Park serves as a primary connection between the urban core of the new Candlestick Point and the State Park beach area. A range of programs within an intimate setting produces a space that enlivens the neighborhood while also providing a critical connection between the urban parks and the bay edge.

Access & Circulation

Long linear paths run through the center of the park and along its northern edge, and carry pedestrians from neighborhood streets to the State Park waterfront. The wedge shape opens vistas from the density of the urban neighborhood into the expansive spaces and sweeping arc of the water's edge.

Activities & Program

The park's program strategy is focused on generating interaction among neighbors and visitors by providing varied activities within a relatively intimate scale. The programmatic gradient flows from active to passive as users move from the urban edge toward the water. A tot lot and dog run on the northwest side provide families with program-specific spaces. As visitors move toward the southeast, a generous lawn with trees promotes gathering, conversation and picnics.

Sustainability Features

A focus on sustainable stormwater management provides both an ecological and formal organizational structure for this park. A long bioswale runs the length of the space, intercepting and cleansing of stormwater from the adjacent neighborhood street before runoff enters the State Park Beach area.

Mini-Wedge Park
Park Area: 1.1 acres

1. Bioswale
2. Tot Lot
3. Shade Structure
4. Plaza
5. Lawn
6. Grasslands
7. Dog Run

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0' 200' 400'

Scale: 1" = 200'

Candlestick Point Boulevard Parks

A hybrid of street and park, the Boulevard Park Streets bring broad fingers of green space into the urban neighborhoods, linking interior parks with bay-front parks. These streets have a strong pedestrian scale and quality, and serve as public 'front yards' for the neighborhoods. Broad landscaped medians or sidewalks are designed as mini-parks with gardens seating areas offering places for parents to sit outside with their children or workers to eat lunch in the sun. These parks also serve as "ecological infrastructure," bands of trees cleanse the air, while bioswales slow and cleanse storm-water before it enters the bay. At Candlestick Point, one Boulevard Park street will link the Alice Griffith Neighborhood Park with Candlestick Neighborhood Park and the state park. On this street, the park space will be a 30-40' wide expanded sidewalk space on the north (sunny) side of the street. A second, perpendicular Boulevard Park Street will link the CP Retail Center with CP Neighborhood Park and the state park. The Boulevard Park Streets will be described in greater detail in the forthcoming *Streetscape Master Plan*.

Candlestick Point Boulevard Parks
Park Area: 1.7 acres

1. Median Boulevard Parks
2. Sidwalk Boulevard Parks

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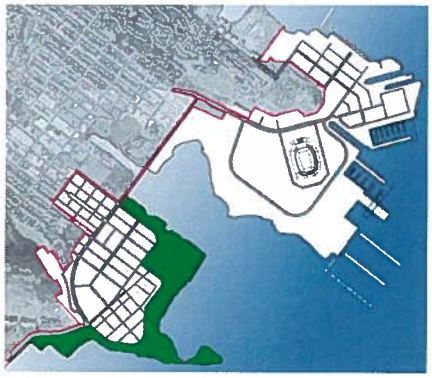
Scale: 1" = 200'

Candlestick State Recreation Area



Vision

The Candlestick Point recreation area is a unique opportunity in the State Park system and along the San Francisco Bay Shoreline to create a model urban recreation area that links city residents and regional visitors to the diversity of estuary and upland habitats of the Bay and demonstrates integrated sustainable design principles for reclaiming fill areas for park uses.

This *Concept Plan* proposes an integrated parks and open space system with improvements to the Candlestick Point State Recreation area that will support the State Park's goals of preserving and protecting the environment while encouraging urban dwellers to experience nature at the bay edge and providing opportunities for place-based outdoor recreation. With a seamless design approach, the park's existing well-used areas will be revitalized and new undeveloped bay edge parklands will be developed.

The park improvements will finally complete the original vision of Candlestick State Recreation Area – to bring the values of the State Park system to the city, to provide recreational and cultural facilities and to connect urban dwellers with the natural environment. Furthermore, the State Park is poised to be one of the state's finest urban waterfront parks, at the forefront of urban ecological design, managing urban stormwater while creating habitat and providing environmental education.

Design Coordination

While the State Parks Department will perform their own master planning process for the CPSRA, these plans will be coordinated with the City to realize the potential of this vision. The follow principles are proposed by the City of San Francisco to guide the planning and design of the park:

- Design city parks and state recreation areas to feel from a user perspective as one park system, despite potential programmatic and operational differences between jurisdictions.
- Develop a park that is programmed and designed for safe and active 18-24 hour daily use by the public.
- Design a pedestrian and bike accessible transition zone between all private development parcels and the park.
- Develop frequent routes into the park from the neighborhood aligning with the planned street network with major linkages with transit stops, bike routes and linear greenway features.
- Create a mixture of passive and active spaces that activate the open space drawing neighbors and visitors to the waterfront.
- Provide duplicative trail systems including linkage to a Class I bike and multi-use recreation trail as a transition between the neighborhood and State Park, a continuous Bay Trail close to the water, and multiple linkages between.

Candlestick Point State Recreation Area
Park Area: 96.7 acres (within project boundary)

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Scale: 1" = 700'

- Install multiple human powered boat access boating including facilities for windsurfers south of Bayview Hill.
- Preserve and expand the existing pocket beach.
- Integrate stormwater treatment systems with the neighboring development to provide model/demonstration sustainability systems and habitat spaces.
- Utilize stainable design principles through park planning to expand the ecological functions of the recreation area and minimize resource consumption by park facilities, programs and users.
- Introduce limited commercial uses to provide food and recreational services for visitors.
- Balance dedicated parking facilities for the recreation area with available on and off street parking provided in the neighboring development and transit access to the area.
- Upgrade existing and install additional fishing a viewing piers into the bay.
- Provide multiple picnicking and barbecuing facilities to accommodate family and social gathering in multiple areas of the park, and consider larger scaled gathering opportunities for events.

Design Potential

The following describes the design potential for the CPSRA.

An extensive trail network, including the San Francisco Bay Trail will link areas within the park with the adjacent urban neighborhoods and the waterfront. Park visitors will enjoy open lawns and meadows, picnic areas, interpretive exhibits, outdoor classrooms, and community gardens. Overlooks, fishing piers, wetlands boardwalks, beaches, and windsurf and kayak launches invite visitors to the water's edge.

The State Parks design will feature a simple, sensitive, and expressive palette of landscape materials to allow the park to grow incrementally over time. Native grasslands, meadows, wooded groves, and more formal 'eco-gardens' will provide a system for choreographing the landscape experience. Landforms and windbreak plantings will structure the experience of place, framing views of the water, and offering refuge from wind and fog. Though identifiable as a State Park, distinct from the other city waterfront parks, the State Park has a strong role in the overall park network, linking and connecting with a variety of other city, neighborhood and community parks.

The 157-acre State Park is divided into many smaller sub-areas, described below.

Grasslands South

This area of the existing State Park is largely undeveloped and has been used for game-day stadium parking. A new Grasslands South area could be improved with native grasslands, glade lawns, and earthworks shaped to provide shelter from the wind and enhance views. Site features could include overlooks, restrooms, and parking.

Bayview Gardens North

Formerly developed as a boat launch, siltation of the South Basin has caused this use to be abandoned. The existing paved parking area is used for game-day stadium parking. Located between the bay and the proposed Bayview Gardens / Wedge Park, the Bayview Gardens North area offers the greatest integration of urban and naturalized open spaces anywhere in the open space system and will be a strong visual gateway to the State Parks and the bay. Bio-swales, storm water 'Eco-Gardens,' and a potential salt-marsh restoration are central features of this area.

The Last Rubble

Until recently, the Last Rubble area was characterized by large piles of rubble and debris, remnants of the site's previous use as a dumping ground. The California Integrated Waste Management Board completed a rubble and debris removal project in April 2009. As a result of this, the majority of the rubble and debris was either removed or crushed on site. This area of the State Parks remains underutilized and is not currently programmed for recreation, with the exception of a walking path. As the Last Rubble Area will be located adjacent to a substantial urban population, this area could be transformed into a new center for the State Park, with a wide variety of program elements.

The park ranger station/visitor's center could be located here as well as a "Great Meadow" for passive recreation and park events. Other features may include parking, picnic areas, overlook terraces, restrooms, and a restaurant/ café.

Wind Meadow

The Wind Meadow includes part of the existing State Park, including the Main Beach. This area will be reconfigured to meet the new urban development edge and interface with the Mini-Wedge neighborhood park. This area will contain a secondary entry and parking lot, and gateway entry kiosk for the State Park. Features here may include new restrooms, picnic areas, waterfront overlooks, expanded tidal wetlands, and access to the water.

Heart of the Park

The Heart of the Park is part of the existing developed State Park. New park area will be added and the existing landscape structure will be retained and enhanced. Planting and overall aesthetics will be improved, pedestrian pathways will be renewed and added, and program areas will be developed for greater use. Site features could include upgraded restrooms, overlook terraces, large and small group picnic areas, and an interpretive amphitheater.

The Point

The landscape of the Last Port will be revitalized with improvements focused on pedestrian circulation, safety and way finding; intensifying areas for increased use; improving the overall park aesthetics and landscape ecology; and reconnecting visitors to the bay shoreline. Native grasslands and shorelines will be restored and stabilized, providing areas for activities such as strolling, picnics, kite flying, and fishing.

The Neck

The existing Neck area is a narrow, eroded section of the State Park that includes a beach and pier. Park area will be added here to increase the width of the park and provide a continuous park experience along the shoreline. New features here could include a parking lot, windsurf/kayak launch, overlook, and picnic areas.

Last Port

The landscape of the Last Port will be revitalized with improvements focused on pedestrian circulation, safety and way finding; intensifying areas for increased use; improving the overall park aesthetics and landscape ecology; and reconnecting visitors to the bay shoreline. Native grasslands and shorelines will be restored and stabilized, providing areas for activities such as strolling, picnics, kite flying, fishing, and direct access to the bay for swimming, kayaking, and windsurfing.

View near Bayview Gardens / Last Rubble area of the Candlestick Point State Recreation Area

Golden-Crowned Sparrow

Checkered Skipper

Fiery Skipper

Habitat Enhancement Measures

A number of measures will be implemented to enhance wildlife habitat conditions within the Project site. Wildlife enhancements would occur primarily in open space areas such as the Grasslands Ecology Park and other parks on the site, though enhancements such as removal of non-native invasive plants and planting of trees and shrubs will occur at scattered locations throughout the park as well. These enhancement measures will focus on areas outside the CPSRA, since the Project will neither impact directly, nor have control over enhancements in, the portion of the CPSRA that is not subject to the land transfer agreement. However, these or similar measures are recommended for the CPSRA as well to enhance habitat conditions there.

- **Control of non-native invasive species:**

  Most of the Project site is currently dominated by non-native plants. Several of these species, including acacias, wild oats, black mustard, bromes, iceplant, and pampas grass, are listed on the California Invasive Plant Council's Invasive Plant Inventory Database (http://www.cal-ipc.org/ip/inventory/weedlist.php). These species are particularly invasive, having the potential to out-compete native plants, expand over large areas, and significantly reduce the ecological value of natural areas on the site. These invasive, non-native species would be removed during initial habitat enhancement efforts to provide areas for creation of higher-quality habitats and to prevent their spread into restored native habitats. Monitoring and ongoing removal/control of these species would be implemented to ensure against the re-establishment and spread of these species on the Project site.

- **Restoration of grasslands:**

  To maintain habitat for grassland-associated wildlife species on the site, grasslands extensive enough to support such species would be maintained and enhanced through the restoration of native grasses. Within the Grasslands Ecology Park, at least 43 acres of native grassland will be restored by the removal of non-natives and restoration, through seeding and/or plugs, of native grass and forb species. Such grassland habitat would not be well manicured or regularly mown (e.g., it will have the appearance of native grassland, not lawn), and signage will be erected discouraging use of this area for recreational purposes. Although trees and shrubs will be planted elsewhere within the Grasslands Ecology Park to provide a mosaic of habitats, woody plants that are planted or allowed to establish naturally within the grasslands will be limited to a few small, scattered patches of low-statured coastal scrub plants such as coyote brush, which will provide cover for wildlife that may otherwise forage in the grasslands. These grasslands would be monitored annually for evidence of the presence of undesirable levels of woody and invasive plants, which will be removed when found to maintain dominance by native grasses and forbs.

Detailed design of the grassland restoration area will be performed by a qualified restoration ecologist. The planting palette for grassland areas will be developed after the precise location of the grasslands is determined and following a thorough examination of soil conditions (which may be modified by the Navy's remediation on HPS), drainage, and other factors. Examples of native grasses and forbs that could be included in planting plans for these grasslands include the following:

Red-Tailed Hawk

Yarrow (*Achillea millefolium*)

California brome (*Bromus carinatus*)

Paintbrush (*Castilleja subinclusa*)

Blue wildrye (*Elymus glaucus*)

Golden yarrow (*Eriophyllum confertiflorum*)

California poppy (*Eschscholzia californica*)

Red fescue (*Festuca rubra*)

Pursching's lotus (*Lotus purshianus*)

Miniature lupine (*Lupinus bicolor*)

Arroyo lupine (*Lupinus succulentus*)

California melic (*Melica imperfecta*)

Purple needlegrass (*Nasella pulchra*)

One-sided bluegrass (*Poa secunda*)

Chia (*Salvia columbariae*)

Bee plant (*Scrophularia californica*)

Checkerbloom (*Sidalcea malvaeflora*)

Blue-eyed grass (*Sisyrinchium montanum*)

Goldenrod (*Solidago spathulata*)

Three weeks fescue (*Vulpia microstachys*)

Western Meadowlark

- **Increase in tree/shrub cover:**

  Approximately 10,000 net, new trees, or more than four times the number currently present in the Project area, will be planted throughout the Project area. While some of these trees will be planted as street trees or for ornamental purposes, a large number will be planted specifically with wildlife habitat in mind. In conjunction with tree planting, numerous shrubs, forbs, and ground cover will be planted and maintained. Within parks such as the Grasslands Ecology Park (outside of the designated grassland restoration areas), trees, shrubs, and ground cover will be planted in clusters to provide dense, multi-layered clumps of vegetation that will provide food, cover, and roosting, nesting, and foraging sites for a variety of wildlife species. Though

Yellow Warbler

these areas are expected to be used by mammals, reptiles, amphibians, and a variety of invertebrates, these plantings will be particularly beneficial as foraging and nesting habitat for birds. Increases in foliage height diversity and vegetation volume resulting from the planting of numerous trees and shrubs on the site, most of which currently supports little woody vegetation, would result in increases in the diversity and abundance of breeding and migratory birds.

Because the majority of the Project site is located on fill material derived from a variety of sources, soil quality is not optimal for plant growth in many areas. Prior to planting, the soils in a given area will be examined by a qualified soils scientist or horticulturist, and soil amendments will be provided as needed to ensure suitable conditions for growth of the desired plant species. On portions of HPS Phase II (e.g., the former landfill), planting of deep-rooted vegetation may be constrained by capping of the landfill. The cap may physically inhibit root growth, and piercing of the cap by roots would be undesirable to maintain the integrity of the cap. If necessary, soil would be imported into such areas to provide contoured mounds and ridges which would serve as planting substrates for deeper rooted trees. Detailed design of native revegetation areas will be performed by, or in consultation with, a qualified restoration ecologist.

Native vegetation shall always be favored in determining the appropriate trees, shrubs, and other vegetation to plant in certain areas. Native plant species often require less fertilizer, irrigation, and pesticides than many non-natives, and native plant species tend to provide more of the structural and dietary resources required by native animals than do non-native plants. The planting palette for particular areas will be developed on a site-specific basis, taking into account the target wildlife species, the size of the planting area, constraints on deep-rooted plants, the desire to maintain cover for habitat connectivity purposes, and other factors. Examples of native trees and shrubs that could be included in planting plans on the Project site include the following:

Gopher Snake

Big-leaf maple (*Acer macrophyllum*)

California buckeye (*Aesculus californica*)

Western redbud (*Cercis occidentalis*)

Coast live oak (*Quercus agrifolia*)

Valley oak (*Quercus lobata*)

Coast redwood (*Sequoia sempervirens*)

Toyon (*Heteromeles arbutifolia*)

Blue elderberry (*Sambucus mexicana*)

Chamise (*Adenostoma fasciculatum*)

California sagebrush (*Artemisia californica*)

Coyote brush (*Baccharis pilularis*)

California lilac (*Ceanothus thyrsiflorus*)

Buckwheat (*Eriogonum fasciculatum*)

Silk tassel (*Garrya elliptica*)

Silver bush lupine (*Lupinus albifrons*)

Sticky monkey-flower (*Mimulus aurantiacus*)

California wax myrtle (*Myrica californica*)

Coffeeberry (*Rhamnus californica*)

Lemonade berry (*Rhus trilobata*)

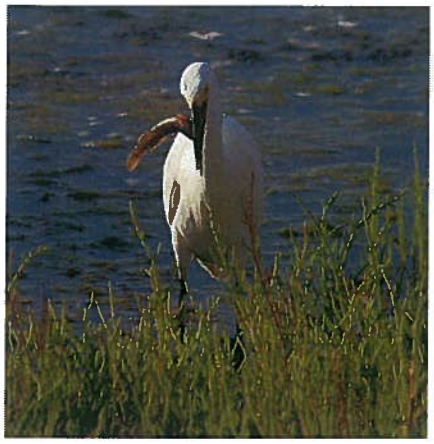
Fuchsia-flowering gooseberry (*Ribes speciosum*)

Black sage (*Salvia mellifera*)

However, site-appropriate non-native species that provide food or structural resources that are particularly valuable to native wildlife may also be considered. For example, flowers of eucalyptus trees and bottlebrush shrubs provide abundant nectar that is used by a variety of native birds, and that attracts insects that in turn serve as food for birds. Palm trees provide cavities (between the petioles of old fronds) that can serve as nesting sites for species such as barn owls and American kestrels. Monterey pine and Monterey cypress are not native to San Francisco, but both are native to limited areas along the Central California Coast. These hardy species are thus well adapted to climatic conditions on the Project site. Judicious incorporation of specific non-native plants within the native-dominated planting palette will allow for wildlife diversity to be maximized within the new planting areas. Non-native species used in landscaping will be species that are adapted to local conditions so that they also will require minimal irrigation, fertilizers, and pesticides.

- **Maintenance of habitat connectivity:**

To help maintain habitat connectivity through the site, at least along the southern edge of HPS Phase II, in light of the roads, trails, and buildings that will be constructed in the Project area, vegetated areas providing cover for dispersing mammals, reptiles, and amphibians would be provided. In some areas, restored tidal marsh will provide some habitat connectivity along the shoreline. "Hardened" shoreline treatments, such as rock, will provide interstitial spaces that provide cover for these small animals as well. In addition, landscaping along the landward side of the shoreline treatments will provide vegetation that can serve as cover for these animals. To the extent feasible, potential obstacles to movement of small animals, such as fences, walls, curbs, and roads will be designed to allow for passage of animals across or through these features. On Candlestick Point, the SRA will be widened along the southwestern shoreline at an existing "pinch point". Revegetation of this area, and maintaining vegetation all along the CPRSA shoreline, would maintain habitat connectivity along the Candlestick Point shoreline as well.



- **Maintenance of refugia for waterbirds:**

  Waterbirds such as egrets, herons, and shorebirds forage along the Candlestick Point shoreline and along the southern shore of HPS Phase II. At low tide, these birds forage on exposed mudflats and beaches, while at high tide, they may congregate in areas providing high-tide roosting and/ or foraging habitat. In planning for future trails, vistas, and other features/ facilities that might concentrate human activities along the waterfront, it is important that human access to shoreline areas is not so pervasive that there are no undisturbed high-tide roosting areas for these birds. Therefore, at least one shoreline area where waterbirds can roost at high tide would be provided that is at least 200 feet from the nearest formal trail or shoreline observation area. Here, waterbirds would be able to roost on riprap, beach, or some other open area removed from concentrated human activity.

  In addition, the bases of the three piers in the southeastern corner of HPS Phase II will be removed to prevent mammals from accessing these piers. The remainder of each of these three piers will be left in place to provide roosting sites for gulls, cormorants, pelicans, and terns. Shorebirds and herons may roost on these structures as well. While waterbirds currently use these piers for roosting, the number of birds using these piers, particularly at night when mammalian predators such as raccoons are most active, may be limited by the ability of mammalian predators to access these piers. Removal of the bases of these piers will prevent the ability of mammals to access roosting birds. The increased security of the piers may also encourage some waterbirds to begin nesting on the piers. If birds show interest in using these piers as nesting sites, addition of nesting substrate such as gravel or shells in certain areas could further encourage nesting by waterbirds.

- **Provision of nest boxes:**

  Nest boxes for birds will be placed in appropriate locations throughout parks and open space areas. Nest boxes will range in size from larger boxes that will be suitable for use by barn owls and American kestrels to smaller boxes that would provide nest sites for chestnut-backed chickadees, tree swallows, and other birds.

Sanderling, Western Sandpipers

- **Creation of tidal marsh and high beach habitat**

  There are several opportunities for creating tidal marsh or high beach/dune habitat in the project area. Along the southern shoreline of HPS Phase II and portions of the shoreline of Candlestick Point that are not subject to high wave action, marsh soils will be placed on the outboard side of shoreline revetments that will be constructed to protect the shoreline. With limited planting of native salt marsh plants, but primarily through natural recruitment, narrow bands of tidal salt marsh will be created in these areas. More extensive tidal marsh could be created in a few "pockets" along the northern and eastern shores of Candlestick Point, where laying back the slope along the shoreline could allow for the creation of broader marsh that would transition upslope to dune scrub and upland habitats. These habitats will contribute organic matter to intertidal and subtidal habitats nearby,

enhancing benthic animal populations and so improving foraging habitat for fish, shorebirds, and diving ducks. These vegetated bands would also provide foraging habitat for some small birds and cover for mammals.

- **Increase in open water habitat**

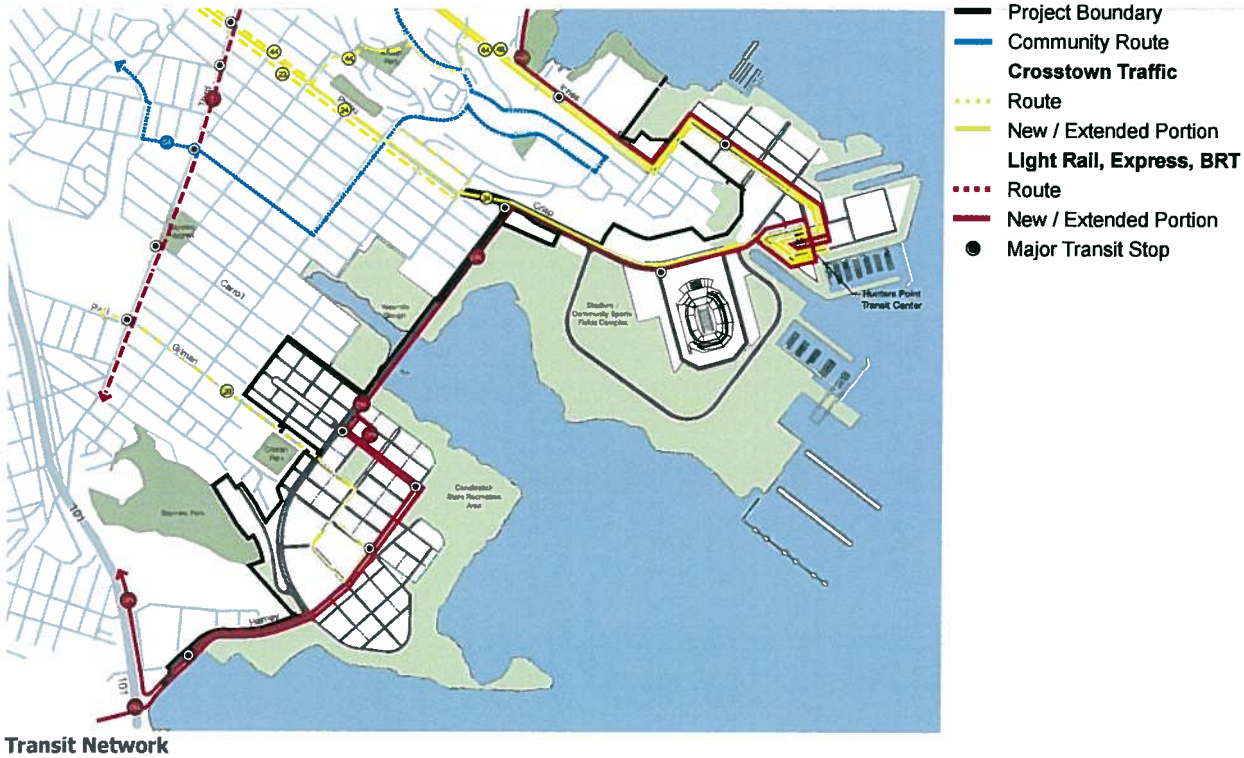
  Although the project includes the placement of fill in some wetlands and aquatic habitats for the purpose of constructing shoreline improvements, the Yosemite Slough bridge, and a marina, the project also includes the removal of fill and structures that currently exist in some locations. For example, along much of the eastern shoreline of HPS Phase II, existing pier walls will be removed and the edges of the existing shoreline "laid back". As a result, new subtidal and intertidal habitat will be created along portions of the shoreline currently occupied by fill, and the project as a whole will result in a net increase of 8 acres of open water that can serve as habitat for fish and benthic organisms.

Park and Shoreline Access Improvements

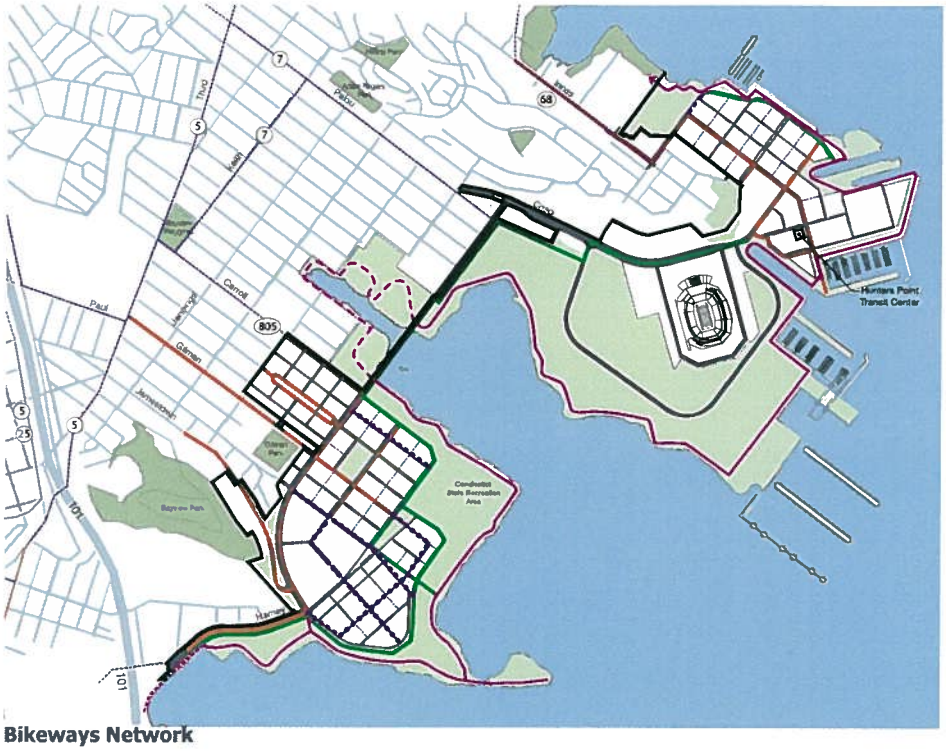
New parks and public spaces will be easily accessible to existing neighborhoods and visitors from other parts of the City and beyond. New pedestrian, bicycle, and transit improvements will provide healthy and sustainable modes of park access. Bike and pedestrian access throughout and between park areas will be coordinated to provide seamless connections. Note that in some places, such as Bayview Hill, extreme topographic challenges prevent direct bike and pedestrian trail connections.

Parking facilities at the State Park, Sports Field Complex, and Marina will be provide for visitors arriving from more distant areas with large groups, and recreational gear and supplies.

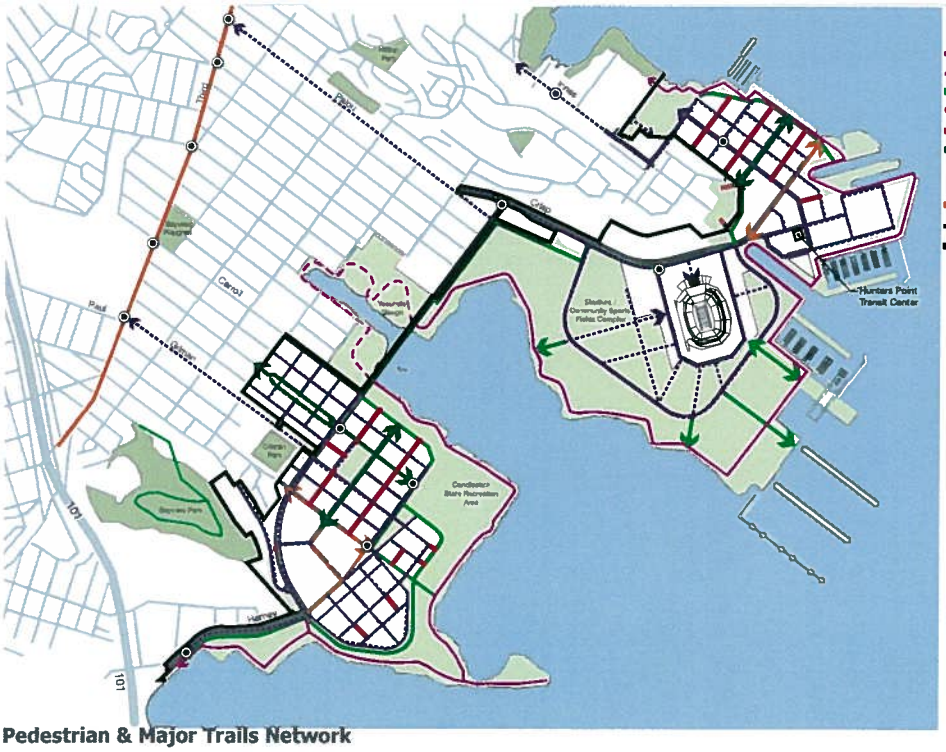
As one means of creating a quieter, healthier and more sustainable city, in some places there will be no automobile roadways between public and private property. In these places, the design of this edge will be carefully designed to create a clear delineation of public and private space, while encouraging full access and use of the public space.



Transit Network



Bikeways Network



Pedestrian & Major Trails Network

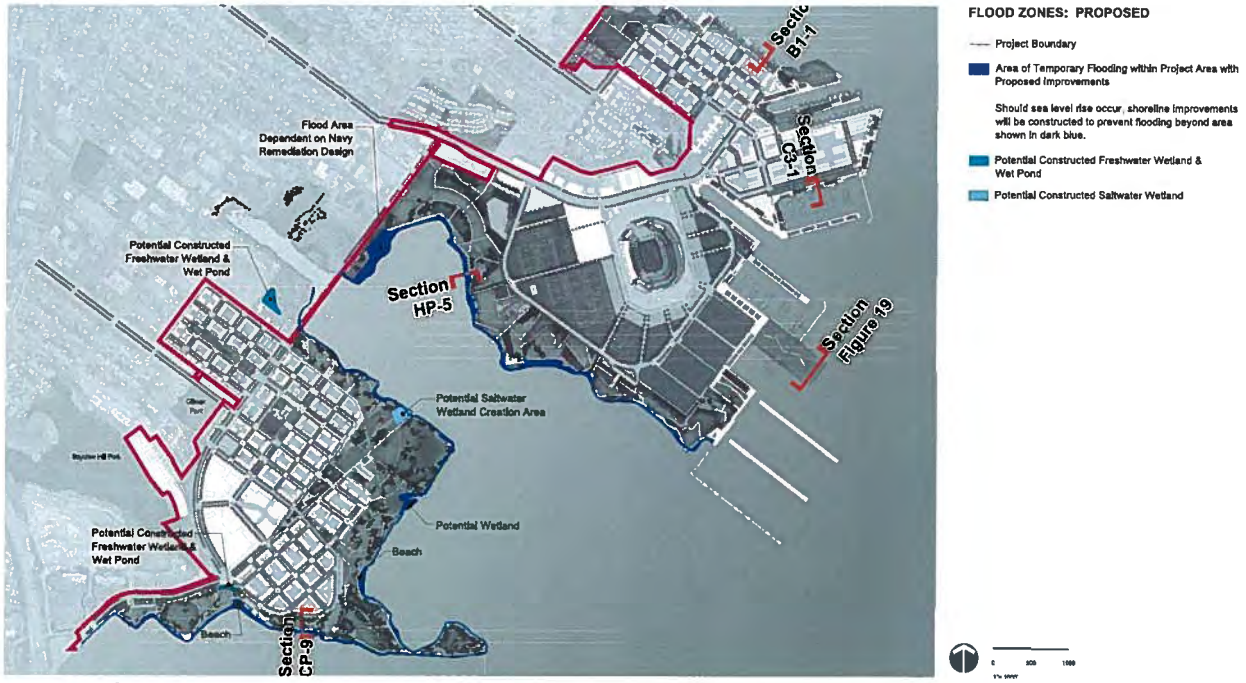
Sea Level Rise Strategy

A project-specific study was undertaken to develop a comprehensive approach to address future sea level rise. The study was based on an exhaustive review of the literature, recent guidance from regional agencies, and knowledge of coastal processes of San Francisco Bay. In almost all of the science reports reviewed, a 36-inch sea level rise increase would not be reached until after 2100. Even with the most aggressive projection of SLR that includes ice cap melt, the increase in sea level would reach 36 inches between the year 2075 and 2080.

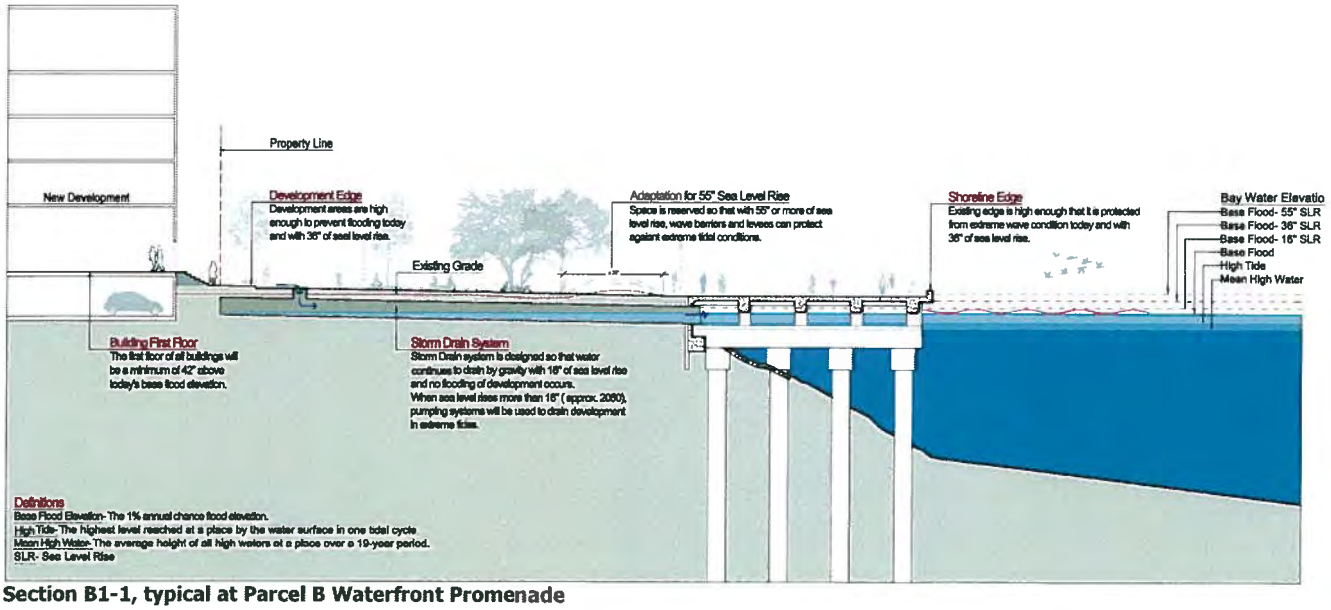
An allowance of 36 inches of sea level rise for establishing development grades was selected as an appropriate planning number for the project. All parking lots and streets will be at an elevation that is 36-inches higher than the present day base flood elevation (the 1% annual chance flood elevation).

In many areas of the existing shoreline, grades are already higher than the existing base flood elevation and would also be above the base flood elevation after 36 inches of sea level rise. The locations where grades are lower and where flooding would occur are the narrow State Parks Area just south of Hunters Point Expressway and the shoreline areas of Hunters Point Parcel E and E-2.

Existing Flood Map - 1% annual chance flood today and with 36" sea level rise without improvements

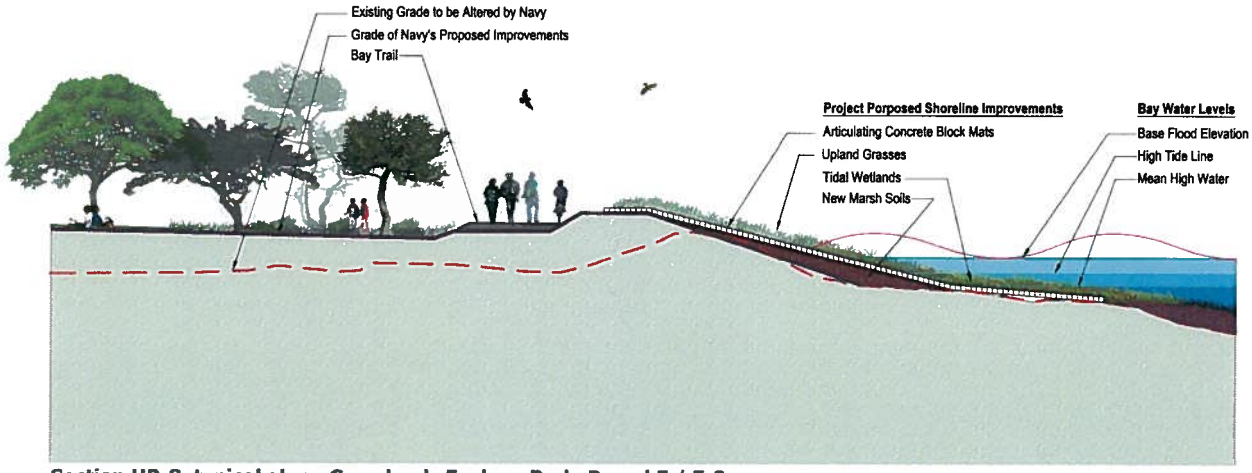


Proposed Flood Map - 1% annual chance flood at today's sea level, and 36" sea level rise



Section B1-1, typical at Parcel B Waterfront Promenade

The design of the park system will respond to future rising sea level by reserving an adaptive management zone in low shoreline areas. In some places this zone will allow for waters to rise and new wetland habitats to form. In other areas the zone will allow for mounding up to create protective embankments.



Section HP-8, typical along Grasslands Ecology Park, Parcel E / E-2

Materials & Elements

Planting

Plant selection will be specific to each location, based on microclimate and soil conditions and the program of the park. In general, park and open space plant selection will focus on native and climate-adapted species that require minimal water use and maintenance. Other factors that may influence plant selection include aesthetics, cultural significance, and habitat value.

Materials

Materials for paving, pathways, and park structures will be selected to reinforce and height the sense of place, minimize environmental impact, maximize durability, longevity and ease of maintenance. These materials may include recycled and salvaged materials such as reclaimed crushed or slab concrete, reclaimed wood, and re-purposed steel bollards and rails. New may include concrete, asphalt, decomposed granite, corten steel, stainless steel.

Furnishings

Park furnishings include elements such as site lighting, trash receptacles, bicycle racks, drinking fountains, signage, and benches. The set of furnishings may vary by park type (City Park, State Park, Ecology Park, Waterfront Promenade) as appropriate to heightening the sense of place. In general, furnishing will reflect a simple, modern, and timeless style. Like other materials, they will also be selected to minimize environmental impact, and maximize durability, longevity, and ease of maintenance.










Litter

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HT Harvey & Associates

Moffatt & Nichol

ARUP

LENNAR URBAN

R|H|A|A

Appendix N4 H.T. Harvey & Associates Candlestick Point/Hunters Point Shipyard Tree Survey, October 16, 2009

H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

CANDLESTICK POINT/HUNTERS POINT SHIPYARD
TREE SURVEY

Prepared by

H. T. HARVEY & ASSOCIATES

Prepared for

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16 October 2009 Project Number 2943-02

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EXECUTIVE SUMMARY

The City of San Francisco provides protection for trees by way of its Urban Forestry Ordinance (Ord. 165-95, App. 5/19/95), Article 16, Sections 806 (Planting and Removal of Street Trees) through 810 (Significant Trees) of the *Public Works Code*. The City's ordinances protect "landmark trees", "significant trees", and "street trees". Landmark trees are trees that are so designated by the City Board of Supervisors, based on a recommendation from the Urban Forestry Council, on the basis of their age, size, shape, species, location, historical association, visual quality, and other contribution to the City's character. Significant trees are defined as trees within 10 feet of a public right-of-way that also meet one of the following size requirements: 20 feet or greater in height; 15 feet or greater in canopy width; or 12 inches or greater diameter of trunk measured at 4.5 feet above grade. Street trees are defined as any tree growing within the public right-of-way, including unimproved public streets and sidewalks, and any tree growing on land under the jurisdiction of the Department of Public Works.

In October 2009, H. T. Harvey & Associates plant ecologists surveyed the Candlestick Point/Hunters Point Shipyard Phase II (CP/HPS) project area for trees protected by the City's ordinances. The survey covered the entire CP/HPS project area except for the portion of Candlestick Point State Recreation Area that is not subject to a land transfer associated with the project and that is thus not expected to be substantially modified by project activities. For the purpose of this survey, a "tree" was defined as any stem of a woody plant with a tree-like (as opposed to shrubby) growth habit measuring at least 2 inches in diameter at breast height (dbh; a height of 4.5 feet above the ground). As a result, single trees with multiple stems measuring at least 2 inches dbh were represented as multiple "trees".

For each woody stem at least 2 inches dbh, the diameter was measured with a Biltmore stick. Those stems with a dbh of 12 inches or greater automatically met one of the size criteria for a significant tree. For other stems for which the dbh was less than 12 inches, but the height was at least 20 feet (ft) or the crown width was at least 15 ft, these parameters were also recorded. Each individual tree was GPS-located.

The tree survey recorded 1,976 tree stems at least 2 inches dbh on 1,068 individual plants on Candlestick Point and 854 tree stems at least 2 inches dbh on 328 individual plants on Hunters Point Shipyard Phase II. Because single trees with multiple stems measuring at least 2 inches dbh were represented as multiple "trees," the high number of trees recorded during this survey was driven largely by such multi-stemmed individuals. Of these, 1,079 stems on Candlestick Point and 400 stems on Hunters Point Shipyard Phase II meet the size criteria for significant trees. Determination of which trees actually meet the criteria for significant trees and street trees will require a determination of which trees are on or within 10 feet of a public right-of-way or on other land under the jurisdiction of the Department of Public Works. No landmark trees are present on the project site.

INTRODUCTION

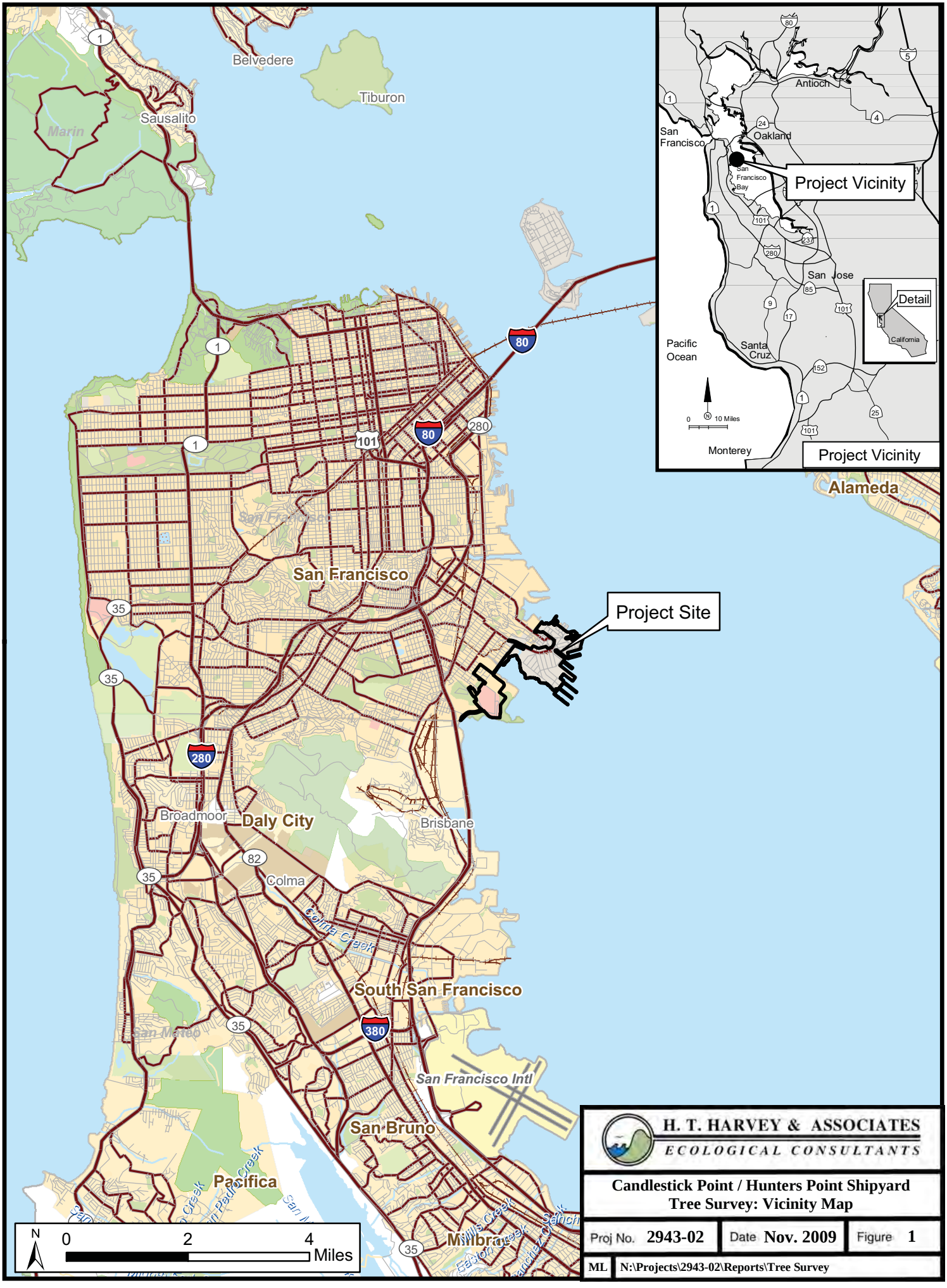
PROJECT AREA DESCRIPTION

The Candlestick Point/Hunters Point Shipyard Phase II (CP/HPS) project area is located within the City and County of San Francisco, California (Figure 1). The land areas are situated in southeastern San Francisco within the Bayview District directly adjacent to San Francisco Bay, east of Highway 101. The CP/HPS project area includes the Candlestick Point State Recreation Area (CPSRA).

SURVEY PURPOSE

The City of San Francisco provides protection for trees by way of its Urban Forestry Ordinance (Ord. 165-95, App. 5/19/95), Article 16, Sections 806 (Planting and Removal of Street Trees) through 810 (Significant Trees) of the *Public Works Code*. The City's ordinances protect "landmark trees", "significant trees", and "street trees". Landmark trees are trees that are so designated by the City Board of Supervisors, based on a recommendation from the Urban Forestry Council, on the basis of their age, size, shape, species, location, historical association, visual quality, and other contribution to the City's character. Significant trees are defined as trees within 10 feet of a public right-of-way that also meet one of the following size requirements: 20 feet or greater in height; 15 feet or greater in canopy width; or 12 inches or greater diameter of trunk measured at 4.5 feet above grade. Street trees are defined as any tree growing within the public right-of-way, including unimproved public streets and sidewalks, and any tree growing on land under the jurisdiction of the Department of Public Works.

The CP/HPS project is expected to result in impacts to some of the trees on the site that are subject to the City's Urban Forestry Ordinance. As a result, a tree survey is necessary to determine the number and location of trees on the site so that impacts to these trees can be avoided and minimized to the extent practicable during project planning, design, and construction, and so that the appropriate approvals can be obtained from the City to allow for the removal of trees that cannot be avoided. Thus, H. T. Harvey & Associates conducted a tree survey for all areas that could potentially be impacted by the project.



H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

Candlestick Point / Hunters Point Shipyard
Tree Survey: Vicinity Map

Proj No. 2943-02	Date Nov. 2009	Figure 1
ML	N:\Projects\2943-02\Reports\Tree Survey	

SURVEY METHODS

In October 2009, H. T. Harvey & Associates plant ecologists surveyed the Candlestick Point/Hunters Point Shipyard Phase II (CP/HPS) project area for trees protected by the City's ordinances. The survey covered the entire CP/HPS project area except for the portion of Candlestick Point State Recreation Area that is not subject to a land transfer associated with the project and that is thus not expected to be substantially modified by project activities.

The City maintains a registry of designated landmark trees. H. T. Harvey & Associates contacted the City's Bureau of Urban Forestry to determine whether any such trees are present within the CP/HPS project area, and confirmed the response by viewing the map of landmark trees at http://www.sfenvironment.org/our_programs/interests.html?ssi=4&ti=8&ii=131.

The City's Urban Forestry Ordinance identifies size criteria for "significant trees", but no size criteria are given for "street trees". However, City Planning Code Sec. 143 states that trees planted as street trees within certain planning districts must be a minimum of 2-inch caliper. Therefore, for the purpose of this survey, a "tree" was defined as any stem of a woody plant with a tree-like (as opposed to shrubby) growth habit measuring at least 2 inches in diameter at breast height (dbh; a height of 4.5 feet above the ground). The City's Urban Forestry Ordinance does not indicate whether each stem of a multi-stemmed tree counts as a separate "tree"; to ensure that the appropriate data were collected, we considered each stem measuring at least 2 inches dbh to represent an individual "tree", even if multiple stems derived from a single plant.

For each woody stem at least 2 inches dbh, the diameter was measured with a Biltmore stick. Those stems with a dbh of 12 inches or greater automatically met one of the size criteria for a significant tree, and thus height and crown width were not estimated for such stems. For stems for which the dbh was less than 12 inches, but the height was at least 20 feet (ft) or the crown width was at least 15 ft, these parameters were also recorded. Each stem measuring at least 2 inches dbh on a tree that, in total, was at least 20 ft tall or had a crown width of at least 15 ft was considered a significant tree; thus, a single tree with five stems of 2 inches or greater dbh, and with a total crown width (from all stems) of at least 15 ft, was considered five separate significant trees for the sake of this survey.

Each individual tree was identified to species or genus where possible, though a few ornamentals could not be identified. Each tree was also GPS-located.

SURVEY RESULTS

The tree survey recorded 1,976 stems at least 2 inches dbh on 1,068 individual plants on Candlestick Point and 854 stems at least 2 inches dbh on 328 individual plants on Hunters Point Shipyard Phase II. Of these, 1,079 stems on Candlestick Point and 400 stems on Hunters Point Shipyard Phase II meet the size criteria for significant trees. Data for Candlestick Point and Hunters Point Shipyard Phase II are presented in Appendices A and B and summarized in Tables 1 and 2, respectively. The locations of individual trees are shown on Figures 2a and 2b.

Table 1. Trees species recorded on Candlestick Point.

Common Name	Scientific Name	No. of Individuals[1]	No. of Stems[2]	No. Potentially Significant Stems[3]
Acacia	*Acacia* sp.	57	97	67
White alder	*Alnus rhombifolia*	1	2	2
Pacific madrone	*Arbutus menziesii*	3	3	0
California buckeye	*Aesculus californica*	1	8	0
Bottlebrush	*Callistemon* sp.	1	5	5
Camphor tree	*Cinnamomum camphorum*	7	7	2
Australian pine	*Casuarina* sp.	22	22	18
Catalpa	*Catalpa* sp.	1	1	0
Blue blossom	*Ceanothus thrysiflorus*	8	23	0
Cypress	*Cupressus* sp.	3	6	2
Eucalyptus	*Eucalyptus* sp.	261	394	294
Common fig	*Ficus carica*	2	2	0
California flannelbush	*Fremontodentron californicum*	2	10	0
Ginkgo	*Ginkgo biloba*	1	1	0
Toyon	*Heteromeles arbutifolia*	3	7	0
Juniper	*Juniperus* sp.	4	6	5
Sweetgum	*Liquidambar styraciflua*	6	6	0
Apple	*Malus* sp.	2	5	0
Myoporum	*Myoporum laetum*	144	498	109
Wax myrtle	*Myrica* sp.	1	1	0
Olive	*Olea europaea*	147	327	238
Pine	*Pinus* sp.	228	288	235
Podocarpus	*Podocarpus* sp.	2	2	2
Poplar	*Populus* sp.	3	5	3
Coast live oak	*Quercus agrifolia*	10	39	7
Coffeeberry	*Rhamnus californica*	1	4	0
Red willow	*Salix laevigata*	19	53	28
Coast redwood	*Sequoia sempervirens*	11	11	10
Giant sequoia	*Sequoiadendron giganteum*	1	1	0
Chinese elm	*Ulmus parviflora*	5	6	5
Bay laurel	*Umbellularia californica*	1	4	0
Fan palm	*Washingtonia* sp.	2	6	6
Unknown tree		108	126	41
Total		**1,068**	**1,976**	**1,079**

[1] Number of individual trees/plants (some with multiple stems)
[2] Number of stems at least 2 inches dbh
[3] Based on the size criteria described previously

Table 2. Trees species recorded on Hunters Point Shipyard Phase II.

Common Name	Scientific Name	No. of Individuals[1]	No. of Stems[2]	No. Potentially Significant Stems[3]
Acacia	*Acacia* sp.	30	85	37
Birch	*Betula* sp.	2	4	2
Cedar	*Cedrus* sp.	4	9	4
Cypress	*Cupressus* sp.	2	2	2
Eucalyptus	*Eucalyptus* sp.	7	18	13
Toyon	*Heteromeles arbutifolia*	107	399	114
California black walnut	*Juglans californica*	2	3	3
Juniper	*Juniperus* sp.	18	53	40
Apple	*Malus domesticus*	3	14	0
Myoporum	*Myoporum laetum*	9	13	0
Spruce	*Picea* sp.	1	1	1
Pine	*Pinus* sp.	15	23	20
London planetree	*Platanus x acerifolia*	37	42	23
Hardy orange	*Poncirus* sp.	2	9	0
Poplar	*Populus* sp.	31	33	32
Cherry	*Prunus* sp.	2	15	4
Douglas-fir	*Pseudotsuga menziesii*	1	1	0
Coast live oak	*Quercus agrifolia*	1	1	0
Willow	*Salix* sp.	3	19	18
Coast redwood	*Sequoia sempervirens*	9	14	13
Elm	*Ulmus* sp.	13	14	3
Fan palm	*Washingtonia* sp.	12	12	11
Unknown tree		17	70	60
Total		**328**	**854**	**400**

[1] Number of individual trees/plants (some with multiple stems)
[2] Number of stems at least 2 inches dbh
[3] Based on the size criteria described previously


Legend
Tree Locations
Tree Survey Boundary
South Basin
Fitch St
Jamestown Ave
Bayview Park
Candlestick Park
Candlestick Point State Recreation Area
San Francisco Bay
Hwy 101
Jamestown Ave
Background: Digital Globe 2007 Aerial
N
0
500
1,000
Feet
H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS
Candlestick Point Tree Survey Results
Proj No. 2943-02
Date Nov. 2009
Figure 2a
ML
N:\Projects\2943-02\Reports\Tree Survey


Legend
Tree Locations
Tree Survey Boundary
Innes Ave
Griffith St
Crisp Rd
Galvez Ave
Fischer Ave
Spear Ave
Hunters Point Shipyard
San Francisco Bay
South Basin
Carroll Ave
Fitch St
Background: Digital Globe 2007 Aerial
N
0
600
1,200
Feet
H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS
Hunters Point Shipyard Tree Survey Results
Proj No. 2943-02
Date Nov. 2009
Figure 2b
ML
N:\Projects\2943-02\Reports\Tree Survey

Because single trees with multiple stems measuring at least 2 inches dbh were represented as multiple "trees," the high number of trees recorded during this survey was influenced substantially by the number of multi-stemmed individuals. On Figures 2a and 2b, and in Appendices A and B, tree numbers correspond to individual plants, with some having multiple stems as detailed in Appendices A and B.

The large number of trees considered "significant" was largely the result of the way in which significant trees were defined for this survey; multiple stems of trees with a combined canopy width of 15 ft, or with at least one stem 20 ft tall, were all considered significant trees. Determination of which trees actually meet the criteria for significant trees and street trees will require a determination of which trees are on or within 10 feet of a public right-of-way or otherwise on land under the jurisdiction of the Department of Public Works.

According to the Bureau of Urban Forestry and review of the map on the City's landmark tree website (http://www.sfenvironment.org/our_programs/interests.html?ssi=4&ti=8&ii=131), no landmark trees are present on the project site.

APPENDIX A.
CANDLESTICK POINT
TREE SURVEY DATA

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
40	Acacia sp.	24			Y
40	Acacia sp.	13			Y
42	Acacia sp.	4	21	8	Y
42	Acacia sp.	4	21	8	Y
42	Acacia sp.	2	21	8	Y
42	Acacia sp.	2	21	8	Y
43	Acacia sp.	4	21	6	Y
43	Acacia sp.	3	21	6	Y
44	Acacia sp.	6	21	6	Y
44	Acacia sp.	5	21	6	Y
44	Acacia sp.	3	21	6	Y
66	Acacia sp.	18			Y
243	Acacia sp.	5	20	8	Y
253	Acacia sp.	3	15	15	Y
254	Acacia sp.	2	20	10	Y
258	Acacia sp.	10	30	20	Y
281	Acacia sp.	4	20	8	Y
338	Acacia sp.	7	40	20	Y
338	Acacia sp.	6	40	20	Y
338	Acacia sp.	4	40	20	Y
339	Acacia sp.	13			Y
339	Acacia sp.	13			Y
339	Acacia sp.	12			Y
348	Acacia sp.	29			Y
349	Acacia sp.	32			Y
349	Acacia sp.	13			Y
350	Acacia sp.	20			Y
366	Acacia sp.	20			Y
586	Acacia sp.	12			Y
612	Acacia sp.	12			Y
613	Acacia sp.	13			Y
614	Acacia sp.	10		15	Y
636	Acacia sp.	16			Y
665	Acacia sp.	10	20		Y
677	Acacia sp.	24			Y
680	Acacia sp.	28			Y
680	Acacia sp.	17			Y
681	Acacia sp.	14			Y
682	Acacia sp.	15			Y
685	Acacia sp.	14			Y
690	Acacia sp.	10	25		Y
695	Acacia sp.	19			Y
696	Acacia sp.	7	20		Y
696	Acacia sp.	6	20		Y
696	Acacia sp.	5	20		Y
696	Acacia sp.	4			Y
708	Acacia sp.	14			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
709	Acacia sp.	14			Y
710	Acacia sp.	6		18	Y
710	Acacia sp.	6		18	Y
710	Acacia sp.	2		18	Y
719	Acacia sp.	10	28		Y
719	Acacia sp.	8	28		Y
720	Acacia sp.	20			Y
720	Acacia sp.	16			Y
759	Acacia sp.	10		17	Y
768	Acacia sp.	8		16	Y
769	Acacia sp.	12			Y
770	Acacia sp.	12			Y
781	Acacia sp.	14			Y
782	Acacia sp.	14			Y
783	Acacia sp.	13			Y
788	Acacia sp.	16			Y
789	Acacia sp.	13			Y
793	Acacia sp.	15			Y
793	Acacia sp.	13			Y
794	Acacia sp.	18			Y
41	Acacia sp.	3	10	5	
194	Acacia sp.	7	12	10	
194	Acacia sp.	4	12	10	
194	Acacia sp.	4	12	10	
247	Acacia sp.	5	15	8	
249	Acacia sp.	7	15	10	
249	Acacia sp.	6	15	10	
249	Acacia sp.	2	15	10	
261	Acacia sp.	3	12	10	
261	Acacia sp.	2	12	10	
261	Acacia sp.	2	12	10	
339	Acacia sp.	10			
339	Acacia sp.	9			
339	Acacia sp.	7			
349	Acacia sp.	8			
349	Acacia sp.	8			
349	Acacia sp.	3			
351	Acacia sp.	10			
351	Acacia sp.	9			
363	Acacia sp.	3	15	8	
363	Acacia sp.	3	15	8	
364	Acacia sp.	3	15	10	
364	Acacia sp.	2	15	10	
688	Acacia sp.	6			
710	Acacia sp.	8			
711	Acacia sp.	4			
711	Acacia sp.	4			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
787	Acacia sp.	5			
793	Acacia sp.	7			
793	Acacia sp.	7			
130	Aesculus californica	5	10	8	
105	Alnus rhombifolia	13			Y
105	Alnus rhombifolia	12			Y
597	Arbutus menziesii	7			
599	Arbutus menziesii	4			
600	Arbutus menziesii	5			
130	Aseculus californica	5	10	8	
130	Aseculus californica	4	10	8	
130	Aseculus californica	3	10	8	
130	Aseculus californica	3	10	8	
130	Aseculus californica	2	10	8	
130	Aseculus californica	2	10	8	
130	Aseculus californica	2	10	8	
168	Callistemon sp.	2	18	15	Y
168	Callistemon sp.	2	18	15	Y
168	Callistemon sp.	2	18	15	Y
168	Callistemon sp.	2	18	15	Y
168	Callistemon sp.	2	18	15	Y
611	Casuarina sp.	10	30		Y
626	Casuarina sp.	20			Y
660	Casuarina sp.	10		22	Y
662	Casuarina sp.	12			Y
663	Casuarina sp.	12			Y
667	Casuarina sp.	22			Y
668	Casuarina sp.	14			Y
669	Casuarina sp.	19			Y
670	Casuarina sp.	12			Y
671	Casuarina sp.	19			Y
672	Casuarina sp.	18			Y
716	Casuarina sp.	17			Y
741	Casuarina sp.	10	20		Y
749	Casuarina sp.	12			Y
750	Casuarina sp.	16			Y
754	Casuarina sp.	14			Y
755	Casuarina sp.	16			Y
765	Casuarina sp.	17			Y
609	Casuarina sp.	8			
610	Casuarina sp.	8			
659	Casuarina sp.	10			
661	Casuarina sp.	10			
901	Catalpa sp.	3			
54	Ceanothus thyrsiflorus	4	16	12	
54	Ceanothus thyrsiflorus	4	16	12	
54	Ceanothus thyrsiflorus	3	16	12	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
54	Ceanothus thyrsiflorus	2	16	12	
54	Ceanothus thyrsiflorus	2	16	12	
54	Ceanothus thyrsiflorus	2	16	12	
210	Ceanothus thyrsiflorus	2	12	8	
211	Ceanothus thyrsiflorus	3	11	6	
212	Ceanothus thyrsiflorus	3	12	8	
213	Ceanothus thyrsiflorus	4	12	10	
213	Ceanothus thyrsiflorus	2	12	10	
230	Ceanothus thyrsiflorus	4	15	8	
230	Ceanothus thyrsiflorus	3	15	8	
230	Ceanothus thyrsiflorus	3	15	8	
230	Ceanothus thyrsiflorus	3	15	8	
233	Ceanothus thyrsiflorus	3	12	10	
233	Ceanothus thyrsiflorus	3	12	10	
233	Ceanothus thyrsiflorus	3	12	10	
233	Ceanothus thyrsiflorus	2	12	10	
234	Ceanothus thyrsiflorus	3	10	8	
234	Ceanothus thyrsiflorus	2	10	8	
234	Ceanothus thyrsiflorus	2	10	8	
234	Ceanothus thyrsiflorus	2	10	8	
727	Cinnamonum camphorum	9		16	Y
738	Cinnamonum camphorum	10		18	Y
737	Cinnamonum camphorum	4			
889	Cinnamonum camphorum	4			
896	Cinnamonum camphorum	8			
908	Cinnamonum camphorum	10			
909	Cinnamonum camphorum	7			
683	Cupressus sp.	13			Y
1011	Cupressus sp.	23			Y
565	Cupressus sp.	7			
565	Cupressus sp.	4			
565	Cupressus sp.	3			
565	Cupressus sp.	2			
252	Eucalyptus globulus	14			Y
255	Eucalyptus globulus	12			Y
257	Eucalyptus globulus	25			Y
259	Eucalyptus globulus	11	30	20	Y
260	Eucalyptus globulus	11	30	20	Y
262	Eucalyptus globulus	12			Y
263	Eucalyptus globulus	10	30	15	Y
296	Eucalyptus globulus	12			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
297	Eucalyptus globulus	94			Y
314	Eucalyptus globulus	12			Y
315	Eucalyptus globulus	12			Y
316	Eucalyptus globulus	15			Y
318	Eucalyptus globulus		20		Y
319	Eucalyptus globulus	16			Y
320	Eucalyptus globulus	20			Y
321	Eucalyptus globulus	17			Y
322	Eucalyptus globulus	20			Y
323	Eucalyptus globulus	17			Y
324	Eucalyptus globulus	14			Y
325	Eucalyptus globulus	23			Y
326	Eucalyptus globulus	18			Y
327	Eucalyptus globulus	18			Y
328	Eucalyptus globulus	17			Y
329	Eucalyptus globulus	13			Y
330	Eucalyptus globulus	14			Y
331	Eucalyptus globulus	12			Y
332	Eucalyptus globulus	10	30	15	Y
336	Eucalyptus globulus	17			Y
341	Eucalyptus globulus	12			Y
342	Eucalyptus globulus	18			Y
343	Eucalyptus globulus	17			Y
344	Eucalyptus globulus	21			Y
345	Eucalyptus globulus	14			Y
346	Eucalyptus globulus	36			Y
373	Eucalyptus globulus	34			Y
374	Eucalyptus globulus	32			Y
375	Eucalyptus globulus	36			Y
376	Eucalyptus globulus	26			Y
377	Eucalyptus globulus	22			Y
378	Eucalyptus globulus	32			Y
379	Eucalyptus globulus	15			Y
380	Eucalyptus globulus	16			Y
381	Eucalyptus globulus	19			Y
382	Eucalyptus globulus	19			Y
383	Eucalyptus globulus	19			Y
384	Eucalyptus globulus	22			Y
385	Eucalyptus globulus	13			Y
386	Eucalyptus globulus	18			Y
387	Eucalyptus globulus	16			Y
388	Eucalyptus globulus	17			Y
389	Eucalyptus globulus	20			Y
390	Eucalyptus globulus	17			Y
391	Eucalyptus globulus	15			Y
392	Eucalyptus globulus	20			Y
393	Eucalyptus globulus	21			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
394	Eucalyptus globulus	34			Y
395	Eucalyptus globulus	20			Y
396	Eucalyptus globulus	5	20	6	Y
397	Eucalyptus globulus	21			Y
398	Eucalyptus globulus	18			Y
399	Eucalyptus globulus	20			Y
401	Eucalyptus globulus	12			Y
402	Eucalyptus globulus	17			Y
403	Eucalyptus globulus	18			Y
404	Eucalyptus globulus	4	30	15	Y
405	Eucalyptus globulus	18			Y
406	Eucalyptus globulus	14			Y
407	Eucalyptus globulus	6	30	15	Y
408	Eucalyptus globulus	16			Y
409	Eucalyptus globulus	19			Y
410	Eucalyptus globulus	9	30	15	Y
411	Eucalyptus globulus	13			Y
412	Eucalyptus globulus	12			Y
413	Eucalyptus globulus	18			Y
414	Eucalyptus globulus	11	30	15	Y
415	Eucalyptus globulus	15			Y
416	Eucalyptus globulus	14			Y
417	Eucalyptus globulus	18			Y
418	Eucalyptus globulus	20			Y
420	Eucalyptus globulus	29			Y
421	Eucalyptus globulus	15			Y
422	Eucalyptus globulus	15			Y
423	Eucalyptus globulus	22			Y
424	Eucalyptus globulus	21			Y
425	Eucalyptus globulus	19			Y
426	Eucalyptus globulus	20			Y
428	Eucalyptus globulus	17			Y
429	Eucalyptus globulus	12			Y
431	Eucalyptus globulus	12			Y
432	Eucalyptus globulus	13			Y
433	Eucalyptus globulus	16			Y
434	Eucalyptus globulus	17			Y
435	Eucalyptus globulus	14			Y
436	Eucalyptus globulus	13			Y
438	Eucalyptus globulus	16			Y
439	Eucalyptus globulus	17			Y
440	Eucalyptus globulus	16			Y
441	Eucalyptus globulus	25			Y
442	Eucalyptus globulus	18			Y
443	Eucalyptus globulus	14			Y
444	Eucalyptus globulus	20			Y
445	Eucalyptus globulus	12			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
447	Eucalyptus globulus	22			Y
448	Eucalyptus globulus	14			Y
449	Eucalyptus globulus	24			Y
449	Eucalyptus globulus	20			Y
449	Eucalyptus globulus	17			Y
450	Eucalyptus globulus	18			Y
1041	Eucalyptus globulus	26			Y
1043	Eucalyptus globulus	17			Y
1043	Eucalyptus globulus	14			Y
1043	Eucalyptus globulus	12			Y
1044	Eucalyptus globulus	32			Y
1045	Eucalyptus globulus	6	20	10	Y
1046	Eucalyptus globulus	34			Y
1047	Eucalyptus globulus	25			Y
1047	Eucalyptus globulus	14			Y
1048	Eucalyptus globulus	22			Y
1048	Eucalyptus globulus	16			Y
1049	Eucalyptus globulus	15			Y
1050	Eucalyptus globulus	22			Y
1052	Eucalyptus globulus	14			Y
1053	Eucalyptus globulus	84			Y
1053	Eucalyptus globulus	24			Y
1055	Eucalyptus globulus	8	60	20	Y
1055	Eucalyptus globulus	6	60	20	Y
1055	Eucalyptus globulus	5	60	20	Y
1055	Eucalyptus globulus	4	60	20	Y
1055	Eucalyptus globulus	4	60	20	Y
1057	Eucalyptus globulus	4	30	15	Y
1057	Eucalyptus globulus	2	30	15	Y
1057	Eucalyptus globulus	2	30	15	Y
1058	Eucalyptus globulus	25			Y
1058	Eucalyptus globulus	14			Y
1059	Eucalyptus globulus	22			Y
1061	Eucalyptus globulus	26			Y
1061	Eucalyptus globulus	24			Y
1062	Eucalyptus globulus	24			Y
1063	Eucalyptus globulus	18			Y
1064	Eucalyptus globulus	18			Y
1064	Eucalyptus globulus	16			Y
1064	Eucalyptus globulus	12			Y
1064	Eucalyptus globulus	12			Y
1065	Eucalyptus globulus	24			Y
1066	Eucalyptus globulus	26			Y
1066	Eucalyptus globulus	14			Y
1067	Eucalyptus globulus	26			Y
1068	Eucalyptus globulus	46			Y
296	Eucalyptus globulus	7			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
400	Eucalyptus globulus	10			
419	Eucalyptus globulus	5	15	8	
419	Eucalyptus globulus	4	15	8	
427	Eucalyptus globulus	11			
430	Eucalyptus globulus	3			
437	Eucalyptus globulus	9			
446	Eucalyptus globulus	10	15	8	
1043	Eucalyptus globulus	6			
1043	Eucalyptus globulus	5			
1047	Eucalyptus globulus	7			
1048	Eucalyptus globulus	4			
1048	Eucalyptus globulus	2			
1049	Eucalyptus globulus	6			
1050	Eucalyptus globulus	11			
1050	Eucalyptus globulus	3			
1050	Eucalyptus globulus	2			
1050	Eucalyptus globulus	2			
1050	Eucalyptus globulus	2			
1051	Eucalyptus globulus	10			
1051	Eucalyptus globulus	3			
1051	Eucalyptus globulus	3			
1051	Eucalyptus globulus	2			
1051	Eucalyptus globulus	2			
1052	Eucalyptus globulus	3			
1052	Eucalyptus globulus	2			
1052	Eucalyptus globulus	2			
1052	Eucalyptus globulus	2			
1054	Eucalyptus globulus	4			
1054	Eucalyptus globulus	3			
1056	Eucalyptus globulus	10	15	8	
1056	Eucalyptus globulus	4	15	8	
1058	Eucalyptus globulus	10			
1059	Eucalyptus globulus	9			
1059	Eucalyptus globulus	5			
1059	Eucalyptus globulus	2			
1060	Eucalyptus globulus	7	15	8	
1060	Eucalyptus globulus	5	15	8	
1061	Eucalyptus globulus	6			
1062	Eucalyptus globulus	6			
1062	Eucalyptus globulus	6			
1062	Eucalyptus globulus	3			
1064	Eucalyptus globulus	8			
1065	Eucalyptus globulus	10			
1066	Eucalyptus globulus	3			
1066	Eucalyptus globulus	2			
1066	Eucalyptus globulus	2			
1066	Eucalyptus globulus	2			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
1066	Eucalyptus globulus	2			
1	Eucalyptus sp.	23			Y
1	Eucalyptus sp.	19			Y
1	Eucalyptus sp.	18			Y
2	Eucalyptus sp.	15			Y
2	Eucalyptus sp.	14			Y
2	Eucalyptus sp.	13			Y
3	Eucalyptus sp.	15			Y
4	Eucalyptus sp.	25			Y
11	Eucalyptus sp.	25			Y
14	Eucalyptus sp.	20			Y
15	Eucalyptus sp.	21			Y
18	Eucalyptus sp.	17			Y
19	Eucalyptus sp.	14			Y
30	Eucalyptus sp.	12	11	10	Y
73	Eucalyptus sp.	17			Y
73	Eucalyptus sp.	15			Y
74	Eucalyptus sp.	14			Y
74	Eucalyptus sp.	12			Y
92	Eucalyptus sp.	18			Y
92	Eucalyptus sp.	15			Y
92	Eucalyptus sp.	12			Y
152	Eucalyptus sp.	5	22	8	Y
152	Eucalyptus sp.	5	22	8	Y
152	Eucalyptus sp.	4	22	8	Y
152	Eucalyptus sp.	3	22	8	Y
153	Eucalyptus sp.	13			Y
154	Eucalyptus sp.	20			Y
545	Eucalyptus sp.	12			Y
546	Eucalyptus sp.	14			Y
547	Eucalyptus sp.	15			Y
548	Eucalyptus sp.	15			Y
549	Eucalyptus sp.	15			Y
550	Eucalyptus sp.	12			Y
571	Eucalyptus sp.	11	40		Y
673	Eucalyptus sp.	12			Y
674	Eucalyptus sp.	10	20		Y
706	Eucalyptus sp.	6		18	Y
707	Eucalyptus sp.	12			Y
734	Eucalyptus sp.	13			Y
735	Eucalyptus sp.	13			Y
736	Eucalyptus sp.	11	22		Y
780	Eucalyptus sp.	20			Y
784	Eucalyptus sp.	13			Y
785	Eucalyptus sp.	18			Y
786	Eucalyptus sp.	24			Y
791	Eucalyptus sp.	7		15	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
791	Eucalyptus sp.	7		15	Y
791	Eucalyptus sp.	7		15	Y
791	Eucalyptus sp.	6		15	Y
791	Eucalyptus sp.	4		15	Y
791	Eucalyptus sp.	4		15	Y
791	Eucalyptus sp.	4		15	Y
791	Eucalyptus sp.	3.5		15	Y
795	Eucalyptus sp.	29		16	Y
795	Eucalyptus sp.	6		16	Y
796	Eucalyptus sp.	14			Y
797	Eucalyptus sp.	16			Y
797	Eucalyptus sp.	15			Y
798	Eucalyptus sp.	14			Y
799	Eucalyptus sp.	17			Y
799	Eucalyptus sp.	16			Y
800	Eucalyptus sp.	14			Y
801	Eucalyptus sp.	14			Y
802	Eucalyptus sp.	15			Y
803	Eucalyptus sp.	22			Y
804	Eucalyptus sp.	18			Y
805	Eucalyptus sp.	18			Y
805	Eucalyptus sp.	18			Y
807	Eucalyptus sp.	18			Y
808	Eucalyptus sp.	18			Y
809	Eucalyptus sp.	22			Y
810	Eucalyptus sp.	50			Y
811	Eucalyptus sp.	26			Y
812	Eucalyptus sp.	14			Y
813	Eucalyptus sp.	18			Y
814	Eucalyptus sp.	15			Y
815	Eucalyptus sp.	22			Y
818	Eucalyptus sp.	16			Y
819	Eucalyptus sp.	13			Y
820	Eucalyptus sp.	10		20	Y
821	Eucalyptus sp.	16			Y
823	Eucalyptus sp.	7	20		Y
823	Eucalyptus sp.	7	20		Y
824	Eucalyptus sp.	6	20		Y
825	Eucalyptus sp.	24			Y
826	Eucalyptus sp.	32			Y
827	Eucalyptus sp.	16			Y
828	Eucalyptus sp.	20			Y
829	Eucalyptus sp.	14			Y
830	Eucalyptus sp.	18			Y
831	Eucalyptus sp.	20			Y
832	Eucalyptus sp.	22			Y
833	Eucalyptus sp.	11	30		Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
834	Eucalyptus sp.	16			Y
835	Eucalyptus sp.	12			Y
836	Eucalyptus sp.	13			Y
837	Eucalyptus sp.	9		22	Y
837	Eucalyptus sp.	6		22	Y
838	Eucalyptus sp.	13			Y
839	Eucalyptus sp.	22			Y
840	Eucalyptus sp.	22			Y
841	Eucalyptus sp.	18			Y
842	Eucalyptus sp.	22			Y
843	Eucalyptus sp.	25			Y
844	Eucalyptus sp.	15			Y
845	Eucalyptus sp.	12			Y
846	Eucalyptus sp.	13			Y
847	Eucalyptus sp.	14			Y
849	Eucalyptus sp.	17			Y
850	Eucalyptus sp.	16			Y
853	Eucalyptus sp.	16			Y
854	Eucalyptus sp.	7		35	Y
854	Eucalyptus sp.	6		35	Y
854	Eucalyptus sp.	4		35	Y
854	Eucalyptus sp.	4		35	Y
855	Eucalyptus sp.	24			Y
856	Eucalyptus sp.	20			Y
961	Eucalyptus sp.	48			Y
961	Eucalyptus sp.	25			Y
962	Eucalyptus sp.	30			Y
965	Eucalyptus sp.	8		20	Y
965	Eucalyptus sp.	8		20	Y
965	Eucalyptus sp.	7		20	Y
966	Eucalyptus sp.	34			Y
966	Eucalyptus sp.	16			Y
967	Eucalyptus sp.	12			Y
1012	Eucalyptus sp.	10	30		Y
1012	Eucalyptus sp.	8	30		Y
1012	Eucalyptus sp.	4	30		Y
1012	Eucalyptus sp.	4	30		Y
1013	Eucalyptus sp.	12			Y
1014	Eucalyptus sp.	16			Y
1015	Eucalyptus sp.	16			Y
1016	Eucalyptus sp.	12			Y
1017	Eucalyptus sp.	12			Y
1018	Eucalyptus sp.	12			Y
1019	Eucalyptus sp.	12			Y
1020	Eucalyptus sp.	16			Y
1021	Eucalyptus sp.	8	30		Y
1021	Eucalyptus sp.	6	30		Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
1022	Eucalyptus sp.	6	28		Y
1023	Eucalyptus sp.	6	28		Y
1024	Eucalyptus sp.	18			Y
1025	Eucalyptus sp.	18			Y
1026	Eucalyptus sp.	20			Y
1027	Eucalyptus sp.	16			Y
3	Eucalyptus sp.	11			
11	Eucalyptus sp.	10			
11	Eucalyptus sp.	7			
18	Eucalyptus sp.	11			
74	Eucalyptus sp.	11			
92	Eucalyptus sp.	7			
153	Eucalyptus sp.	11			
153	Eucalyptus sp.	8			
153	Eucalyptus sp.	4			
544	Eucalyptus sp.	3	15	12	
544	Eucalyptus sp.	3	15	12	
544	Eucalyptus sp.	2	15	12	
544	Eucalyptus sp.	2	15	12	
544	Eucalyptus sp.	2	15	12	
705	Eucalyptus sp.	8			
790	Eucalyptus sp.	8			
792	Eucalyptus sp.	5			
792	Eucalyptus sp.	4			
792	Eucalyptus sp.	4			
800	Eucalyptus sp.	9			
801	Eucalyptus sp.	10			
806	Eucalyptus sp.	4			
812	Eucalyptus sp.	11			
816	Eucalyptus sp.	10			
817	Eucalyptus sp.	4			
822	Eucalyptus sp.	6			
830	Eucalyptus sp.	10			
846	Eucalyptus sp.	6			
846	Eucalyptus sp.	10			
846	Eucalyptus sp.	6			
848	Eucalyptus sp.	4			
851	Eucalyptus sp.	7			
851	Eucalyptus sp.	5			
851	Eucalyptus sp.	4			
851	Eucalyptus sp.	4			
852	Eucalyptus sp.	11			
853	Eucalyptus sp.	10			
853	Eucalyptus sp.	10			
1013	Eucalyptus sp.	4			
1017	Eucalyptus sp.	6			
1017	Eucalyptus sp.	11			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
1017	Eucalyptus sp.	8			
1017	Eucalyptus sp.	6			
1017	Eucalyptus sp.	6			
1017	Eucalyptus sp.	4			
1017	Eucalyptus sp.	4			
1017	Eucalyptus sp.	4			
1018	Eucalyptus sp.	10			
1018	Eucalyptus sp.	5			
1019	Eucalyptus sp.	6			
1025	Eucalyptus sp.	5			
887	Ficus carica	10			
900	Ficus carica	4			
7	Fremontodendron californicum	5	12	12	
7	Fremontodendron californicum	4	12	12	
7	Fremontodendron californicum	3	12	12	
7	Fremontodendron californicum	2	12	12	
7	Fremontodendron californicum	2	12	12	
27	Fremontodendron californicum	4	10	8	
27	Fremontodendron californicum	3	10	8	
27	Fremontodendron californicum	2	10	8	
27	Fremontodendron californicum	2	10	8	
27	Fremontodendron californicum	2	10	8	
885	Ginkgo biloba	4			
56	Heteromeles arbutifolia	6	8	6	
56	Heteromeles arbutifolia	3	8	6	
56	Heteromeles arbutifolia	3	8	6	
56	Heteromeles arbutifolia	2	8	6	
56	Heteromeles arbutifolia	2	8	6	
250	Heteromeles arbutifolia	2	10	3	
256	Heteromeles arbutifolia	2	3	3	
16	Juniperus sp.	15	21	17	Y
16	Juniperus sp.	8	21	17	Y
16	Juniperus sp.	6	21	17	Y
46	Juniperus sp.	12			Y
203	Juniperus sp.	14			Y
45	Juniperus sp.	4	8	12	
897	Liquidambar styraciflua	6			
898	Liquidambar styraciflua	6			
903	Liquidambar styraciflua	6			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
904	Liquidambar styraciflua	5			
905	Liquidambar styraciflua	5			
911	Liquidambar styraciflua	6			
701	Malus sp.	8			
702	Malus sp.	4			
702	Malus sp.	4			
702	Malus sp.	4			
702	Malus sp.	3			
8	Myoporum laetum	14			Y
9	Myoporum laetum	8	18	15	Y
9	Myoporum laetum	8	18	15	Y
9	Myoporum laetum	7	18	15	Y
9	Myoporum laetum	6	18	15	Y
9	Myoporum laetum	6	18	15	Y
9	Myoporum laetum	5	18	15	Y
9	Myoporum laetum	4	18	15	Y
9	Myoporum laetum	3	18	15	Y
10	Myoporum laetum	9	18	15	Y
10	Myoporum laetum	8	18	15	Y
10	Myoporum laetum	6	18	15	Y
10	Myoporum laetum	6	18	15	Y
10	Myoporum laetum	5	18	15	Y
10	Myoporum laetum	4	18	15	Y
10	Myoporum laetum	4	18	15	Y
10	Myoporum laetum	4	18	15	Y
10	Myoporum laetum	3	18	15	Y
10	Myoporum laetum	3	18	15	Y
10	Myoporum laetum	2	18	15	Y
12	Myoporum laetum	16			Y
13	Myoporum laetum	10	17	18	Y
13	Myoporum laetum	8	17	18	Y
13	Myoporum laetum	8	17	18	Y
13	Myoporum laetum	6	17	18	Y
13	Myoporum laetum	5	17	18	Y
20	Myoporum laetum	6	14	17	Y
20	Myoporum laetum	3	14	17	Y
20	Myoporum laetum	3	14	17	Y
20	Myoporum laetum	2	14	17	Y
20	Myoporum laetum	2	14	17	Y
20	Myoporum laetum	2	14	17	Y
21	Myoporum laetum	6	12	15	Y
21	Myoporum laetum	4	12	15	Y
21	Myoporum laetum	3	12	15	Y
21	Myoporum laetum	2	12	15	Y
21	Myoporum laetum	2	12	15	Y
138	Myoporum laetum	7	14	15	Y
138	Myoporum laetum	7	14	15	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
138	Myoporum laetum	7	14	15	Y
138	Myoporum laetum	6	14	15	Y
138	Myoporum laetum	5	14	15	Y
147	Myoporum laetum	14			Y
148	Myoporum laetum	15			Y
150	Myoporum laetum	28	14	11	Y
156	Myoporum laetum	21			Y
164	Myoporum laetum	7	15	15	Y
164	Myoporum laetum	6	15	15	Y
164	Myoporum laetum	4	15	15	Y
164	Myoporum laetum	3	15	15	Y
164	Myoporum laetum	2	15	15	Y
167	Myoporum laetum	9	18	15	Y
167	Myoporum laetum	8	18	15	Y
167	Myoporum laetum	6	18	15	Y
167	Myoporum laetum	6	18	15	Y
167	Myoporum laetum	4	18	15	Y
169	Myoporum laetum	12			Y
170	Myoporum laetum	15			Y
171	Myoporum laetum	14			Y
175	Myoporum laetum	21			Y
181	Myoporum laetum	7	15	20	Y
181	Myoporum laetum	6	15	20	Y
181	Myoporum laetum	5	15	20	Y
181	Myoporum laetum	5	15	20	Y
181	Myoporum laetum	4	15	20	Y
181	Myoporum laetum	4	15	20	Y
181	Myoporum laetum	4	15	20	Y
181	Myoporum laetum	4	15	20	Y
181	Myoporum laetum	3	15	20	Y
181	Myoporum laetum	3	15	20	Y
181	Myoporum laetum	2	15	20	Y
190	Myoporum laetum	24			Y
191	Myoporum laetum	18	15	12	Y
208	Myoporum laetum	12			Y
214	Myoporum laetum	10	15	20	Y
220	Myoporum laetum	11	20	25	Y
220	Myoporum laetum	10	20	25	Y
220	Myoporum laetum	7	20	25	Y
222	Myoporum laetum	3	12	15	Y
222	Myoporum laetum	3	12	15	Y
222	Myoporum laetum	3	12	15	Y
222	Myoporum laetum	2	12	15	Y
223	Myoporum laetum	3	12	15	Y
223	Myoporum laetum	3	12	15	Y
223	Myoporum laetum	3	12	15	Y
223	Myoporum laetum	2	12	15	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
223	Myoporum laetum	2	12	15	Y
223	Myoporum laetum	2	12	15	Y
226	Myoporum laetum	11	15	15	Y
232	Myoporum laetum	18			Y
236	Myoporum laetum	15			Y
237	Myoporum laetum	12			Y
248	Myoporum laetum	5	15	15	Y
248	Myoporum laetum	5	15	15	Y
248	Myoporum laetum	4	15	15	Y
251	Myoporum laetum	10	15	20	Y
251	Myoporum laetum	8	15	20	Y
251	Myoporum laetum	7	15	20	Y
251	Myoporum laetum	3	15	20	Y
697	Myoporum laetum	14			Y
698	Myoporum laetum	13			Y
700	Myoporum laetum	12			Y
963	Myoporum laetum	16			Y
963	Myoporum laetum	13			Y
964	Myoporum laetum	20			Y
964	Myoporum laetum	13			Y
964	Myoporum laetum	12			Y
964	Myoporum laetum	12			Y
964	Myoporum laetum	12			Y
5	Myoporum laetum	6	15	12	
5	Myoporum laetum	6	15	12	
5	Myoporum laetum	4	15	12	
5	Myoporum laetum	3	15	12	
6	Myoporum laetum	6	10	8	
6	Myoporum laetum	6	10	8	
6	Myoporum laetum	4	10	8	
6	Myoporum laetum	4	10	8	
22	Myoporum laetum	8	10	12	
22	Myoporum laetum	3	10	12	
22	Myoporum laetum	2	10	12	
23	Myoporum laetum	4	8	10	
23	Myoporum laetum	3	8	10	
23	Myoporum laetum	3	8	10	
23	Myoporum laetum	2	8	10	
24	Myoporum laetum	6	8	9	
25	Myoporum laetum	4	10	13	
25	Myoporum laetum	3	10	13	
25	Myoporum laetum	2	10	13	
25	Myoporum laetum	2	10	13	
26	Myoporum laetum	5	12	12	
26	Myoporum laetum	4	12	12	
26	Myoporum laetum	4	12	12	
26	Myoporum laetum	4	12	12	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
31	Myoporum laetum	8	11	12	
31	Myoporum laetum	2	11	12	
31	Myoporum laetum	2	11	12	
32	Myoporum laetum	5	8	12	
32	Myoporum laetum	3	8	12	
32	Myoporum laetum	3	8	12	
32	Myoporum laetum	2	8	12	
32	Myoporum laetum	2	8	12	
32	Myoporum laetum	2	8	12	
33	Myoporum laetum	10	8	8	
33	Myoporum laetum	2	8	8	
33	Myoporum laetum	2	8	8	
34	Myoporum laetum	6	8	8	
34	Myoporum laetum	2	8	8	
34	Myoporum laetum	2	8	8	
35	Myoporum laetum	4	8	10	
35	Myoporum laetum	3	8	10	
35	Myoporum laetum	2	8	10	
35	Myoporum laetum	2	8	10	
35	Myoporum laetum	2	8	10	
35	Myoporum laetum	2	8	10	
52	Myoporum laetum	8	16	11	
52	Myoporum laetum	3	16	11	
52	Myoporum laetum	2	16	11	
52	Myoporum laetum	2	16	11	
59	Myoporum laetum	5	8	8	
59	Myoporum laetum	3	8	8	
59	Myoporum laetum	2	8	8	
59	Myoporum laetum	2	8	8	
60	Myoporum laetum	2	8	6	
60	Myoporum laetum	2	8	6	
60	Myoporum laetum	2	8	6	
61	Myoporum laetum	3	8	8	
61	Myoporum laetum	2	8	8	
61	Myoporum laetum	2	8	8	
62	Myoporum laetum	3	8	6	
62	Myoporum laetum	2	8	6	
63	Myoporum laetum	3	8	7	
63	Myoporum laetum	2	8	7	
63	Myoporum laetum	2	8	7	
65	Myoporum laetum	5	9	8	
65	Myoporum laetum	4	9	8	
65	Myoporum laetum	3	9	8	
65	Myoporum laetum	3	9	8	
65	Myoporum laetum	3	9	8	
65	Myoporum laetum	2	9	8	
65	Myoporum laetum	2	9	8	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
65	Myoporum laetum	2	9	8	
65	Myoporum laetum	2	9	8	
65	Myoporum laetum	2	9	8	
65	Myoporum laetum	2	9	8	
67	Myoporum laetum	6	10	8	
67	Myoporum laetum	5	10	8	
67	Myoporum laetum	4	10	8	
67	Myoporum laetum	3	10	8	
93	Myoporum laetum	5	15	12	
93	Myoporum laetum	5	15	12	
93	Myoporum laetum	4	15	12	
93	Myoporum laetum	3	15	12	
93	Myoporum laetum	3	15	12	
93	Myoporum laetum	2	15	12	
93	Myoporum laetum	2	15	12	
94	Myoporum laetum	6	15	12	
94	Myoporum laetum	5	15	12	
94	Myoporum laetum	5	15	12	
94	Myoporum laetum	4	15	12	
94	Myoporum laetum	3	15	12	
94	Myoporum laetum	3	15	12	
94	Myoporum laetum	3	15	12	
94	Myoporum laetum	3	15	12	
94	Myoporum laetum	2	15	12	
94	Myoporum laetum	2	15	12	
95	Myoporum laetum	7	15	12	
95	Myoporum laetum	6	15	12	
95	Myoporum laetum	4	15	12	
95	Myoporum laetum	4	15	12	
95	Myoporum laetum	3	15	12	
95	Myoporum laetum	2	15	12	
96	Myoporum laetum	6	15	12	
96	Myoporum laetum	5	15	12	
96	Myoporum laetum	5	15	12	
96	Myoporum laetum	5	15	12	
96	Myoporum laetum	4	15	12	
96	Myoporum laetum	3	15	12	
96	Myoporum laetum	3	15	12	
96	Myoporum laetum	3	15	12	
96	Myoporum laetum	2	15	12	
96	Myoporum laetum	2	15	12	
97	Myoporum laetum	8	15	10	
97	Myoporum laetum	6	15	10	
97	Myoporum laetum	5	15	10	
97	Myoporum laetum	4	15	10	
97	Myoporum laetum	2	15	10	
97	Myoporum laetum	2	15	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
98	Myoporum laetum	6	15	10	
98	Myoporum laetum	4	15	10	
98	Myoporum laetum	4	15	10	
98	Myoporum laetum	4	15	10	
98	Myoporum laetum	3	15	10	
98	Myoporum laetum	3	15	10	
98	Myoporum laetum	2	15	10	
98	Myoporum laetum	2	15	10	
98	Myoporum laetum	2	15	10	
98	Myoporum laetum	2	15	10	
99	Myoporum laetum	7	15	11	
99	Myoporum laetum	7	15	11	
99	Myoporum laetum	5	15	11	
99	Myoporum laetum	4	15	11	
99	Myoporum laetum	4	15	11	
99	Myoporum laetum	2	15	11	
99	Myoporum laetum	2	15	11	
100	Myoporum laetum	6	15	10	
100	Myoporum laetum	4	15	10	
100	Myoporum laetum	4	15	10	
100	Myoporum laetum	3	15	10	
100	Myoporum laetum	3	15	10	
100	Myoporum laetum	2	15	10	
101	Myoporum laetum	10	12	10	
102	Myoporum laetum	6	13	11	
102	Myoporum laetum	6	13	11	
102	Myoporum laetum	6	13	11	
102	Myoporum laetum	5	13	11	
102	Myoporum laetum	4	13	11	
102	Myoporum laetum	4	13	11	
102	Myoporum laetum	4	13	11	
102	Myoporum laetum	3	13	11	
102	Myoporum laetum	2	13	11	
103	Myoporum laetum	6	12	12	
103	Myoporum laetum	5	12	12	
103	Myoporum laetum	4	12	12	
104	Myoporum laetum	5	12	11	
104	Myoporum laetum	4	12	11	
104	Myoporum laetum	4	12	11	
104	Myoporum laetum	3	12	11	
104	Myoporum laetum	3	12	11	
104	Myoporum laetum	3	12	11	
104	Myoporum laetum	2	12	11	
104	Myoporum laetum	2	12	11	
111	Myoporum laetum	6	8	7	
112	Myoporum laetum	9	12	8	
112	Myoporum laetum	7	12	8	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
112	Myoporum laetum	6	12	8	
112	Myoporum laetum	6	12	8	
112	Myoporum laetum	2	12	8	
113	Myoporum laetum	9	14	11	
113	Myoporum laetum	7	14	11	
113	Myoporum laetum	7	14	11	
113	Myoporum laetum	6	14	11	
114	Myoporum laetum	8	15	8	
114	Myoporum laetum	8	15	8	
114	Myoporum laetum	5	15	8	
114	Myoporum laetum	4	15	8	
115	Myoporum laetum	8	14	10	
115	Myoporum laetum	6	14	10	
115	Myoporum laetum	6	14	10	
115	Myoporum laetum	5	14	10	
115	Myoporum laetum	4	14	10	
116	Myoporum laetum	10	14	8	
116	Myoporum laetum	3	14	8	
116	Myoporum laetum	2	14	8	
116	Myoporum laetum	2	14	8	
117	Myoporum laetum	6	14	8	
117	Myoporum laetum	6	14	8	
117	Myoporum laetum	6	14	8	
117	Myoporum laetum	5	14	8	
117	Myoporum laetum	4	14	8	
117	Myoporum laetum	3	14	8	
117	Myoporum laetum	2	14	8	
118	Myoporum laetum	6	16	10	
118	Myoporum laetum	5	16	10	
119	Myoporum laetum	7	14	8	
119	Myoporum laetum	5	14	8	
119	Myoporum laetum	4	14	8	
119	Myoporum laetum	4	14	8	
119	Myoporum laetum	4	14	8	
119	Myoporum laetum	3	14	8	
120	Myoporum laetum	10	12	8	
120	Myoporum laetum	7	12	8	
121	Myoporum laetum	6	14	8	
121	Myoporum laetum	5	14	8	
121	Myoporum laetum	3	14	8	
121	Myoporum laetum	3	14	8	
122	Myoporum laetum	10	14	8	
122	Myoporum laetum	7	14	8	
122	Myoporum laetum	6	14	8	
122	Myoporum laetum	6	14	8	
122	Myoporum laetum	6	14	8	
122	Myoporum laetum	4	14	8	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
122	Myoporum laetum	3	14	8	
123	Myoporum laetum	5	14	7	
123	Myoporum laetum	5	14	7	
123	Myoporum laetum	4	14	7	
123	Myoporum laetum	3	14	7	
124	Myoporum laetum	4	14	8	
124	Myoporum laetum	3	14	8	
124	Myoporum laetum	2	14	8	
124	Myoporum laetum	2	14	8	
125	Myoporum laetum	7	14	8	
125	Myoporum laetum	5	14	8	
125	Myoporum laetum	4	14	8	
125	Myoporum laetum	4	14	8	
126	Myoporum laetum	4	13	9	
126	Myoporum laetum	4	13	9	
126	Myoporum laetum	3	13	9	
126	Myoporum laetum	2	13	9	
127	Myoporum laetum	6	10	8	
127	Myoporum laetum	4	10	8	
127	Myoporum laetum	3	10	8	
145	Myoporum laetum	8	14	10	
145	Myoporum laetum	8	14	10	
145	Myoporum laetum	4	14	10	
145	Myoporum laetum	3	14	10	
146	Myoporum laetum	6	14	10	
146	Myoporum laetum	5	14	10	
146	Myoporum laetum	5	14	10	
146	Myoporum laetum	4	14	10	
149	Myoporum laetum	11	15	11	
149	Myoporum laetum	10	15	11	
149	Myoporum laetum	7	15	11	
151	Myoporum laetum	8	14	12	
151	Myoporum laetum	8	14	12	
151	Myoporum laetum	7	14	12	
151	Myoporum laetum	6	14	12	
155	Myoporum laetum	8	10	8	
155	Myoporum laetum	5	10	8	
157	Myoporum laetum	10	14	11	
158	Myoporum laetum	6	12	12	
158	Myoporum laetum	6	12	12	
158	Myoporum laetum	6	12	12	
158	Myoporum laetum	6	12	12	
158	Myoporum laetum	3	12	12	
160	Myoporum laetum	2	8	10	
160	Myoporum laetum	2	8	10	
160	Myoporum laetum	2	8	10	
161	Myoporum laetum	4	10	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
161	Myoporum laetum	4	10	10	
161	Myoporum laetum	4	10	10	
161	Myoporum laetum	4	10	10	
161	Myoporum laetum	2	10	10	
162	Myoporum laetum	5	10	8	
162	Myoporum laetum	2	10	8	
162	Myoporum laetum	2	10	8	
163	Myoporum laetum	6	15	11	
163	Myoporum laetum	4	15	11	
163	Myoporum laetum	4	15	11	
163	Myoporum laetum	4	15	11	
169	Myoporum laetum	7			
170	Myoporum laetum	9			
171	Myoporum laetum	8			
172	Myoporum laetum	9	15	12	
172	Myoporum laetum	9	15	12	
172	Myoporum laetum	8	15	12	
173	Myoporum laetum	9	14	8	
173	Myoporum laetum	6	14	8	
174	Myoporum laetum	8	12	10	
174	Myoporum laetum	5	12	10	
174	Myoporum laetum	4	12	10	
177	Myoporum laetum	5	10	12	
177	Myoporum laetum	3	10	12	
177	Myoporum laetum	3	10	12	
177	Myoporum laetum	3	10	12	
177	Myoporum laetum	2	10	12	
177	Myoporum laetum	2	10	12	
177	Myoporum laetum	2	10	12	
177	Myoporum laetum	2	10	12	
177	Myoporum laetum	2	10	12	
178	Myoporum laetum	4	8	6	
178	Myoporum laetum	2	8	6	
179	Myoporum laetum	3	10	8	
179	Myoporum laetum	2	10	8	
179	Myoporum laetum	2	10	8	
180	Myoporum laetum	6	15	13	
180	Myoporum laetum	5	15	13	
180	Myoporum laetum	4	15	13	
180	Myoporum laetum	3	15	13	
182	Myoporum laetum	7	12	10	
182	Myoporum laetum	4	12	10	
183	Myoporum laetum	8	8	8	
183	Myoporum laetum	2	8	8	
184	Myoporum laetum	4			
184	Myoporum laetum	3			
184	Myoporum laetum	2			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
185	Myoporum laetum	4	10	8	
185	Myoporum laetum	2	10	8	
185	Myoporum laetum	2	10	8	
186	Myoporum laetum	4	9	8	
187	Myoporum laetum	3	8	7	
187	Myoporum laetum	2	8	7	
187	Myoporum laetum	2	8	7	
187	Myoporum laetum	2	8	7	
188	Myoporum laetum	9	15	12	
189	Myoporum laetum	10	15	12	
189	Myoporum laetum	9	15	12	
189	Myoporum laetum	6	15	12	
192	Myoporum laetum	4	10	8	
192	Myoporum laetum	3	10	8	
192	Myoporum laetum	2	10	8	
193	Myoporum laetum	4	10	8	
193	Myoporum laetum	4	10	8	
204	Myoporum laetum	6	10	8	
204	Myoporum laetum	3	10	8	
204	Myoporum laetum	2	10	8	
204	Myoporum laetum	2	10	8	
204	Myoporum laetum	2	10	8	
204	Myoporum laetum	2	10	8	
204	Myoporum laetum	2	10	8	
205	Myoporum laetum	8	12	10	
205	Myoporum laetum	3	12	10	
205	Myoporum laetum	2	12	10	
205	Myoporum laetum	2	12	10	
205	Myoporum laetum	2	12	10	
205	Myoporum laetum	2	12	10	
206	Myoporum laetum	5	10	8	
206	Myoporum laetum	3	10	8	
206	Myoporum laetum	2	10	8	
206	Myoporum laetum	2	10	8	
206	Myoporum laetum	2	10	8	
207	Myoporum laetum	4	12	10	
207	Myoporum laetum	3	12	10	
207	Myoporum laetum	3	12	10	
207	Myoporum laetum	3	12	10	
207	Myoporum laetum	2	12	10	
209	Myoporum laetum	4	11	10	
209	Myoporum laetum	4	11	10	
209	Myoporum laetum	3	11	10	
209	Myoporum laetum	3	11	10	
209	Myoporum laetum	2	11	10	
209	Myoporum laetum	2	11	10	
209	Myoporum laetum	2	11	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
225	Myoporum laetum	2	12	10	
225	Myoporum laetum	2	12	10	
227	Myoporum laetum	2	10	8	
227	Myoporum laetum	2	10	8	
228	Myoporum laetum	3	10	8	
228	Myoporum laetum	3	10	8	
228	Myoporum laetum	2	10	8	
228	Myoporum laetum	2	10	8	
229	Myoporum laetum	2			
231	Myoporum laetum	5	12	8	
235	Myoporum laetum	10	15	8	
240	Myoporum laetum	3	15	6	
240	Myoporum laetum	2	15	6	
699	Myoporum laetum	10			
712	Myoporum laetum	4			
712	Myoporum laetum	4			
721	Myoporum laetum	8			
722	Myoporum laetum	8			
723	Myoporum laetum	8			
724	Myoporum laetum	10			
745	Myoporum laetum	8			
746	Myoporum laetum	6			
747	Myoporum laetum	8			
748	Myoporum laetum	8			
751	Myoporum laetum	6			
752	Myoporum laetum	10			
753	Myoporum laetum	8			
761	Myoporum laetum	8			
762	Myoporum laetum	8			
763	Myoporum laetum	8			
764	Myoporum laetum	7			
922	Myoporum laetum	5			
963	Myoporum laetum	10			
964	Myoporum laetum	6			
964	Myoporum laetum	10			
964	Myoporum laetum	8			
216	Myrica sp.	2	12	10	
298	Olea europaea	9	20	15	Y
298	Olea europaea	7	20	15	Y
299	Olea europaea	10	20	15	Y
299	Olea europaea	5	20	15	Y
300	Olea europaea	12	20	15	Y
300	Olea europaea	6	20	15	Y
301	Olea europaea	6	15	15	Y
301	Olea europaea	5	15	15	Y
301	Olea europaea	4	15	15	Y
309	Olea europaea	11	15	15	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
310	Olea europaea	12			Y
311	Olea europaea	12			Y
311	Olea europaea	12			Y
312	Olea europaea	10	25	15	Y
312	Olea europaea	9	25	15	Y
312	Olea europaea	9	25	15	Y
317	Olea europaea	8	25	10	Y
334	Olea europaea	6	25	15	Y
369	Olea europaea	12			Y
451	Olea europaea	8	20	12	Y
452	Olea europaea	10	20	12	Y
452	Olea europaea	9	20	12	Y
453	Olea europaea	6	20	12	Y
453	Olea europaea	6	20	12	Y
453	Olea europaea	5	20	12	Y
454	Olea europaea	14			Y
455	Olea europaea	8	20	10	Y
455	Olea europaea	6	20	10	Y
455	Olea europaea	4	20	10	Y
456	Olea europaea	10	20	6	Y
456	Olea europaea	8	20	6	Y
457	Olea europaea	7	20	8	Y
457	Olea europaea	4	20	8	Y
458	Olea europaea	7	20	8	Y
458	Olea europaea	6	20	8	Y
458	Olea europaea	4	20	8	Y
459	Olea europaea	6	20	10	Y
459	Olea europaea	6	20	10	Y
459	Olea europaea	6	20	10	Y
460	Olea europaea	8	20	8	Y
460	Olea europaea	8	20	8	Y
460	Olea europaea	4	20	8	Y
461	Olea europaea	7	20	10	Y
461	Olea europaea	6	20	10	Y
462	Olea europaea	7	20	8	Y
462	Olea europaea	7	20	8	Y
462	Olea europaea	7	20	8	Y
463	Olea europaea	7	20	8	Y
463	Olea europaea	6	20	8	Y
463	Olea europaea	5	20	8	Y
464	Olea europaea	8	20	8	Y
464	Olea europaea	8	20	8	Y
464	Olea europaea	4	20	8	Y
465	Olea europaea	9	20	10	Y
465	Olea europaea	7	20	10	Y
465	Olea europaea	6	20	10	Y
466	Olea europaea	9	20	8	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
467	Olea europaea	7	20	8	Y
467	Olea europaea	7	20	8	Y
468	Olea europaea	8	20	8	Y
468	Olea europaea	6	20	8	Y
468	Olea europaea	6	20	8	Y
468	Olea europaea	3	20	8	Y
468	Olea europaea	3	20	8	Y
469	Olea europaea	7	20	10	Y
469	Olea europaea	6	20	10	Y
469	Olea europaea	5	20	10	Y
470	Olea europaea	9	20	6	Y
471	Olea europaea	9	20	6	Y
471	Olea europaea	5	20	6	Y
471	Olea europaea	4	20	6	Y
472	Olea europaea	8	20	8	Y
472	Olea europaea	6	20	8	Y
473	Olea europaea	6	20	10	Y
473	Olea europaea	6	20	10	Y
474	Olea europaea	8	20	8	Y
474	Olea europaea	8	20	8	Y
475	Olea europaea	9	20	6	Y
475	Olea europaea	7	20	6	Y
476	Olea europaea	8	20	10	Y
476	Olea europaea	7	20	10	Y
477	Olea europaea	8	20	8	Y
477	Olea europaea	7	20	8	Y
478	Olea europaea	8	20	8	Y
480	Olea europaea	11	20	10	Y
481	Olea europaea	11	20	8	Y
481	Olea europaea	8	20	8	Y
482	Olea europaea	7	20	8	Y
482	Olea europaea	7	20	8	Y
484	Olea europaea	8	20	8	Y
484	Olea europaea	7	20	8	Y
485	Olea europaea	10	20	8	Y
485	Olea europaea	8	20	8	Y
486	Olea europaea	7	20	8	Y
486	Olea europaea	6	20	8	Y
486	Olea europaea	4	20	8	Y
489	Olea europaea	6	20	10	Y
489	Olea europaea	6	20	10	Y
489	Olea europaea	4	20	10	Y
490	Olea europaea	6	20	8	Y
490	Olea europaea	6	20	8	Y
491	Olea europaea	8	20	10	Y
491	Olea europaea	5	20	10	Y
491	Olea europaea	5	20	10	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
492	Olea europaea	8	20	8	Y
492	Olea europaea	7	20	8	Y
492	Olea europaea	5	20	8	Y
493	Olea europaea	11	20	8	Y
493	Olea europaea	8	20	8	Y
494	Olea europaea	9	20	8	Y
494	Olea europaea	6	20	8	Y
495	Olea europaea	8	20	8	Y
495	Olea europaea	7	20	8	Y
496	Olea europaea	9	20	10	Y
496	Olea europaea	7	20	10	Y
497	Olea europaea	8	20	10	Y
497	Olea europaea	7	20	10	Y
497	Olea europaea	5	20	10	Y
498	Olea europaea	9	20	8	Y
498	Olea europaea	6	20	8	Y
498	Olea europaea	6	20	8	Y
499	Olea europaea	15	20	8	Y
500	Olea europaea	10	20	8	Y
500	Olea europaea	8	20	8	Y
502	Olea europaea	7	20	10	Y
502	Olea europaea	7	20	10	Y
502	Olea europaea	5	20	10	Y
503	Olea europaea	9	20	10	Y
503	Olea europaea	8	20	10	Y
504	Olea europaea	9	20	8	Y
504	Olea europaea	7	20	8	Y
505	Olea europaea	8	20	10	Y
505	Olea europaea	6	20	10	Y
506	Olea europaea	10	20	8	Y
506	Olea europaea	9	20	8	Y
507	Olea europaea	8	20	10	Y
507	Olea europaea	6	20	10	Y
508	Olea europaea	6	20	8	Y
508	Olea europaea	5	20	8	Y
509	Olea europaea	7	20	8	Y
509	Olea europaea	7	20	8	Y
509	Olea europaea	4	20	8	Y
509	Olea europaea	3	20	8	Y
510	Olea europaea	7	20	10	Y
510	Olea europaea	7	20	10	Y
510	Olea europaea	5	20	10	Y
511	Olea europaea	8	20	10	Y
511	Olea europaea	7	20	10	Y
512	Olea europaea	13	20	10	Y
512	Olea europaea	8	20	10	Y
513	Olea europaea	14			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
514	Olea europaea	6	20	8	Y
514	Olea europaea	6	20	8	Y
514	Olea europaea	5	20	8	Y
514	Olea europaea	5	20	8	Y
514	Olea europaea	4	20	8	Y
515	Olea europaea	9	20	10	Y
515	Olea europaea	7	20	10	Y
515	Olea europaea	5	20	10	Y
516	Olea europaea	12			Y
517	Olea europaea	7	20	10	Y
517	Olea europaea	7	20	10	Y
517	Olea europaea	5	20	10	Y
517	Olea europaea	4	20	10	Y
518	Olea europaea	9	20	10	Y
518	Olea europaea	6	20	10	Y
519	Olea europaea	12			Y
521	Olea europaea	13			Y
522	Olea europaea	9	20	15	Y
522	Olea europaea	8	20	15	Y
522	Olea europaea	7	20	15	Y
523	Olea europaea	9	25	15	Y
523	Olea europaea	8	25	15	Y
524	Olea europaea	6	20	10	Y
524	Olea europaea	6	20	10	Y
525	Olea europaea	7	20	10	Y
525	Olea europaea	6	20	10	Y
526	Olea europaea	9	20	8	Y
526	Olea europaea	8	20	8	Y
526	Olea europaea	7	20	8	Y
527	Olea europaea	9	20	10	Y
527	Olea europaea	4	20	10	Y
528	Olea europaea	8	20	10	Y
529	Olea europaea	9	15	15	Y
529	Olea europaea	7	15	15	Y
529	Olea europaea	6	15	15	Y
529	Olea europaea	6	15	15	Y
532	Olea europaea	8	15	15	Y
532	Olea europaea	7	15	15	Y
532	Olea europaea	6	15	15	Y
532	Olea europaea	6	15	15	Y
533	Olea europaea	6	15	15	Y
533	Olea europaea	6	15	15	Y
533	Olea europaea	5	15	15	Y
535	Olea europaea	6	20	15	Y
535	Olea europaea	5	20	15	Y
535	Olea europaea	5	20	15	Y
535	Olea europaea	5	20	15	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
535	Olea europaea	4	20	15	Y
537	Olea europaea	7	20	15	Y
537	Olea europaea	6	20	15	Y
537	Olea europaea	3	20	15	Y
538	Olea europaea	6	20	15	Y
538	Olea europaea	6	20	15	Y
538	Olea europaea	4	20	15	Y
539	Olea europaea	9	20	15	Y
539	Olea europaea	7	20	15	Y
539	Olea europaea	5	20	15	Y
539	Olea europaea	4	20	15	Y
540	Olea europaea	10	20	15	Y
540	Olea europaea	8	20	15	Y
540	Olea europaea	7	20	15	Y
541	Olea europaea	10	20	15	Y
541	Olea europaea	8	20	15	Y
551	Olea europaea	11	20	15	Y
551	Olea europaea	10	20	15	Y
551	Olea europaea	9	20	15	Y
552	Olea europaea	13	20	15	Y
552	Olea europaea	9	20	15	Y
553	Olea europaea	22			Y
554	Olea europaea	15			Y
555	Olea europaea	16			Y
556	Olea europaea	14			Y
556	Olea europaea	13			Y
557	Olea europaea	13			Y
558	Olea europaea	12			Y
559	Olea europaea	12			Y
560	Olea europaea	13			Y
560	Olea europaea	12			Y
561	Olea europaea	12			Y
562	Olea europaea	8	20	10	Y
563	Olea europaea	9	15	18	Y
587	Olea europaea	8	20		Y
588	Olea europaea	12			Y
757	Olea europaea	10		20	Y
758	Olea europaea	8		15	Y
857	Olea europaea	8		15	Y
858	Olea europaea	11		15	Y
128	Olea europaea	4	11	6	
128	Olea europaea	3	11	6	
128	Olea europaea	2	11	6	
129	Olea europaea	6	11	8	
129	Olea europaea	4	11	8	
129	Olea europaea	3	11	8	
129	Olea europaea	3	11	8	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
129	Olea europaea	2	11	8	
129	Olea europaea	2	11	8	
302	Olea europaea	11	15	12	
302	Olea europaea	6	15	12	
302	Olea europaea	2	15	12	
303	Olea europaea	8	15	10	
303	Olea europaea	7	15	10	
304	Olea europaea	8	15	12	
304	Olea europaea	6	15	12	
304	Olea europaea	6	15	12	
305	Olea europaea	8	15	10	
305	Olea europaea	8	15	10	
305	Olea europaea	6	15	10	
306	Olea europaea	5	12	8	
307	Olea europaea	6	10	6	
308	Olea europaea	6	10	8	
310	Olea europaea	9			
310	Olea europaea	8			
311	Olea europaea	10			
313	Olea europaea	9	10	6	
335	Olea europaea	5	15	10	
340	Olea europaea	6			
340	Olea europaea	6			
358	Olea europaea	7	15	10	
361	Olea europaea	9	15	10	
365	Olea europaea	4	15	10	
370	Olea europaea	8	15	10	
372	Olea europaea	4	15	10	
372	Olea europaea	3	15	10	
372	Olea europaea	3	15	10	
479	Olea europaea	6	15	6	
483	Olea europaea	8	15	8	
483	Olea europaea	7	15	8	
487	Olea europaea	8	15	10	
487	Olea europaea	6	15	10	
487	Olea europaea	5	15	10	
487	Olea europaea	4	15	10	
488	Olea europaea	8	15	8	
488	Olea europaea	7	15	8	
488	Olea europaea	6	15	8	
488	Olea europaea	4	15	8	
501	Olea europaea	8	15	8	
501	Olea europaea	8	15	8	
501	Olea europaea	6	15	8	
513	Olea europaea	10			
519	Olea europaea	10			
519	Olea europaea	6			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
520	Olea europaea	8	15	10	
520	Olea europaea	7	15	10	
520	Olea europaea	6	15	10	
520	Olea europaea	5	15	10	
530	Olea europaea	10	15	10	
530	Olea europaea	8	15	10	
530	Olea europaea	7	15	10	
531	Olea europaea	8	15	10	
531	Olea europaea	7	15	10	
531	Olea europaea	7	15	10	
534	Olea europaea	9	15	12	
534	Olea europaea	6	15	12	
534	Olea europaea	4	15	12	
536	Olea europaea	7	15	10	
536	Olea europaea	6	15	10	
536	Olea europaea	4	15	10	
553	Olea europaea	9			
554	Olea europaea	9			
554	Olea europaea	8			
555	Olea europaea	10			
557	Olea europaea	11			
557	Olea europaea	10			
558	Olea europaea	11			
558	Olea europaea	10			
559	Olea europaea	11			
560	Olea europaea	7			
564	Olea europaea	11	15	8	
576	Olea europaea	6			
591	Olea europaea	6	18		
592	Olea europaea	5			
594	Olea europaea	10			
595	Olea europaea	4			
632	Olea europaea	8			
645	Olea europaea	4			
760	Olea europaea	6			
578	Pinus radiata	28			Y
579	Pinus radiata	22			Y
580	Pinus radiata	26			Y
581	Pinus radiata	24			Y
583	Pinus radiata	28			Y
584	Pinus radiata	52			Y
589	Pinus radiata	16			Y
590	Pinus radiata	19			Y
593	Pinus radiata	32			Y
605	Pinus radiata	16			Y
606	Pinus radiata	10	20		Y
617	Pinus radiata	14			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
618	Pinus radiata	16			Y
620	Pinus radiata	22			Y
622	Pinus radiata	30			Y
623	Pinus radiata	27			Y
624	Pinus radiata	29			Y
625	Pinus radiata	31			Y
627	Pinus radiata	14			Y
628	Pinus radiata	27			Y
628	Pinus radiata	26			Y
630	Pinus radiata	51			Y
631	Pinus radiata	32			Y
633	Pinus radiata	53			Y
634	Pinus radiata	47			Y
635	Pinus radiata	16			Y
638	Pinus radiata	16			Y
639	Pinus radiata	12			Y
640	Pinus radiata	28			Y
641	Pinus radiata	22			Y
642	Pinus radiata	33			Y
647	Pinus radiata	25			Y
648	Pinus radiata	12			Y
649	Pinus radiata	22			Y
651	Pinus radiata	28			Y
652	Pinus radiata	44			Y
653	Pinus radiata	52			Y
664	Pinus radiata	10	20		Y
678	Pinus radiata	42			Y
689	Pinus radiata	13			Y
691	Pinus radiata	19			Y
692	Pinus radiata	16			Y
693	Pinus radiata	17			Y
694	Pinus radiata	15			Y
725	Pinus radiata	15			Y
726	Pinus radiata	21			Y
728	Pinus radiata	18			Y
729	Pinus radiata	18			Y
730	Pinus radiata	16			Y
739	Pinus radiata	14			Y
740	Pinus radiata	16			Y
743	Pinus radiata	31			Y
744	Pinus radiata	18			Y
756	Pinus radiata	19			Y
756	Pinus radiata	16			Y
771	Pinus radiata	24			Y
772	Pinus radiata	24			Y
773	Pinus radiata	24			Y
774	Pinus radiata	28			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
775	Pinus radiata	36			Y
776	Pinus radiata	33			Y
777	Pinus radiata	21			Y
778	Pinus radiata	22			Y
779	Pinus radiata	21			Y
621	Pinus radiata	10			
577	Pinus radiata	24			Y
36	Pinus sp.	15	18	12	Y
47	Pinus sp.	16			Y
70	Pinus sp.	12			Y
71	Pinus sp.	18			Y
75	Pinus sp.	18			Y
76	Pinus sp.	15			Y
77	Pinus sp.	14			Y
79	Pinus sp.	27			Y
80	Pinus sp.	12			Y
81	Pinus sp.	12			Y
82	Pinus sp.	17			Y
83	Pinus sp.	19			Y
84	Pinus sp.	15			Y
85	Pinus sp.	14			Y
86	Pinus sp.	14			Y
86	Pinus sp.	12			Y
87	Pinus sp.	19			Y
88	Pinus sp.	12			Y
89	Pinus sp.	14			Y
90	Pinus sp.	9	30	8	Y
91	Pinus sp.	14			Y
106	Pinus sp.	13			Y
108	Pinus sp.	14			Y
109	Pinus sp.	12			Y
139	Pinus sp.	27			Y
140	Pinus sp.	20			Y
141	Pinus sp.	26			Y
142	Pinus sp.	12			Y
143	Pinus sp.	24			Y
176	Pinus sp.	10	20	14	Y
198	Pinus sp.	12			Y
200	Pinus sp.	12			Y
201	Pinus sp.	12			Y
264	Pinus sp.	11	30	20	Y
264	Pinus sp.	10	30	20	Y
264	Pinus sp.	9	30	20	Y
264	Pinus sp.	8	30	20	Y
264	Pinus sp.	4	30	20	Y
264	Pinus sp.	3	30	20	Y
265	Pinus sp.	34			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
266	Pinus sp.	13			Y
266	Pinus sp.	12			Y
267	Pinus sp.	12			Y
268	Pinus sp.	15			Y
269	Pinus sp.	18			Y
270	Pinus sp.	16			Y
271	Pinus sp.	24			Y
272	Pinus sp.	6	6	20	Y
273	Pinus sp.	15			Y
274	Pinus sp.	15			Y
275	Pinus sp.	18			Y
275	Pinus sp.	14			Y
276	Pinus sp.	25			Y
277	Pinus sp.	12			Y
277	Pinus sp.	12			Y
278	Pinus sp.	26			Y
279	Pinus sp.	8	30	8	Y
280	Pinus sp.	26			Y
282	Pinus sp.	24			Y
283	Pinus sp.	15			Y
284	Pinus sp.	18			Y
285	Pinus sp.	7	25	15	Y
285	Pinus sp.	6	25	15	Y
285	Pinus sp.	4	25	15	Y
286	Pinus sp.	19			Y
287	Pinus sp.	18			Y
288	Pinus sp.	16			Y
289	Pinus sp.	21			Y
290	Pinus sp.	6	15	20	Y
290	Pinus sp.	4	15	20	Y
291	Pinus sp.	15			Y
292	Pinus sp.	18			Y
293	Pinus sp.	24			Y
294	Pinus sp.	10	20	15	Y
294	Pinus sp.	7	20	15	Y
294	Pinus sp.	3	20	15	Y
295	Pinus sp.	10	30	20	Y
295	Pinus sp.	8	30	20	Y
295	Pinus sp.	6	30	20	Y
333	Pinus sp.	24			Y
337	Pinus sp.	25			Y
353	Pinus sp.	28			Y
354	Pinus sp.	28			Y
355	Pinus sp.	27			Y
356	Pinus sp.	16			Y
357	Pinus sp.	32			Y
359	Pinus sp.	27			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
360	Pinus sp.	14			Y
362	Pinus sp.	18			Y
367	Pinus sp.	28			Y
368	Pinus sp.	20			Y
371	Pinus sp.	28			Y
859	Pinus sp.	12			Y
860	Pinus sp.	17			Y
861	Pinus sp.	16			Y
862	Pinus sp.	10		20	Y
862	Pinus sp.	10		20	Y
863	Pinus sp.	10		22	Y
865	Pinus sp.	8		18	Y
865	Pinus sp.	6		18	Y
865	Pinus sp.	4		18	Y
866	Pinus sp.	10		20	Y
867	Pinus sp.	13			Y
868	Pinus sp.	10		20	Y
869	Pinus sp.	17			Y
870	Pinus sp.	10		20	Y
871	Pinus sp.	10		18	Y
872	Pinus sp.	6		18	Y
872	Pinus sp.	4		18	Y
873	Pinus sp.	8		16	Y
875	Pinus sp.	16			Y
876	Pinus sp.	20			Y
877	Pinus sp.	20			Y
877	Pinus sp.	15			Y
878	Pinus sp.	30			Y
879	Pinus sp.	47			Y
968	Pinus sp.	24			Y
969	Pinus sp.	20			Y
970	Pinus sp.	20			Y
971	Pinus sp.	25			Y
972	Pinus sp.	16			Y
973	Pinus sp.	16			Y
973	Pinus sp.	14			Y
974	Pinus sp.	12			Y
975	Pinus sp.	34			Y
976	Pinus sp.	20			Y
977	Pinus sp.	20			Y
978	Pinus sp.	30			Y
979	Pinus sp.	29			Y
980	Pinus sp.	17			Y
981	Pinus sp.	29			Y
981	Pinus sp.	20			Y
982	Pinus sp.	20			Y
982	Pinus sp.	16			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
983	Pinus sp.	20			Y
984	Pinus sp.	21			Y
985	Pinus sp.	37			Y
986	Pinus sp.	20			Y
987	Pinus sp.	25			Y
987	Pinus sp.	22			Y
988	Pinus sp.	18			Y
989	Pinus sp.	10		23	Y
990	Pinus sp.	12			Y
991	Pinus sp.	26			Y
992	Pinus sp.	12			Y
993	Pinus sp.	8		17	Y
994	Pinus sp.	16			Y
995	Pinus sp.	19			Y
996	Pinus sp.	20			Y
997	Pinus sp.	20			Y
998	Pinus sp.	30			Y
999	Pinus sp.	16			Y
1000	Pinus sp.	20			Y
1001	Pinus sp.	6		20	Y
1001	Pinus sp.	6		20	Y
1001	Pinus sp.	6		20	Y
1001	Pinus sp.	6		20	Y
1001	Pinus sp.	4		20	Y
1001	Pinus sp.	2		20	Y
1002	Pinus sp.	22			Y
1003	Pinus sp.	13			Y
1004	Pinus sp.	10		18	Y
1007	Pinus sp.	9		18	Y
1007	Pinus sp.	8		18	Y
1009	Pinus sp.	20			Y
1010	Pinus sp.	24			Y
1010	Pinus sp.	13			Y
1038	Pinus sp.	19			Y
1039	Pinus sp.	12			Y
1040	Pinus sp.	12			Y
36	Pinus sp.	6	18	12	
36	Pinus sp.	5	18	12	
36	Pinus sp.	4	18	12	
37	Pinus sp.	9	18	8	
48	Pinus sp.	4	10	12	
78	Pinus sp.	10			
79	Pinus sp.	11			
80	Pinus sp.	7			
80	Pinus sp.	4			
86	Pinus sp.	11			
86	Pinus sp.	8			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
107	Pinus sp.	7	9	6	
109	Pinus sp.	11			
109	Pinus sp.	10			
110	Pinus sp.	7	7	7	
110	Pinus sp.	4			
110	Pinus sp.	3			
110	Pinus sp.	2			
131	Pinus sp.	11	8	4	
131	Pinus sp.	2	8	4	
132	Pinus sp.	4	10	6	
133	Pinus sp.	4	10	6	
134	Pinus sp.	6	9	5	
135	Pinus sp.	10	15	8	
136	Pinus sp.	10	14	6	
137	Pinus sp.	6	12	6	
195	Pinus sp.	6	18	10	
196	Pinus sp.	4	12	7	
197	Pinus sp.	7	12	10	
199	Pinus sp.	5	10	8	
199	Pinus sp.	4	10	8	
266	Pinus sp.	8			
266	Pinus sp.	7			
542	Pinus sp.	4	15	8	
542	Pinus sp.	4	15	8	
542	Pinus sp.	3	15	8	
543	Pinus sp.	6	15	10	
543	Pinus sp.	6	15	10	
543	Pinus sp.	4	15	10	
543	Pinus sp.	4	15	10	
615	Pinus sp.	6			
666	Pinus sp.	5			
859	Pinus sp.	8			
864	Pinus sp.	10			
874	Pinus sp.	11			
877	Pinus sp.	10			
996	Pinus sp.	9			
996	Pinus sp.	8			
1005	Pinus sp.	8			
1006	Pinus sp.	11			
1006	Pinus sp.	6			
1008	Pinus sp.	8			
601	Podocarpus sp.	8	30		Y
602	Podocarpus sp.	5	25		Y
717	Populus sp.	12			Y
718	Populus sp.	10	22		Y
144	Populus sp.	15			Y
144	Populus sp.	10			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
144	Populus sp.	8			
38	Quercus agrifolia	14	17	20	Y
38	Quercus agrifolia	9	17	20	Y
38	Quercus agrifolia	7	17	20	Y
38	Quercus agrifolia	6	17	20	Y
72	Quercus agrifolia	8	20	12	Y
72	Quercus agrifolia	6	20	12	Y
72	Quercus agrifolia	6	20	12	Y
28	Quercus agrifolia	8	10	10	
28	Quercus agrifolia	6	10	10	
28	Quercus agrifolia	6	10	10	
29	Quercus agrifolia	7	10	11	
29	Quercus agrifolia	6	10	11	
29	Quercus agrifolia	5	10	11	
29	Quercus agrifolia	4	10	11	
39	Quercus agrifolia	3	8	7	
39	Quercus agrifolia	2	8	7	
39	Quercus agrifolia	2	8	7	
49	Quercus agrifolia	6	14	12	
49	Quercus agrifolia	6	14	12	
49	Quercus agrifolia	6	14	12	
50	Quercus agrifolia	8	12	12	
50	Quercus agrifolia	4	12	12	
50	Quercus agrifolia	3	12	12	
50	Quercus agrifolia	3	12	12	
51	Quercus agrifolia	9	10	12	
51	Quercus agrifolia	7	10	12	
51	Quercus agrifolia	6	10	12	
51	Quercus agrifolia	4	10	12	
51	Quercus agrifolia	4	10	12	
51	Quercus agrifolia	4	10	12	
53	Quercus agrifolia	6	15	11	
53	Quercus agrifolia	6	15	11	
53	Quercus agrifolia	4	15	11	
53	Quercus agrifolia	4	15	11	
53	Quercus agrifolia	4	15	11	
53	Quercus agrifolia	3	15	11	
55	Quercus agrifolia	5	10	8	
55	Quercus agrifolia	2	10	8	
55	Quercus agrifolia	2	10	8	
57	Rhamnus californica	8	10	8	
57	Rhamnus californica	3	10	8	
57	Rhamnus californica	2	10	8	
57	Rhamnus californica	2	10	8	
159	Salix laevigata	22			Y
166	Salix laevigata	11	15	25	Y
215	Salix laevigata	7	25	15	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
215	Salix laevigata	6	25	15	Y
215	Salix laevigata	2	25	15	Y
217	Salix laevigata	6	25	6	Y
218	Salix laevigata	18			Y
219	Salix laevigata	13			Y
221	Salix laevigata	9	20	15	Y
221	Salix laevigata	5	20	15	Y
221	Salix laevigata	4	20	15	Y
238	Salix laevigata	4	25	15	Y
238	Salix laevigata	3	25	15	Y
238	Salix laevigata	3	25	15	Y
239	Salix laevigata	6	20	8	Y
244	Salix laevigata	5	20	15	Y
244	Salix laevigata	4	20	15	Y
244	Salix laevigata	3	20	15	Y
244	Salix laevigata	3	20	15	Y
656	Salix laevigata	12			Y
1042	Salix laevigata	3	15	30	Y
1042	Salix laevigata	3	15	30	Y
1042	Salix laevigata	3	15	30	Y
1042	Salix laevigata	2	15	30	Y
1042	Salix laevigata	2	15	30	Y
1042	Salix laevigata	2	15	30	Y
1042	Salix laevigata	2	15	30	Y
1042	Salix laevigata	2	15	30	Y
159	Salix laevigata	8			
159	Salix laevigata	7			
159	Salix laevigata	7			
159	Salix laevigata	6			
159	Salix laevigata	6			
159	Salix laevigata	5			
159	Salix laevigata	5			
165	Salix laevigata	2	10	5	
165	Salix laevigata	2	10	5	
202	Salix laevigata	11	17	14	
202	Salix laevigata	10	17	14	
202	Salix laevigata	9	17	14	
202	Salix laevigata	7	17	14	
224	Salix laevigata	6	15	12	
224	Salix laevigata	4	15	12	
224	Salix laevigata	3	15	12	
224	Salix laevigata	3	15	12	
241	Salix laevigata	6	8	4	
242	Salix laevigata	3	15	12	
242	Salix laevigata	2	15	12	
245	Salix laevigata	11	15	10	
246	Salix laevigata	3	8	6	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
656	Salix laevigata	5			
656	Salix laevigata	3			
656	Salix laevigata	2			
1028	Sequoia sempervirens	8	25	15	Y
1029	Sequoia sempervirens	8	25	15	Y
1030	Sequoia sempervirens	11	25	15	Y
1031	Sequoia sempervirens	11	25	15	Y
1032	Sequoia sempervirens	6	25	15	Y
1033	Sequoia sempervirens	6	25	15	Y
1034	Sequoia sempervirens	11	25	15	Y
1035	Sequoia sempervirens	8	25	15	Y
1036	Sequoia sempervirens	5	20	10	Y
352	Sequoia sempervirens	19			Y
1037	Sequoia sempervirens	3	15	8	
347	Sequoiadendron giganticum	6	15	6	
637	Ulmus parviflora	6	20		Y
643	Ulmus parviflora	15			Y
644	Ulmus parviflora	15			Y
675	Ulmus parviflora	10	25		Y
676	Ulmus parviflora	12			Y
637	Ulmus parviflora	5			
58	Umbellularia californica	6	10	11	
58	Umbellularia californica	5	10	11	
58	Umbellularia californica	3	10	11	
58	Umbellularia californica	2	10	11	
17	Unknown	14			Y
68	Unknown	8	25	18	Y
68	Unknown	8	25	18	Y
68	Unknown	7	25	18	Y
68	Unknown	7	25	18	Y
68	Unknown	5	25	18	Y
68	Unknown	4	25	18	Y
69	Unknown	26			Y
69	Unknown	16			Y
567	Unknown	8	20		Y
568	Unknown	7	22		Y
569	Unknown	8	24		Y
572	Unknown	6	25		Y
573	Unknown	10	30		Y
574	Unknown	5	20		Y
575	Unknown	8	20		Y
582	Unknown	8	22		Y
585	Unknown	8	20		Y
598	Unknown	8	30		Y
650	Unknown	8		16	Y
655	Unknown	16			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
657	Unknown	18			Y
679	Unknown	16			Y
686	Unknown	6		20	Y
687	Unknown	19		25	Y
703	Unknown	14			Y
704	Unknown	12			Y
713	Unknown	12			Y
715	Unknown	14			Y
733	Unknown	10		17	Y
766	Unknown	6		15	Y
767	Unknown	28			Y
917	Unknown	18			Y
918	Unknown	15			Y
939	Unknown	16			Y
17	Unknown	8			
17	Unknown	6			
566	Unknown	6			
570	Unknown	4			
596	Unknown	6			
603	Unknown	8	18		
604	Unknown	8			
607	Unknown	6			
608	Unknown	6			
616	Unknown	4			
619	Unknown	4			
646	Unknown	6			
654	Unknown	8			
658	Unknown	8			
684	Unknown	6			
684	Unknown	6			
704	Unknown	8			
704	Unknown	8			
704	Unknown	8			
704	Unknown	5			
714	Unknown	6			
731	Unknown	5			
732	Unknown	5			
742	Unknown	5			
882	Unknown	10			
883	Unknown	10			
884	Unknown	9			
886	Unknown	10			
888	Unknown	11			
890	Unknown	8			
891	Unknown	11			
892	Unknown	11			
893	Unknown	8			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
894	Unknown	10			
895	Unknown	6			
899	Unknown	11			
902	Unknown	11			
906	Unknown	10			
907	Unknown	9			
910	Unknown	9			
912	Unknown	6			
913	Unknown	10			
914	Unknown	10			
915	Unknown	9			
916	Unknown	9.5			
919	Unknown	8			
920	Unknown	6			
921	Unknown	10			
923	Unknown	3			
924	Unknown	4			
925	Unknown	2			
926	Unknown	8			
927	Unknown	2			
928	Unknown	8			
929	Unknown	3			
930	Unknown	8			
931	Unknown	3			
932	Unknown	10			
933	Unknown	2			
934	Unknown	9			
935	Unknown	2			
936	Unknown	10			
937	Unknown	2			
938	Unknown	10			
940	Unknown	2			
941	Unknown	2.5			
942	Unknown	3			
943	Unknown	2			
944	Unknown	8			
945	Unknown	7			
946	Unknown	3			
947	Unknown	7			
948	Unknown	3			
949	Unknown	7			
950	Unknown	8			
951	Unknown	5			
952	Unknown	8			
953	Unknown	4			
954	Unknown	10			
955	Unknown	3			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
956	Unknown	2			
957	Unknown	7			
958	Unknown	3			
959	Unknown	7			
960	Unknown	3			
64	Unknown	10	21	12	Y
64	Unknown	6	21	12	Y
64	Unknown	6	21	12	Y
64	Unknown	6	21	12	Y
64	Unknown	4	21	12	Y
64	Unknown	4	21	12	Y
880	Washingtonia sp.	22			Y
880	Washingtonia sp.	16			Y
880	Washingtonia sp.	13			Y
881	Washingtonia sp.	22			Y
881	Washingtonia sp.	17			Y
881	Washingtonia sp.	16			Y

APPENDIX B.
HUNTERS POINT SHIPYARD PHASE II
TREE SURVEY DATA

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
11	Acacia sp.	4	10	15	Y
13	Acacia sp.	14			Y
16	Acacia sp.	6	12	15	Y
16	Acacia sp.	5	12	15	Y
16	Acacia sp.	5	12	15	Y
16	Acacia sp.	4	12	15	Y
16	Acacia sp.	3	12	15	Y
17	Acacia sp.	6	15	20	Y
17	Acacia sp.	5	15	20	Y
17	Acacia sp.	4	15	20	Y
17	Acacia sp.	3	15	20	Y
17	Acacia sp.	2	15	20	Y
18	Acacia sp.	20	15	10	Y
18	Acacia sp.	4	15	10	
18	Acacia sp.	3	15	10	
28	Acacia sp.	13			Y
87	Acacia sp.	8	30	15	Y
87	Acacia sp.	4	30	15	Y
87	Acacia sp.	3	30	15	Y
133	Acacia sp.	9	35	30	Y
133	Acacia sp.	8	35	30	Y
133	Acacia sp.	8	35	30	Y
133	Acacia sp.	6	35	30	Y
133	Acacia sp.	6	35	30	Y
171	Acacia sp.	2	10	15	Y
186	Acacia sp.	4	10	8	
187	Acacia sp.	3	10	10	
187	Acacia sp.	2	10	10	
187	Acacia sp.	2	10	10	
188	Acacia sp.	3	10	10	
188	Acacia sp.	2	10	10	
189	Acacia sp.	3	15	10	
189	Acacia sp.	2	15	10	
190	Acacia sp.	2	12	12	
191	Acacia sp.	2	8	6	
192	Acacia sp.	3	10	8	
192	Acacia sp.	2	10	8	
193	Acacia sp.	4	8	12	
193	Acacia sp.	2	8	12	
194	Acacia sp.	4	12	10	
194	Acacia sp.	3	12	10	
194	Acacia sp.	3	12	10	
195	Acacia sp.	2	10	10	
244	Acacia sp.	5	15	10	
244	Acacia sp.	4	15	10	
244	Acacia sp.	3	15	10	
244	Acacia sp.	2	15	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
244	Acacia sp.	2	15	10	
244	Acacia sp.	2	15	10	
245	Acacia sp.	13			Y
245	Acacia sp.	8			
246	Acacia sp.	16			Y
246	Acacia sp.	12			Y
246	Acacia sp.	12			Y
246	Acacia sp.	5			
251	Acacia sp.	3	10	8	
251	Acacia sp.	3	10	8	
252	Acacia sp.	4	10	6	
252	Acacia sp.	3	10	6	
252	Acacia sp.	3	10	6	
253	Acacia sp.	4	8	6	
253	Acacia sp.	3	8	6	
253	Acacia sp.	2	8	6	
253	Acacia sp.	2	8	6	
253	Acacia sp.	2	8	6	
254	Acacia sp.	7	8	6	
254	Acacia sp.	5	8	6	
254	Acacia sp.	4	8	6	
254	Acacia sp.	3	8	6	
254	Acacia sp.	3	8	6	
293	Acacia sp.	6	25	15	Y
293	Acacia sp.	5	25	15	Y
293	Acacia sp.	5	25	15	Y
293	Acacia sp.	4	25	15	Y
313	Acacia sp.	3	10	15	Y
313	Acacia sp.	2	10	15	Y
313	Acacia sp.	2	10	15	Y
313	Acacia sp.	2	10	15	Y
313	Acacia sp.	2	10	15	Y
313	Acacia sp.	2	10	15	Y
314	Acacia sp.	2	8	8	
315	Acacia sp.	3	8	8	
315	Acacia sp.	3	8	8	
315	Acacia sp.	2	8	8	
315	Acacia sp.	2	8	8	
295	Betula sp.	8	20	12	Y
295	Betula sp.	6	20	12	Y
297	Betula sp.	2	15	8	
297	Betula sp.	2	15	8	
49	Cedrus sp.	12			Y
49	Cedrus sp.	7			
83	Cedrus sp.	13			Y
102	Cedrus sp.	13			Y
102	Cedrus sp.	11			

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
102	Cedrus sp.	10			
131	Cedrus sp.	12			Y
131	Cedrus sp.	11			
131	Cedrus sp.	10			
24	Cupressus	25			Y
25	Cupressus	15			Y
5	Eucalyptus sp.	15	15	12	Y
7	Eucalyptus sp.	15			Y
7	Eucalyptus sp.	5			
7	Eucalyptus sp.	4			
7	Eucalyptus sp.	3			
7	Eucalyptus sp.	3			
7	Eucalyptus sp.	2			
8	Eucalyptus sp.	4	15	15	Y
8	Eucalyptus sp.	4	15	15	Y
8	Eucalyptus sp.	3	15	15	Y
9	Eucalyptus sp.	2	15	20	Y
9	Eucalyptus sp.	2	15	20	Y
12	Eucalyptus sp.	5	12	15	Y
12	Eucalyptus sp.	4	12	15	Y
12	Eucalyptus sp.	4	12	15	Y
182	Eucalyptus sp.	37	16	18	Y
183	Eucalyptus sp.	18			Y
183	Eucalyptus sp.	16			Y
1	Heteromeles arbutifolia	4	10	7	
1	Heteromeles arbutifolia	3	10	7	
1	Heteromeles arbutifolia	2	10	7	
1	Heteromeles arbutifolia	2	10	7	
2	Heteromeles arbutifolia	6	15	8	
2	Heteromeles arbutifolia	3	15	8	
2	Heteromeles arbutifolia	2	15	8	
2	Heteromeles arbutifolia	2	15	8	
3	Heteromeles arbutifolia	6	15	8	
3	Heteromeles arbutifolia	4	15	8	
3	Heteromeles arbutifolia	3	15	8	
3	Heteromeles arbutifolia	2	15	8	
3	Heteromeles arbutifolia	2	15	8	
3	Heteromeles arbutifolia	2	15	8	
71	Heteromeles arbutifolia	8	12	15	Y
71	Heteromeles arbutifolia	3	12	15	Y
71	Heteromeles arbutifolia	2	12	15	Y
71	Heteromeles arbutifolia	2	12	15	Y
71	Heteromeles arbutifolia	2	12	15	Y
72	Heteromeles arbutifolia	5	12	10	
72	Heteromeles arbutifolia	3	12	10	
72	Heteromeles arbutifolia	2	12	10	
72	Heteromeles arbutifolia	2	12	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
72	Heteromeles arbutifolia	2	12	10	
72	Heteromeles arbutifolia	2	12	10	
72	Heteromeles arbutifolia	2	12	10	
72	Heteromeles arbutifolia	2	12	10	
73	Heteromeles arbutifolia	5	15	10	
73	Heteromeles arbutifolia	4	15	10	
75	Heteromeles arbutifolia	10	20	15	Y
77	Heteromeles arbutifolia	10	15	15	Y
77	Heteromeles arbutifolia	8	15	15	Y
78	Heteromeles arbutifolia	6	15	10	
78	Heteromeles arbutifolia	4	15	10	
82	Heteromeles arbutifolia	6	25	15	Y
82	Heteromeles arbutifolia	5	25	15	Y
82	Heteromeles arbutifolia	4	25	15	Y
82	Heteromeles arbutifolia	4	25	15	Y
89	Heteromeles arbutifolia	5	25	25	Y
89	Heteromeles arbutifolia	4	25	25	Y
89	Heteromeles arbutifolia	3	25	25	Y
100	Heteromeles arbutifolia	8	20	20	Y
100	Heteromeles arbutifolia	5	20	20	Y
100	Heteromeles arbutifolia	4	20	20	Y
100	Heteromeles arbutifolia	4	20	20	Y
100	Heteromeles arbutifolia	4	20	20	Y
100	Heteromeles arbutifolia	3	20	20	Y
100	Heteromeles arbutifolia	3	20	20	Y
137	Heteromeles arbutifolia	6	15	10	
137	Heteromeles arbutifolia	4	15	10	
137	Heteromeles arbutifolia	3	15	10	
137	Heteromeles arbutifolia	2	15	10	
140	Heteromeles arbutifolia	4	15	15	Y
140	Heteromeles arbutifolia	3	15	15	Y
140	Heteromeles arbutifolia	3	15	15	Y
140	Heteromeles arbutifolia	3	15	15	Y
140	Heteromeles arbutifolia	2	15	15	Y
140	Heteromeles arbutifolia	2	15	15	Y
140	Heteromeles arbutifolia	2	15	15	Y
140	Heteromeles arbutifolia	2	15	15	Y
140	Heteromeles arbutifolia	2	15	15	Y
141	Heteromeles arbutifolia	7	12	15	Y
141	Heteromeles arbutifolia	5	12	15	Y
141	Heteromeles arbutifolia	4	12	15	Y
141	Heteromeles arbutifolia	4	12	15	Y
141	Heteromeles arbutifolia	3	12	15	Y
141	Heteromeles arbutifolia	3	12	15	Y
141	Heteromeles arbutifolia	2	12	15	Y
142	Heteromeles arbutifolia	3	12	10	
142	Heteromeles arbutifolia	2	12	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
142	Heteromeles arbutifolia	2	12	10	
142	Heteromeles arbutifolia	2	12	10	
142	Heteromeles arbutifolia	2	12	10	
143	Heteromeles arbutifolia	2	12	10	
143	Heteromeles arbutifolia	2	12	10	
143	Heteromeles arbutifolia	2	12	10	
145	Heteromeles arbutifolia	2	8	6	
145	Heteromeles arbutifolia	2	8	6	
145	Heteromeles arbutifolia	2	8	6	
146	Heteromeles arbutifolia	4	20	15	Y
146	Heteromeles arbutifolia	3	20	15	Y
146	Heteromeles arbutifolia	3	20	15	Y
146	Heteromeles arbutifolia	2	20	15	Y
146	Heteromeles arbutifolia	2	20	15	Y
146	Heteromeles arbutifolia	2	20	15	Y
146	Heteromeles arbutifolia	2	20	15	Y
146	Heteromeles arbutifolia	2	20	15	Y
147	Heteromeles arbutifolia	6	12	8	
147	Heteromeles arbutifolia	3	12	8	
147	Heteromeles arbutifolia	2	12	8	
147	Heteromeles arbutifolia	2	12	8	
147	Heteromeles arbutifolia	2	12	8	
147	Heteromeles arbutifolia	2	12	8	
148	Heteromeles arbutifolia	2	12	8	
148	Heteromeles arbutifolia	2	12	8	
149	Heteromeles arbutifolia	2	10	8	
149	Heteromeles arbutifolia	2	10	8	
149	Heteromeles arbutifolia	2	10	8	
150	Heteromeles arbutifolia	3	12	8	
150	Heteromeles arbutifolia	2	12	8	
150	Heteromeles arbutifolia	2	12	8	
150	Heteromeles arbutifolia	2	12	8	
151	Heteromeles arbutifolia	2	12	8	
151	Heteromeles arbutifolia	2	12	8	
151	Heteromeles arbutifolia	2	12	8	
152	Heteromeles arbutifolia	3	15	10	
152	Heteromeles arbutifolia	3	15	10	
152	Heteromeles arbutifolia	2	15	10	
152	Heteromeles arbutifolia	2	15	10	
152	Heteromeles arbutifolia	2	15	10	
153	Heteromeles arbutifolia	3	15	10	
153	Heteromeles arbutifolia	2	15	10	
153	Heteromeles arbutifolia	2	15	10	
153	Heteromeles arbutifolia	2	15	10	
153	Heteromeles arbutifolia	2	15	10	
154	Heteromeles arbutifolia	3	12	8	
154	Heteromeles arbutifolia	2	12	8	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
155	Heteromeles arbutifolia	3	12	10	
155	Heteromeles arbutifolia	3	12	10	
155	Heteromeles arbutifolia	2	12	10	
155	Heteromeles arbutifolia	2	12	10	
155	Heteromeles arbutifolia	2	12	10	
155	Heteromeles arbutifolia	2	12	10	
156	Heteromeles arbutifolia	3	15	10	
156	Heteromeles arbutifolia	3	15	10	
156	Heteromeles arbutifolia	2	15	10	
156	Heteromeles arbutifolia	2	15	10	
157	Heteromeles arbutifolia	10	20	15	Y
157	Heteromeles arbutifolia	6	20	15	Y
157	Heteromeles arbutifolia	5	20	15	Y
157	Heteromeles arbutifolia	3	20	15	Y
157	Heteromeles arbutifolia	3	20	15	Y
158	Heteromeles arbutifolia	2	12	8	
159	Heteromeles arbutifolia	3	12	12	
159	Heteromeles arbutifolia	3	12	12	
159	Heteromeles arbutifolia	2	12	12	
159	Heteromeles arbutifolia	2	12	12	
159	Heteromeles arbutifolia	2	12	12	
159	Heteromeles arbutifolia	2	12	12	
159	Heteromeles arbutifolia	2	12	12	
160	Heteromeles arbutifolia	3	12	6	
161	Heteromeles arbutifolia	2	12	8	
162	Heteromeles arbutifolia	3	10	8	
162	Heteromeles arbutifolia	2	10	8	
162	Heteromeles arbutifolia	2	10	8	
162	Heteromeles arbutifolia	2	10	8	
162	Heteromeles arbutifolia	2	10	8	
163	Heteromeles arbutifolia	3	8	8	
163	Heteromeles arbutifolia	2	8	8	
163	Heteromeles arbutifolia	2	8	8	
163	Heteromeles arbutifolia	2	8	8	
164	Heteromeles arbutifolia	3	10	8	
164	Heteromeles arbutifolia	2	10	8	
164	Heteromeles arbutifolia	2	10	8	
165	Heteromeles arbutifolia	3	10	20	Y
165	Heteromeles arbutifolia	2	10	20	Y
165	Heteromeles arbutifolia	2	10	20	Y
166	Heteromeles arbutifolia	7	12	20	Y
166	Heteromeles arbutifolia	6	12	20	Y
166	Heteromeles arbutifolia	5	12	20	Y
166	Heteromeles arbutifolia	4	12	20	Y
166	Heteromeles arbutifolia	4	12	20	Y
166	Heteromeles arbutifolia	3	12	20	Y
166	Heteromeles arbutifolia	3	12	20	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
166	Heteromeles arbutifolia	3	12	20	Y
167	Heteromeles arbutifolia	3	10	8	
167	Heteromeles arbutifolia	2	10	8	
167	Heteromeles arbutifolia	2	10	8	
168	Heteromeles arbutifolia	2	10	8	
168	Heteromeles arbutifolia	2	10	8	
169	Heteromeles arbutifolia	2	10	8	
169	Heteromeles arbutifolia	2	10	8	
169	Heteromeles arbutifolia	2	10	8	
170	Heteromeles arbutifolia	3	10	8	
170	Heteromeles arbutifolia	3	10	8	
170	Heteromeles arbutifolia	2	10	8	
170	Heteromeles arbutifolia	2	10	8	
170	Heteromeles arbutifolia	2	10	8	
170	Heteromeles arbutifolia	2	10	8	
170	Heteromeles arbutifolia	2	10	8	
172	Heteromeles arbutifolia	4	8	10	
172	Heteromeles arbutifolia	3	8	10	
172	Heteromeles arbutifolia	2	8	10	
172	Heteromeles arbutifolia	2	8	10	
172	Heteromeles arbutifolia	2	8	10	
173	Heteromeles arbutifolia	3	8	10	
173	Heteromeles arbutifolia	2	8	10	
174	Heteromeles arbutifolia	4	8	10	
174	Heteromeles arbutifolia	4	8	10	
174	Heteromeles arbutifolia	3	8	10	
175	Heteromeles arbutifolia	5	8	10	
175	Heteromeles arbutifolia	4	8	10	
175	Heteromeles arbutifolia	4	8	10	
175	Heteromeles arbutifolia	2	8	10	
176	Heteromeles arbutifolia	2	10	8	
176	Heteromeles arbutifolia	2	10	8	
177	Heteromeles arbutifolia	2	8	8	
178	Heteromeles arbutifolia	2	7	8	
178	Heteromeles arbutifolia	2	7	8	
178	Heteromeles arbutifolia	2	7	8	
179	Heteromeles arbutifolia	5	10	8	
179	Heteromeles arbutifolia	3	10	8	
179	Heteromeles arbutifolia	2	10	8	
179	Heteromeles arbutifolia	2	10	8	
179	Heteromeles arbutifolia	2	10	8	
180	Heteromeles arbutifolia	3	12	10	
180	Heteromeles arbutifolia	2	12	10	
180	Heteromeles arbutifolia	2	12	10	
181	Heteromeles arbutifolia	2	12	8	
184	Heteromeles arbutifolia	4	10	10	
184	Heteromeles arbutifolia	2	10	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
184	Heteromeles arbutifolia	2	10	10	
196	Heteromeles arbutifolia	4	15	20	Y
196	Heteromeles arbutifolia	3	15	20	Y
196	Heteromeles arbutifolia	3	15	20	Y
196	Heteromeles arbutifolia	3	15	20	Y
196	Heteromeles arbutifolia	2	15	20	Y
196	Heteromeles arbutifolia	2	15	20	Y
196	Heteromeles arbutifolia	2	15	20	Y
197	Heteromeles arbutifolia	5	15	15	Y
197	Heteromeles arbutifolia	4	15	15	Y
197	Heteromeles arbutifolia	3	15	15	Y
197	Heteromeles arbutifolia	2	15	15	Y
197	Heteromeles arbutifolia	2	15	15	Y
233	Heteromeles arbutifolia	4	15	20	Y
233	Heteromeles arbutifolia	3	15	20	Y
233	Heteromeles arbutifolia	3	15	20	Y
233	Heteromeles arbutifolia	2	15	20	Y
234	Heteromeles arbutifolia	7	15	12	
236	Heteromeles arbutifolia	3	15	10	
236	Heteromeles arbutifolia	2	15	10	
236	Heteromeles arbutifolia	2	15	10	
237	Heteromeles arbutifolia	4	12	8	
238	Heteromeles arbutifolia	3	15	8	
239	Heteromeles arbutifolia	2	12	8	
240	Heteromeles arbutifolia	2	12	8	
241	Heteromeles arbutifolia	3	15	10	
241	Heteromeles arbutifolia	2	15	10	
242	Heteromeles arbutifolia	3	8	10	
243	Heteromeles arbutifolia	3	15	10	
243	Heteromeles arbutifolia	2	15	10	
247	Heteromeles arbutifolia	4	15	10	
247	Heteromeles arbutifolia	3	15	10	
247	Heteromeles arbutifolia	2	15	10	
248	Heteromeles arbutifolia	6	12	8	
248	Heteromeles arbutifolia	4	12	8	
248	Heteromeles arbutifolia	3	12	8	
248	Heteromeles arbutifolia	2	12	8	
249	Heteromeles arbutifolia	5	10	8	
249	Heteromeles arbutifolia	2	10	8	
249	Heteromeles arbutifolia	2	10	8	
249	Heteromeles arbutifolia	2	10	8	
249	Heteromeles arbutifolia	2	10	8	
250	Heteromeles arbutifolia	3	10	8	
250	Heteromeles arbutifolia	3	10	8	
250	Heteromeles arbutifolia	3	10	8	
250	Heteromeles arbutifolia	2	10	8	
255	Heteromeles arbutifolia	3	15	15	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
255	Heteromeles arbutifolia	2	15	15	Y
255	Heteromeles arbutifolia	2	15	15	Y
256	Heteromeles arbutifolia	10	15	20	Y
256	Heteromeles arbutifolia	3	15	20	Y
256	Heteromeles arbutifolia	2	15	20	Y
257	Heteromeles arbutifolia	3	20	15	Y
257	Heteromeles arbutifolia	3	20	15	Y
257	Heteromeles arbutifolia	3	20	15	Y
257	Heteromeles arbutifolia	2	20	15	Y
257	Heteromeles arbutifolia	2	20	15	Y
258	Heteromeles arbutifolia	5	20	15	Y
258	Heteromeles arbutifolia	4	20	15	Y
258	Heteromeles arbutifolia	3	20	15	Y
258	Heteromeles arbutifolia	3	20	15	Y
259	Heteromeles arbutifolia	4	15	10	
260	Heteromeles arbutifolia	5	12	8	
260	Heteromeles arbutifolia	4	12	8	
260	Heteromeles arbutifolia	2	12	8	
260	Heteromeles arbutifolia	2	12	8	
261	Heteromeles arbutifolia	3	10	10	
261	Heteromeles arbutifolia	3	10	10	
261	Heteromeles arbutifolia	2	10	10	
262	Heteromeles arbutifolia	6	12	10	
262	Heteromeles arbutifolia	5	12	10	
262	Heteromeles arbutifolia	3	12	10	
263	Heteromeles arbutifolia	2	12	10	
264	Heteromeles arbutifolia	3	15	8	
264	Heteromeles arbutifolia	2	15	8	
264	Heteromeles arbutifolia	2	15	8	
265	Heteromeles arbutifolia	3	15	25	Y
265	Heteromeles arbutifolia	3	15	25	Y
265	Heteromeles arbutifolia	2	15	25	Y
265	Heteromeles arbutifolia	2	15	25	Y
266	Heteromeles arbutifolia	3	20	8	Y
266	Heteromeles arbutifolia	2	20	8	Y
267	Heteromeles arbutifolia	2	15	10	
268	Heteromeles arbutifolia	6	12	8	
268	Heteromeles arbutifolia	3	12	8	
268	Heteromeles arbutifolia	3	12	8	
270	Heteromeles arbutifolia	4	10	8	
271	Heteromeles arbutifolia	4	10	6	
271	Heteromeles arbutifolia	4	10	6	
271	Heteromeles arbutifolia	3	10	6	
272	Heteromeles arbutifolia	3	10	8	
272	Heteromeles arbutifolia	3	10	8	
272	Heteromeles arbutifolia	2	10	8	
273	Heteromeles arbutifolia	3	10	6	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
274	Heteromeles arbutifolia	6	15	12	
274	Heteromeles arbutifolia	5	15	12	
274	Heteromeles arbutifolia	4	15	12	
274	Heteromeles arbutifolia	3	15	12	
274	Heteromeles arbutifolia	3	15	12	
274	Heteromeles arbutifolia	2	15	12	
274	Heteromeles arbutifolia	2	15	12	
274	Heteromeles arbutifolia	2	15	12	
274	Heteromeles arbutifolia	2	15	12	
275	Heteromeles arbutifolia	5	15	10	
275	Heteromeles arbutifolia	4	15	10	
275	Heteromeles arbutifolia	3	15	10	
275	Heteromeles arbutifolia	2	15	10	
275	Heteromeles arbutifolia	2	15	10	
276	Heteromeles arbutifolia	3	12	8	
276	Heteromeles arbutifolia	2	12	8	
276	Heteromeles arbutifolia	2	12	8	
277	Heteromeles arbutifolia	6	15	10	
277	Heteromeles arbutifolia	5	15	10	
277	Heteromeles arbutifolia	5	15	10	
277	Heteromeles arbutifolia	5	15	10	
277	Heteromeles arbutifolia	4	15	10	
277	Heteromeles arbutifolia	3	15	10	
277	Heteromeles arbutifolia	3	15	10	
277	Heteromeles arbutifolia	2	15	10	
278	Heteromeles arbutifolia	3	15	10	
278	Heteromeles arbutifolia	3	15	10	
278	Heteromeles arbutifolia	2	15	10	
278	Heteromeles arbutifolia	2	15	10	
278	Heteromeles arbutifolia	2	15	10	
279	Heteromeles arbutifolia	2	10	6	
279	Heteromeles arbutifolia	2	10	6	
280	Heteromeles arbutifolia	3	12	8	
280	Heteromeles arbutifolia	2	12	8	
280	Heteromeles arbutifolia	2	12	8	
281	Heteromeles arbutifolia	3	10	6	
281	Heteromeles arbutifolia	3	10	6	
281	Heteromeles arbutifolia	2	10	6	
282	Heteromeles arbutifolia	5	15	8	
282	Heteromeles arbutifolia	4	15	8	
282	Heteromeles arbutifolia	3	15	8	
282	Heteromeles arbutifolia	3	15	8	
283	Heteromeles arbutifolia	5	20	15	Y
283	Heteromeles arbutifolia	4	20	15	Y
283	Heteromeles arbutifolia	2	20	15	Y
283	Heteromeles arbutifolia	2	20	15	Y
284	Heteromeles arbutifolia	3	15	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
284	Heteromeles arbutifolia	3	15	10	
284	Heteromeles arbutifolia	2	15	10	
284	Heteromeles arbutifolia	2	15	10	
284	Heteromeles arbutifolia	2	15	10	
284	Heteromeles arbutifolia	1	15	10	
294	Heteromeles arbutifolia	3	25	15	Y
294	Heteromeles arbutifolia	3	25	15	Y
294	Heteromeles arbutifolia	3	25	15	Y
294	Heteromeles arbutifolia	3	25	15	Y
294	Heteromeles arbutifolia	2	25	15	Y
294	Heteromeles arbutifolia	2	25	15	Y
294	Heteromeles arbutifolia	2	25	15	Y
294	Heteromeles arbutifolia	2	25	15	Y
294	Heteromeles arbutifolia	2	25	15	Y
294	Heteromeles arbutifolia	2	25	15	Y
294	Heteromeles arbutifolia	2	25	15	Y
296	Heteromeles arbutifolia	3	12	10	
296	Heteromeles arbutifolia	2	12	10	
296	Heteromeles arbutifolia	2	12	10	
296	Heteromeles arbutifolia	2	12	10	
296	Heteromeles arbutifolia	2	12	10	
308	Heteromeles arbutifolia	2	10	6	
308	Heteromeles arbutifolia	2	10	6	
308	Heteromeles arbutifolia	2	10	6	
309	Heteromeles arbutifolia	2	8	4	
309	Heteromeles arbutifolia	2	8	4	
310	Heteromeles arbutifolia	3	10	8	
310	Heteromeles arbutifolia	3	10	8	
310	Heteromeles arbutifolia	2	10	8	
310	Heteromeles arbutifolia	2	10	8	
312	Heteromeles arbutifolia	3	12	8	
312	Heteromeles arbutifolia	2	12	8	
312	Heteromeles arbutifolia	2	12	8	
312	Heteromeles arbutifolia	2	12	8	
316	Heteromeles arbutifolia	3	10	8	
316	Heteromeles arbutifolia	3	10	8	
316	Heteromeles arbutifolia	2	10	8	
316	Heteromeles arbutifolia	2	10	8	
316	Heteromeles arbutifolia	2	10	8	
317	Heteromeles arbutifolia	3	12	8	
317	Heteromeles arbutifolia	3	12	8	
317	Heteromeles arbutifolia	3	12	8	
317	Heteromeles arbutifolia	2	12	8	
317	Heteromeles arbutifolia	2	12	8	
317	Heteromeles arbutifolia	2	12	8	
317	Heteromeles arbutifolia	2	12	8	
317	Heteromeles arbutifolia	2	12	8	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
10	Juglans californica	5	15	20	Y
10	Juglans californica	4	15	20	Y
185	Juglans californica	12			Y
19	Juniperus sp.	8	20	10	Y
19	Juniperus sp.	8	20	10	Y
19	Juniperus sp.	6	20	10	Y
19	Juniperus sp.	6	20	10	Y
20	Juniperus sp.	13	20	10	Y
20	Juniperus sp.	8	20	10	Y
20	Juniperus sp.	8	20	10	Y
20	Juniperus sp.	6	20	10	Y
127	Juniperus sp.	7	15	15	Y
127	Juniperus sp.	4	15	15	Y
127	Juniperus sp.	2	15	15	Y
130	Juniperus sp.	5	15	12	
130	Juniperus sp.	3	15	12	
130	Juniperus sp.	3	15	12	
130	Juniperus sp.	3	15	12	
130	Juniperus sp.	3	15	12	
130	Juniperus sp.	2	15	12	
130	Juniperus sp.	2	15	12	
130	Juniperus sp.	2	15	12	
130	Juniperus sp.	2	15	12	
304	Juniperus sp.	12			Y
304	Juniperus sp.	10			
304	Juniperus sp.	10			
304	Juniperus sp.	10			
304	Juniperus sp.	8			
305	Juniperus sp.	10	20	10	Y
305	Juniperus sp.	8	20	10	Y
306	Juniperus sp.	14			Y
306	Juniperus sp.	12			Y
307	Juniperus sp.	22			Y
307	Juniperus sp.	20			Y
307	Juniperus sp.	18			Y
307	Juniperus sp.	12			Y
311	Juniperus sp.	6	15	15	Y
311	Juniperus sp.	4	15	15	Y
311	Juniperus sp.	2	15	15	Y
311	Juniperus sp.	2	15	15	Y
318	Juniperus sp.	10	30	20	Y
318	Juniperus sp.	8	30	20	Y
318	Juniperus sp.	8	30	20	Y
318	Juniperus sp.	6	30	20	Y
318	Juniperus sp.	6	30	20	Y
318	Juniperus sp.	6	30	20	Y
318	Juniperus sp.	6	30	20	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
318	Juniperus sp.	3	30	20	Y
321	Juniperus sp.	22			Y
322	Juniperus sp.	20			Y
323	Juniperus sp.	24			Y
324	Juniperus sp.	30			Y
325	Juniperus sp.	18			Y
326	Juniperus sp.	20			Y
327	Juniperus sp.	20			Y
328	Juniperus sp.	20			Y
113	Malus domesticus	3	8	10	
113	Malus domesticus	2	8	10	
113	Malus domesticus	2	8	10	
113	Malus domesticus	2	8	10	
124	Malus domesticus	3	15	12	
124	Malus domesticus	2	15	12	
124	Malus domesticus	2	15	12	
124	Malus domesticus	2	15	12	
124	Malus domesticus	2	15	12	
126	Malus domesticus	3	8	8	
126	Malus domesticus	2	8	8	
126	Malus domesticus	2	8	8	
126	Malus domesticus	2	8	8	
126	Malus domesticus	2	8	8	
269	Myoporum laetum	8	10	8	
269	Myoporum laetum	5	10	8	
269	Myoporum laetum	5	10	8	
269	Myoporum laetum	4	10	8	
269	Myoporum laetum	4	10	8	
285	Myoporum laetum	4	10	6	
286	Myoporum laetum	2	8	4	
287	Myoporum laetum	2	8	4	
288	Myoporum laetum	3	8	4	
289	Myoporum laetum	2	8	4	
290	Myoporum laetum	2	8	4	
291	Myoporum laetum	3	8	4	
292	Myoporum laetum	3	8	4	
74	Picea sp.	8	25	10	Y
21	Pinus sp.	31			Y
22	Pinus sp.	31			Y
22	Pinus sp.	20			Y
23	Pinus sp.	60			Y
29	Pinus sp.	8	20	12	Y
31	Pinus sp.	51			Y
33	Pinus sp.	60			Y
34	Pinus sp.	64			Y
39	Pinus sp.	130			Y
79	Pinus sp.	10	15	10	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
112	Pinus sp.	4	12	8	
115	Pinus sp.	20			Y
121	Pinus sp.	24			Y
129	Pinus sp.	10	15	15	Y
129	Pinus sp.	10	15	15	Y
129	Pinus sp.	7	15	15	Y
129	Pinus sp.	6	15	15	Y
129	Pinus sp.	6	15	15	Y
129	Pinus sp.	6	15	15	Y
129	Pinus sp.	5	15	15	Y
129	Pinus sp.	5	15	15	Y
235	Pinus sp.	12			Y
319	Pinus sp.	8	15	10	
35	Platanus acerifolia	7	20	12	Y
36	Platanus acerifolia	9	20	12	Y
37	Platanus acerifolia	6	20	10	Y
38	Platanus acerifolia	9			
40	Platanus acerifolia	18			Y
41	Platanus acerifolia	26			Y
42	Platanus acerifolia	6	20	15	Y
42	Platanus acerifolia	3	20	15	Y
42	Platanus acerifolia	3	20	15	Y
43	Platanus acerifolia	4	15	6	
43	Platanus acerifolia	3	15	6	
43	Platanus acerifolia	2	15	6	
43	Platanus acerifolia	2	15	6	
44	Platanus acerifolia	8	15	6	
45	Platanus acerifolia	4	15	7	
46	Platanus acerifolia	8	15	20	Y
47	Platanus acerifolia	12			Y
48	Platanus acerifolia	8	20	10	Y
50	Platanus acerifolia	13			Y
51	Platanus acerifolia	22			Y
52	Platanus acerifolia	12			Y
53	Platanus acerifolia	13			Y
54	Platanus acerifolia	10	15	6	
55	Platanus acerifolia	8	15	6	
56	Platanus acerifolia	8	15	12	
57	Platanus acerifolia	14			Y
58	Platanus acerifolia	8	15	12	
59	Platanus acerifolia	12			Y
61	Platanus acerifolia	12			Y
62	Platanus acerifolia	10	15	8	
63	Platanus acerifolia	25			Y
64	Platanus acerifolia	8	12	8	
65	Platanus acerifolia	10	12	15	Y
66	Platanus acerifolia	5	12	8	

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
67	Platanus acerifolia	8	12	12	
68	Platanus acerifolia	8	15	12	
69	Platanus acerifolia	7	15	10	
70	Platanus acerifolia	10	15	20	Y
135	Platanus acerifolia	10	20	12	Y
136	Platanus acerifolia	13			Y
138	Platanus acerifolia	9	15	8	
139	Platanus acerifolia	10	15	10	
108	Poncirus sp.	4	15	10	
108	Poncirus sp.	3	15	10	
108	Poncirus sp.	3	15	10	
108	Poncirus sp.	2	15	10	
109	Poncirus sp.	4	15	10	
109	Poncirus sp.	4	15	10	
109	Poncirus sp.	2	15	10	
109	Poncirus sp.	2	15	10	
109	Poncirus sp.	2	15	10	
198	Populus sp.	20	20	10	Y
198	Populus sp.	6	20	10	Y
199	Populus sp.	14			Y
200	Populus sp.	14			Y
201	Populus sp.	20			Y
202	Populus sp.	12			Y
203	Populus sp.	16			Y
208	Populus sp.	17			Y
209	Populus sp.	12			Y
210	Populus sp.	12			Y
211	Populus sp.	25			Y
212	Populus sp.	14			Y
213	Populus sp.	11			
214	Populus sp.	10	20	6	Y
215	Populus sp.	9	20	6	Y
216	Populus sp.	11	20	6	Y
217	Populus sp.	10	20	6	Y
218	Populus sp.	11	20	6	Y
219	Populus sp.	11	20	6	Y
220	Populus sp.	10	20	6	Y
221	Populus sp.	8	20	6	Y
222	Populus sp.	8	20	6	Y
223	Populus sp.	8	20	6	Y
224	Populus sp.	10	20	6	Y
225	Populus sp.	12			Y
226	Populus sp.	21			Y
227	Populus sp.	18			Y
228	Populus sp.	18			Y
228	Populus sp.	12			Y
229	Populus sp.	15			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
230	Populus sp.	12			Y
231	Populus sp.	19			Y
232	Populus sp.	14			Y
118	Prunus sp.	3	15	12	
118	Prunus sp.	3	15	12	
118	Prunus sp.	3	15	12	
118	Prunus sp.	2	15	12	
118	Prunus sp.	2	15	12	
118	Prunus sp.	2	15	12	
118	Prunus sp.	2	15	12	
118	Prunus sp.	2	15	12	
118	Prunus sp.	2	15	12	
118	Prunus sp.	2	15	12	
118	Prunus sp.	2	15	12	
120	Prunus sp.	3	20	12	Y
120	Prunus sp.	2	20	12	Y
120	Prunus sp.	2	20	12	Y
120	Prunus sp.	2	20	12	Y
30	Pseudotsuga menziesii	2	10	6	
76	Quercus agrifolia	5	15	8	
14	Salix laevigata	20			Y
14	Salix laevigata	14			Y
14	Salix laevigata	12			Y
14	Salix laevigata	12			Y
14	Salix laevigata	10			
15	Salix laevigata	10	10	15	Y
15	Salix laevigata	4	10	15	Y
15	Salix laevigata	4	10	15	Y
15	Salix laevigata	3	10	15	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
4	Salix sp.	2	12	20	Y
80	Sequoia sempervirens	46			Y
81	Sequoia sempervirens	36			Y
81	Sequoia sempervirens	32			Y
84	Sequoia sempervirens	16			Y
85	Sequoia sempervirens	28			Y
86	Sequoia sempervirens	12			Y
88	Sequoia sempervirens	6	20	12	Y
103	Sequoia sempervirens	29			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
103	Sequoia sempervirens	28			Y
103	Sequoia sempervirens	26			Y
104	Sequoia sempervirens	22			Y
105	Sequoia sempervirens	29			Y
105	Sequoia sempervirens	19			Y
105	Sequoia sempervirens	9			
110	Ulmus sp.	6	15	10	
111	Ulmus sp.	7	15	10	
114	Ulmus sp.	2	15	10	
116	Ulmus sp.	5	12	10	
117	Ulmus sp.	5	9	8	
119	Ulmus sp.	5	20	12	Y
122	Ulmus sp.	5	15	8	
123	Ulmus sp.	2	12	8	
125	Ulmus sp.	6	15	12	
128	Ulmus sp.	6	10	6	
298	Ulmus sp.	10	15	25	Y
298	Ulmus sp.	8	15	25	Y
299	Ulmus sp.	3	12	4	
300	Ulmus sp.	2	8	5	
6	Unknown	13			Y
60	Unknown	8	22	30	Y
60	Unknown	7	22	30	Y
60	Unknown	6	22	30	Y
60	Unknown	5	22	30	Y
60	Unknown	4	22	30	Y
90	Unknown	5	20	10	Y
90	Unknown	4	20	10	Y
91	Unknown	6	20	15	Y
91	Unknown	4	20	15	Y
91	Unknown	3	20	15	Y
91	Unknown	3	20	15	Y
91	Unknown	3	20	15	Y
91	Unknown	3	20	15	Y
92	Unknown	8	25	15	Y
92	Unknown	6	25	15	Y
92	Unknown	5	25	15	Y
92	Unknown	4	25	15	Y
93	Unknown	6	20	12	Y
93	Unknown	5	20	12	Y
93	Unknown	2	20	12	Y
94	Unknown	5	20	11	Y
94	Unknown	3	20	11	Y
94	Unknown	3	20	11	Y
94	Unknown	2	20	11	Y
95	Unknown	4	20	10	Y
95	Unknown	4	20	10	Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
95	Unknown	3	20	10	Y
95	Unknown	3	20	10	Y
96	Unknown	8	30	10	Y
96	Unknown	5	30	10	Y
96	Unknown	4	30	10	Y
96	Unknown	4	30	10	Y
96	Unknown	4	30	10	Y
96	Unknown	4	30	10	Y
96	Unknown	3	30	10	Y
97	Unknown	10	25	10	Y
97	Unknown	8	25	10	Y
97	Unknown	4	25	10	Y
97	Unknown	3	25	10	Y
97	Unknown	3	25	10	Y
98	Unknown	3	20	12	Y
98	Unknown	3	20	12	Y
98	Unknown	2	20	12	Y
98	Unknown	2	20	12	Y
98	Unknown	2	20	12	Y
99	Unknown	2	20	12	Y
99	Unknown	2	20	12	Y
99	Unknown	2	20	12	Y
101	Unknown	4	20	10	Y
101	Unknown	3	20	10	Y
144	Unknown	2	12	12	
144	Unknown	2	12	12	
144	Unknown	2	12	12	
144	Unknown	2	12	12	
144	Unknown	2	12	12	
301	Unknown	3	20	10	Y
301	Unknown	3	20	10	Y
301	Unknown	3	20	10	Y
302	Unknown	4	20	15	Y
302	Unknown	3	20	15	Y
302	Unknown	3	20	15	Y
302	Unknown	3	20	15	Y
302	Unknown	2	20	15	Y
302	Unknown	2	20	15	Y
303	Unknown	3	15	8	
303	Unknown	2	15	8	
303	Unknown	2	15	8	
303	Unknown	2	15	8	
303	Unknown	2	15	8	
26	Washingtonia sp.	39			Y
27	Washingtonia sp.	62			Y
32	Washingtonia sp.	22			Y
106	Washingtonia sp.	26			Y

Tree #	Species	DBH	Min. Height (ft.)	Min. Crown Width (ft.)	Significant?
107	Washingtonia sp.	21			Y
132	Washingtonia sp.	20			Y
134	Washingtonia sp.	8	15	6	
204	Washingtonia sp.	32			Y
205	Washingtonia sp.	27			Y
206	Washingtonia sp.	25			Y
207	Washingtonia sp.	34			Y
320	Washingtonia sp.	19			Y

Appendix O There is no appendix associated with Section III.O

Appendix P1 ESA Potential Wind Conditions at Executive Park Development, March 10, 2009

Technical Memorandum

TO: Michael Li
Turnstone Consulting
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FROM: Charles Bennett
Cory Barringhaus
Environmental Science Associates
225 Bush Street, Suite 1700
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DATE: May 4, 2009

SUBJECT: Potential Wind Conditions at Executive Park Development
Windsurfing Area Testing
San Francisco, California
ESA 208449

I. Introduction and Overview

A series of wind tunnel tests were performed in February 2009 for the Executive Park development proposed in the southeastern area of the City of San Francisco, near Candlestick Point. The wind tests were performed to study the wind conditions at a windsurfing launch site at the Candlestick Point State Recreation Area (CPSRA) and in the sailing area in the Bay to the southeast of the site. This study considered winds under the Existing development conditions, under the Project scenario, and under the Project with Cumulative development scenario.

The buildings now under construction, as well as the approved, but not yet constructed buildings in the vicinity of the site were considered to be part of the existing setting conditions. The conditions for the Project at the Executive Park site include demolition of 3 existing buildings and the construction of 13 separate buildings (or building clusters) with roof heights ranging from approximately 86 to 293 feet. The cumulative conditions include the Project plus structures proposed as part of the redevelopment of the Candlestick Point area located immediately north of the CPSRA windsurfing launch site.

Background and details of the test methods are presented in this technical memorandum in Section II, Background and Wind Test Protocols. Test results and discussion are presented in Section III, Test Cases and Study Results.

ESA

Summaries of Tests

Three development scenarios were modeled and tested in the atmospheric boundary layer wind tunnel. The scenarios are: 1) Existing Setting, 2) Project, and 3) Project plus Cumulative. Measurements of wind speed and wind turbulence were taken at points within a windsurfing test area defined by a 1,750 ft. by 2,500 ft. downwind measurement grid, anchored at the CPSRA windsurfing launch and landing area and reaching generally toward the South-southwest, covering an area of 100.44 acres of the Bay. With respect to wind testing of windsurfing areas, three of the standard wind test protocols were varied[1], for these reasons:

- Southwest winds blow onshore, across the Project site and toward Bay View Hill. A wind from the Southwest that blows across the Project site could not reach the windsurfing areas that lie to the south of Candlestick Point. Thus, neither the Project nor the Cumulative scenario would have any effect on winds in the windsurfing areas south of Candlestick Point for Southwest wind.

- For the West wind, the most southerly of the test grid locations were not measured. Those test grid locations far south of the launch area are crosswind to the West wind and are well outside of the area that could potentially be affected by development under either the Project or the Project plus Cumulative scenario.

- The windsurfing areas are relatively distant from the Project site, the closest grid point being approximately 2,000 feet distant. Even at the closest of the windsurfing test locations, it cannot reasonably be anticipated that meaningful differences can be found between the wind speed and turbulence measurements for the Project scenario and the measurements for the Alternative scenario. Therefore, both the Project scenario and the Alternative scenario wind conditions are well represented by either test scenario. The physical model used in the test was the Alternative scenario.

Existing Setting

The existing setting consists of the existing buildings on and in the vicinity of the Project site, including the St. Francis Bay development, other developments, including the Signature and Hanover projects, and St. Francis Bay Phase III. The existing setting also includes Candlestick Park stadium.

Wind Speed

- Northwest wind speeds in the test grid closer to shore range from 42% to 50% of overhead wind speed, increasing to between 55% and 60% of overhead wind speeds farther from shore. This pattern, with lower wind speeds nearer the shore, shows the combined "wind shadow" effect[2] of Bay View Hill, existing buildings and the Candlestick Park stadium. With increasing downwind distance, wind speeds recover.

- West-Northwest wind speeds in the test grid are generally between 55% and 60% of overhead wind speeds. A smaller "wind shadow" extends from the shore.

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1 See the section "Model and Wind Testing Protocols" for more detail on these items.

2 The "wind shadow" is due to the local decrease in wind speed that results from redirected winds and drag that effectively decrease the speed of the wind as it passes over and around the hill, other landforms and vegetation, and the structures.

- West wind speeds in the test grid are generally between 55% and 60% of overhead wind speeds. A small "wind shadow" occurs close to the shore.

Wind Turbulence

- Northwest wind turbulence intensity[3] (TI) values between 22% and 26% occur in the test grid nearer the shore, in the "wind shadow", where wind speeds are low. TI values decrease downwind, generally as wind speeds increase. TI values range from 18% to 22% over about half of the grid area. TI values between 14% and 18% occur only in areas farthest downwind.

- West-Northwest wind TI values range from 14% to 18% over most of the test grid, with higher TI values, ranging from 18% to 22% in a 1.5-acre± area[4] near the shoreline at the northwest corner of the test grid. TI values are higher where wind speed is lower.

- West wind, TI values are between 14% and 18% over most of the test grid, with higher TI values, ranging from 18% to 22%, in a 1.5-acre± area near the shore, where wind speed is lower.

Project

This scenario consists of the demolition of three existing buildings and addition of the proposed Executive Park development projects.

Wind Speed

- Northwest wind speeds would decrease by 5% to 10% with the Project, compared to Existing wind speeds, in two areas of the grid well south of the CPSRA windsurfing launching and landing area. These two areas are two bands that extend part way across the grid; one more than 600 ft south and one more than 1,200 ft south-southwest of the CPSRA windsurfing launching and landing area. Northwest wind speeds in other areas of the grid would not decrease by more than 5%; in several patches, Northwest wind speeds would either not change or would increase slightly.

- West-Northwest wind speeds would decrease by 10% or more with the Project, compared to Existing wind speeds, in an area that includes the present CPSRA windsurfing launching and landing area. This 2.5-acre± area would extend as far as approximately 125 ft. from the shoreline. West-Northwest wind speed decreases of 5% to 10% would occur over nearly one-third of the grid area, while wind speed decreases of 0% to 5% would occur over approximately half of the grid area.

- West wind speeds over the entire grid area, except at the northwest tip of the grid, would not decrease by more than 5% from Existing wind speeds due to the Project.

Wind Turbulence

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3 Wind turbulence intensity, as defined and used in Planning Code Section 148 is represented here by the abbreviation TI. See the discussion in Section II. Background and Test Protocols

4 The estimates of the test grid areas contained within various wind speed range and turbulence isopleths are approximations; the areas are flagged in this memorandum by the symbol ±, to indicate an approximate value.

- Northwest wind TI values would generally increase, just as wind speeds would generally decrease, under the Project scenario, as compared to Existing TI values. TI values would be between 26% and 30% at three spots in the northwest portion of the grid, generally where Northwest wind speeds would be lower. TI values would decrease downwind, just as wind speeds would increase. TI values would be between 22% and 26% over nearly one-quarter of the grid and between 18% and 22% over about three-quarters of the grid. TI values would range from 14% to 18% at two spots farthest downwind.

- West-Northwest wind TI values with the Project would range from 14% to 18% over a 40-acre± area at the south end of the grid, with higher TI values, ranging from 18% to 22%, over a 37-acre± area to the north. TI values of 22% to 26% would occur in a 10-acre± area along the shoreline, including the present CPSRA windsurfing launching and landing area. TI values would be between 26% and 30% in a 1-acre± area at the northwest corner of the grid, where wind speed would be low.

- West wind TI values between 18% and 22% would occur in a 17-acre±± area along the shoreline with the Project. This area would extend from the CPSRA windsurfing launching and landing area to the northwest corner of the grid. TI values would range from 14% to 18% over the rest of the grid area. Again, TI would be high where wind speed is low.

Project plus Cumulative

This scenario consists of the Project with the addition of Cumulative development proposed in the redevelopment area north of the CPSRA launch site and windsurfing area of the Bay. Candlestick Park Stadium would be demolished.

Wind Speed

- Northwest wind speeds would decrease by 10% to 20% under the Project plus Cumulative scenario, compared to Existing wind speeds, along an 7-acre± shoreline area that includes the present CPSRA windsurfing launching and landing sites and extending more than 300 ft. into the Bay there. Northwest wind speed decreases of 5% to 10% would occur over a nearly 36-acre± area of the grid. Northwest wind speeds in other areas of the grid would not decrease by more than 5%; in a 12-acre± area near the center of the grid, Northwest wind speeds would either not change or would increase slightly.

- West-Northwest wind speeds would decrease by 10% to 20%, compared to Existing wind speeds, along a 10-acre± shoreline area that includes the present CPSRA windsurfing launching and landing area, and would extend from approximately 125 ft. to 500 ft. into the Bay. West-Northwest wind speed decreases of 5% to 10% would occur over a nearly 27-acre± area of the grid, while wind speed decreases of 0% to 5% would occur over a 40-acre± area of the grid. Wind speed increases of 0% to 5% would occur in a nearly 6-acre± area at the south end of the grid

- West wind speeds would decrease by 5% to 10% at one spot on the shoreline at the northwest tip of the grid. West wind speeds over the rest of the grid area would not change by more than 5% from existing wind conditions due to the Project plus Cumulative scenario, compared to Existing conditions.

Wind Turbulence

- Northwest wind TI values would generally increase, just as wind speeds generally decrease, under the Project plus Cumulative scenario, compared to Existing turbulence. TI values would be between 26% and 30% at a more than 2-acre± area at the northwest corner of the grid. TI values would decrease downwind, as wind speeds would increase. TI values would be from 22% to 26% over a 27-acre± area of the grid. TI values would range from 18% to 22% over almost all of the remaining grid area.

- West-Northwest wind TI values with the Project plus Cumulative scenario would range from 14% to 18% over an 47-acre± area at the south end of the grid, with higher TI values, between 18% and 22%, over an 30-acre± area to the north. TI values from 22% to 26% would occur in a 20-acre± area along the shoreline, including the present CPSRA windsurfing launching and landing area. TI values would be between 26% and 30% in a 1-acre± area at the shoreline at the northwest corner of the grid.

- West wind TI values from 18% to 22% would occur in a 17-acre± area along the shoreline with the Project plus Cumulative scenario. This area would extend from the CPSRA windsurfing launching and landing area to the northwest corner of the grid. TI values would be between 14% and 18% over the rest of the grid area. Again, TI would be high where wind speed is low.

Wind Evaluation Criteria

There are no established criteria, in the *Planning Code* or in the California Environmental Quality Act Guidelines or elsewhere, to define the level of reduction in wind speed that would constitute a "significant adverse impact" under CEQA for windsurfing at the CPSRA or in the Bay. Similarly, there are no CEQA criteria to define the level of wind turbulence that would constitute a "significant adverse impact" under CEQA for windsurfing.

ESA

II. Background and Test Protocols

Background

The difference in pressure between two points on the earth causes air masses to move over the earth from the area of higher pressure to the area of lower pressure. This movement of large masses of air results in winds. The interaction of a moving air mass with the surface of the earth creates turbulence and slows the motion of that layer of air that is next to the surface. The slower-moving air near the surface, in turn, slows the next layer of moving air just above it. The turbulence propagates upward, with the result that higher wind velocities are associated with air at greater heights above the surface. This relationship between height and velocity is referred to as a wind velocity profile. The shape of the wind velocity profile created depends on the roughness of the surface over which the wind moves. Smooth surfaces, such as flat open ground or water bodies, do not slow wind flow nearly as much as do rough surfaces, such as urban development, so they have different wind speed profiles.

Winds that move over San Francisco encounter differing levels of roughness, and differing wind speed profiles, due to differing topography, vegetation and structures that all act to slow the wind near the ground and create turbulence. However, when those winds reach large areas of smooth, flat surfaces, such as open land or the Bay, wind speeds near the surface of the ground or water will increase and the level of turbulence will decrease. Of particular importance to site wind conditions is the topography of the vicinity, which includes 525-foot high Visitacion Knob, in McLaren Park to the west-northwest, and the ridge that extends from McLaren Park eastward to the 250-foot high Bayview Hill several hundred feet north of the Project site. In addition to the topography, the extensive low-rise development and the US 101 Freeway that lie to the west and northwest, as well as other approved buildings of similar size that will lie immediately north of the site will strongly affect the prevailing winds that reach the Project site. Most of the Project structures would be built on currently vacant land containing parking lots, and some of the proposed buildings would be larger than the three existing on-site buildings that would be demolished. The overall mass of the development and the size of the proposed structures can be large enough to affect ground-level winds nearby and to have some effect on wind conditions downwind in the Bay.

From the perspective of windsurfers, the presence of these existing landforms and buildings that already lie upwind of windsurfing areas represent "roughness" that controls the speed and turbulence of the winds that reach the nearby wind surfing area in the San Francisco Bay. The Project would add additional building masses to the proposed site near the shore of the Bay, and thereby increasing the effective roughness of the site and decreasing the speed of the wind across the site.

Wind tunnel testing was used to document the existing wind conditions in identified windsurfing areas and to determine the extent to which those existing wind conditions would be altered by proposed development.

Existing Climate and Wind Conditions

While the wind conditions at the Project site are not the same as those in downtown San Francisco, wind conditions at the site can be related to the wind conditions at the old San Francisco Federal Building, just over 5 miles to the north, to account for the differences in wind speed. Correction factors have been calculated for the hourly wind speed and direction data collected at the old San Francisco Federal Building to allow the computation

of pedestrian wind speeds at the Executive Park site and to allow comparisons of those statistics with the *Planning Code* criteria for pedestrian comfort and safety in the vicinity of the site. In addition to the wind data from the old San Francisco Federal Building, an hourly wind data record is available for the meteorological station at the San Francisco International Airport, approximately 6 miles to the south, where hourly wind speed and direction data also are collected. While the wind conditions of the Executive Park site are not identical to wind conditions at SFO, wind speed information at SFO is helpful in understanding the general wind conditions in the Bay at a location where winds are not as strongly affected by topography and structures.

The time of interest for sail boarding typically extends from the late spring well into fall, April 1st through November 1st, for times of day from 6 am until 7 pm, mainly during daylight hours. The wind data for the old San Francisco Federal Building consider a similar general daily interval, but does not differentiate by season; on the other hand, the summary of the data for the San Francisco Airport meteorological station discusses only the season from April 1st through November 1st. and the times of day from 6 am until 7 pm.

Old San Francisco Federal Building

Average winds speeds in San Francisco are the highest in the summer and lowest in winter. However, the strongest peak winds occur in winter. The highest average wind speeds occur in mid-afternoon and the lowest in the early morning. Westerly to northwesterly winds are the most frequent and strongest winds during all seasons. Of the 16 primary wind directions, four have the greatest frequency of occurrence and subsequently make up the majority of the strong winds that occur. These winds are Northwest, West-Northwest, West, and West-Southwest.

Data describing the speed, direction, and frequency of occurrence of winds were gathered at the old San Francisco Federal Building at 50 United Nations Plaza (at a height of 132 ft.) during the six-year period, 1945 to 1950. Measurements taken hourly and averaged over one-minute periods have been tabulated for each month (averaged over the six years) in three-hour periods using seven classes of wind speed and 16 compass directions. Analysis of these data shows that during the hours from 6:00 a.m. to 8:00 p.m., about 70% of all winds blow from five of the 16 directions as follows: Northwest (NW), 10%; West-Northwest (WNW), 14%; West (W), 35%; West-Southwest (WSW), 2%; Southwest (SW), 9%; and all other winds, 28%. Calm conditions occur 2% of the time. More than 90% of measured winds over 13 mph blow from these directions. Wind speeds and directions in the Project vicinity are altered by the topography of Bayview hill. The steps needed to adjust for these differences are described under the discussion of Wind Speed Profile Adjustments.

San Francisco International Airport

An examination of six years of record (78,638 hourly observations) of the hourly wind speeds and wind directions measured at the weather station at the San Francisco Airport meteorological station was used to establish the general frequency of occurrence of winds during the time of interest for sail boarding. A total of 23,935 hours of record for times of day from 6 am until 7 pm, mainly during the daylight hours, daily for April 1st through November 1st, was used to establish baseline wind conditions for the site vicinity. The highest average wind speeds occur in mid-afternoon and the lowest in the early morning. Westerly to northwesterly winds are the most frequent and strongest winds during all seasons. Of the 16 primary wind directions, four have the greatest frequency of occurrence as well as they make up the majority of the strong winds that occur; these are Northwest, West-Northwest, West and West-Southwest winds.

Analysis of these data shows that during the hours from 6:00 a.m. to 7:00 p.m., about 73.3% of all winds blow from five of the 16 directions, as follows: Northwest (NW), 19.0%; West Northwest (WNW), 27.6%; West (W), 15.9%; West Southwest (WSW), 6.7%; Southwest (SW), 4.0%; and all other winds, 24.4%. Calm conditions occur 2.3% of the time. When only wind speeds of 9 knots (10 mph) or more are considered, these percentages decrease by about 2% for each major direction: Northwest (NW), 17.0%; West Northwest (WNW), 24.6%; West (W), 13.8%; West Southwest (WSW), 4.4%; and Southwest (SW), 2.4%.

Wind Speed Evaluation Criteria

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds from 8 to 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. The top of this speed range marks a boundary beyond which pedestrians generally consider winds to be objectionable. By contrast, comfort seems less an objective and stronger winds are typically more valued in wind-powered activities such as windsurfing. Wind speeds of 13 mph or more are usually considered desirable for wind-powered activities, such as paragliding and hang-gliding, as well as for windsurfing. Typically, the more skilled the participant, the more higher the wind speed desired.

Wind speed effects on land and water-related uses of the Candlestick Point State Recreation Area (CPSRA) shoreline and Bay areas vary with the specific use. Sailing requires wind, and the more proficient the sailor, the more wind seems to be preferred. Wind direction is also important to windsurfing, in that an adverse wind direction can make it more difficult to launch, to reach a desirable sailing area or to return to the launch site. Wind is necessary to launch and land, but if winds are too strong at the launch site, beginners and less-skilled windsurfers could find it difficult to do either.

There appear to be no specific criteria for minimum wind speeds to support "good" sailing. Rather, for highly skilled windsurfers, it appears to be the case that the more wind in the sailing area, the better. If a project were to cause substantial wind speed reductions over much of a major windsurfing area or at an irreplaceable launching or landing site, the utility of the CPSRA and Bay as an important windsurfing area could be adversely affected. Similarly, there are no known criteria to determine the level of wind turbulence acceptable for windsurfing.

San Francisco Planning Code and CEQA Requirements

San Francisco *Planning Code* Section 148, Reduction of Ground-Level Wind Currents, contains requirements that are used for evaluation of wind impacts for the purposes of CEQA in San Francisco. Section 148 defines comfort and hazard criteria for pedestrian areas and defines the wind speeds in terms of equivalent wind speeds[5], an average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence.

5 Equivalent mean wind speed is defined as the mean wind speed, multiplied by the quantity (one plus three times the turbulence intensity) divided by 1.45. This amplifies the equivalent mean wind speed values when turbulence intensity is greater than 15%. The *Planning Code* protocol definition of turbulence intensity differs from that in engineering use. There, the value used by the *Planning Code* (turbulence intensity / mean velocity) is called the "relative intensity of turbulence" or the "turbulence level". Regardless, references to Turbulence Intensity or TI in this Memo will follow the *Planning Code* protocol definition, unless otherwise noted.

There are no established criteria in the *Planning Code* to define the level of reduction in wind speed that would constitute a "significant adverse impact" under CEQA for windsurfing at the CPSRA or in the Bay.[6]

Just as there are no San Francisco criteria to define minimum wind speeds necessary to support windsurfing, nor are there established criteria to define the level of reduction in wind speed that would constitute a "significant adverse impact" under the California Environmental Quality Act (CEQA) for windsurfing at CPSRA or the Bay.

Model and Wind Testing Protocols

A 1:600 scale (1-inch to 50-foot scale) model of the Project site vicinity and a substantial downwind reach into the Bay was constructed in order to simulate the Project and its existing and future contexts. The test model included two configurations of the Project, for the purposes of conducting pedestrian wind testing. See Figures 1 and 2. The test model also included that portion of the Bay, extending southward from the Project site to approximately 1,000 ft. east of the launch area of the Candlestick Point State Recreation Area (CPSRA). The scale model of the Project and surrounding area was constructed by ESA from building plans provided by the Project architects. The windsurfing test area was defined by a 1,750 ft. by 2,500 ft. downwind grid, anchored at the CPSRA launch area and reaching generally toward the South-southwest. The scale models were then tested in an atmospheric boundary layer wind-tunnel facility at the University of California-Davis, under the direction of Bruce White, Ph.D. These wind tests, however, were performed independent of the University.

Three development scenarios were modeled and tested in the atmospheric boundary layer wind tunnel. The scenarios are: 1) Existing Setting, 2) Project, and 3) Project plus Cumulative.

With respect to the wind testing of effects on the wind surfing areas, three of the usual wind test protocols were varied, as follows, for the reasons stated here:

- For windsurfing area testing, the Southwest wind was not tested. The Southwest wind blows onshore toward the flank of Bay View Hill, and parallel to Harney Way at the Project site, so Southwest winds that blow across the Project site could not reach windsurfing areas that lie to the south of Candlestick Point. For that reason, under Southwest wind conditions neither the Project scenario nor the Cumulative scenario could have any effect on winds in the windsurfing areas that lie south of Candlestick Point.

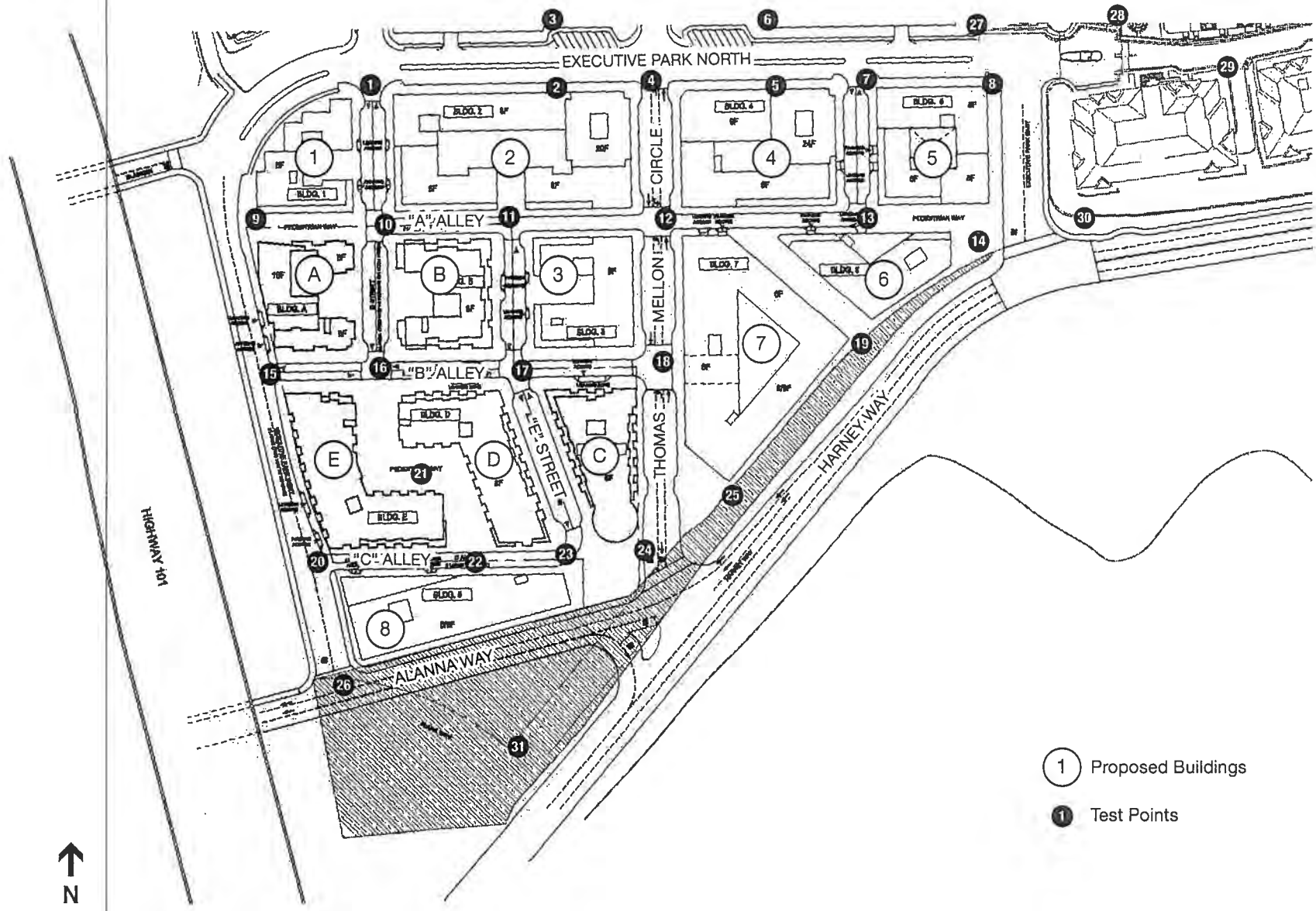
- For the West wind direction, the test grid locations far south of the launch area are crosswind to the West wind and are considered to be well outside of the area that could potentially be affected by either the Project or the Project plus Cumulative scenarios. For that reason, test points that lie more than 1,500 feet south of the launch area were not measured for the West wind. The validity of this reasoning is verified by the test data, which show little north-south variation in the wind speeds for those points measured.

- The windsurfing areas are relatively distant from the Project site, the closest point being approximately 2,000 feet from the Project site boundary. At such distances, even at the closest of the test locations in the

[6] The City of Burlingame, in an EIR that evaluated the effects of a proposed shoreline development on windsurfing, applied the following standard of significance for the purposes of that EIR: "A reduction of 10% or more in wind speeds at irreplaceable launching and landing sites, or a reduction in wind speed of 10% or more over large portions of transit routes or primary board sailing areas would be a significant adverse impact."

windsurfing area grid, it cannot reasonably be anticipated that meaningful differences can be found between the wind speed and turbulence measurements for the Project scenario and the wind speed and turbulence measurements for the Alternative scenario[7]. For this reason, to determine the possible Project effect on wind in windsurfing areas, both the Project scenario and the Alternative scenario wind conditions are well represented by a single scenario. The physical model used in the test was the Alternative, which is the same as the Project, except that Alanna Way is realigned and there is a revised design for one proposed Project building (Building 8) located in the southwest corner of the Project site.

7 A simple analysis of the decay of the wind speed reduction *vs.* distance from the center of the site of Building 8 for each of the two scenarios, the Project and the Alternative, shows that the wind speed reductions for each scenario converge to values that differ by less than 20% at a ground distance of less than 900 ft. and to within 4% at a distance of less than 1,200 ft. By extrapolation, these differences between Project and Alternative would be less than 1% at any point in the windsurfing test grid, more than 2,000 ft. from the center of the Building 8 site. This 1% difference cannot be considered to be meaningful, because it is well within the range of uncertainty of the individual wind speed measurements. Therefore the effects of the Project and the Alternative would be the same.

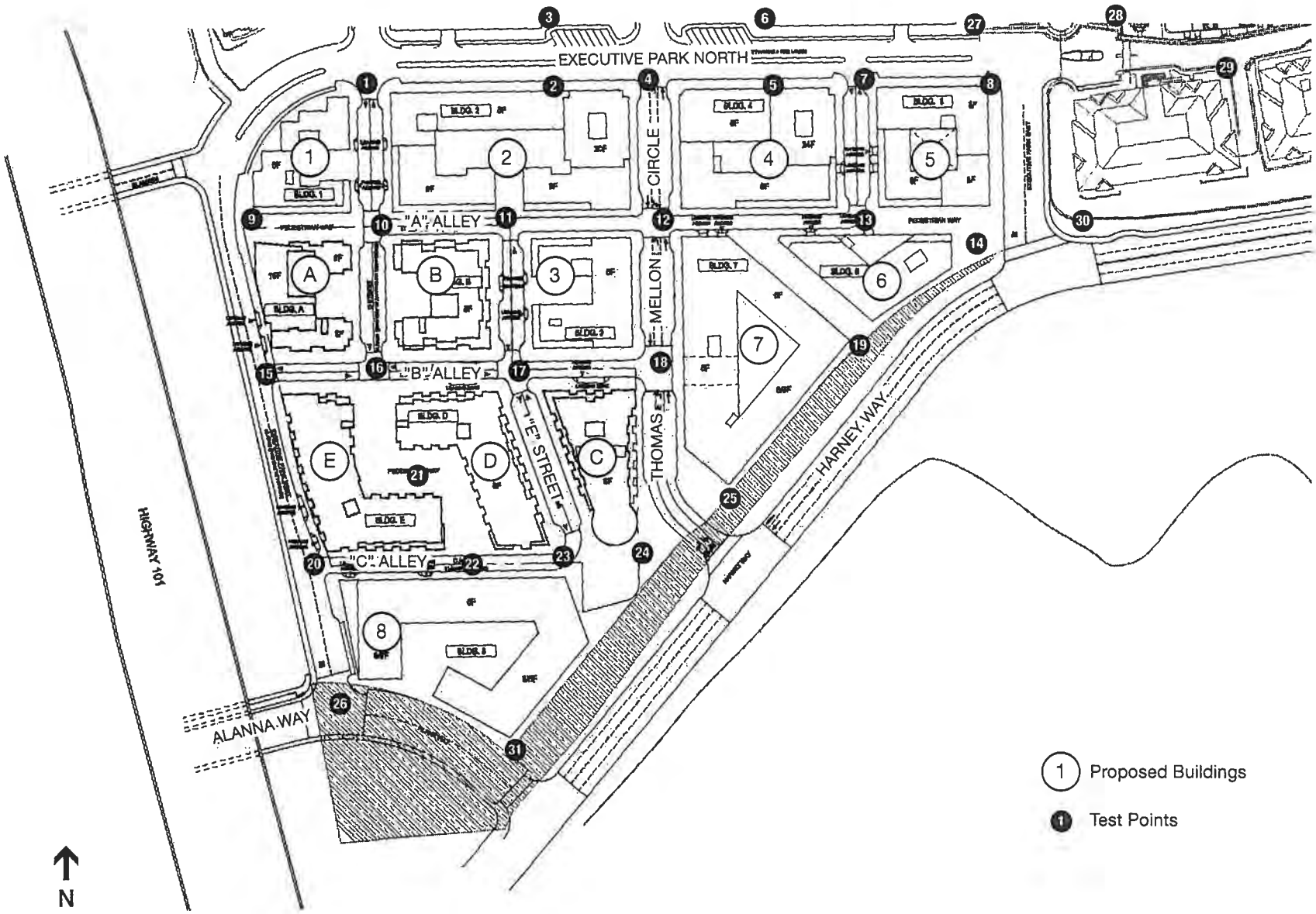


SOURCE: ESA

Executive Park Wind Test . 208449

Figure 1

Wind Test Point Locations: Project - Base



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 2

Wind Test Point Locations: Project - Option 1

Test Procedure

The test procedure consisted of orienting the selected configuration of the model in the atmospheric boundary layer wind-tunnel and measuring the wind speed at each of the test locations with a hot-wire anemometer. Hot-wire measurements were taken at most of the same surface points for all test configurations and wind directions. However, as noted above, test measurement points were varied to suit the specific needs for each wind direction.

The wind tunnel allows testing of natural atmospheric boundary layer flow past surface objects such as buildings and other structures. The tunnel has an overall length of 22 meters (m) (72 feet), a test section of 1.22 m (4 feet) wide by 1.83 m (6 feet) high, and an adjustable false ceiling. The adjustable ceiling and turbulence generators allow speeds within the tunnel to vary from 1 meter per second (m/s) to 8 m/s, or 2.2 mph to 17.9 mph.

Wind-speed measurements at each test location were made with a hot-wire anemometer, an instrument that directly relates rates of heat transfer to wind speeds by electronic signals that are proportional to the magnitude and steadiness of the wind. The hot-wire probe was calibrated to an accuracy of within 2% before the test procedure was begun. The hot-wire probe measured the analog voltage at a rate of 1,000 times per second for approximately 30 seconds at each test location. When converted to digital signals, this measurement provided approximately 30,000 individual voltage samples that were averaged and the root mean square calculated for each test location. These data, when converted to velocity using the calibration curves, provided the mean wind velocity and the turbulence intensity values used to calculate equivalent wind speed under the *Planning Code*. In that calculation, turbulence intensity (TI) is expressed as a percentage of mean velocity[8].

By measuring both the mean wind speeds and corresponding turbulence intensities, high wind speeds and gustiness (changes in wind speeds over short periods of time) could be determined. The ratio of near-surface speed to reference wind speed was calculated from the hot-wire measurements. The inherent uncertainty of measurements made with the hot-wire anemometer close to the surface of the model is ±5% of the true values.

These values were compared with measurements of the free-stream wind, measured at a scale height in excess of 1,500 feet, near the center of the wind tunnel. As a result, each wind tunnel measurement resulted in a ratio that relates the speed of surface-level wind to the speed of the free-stream wind. These wind speed ratios (called R-values here) are the primary output data of wind tunnel tests. The R-values, the ratios, are usually substantially less than 1.00 because, due to boundary layer effects, wind speeds at pedestrian level are usually much less than the speed of the free-stream wind[9].

Note that it is possible to correlate these wind speed ratios for each wind direction to the wind speeds actually measured at the reference elevation, in this case the height of the wind instrumentation at the San Francisco station, and then to convert them into representative values of wind speed on and around the Project site, as is done to compare with wind comfort and safety criteria under the *Planning Code*.

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8 The *Planning Code* protocol definition is: Turbulence Intensity, TI = root mean square (velocity) / mean velocity. This definition differs from that in engineering use, as noted in a prior footnote.

9 For the purposes of comparison, in most cases where a wind hazard condition is found at a pedestrian location in San Francisco, at least one or more of the corresponding directional R-values exceeds 0.50. It is extraordinary to find an R-value that exceeds 0.70.

However, for the purposes of this analysis, it is of more use just to make direct comparisons between the ratios obtained for each wind direction and each scenario. Since each windsurfer can know the wind direction under which they sail, the change in the wind speed could be determined by comparing the ratios measured for the Project test with the ratios for Existing Conditions each for the relevant wind direction. The comparisons are made by dividing the ratios for each test point of the Project scenario by the corresponding ratio for the corresponding point of the Existing Condition. When expressed as a percentage, these ratios of the R-values are a simple measure of the percentage change in wind speed that would result from the Project.

In addition to wind speed and turbulence, the energy content of the wind can also be determined from the wind tunnel tests. Just as the wind speed is proportional to the R-values, the energy of the wind is proportional to the third power of the R-values. In a case where the wind speed would be reduced by 10%, the energy in that wind would be reduced by 27%. However, for the purposes of this analysis, R-values are studied because they relate directly to the most commonly used indicator, the speed of the wind.

With respect to the ability of wind tunnel testing to accurately simulate the wind conditions relevant to wind surfing, it has been well documented in the scientific literature that the atmospheric boundary layer wind-tunnel can correctly represent wind velocity, wind turbulence and the power spectrum of the wind.

Wind Speed Profile Adjustments

To obtain the proper scaling of calculated pedestrian level equivalent wind speeds, adjustments must be made to correct for differences between the relationship between height above the ground and wind speed (called "the wind speed profile") at the Civic Center weather station and the wind speed profile at the Project site. This study does not involve calculating equivalent wind speeds at pedestrian level, so it is not necessary to make corresponding corrections for the wind speed profile at the Project site. The following wind test cases and study results reflect the use of unadjusted values.

III. Test Cases and Study Results

Introduction

Wind-tunnel tests to measure wind speeds in the windsurfing area were conducted for three scenarios: the Existing Setting, Project, and Project plus Cumulative. As discussed previously in Model and Wind Testing Protocols, both the Project and the Alternative wind conditions are well represented by the same test scenario. The physical model tested was the Alternative scenario. For the reasons discussed previously, all further discussion in this Technical Memorandum will refer to this test scenario as the "Project" scenario.

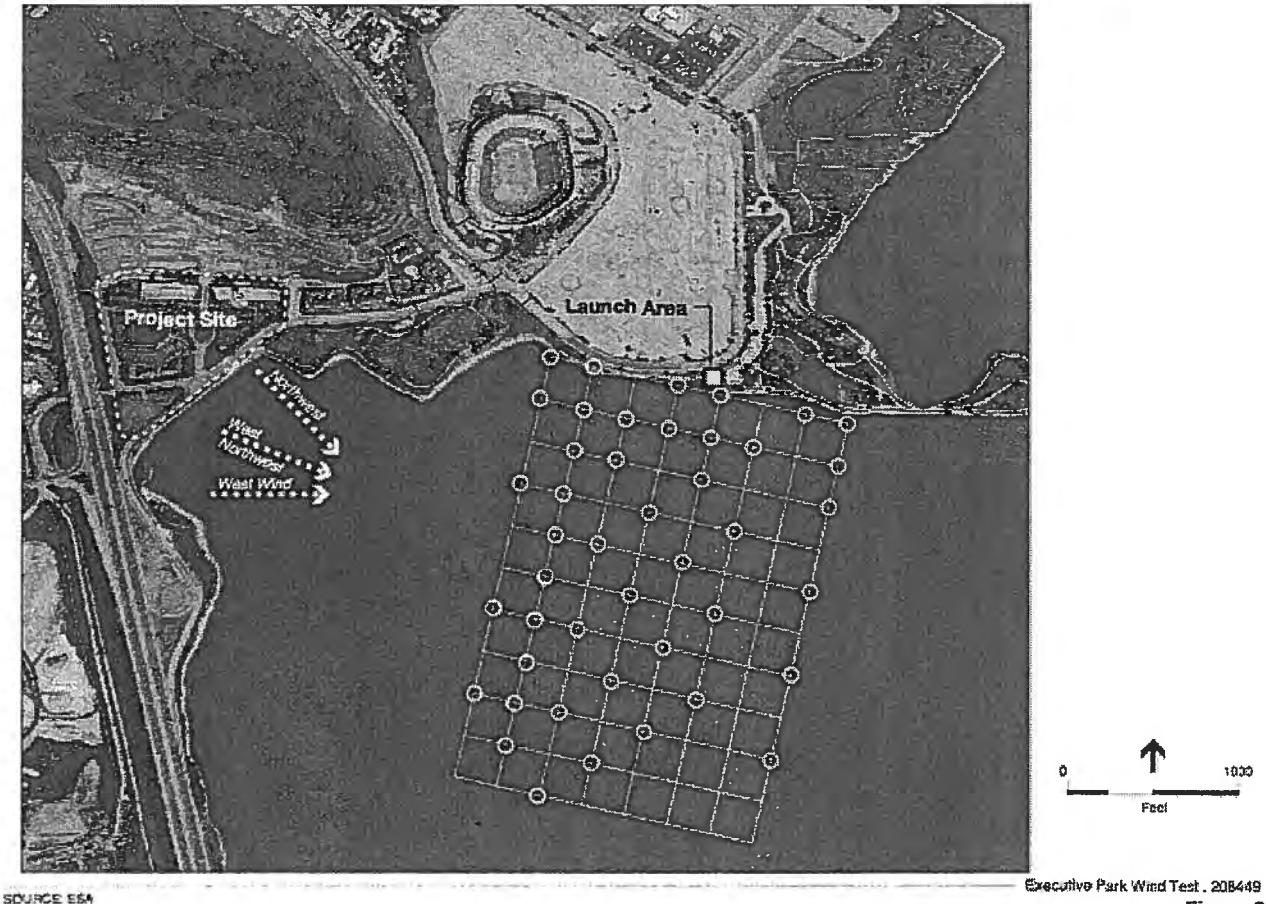


Figure 3
Study Area with Wind Tunnel Measurement Points

Up to 44 locations were measured for each of the various scenarios and wind directions. Considering the spatial relationship of the proposed development to the Bay and the windsurfing launch area, the wind tests focused on the effects of west (W), west-northwest (WNW), and northwest (NW) winds, the three wind directions that could be most affected by proposed development. Southwest winds are onshore winds and would not affect wind in the windsurfing areas, so southwest winds were not studied.

Test Locations

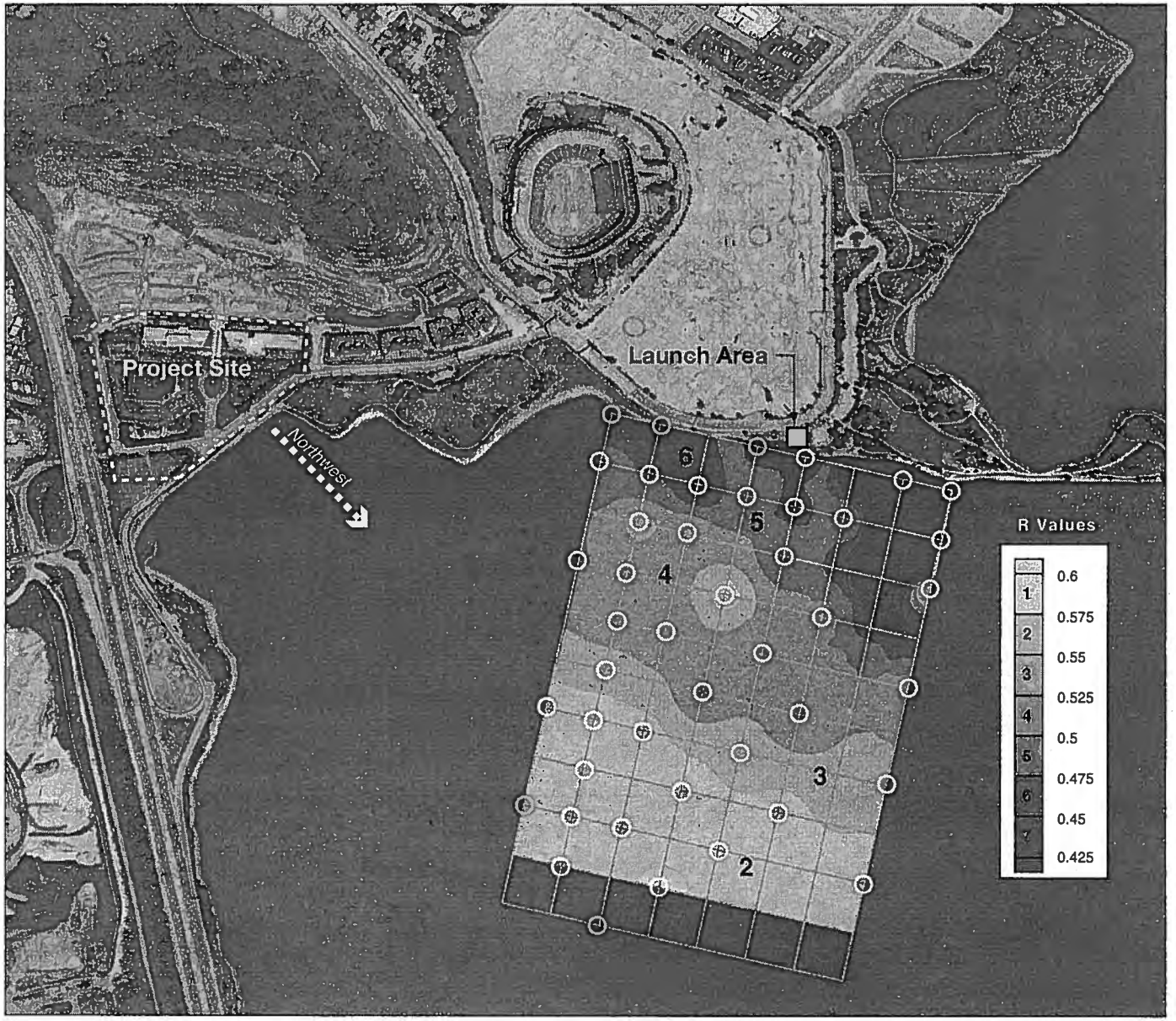
The 44 windsurfing test locations form an 8 by 11 grid, with 250 ft. spacing between each of the possible individual test points (see Figure 3). The test grid is oriented generally north-northeast by south-southwest, with the coordinate origin located approximately 1,000 ft. northwest of the primary windsurfing launch site at CPSRA. Boards launched here proceed in a southwesterly or south-southwesterly direction. The test grid area aligns with the shoreline near the windsurf launch area and covers the area of the Bay described as an important windsurfing area, based on information provided by Mr. Peter Thorner of the San Francisco Boardsailing Association (*Candlestick Sailing Tracks)*, attached to this document). The area within the 1,750 by 2,500 ft. test grid is 100.44 acres.

As described in Test Procedure, hot-wire measurements were taken at selected surface points for each of the three test configurations and three wind directions. As noted previously, the most southerly of the test points were not measured for the West wind direction as these locations are considered to be outside the area potentially affected by the Project scenario and the Project plus Cumulative scenario.

Test Results

The wind tunnel test outputs for each of the three scenarios produced three sets of detailed data tables, one set for each of the three wind directions. Data from these tables were plotted to figures that illustrate the existing conditions and changes that would result from implementation of Project, and also show the effects from cumulative development in the Candlestick Point area.

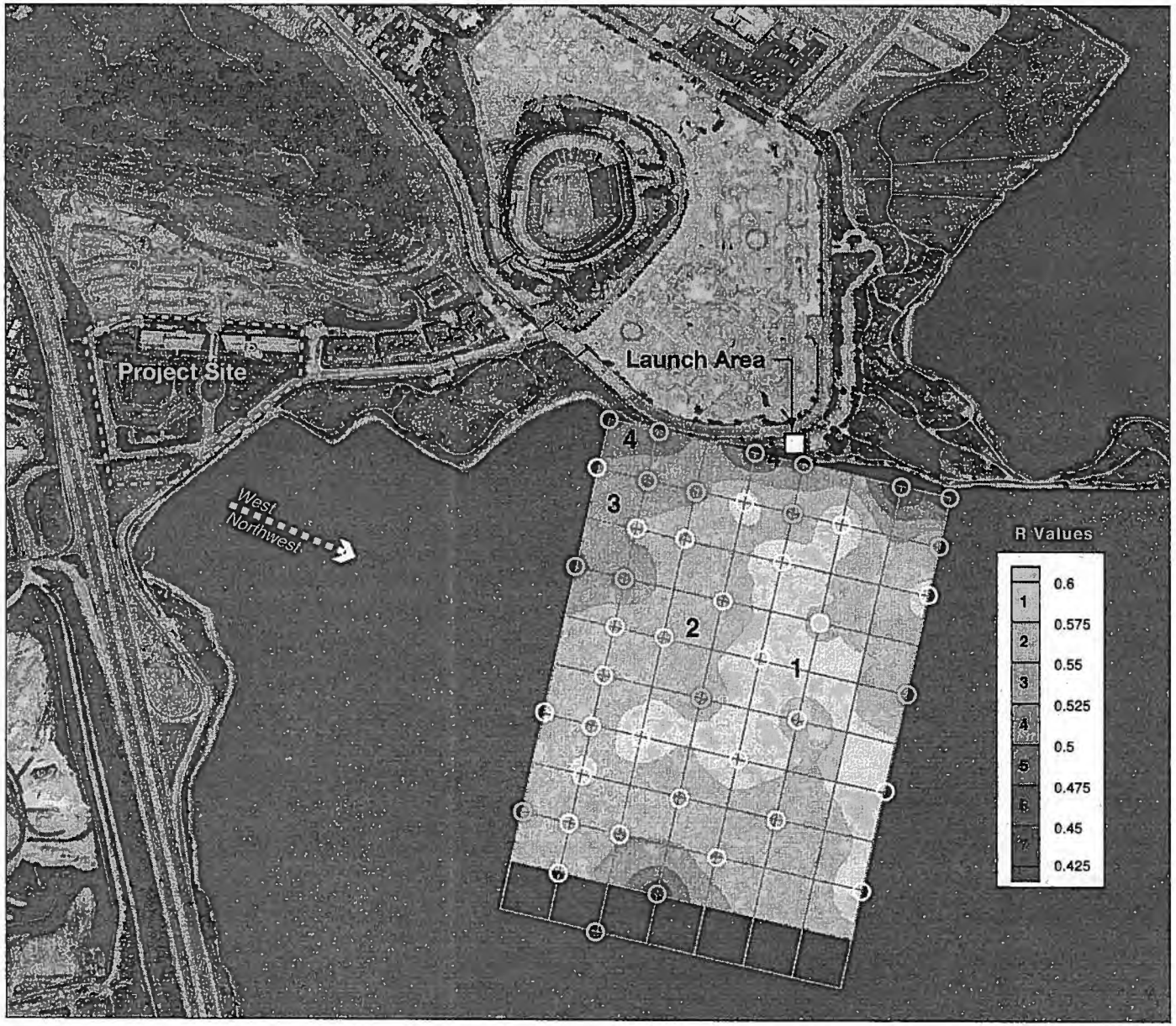
Figure 3 shows the measurement point locations in relation to the Project site and vicinity. Summary information about the wind tunnel test results are illustrated in the figures and details are discussed in the text that follows.



SOURCE: ESA

Executive Park Wind Test . 208449

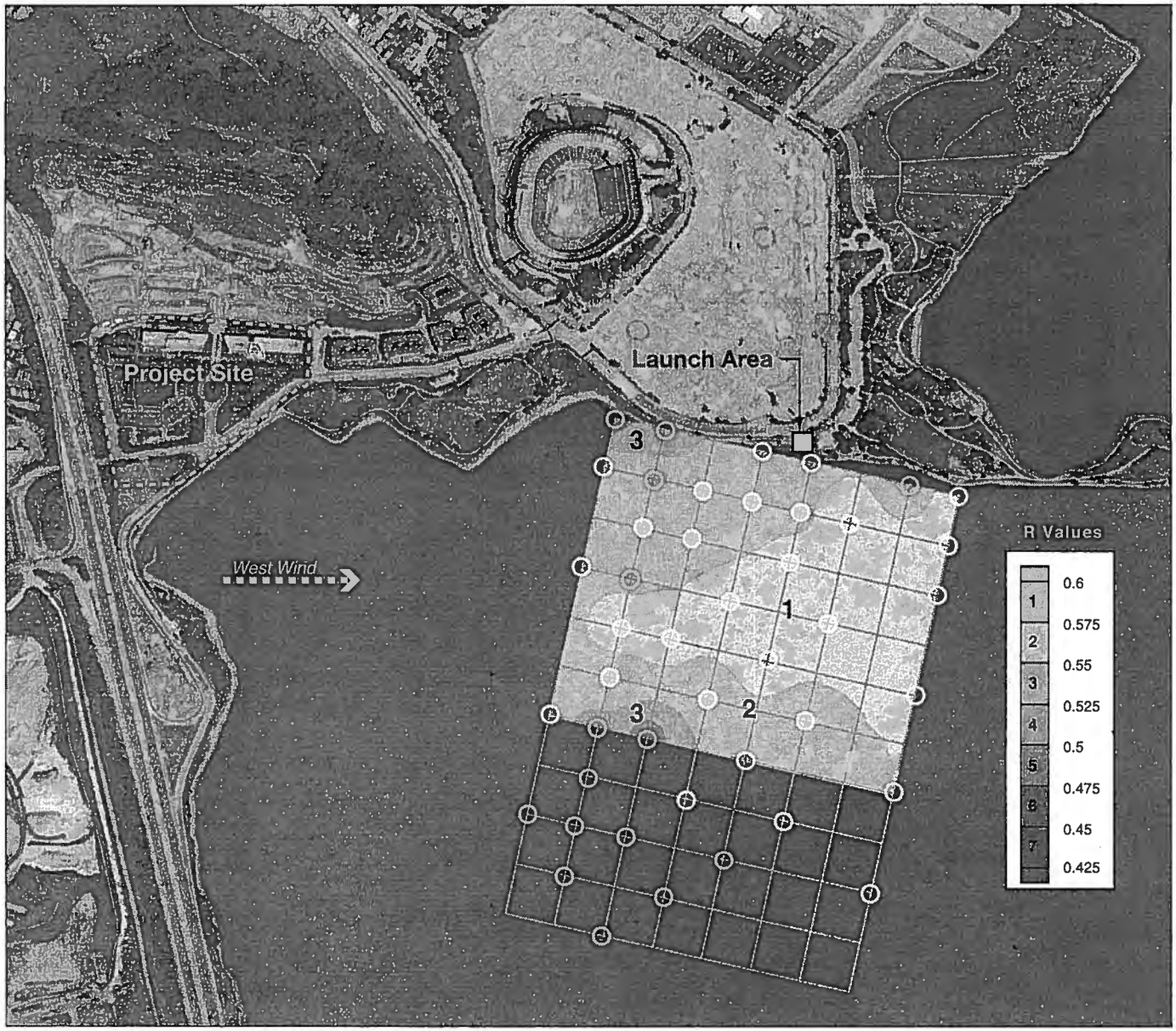
Figure 4
R Values
Northwest Wind
Existing Setting



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 5
R Values
West-Northwest Wind
Existing Setting



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 6
R Values
West Wind
Existing Setting

Test 1: Existing Setting

Wind Speed

The R-values under the Existing Setting for each of three wind directions: Northwest, West-Northwest and West are as follows:

- Northwest wind R-values vary from 0.39 to 0.58, indicating that the wind speed near the surface of the Bay is between 39% and 58% of the speed of the free-stream wind flowing high overhead.
- West-Northwest wind R-values range between 0.47 and 0.60 (47% to 60% of the free-stream wind).
- West wind R-values range from 0.51 to 0.61 (between 51% and 61% of the free-stream wind).

The R-values, as plotted in Figures 4, 5 and 6, are generally lower closer to the shoreline, due to the effects of the topography, rough ground surface and buildings in slowing the wind[10] as it moves over the land. The combined effects are most pronounced for Northwest wind. The depression of the R-values at the northeast corner of the grid defines the existing wind-shadow from the Candlestick Park stadium, located northwest of the CPSRA launch area.

Wind Turbulence

Values of turbulence intensity (TI) were measured for the Existing Setting for each of three wind directions: Northwest, West-Northwest and West. No TI values[11] were found that were less than 14% and no TI values reached 30%. Because the TI values fell close together, and because there was no reason to make finer distinctions, TI values are arbitrarily grouped within four 4%-wide "zones" or "areas" for plotting; each with a numerical identifier, as follows:

Area "1" - TI = 26% to 30%,

Area "2" - TI = 22% to 26%,

Area "3" - TI = 18% to 22%, and

Area "4" - TI = 14% to 18%.

Figures 7, 8 and 9 show plots of based on these isopleths of the turbulence intensity (TI) values measured for the Existing Setting under each of three wind directions: Northwest, West-Northwest and West. In general, the highest values of turbulence occur near the shore with the lower values occurring downwind. The highest peak TI values occur under Northwest winds. Lower peak TI values and smaller coverage areas occur for West-Northwest winds, while still lower peak values and much smaller coverage areas occur for West winds.

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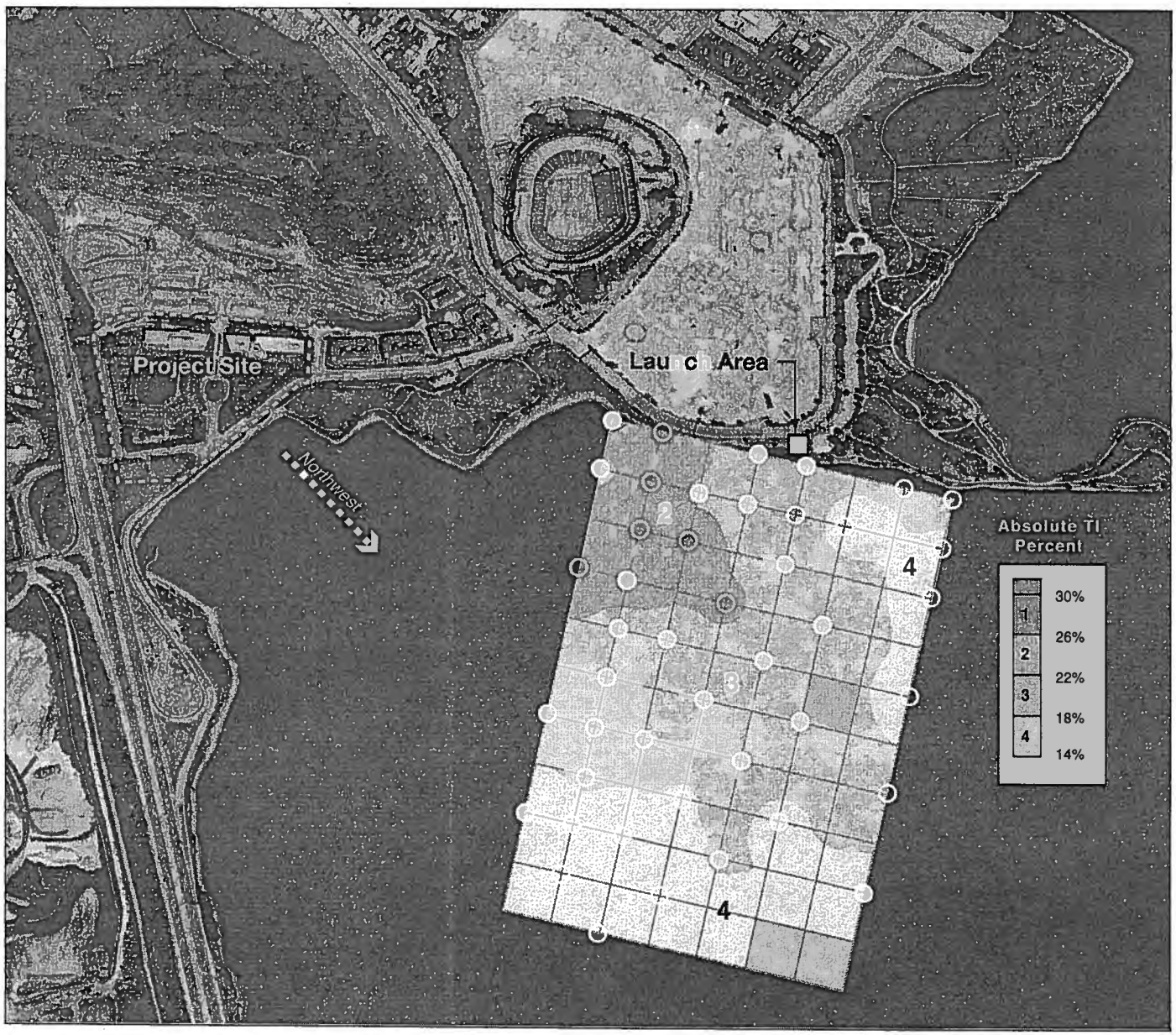
10 Vegetation, which was not included in the wind test model, can further increase wind drag and substantially decrease wind speeds.

11 The formula Planning Code Section 148 uses to compute "equivalent wind speed" assumes a baseline value of 15% for TI. Values of TI from wind testing of buildings in the Downtown typically exceed 15% and TI values in the range of 30% to 50% are not uncommon.

- Northwest wind TI values range from 26% near the shore to 14% downwind. The highest TI values (22% to 26%) cover 13-acre±s at the northwest corner of the grid, near the shoreline. The high TI is likely the result of the downwind "shadow" of the Bay View Hill, existing buildings at Executive Park and the existing Candlestick Park stadium. Lower TI values (18% to 22%) cover approximately half of the grid area, generally extending the downwind shadow of existing features. TI values range between 14% and 18% over the remaining one-third of the grid, in those areas farthest downwind. See Figure 7.

- West-Northwest wind TI values range from 14% to 18% over about three-quarters of the grid area, with TI values between 18% and 22% covering one-quarter of the grid close to shore, and 22% to 26% in a less than half-acre± area at the shoreline at the northwest tip of the grid. See Figure 8.

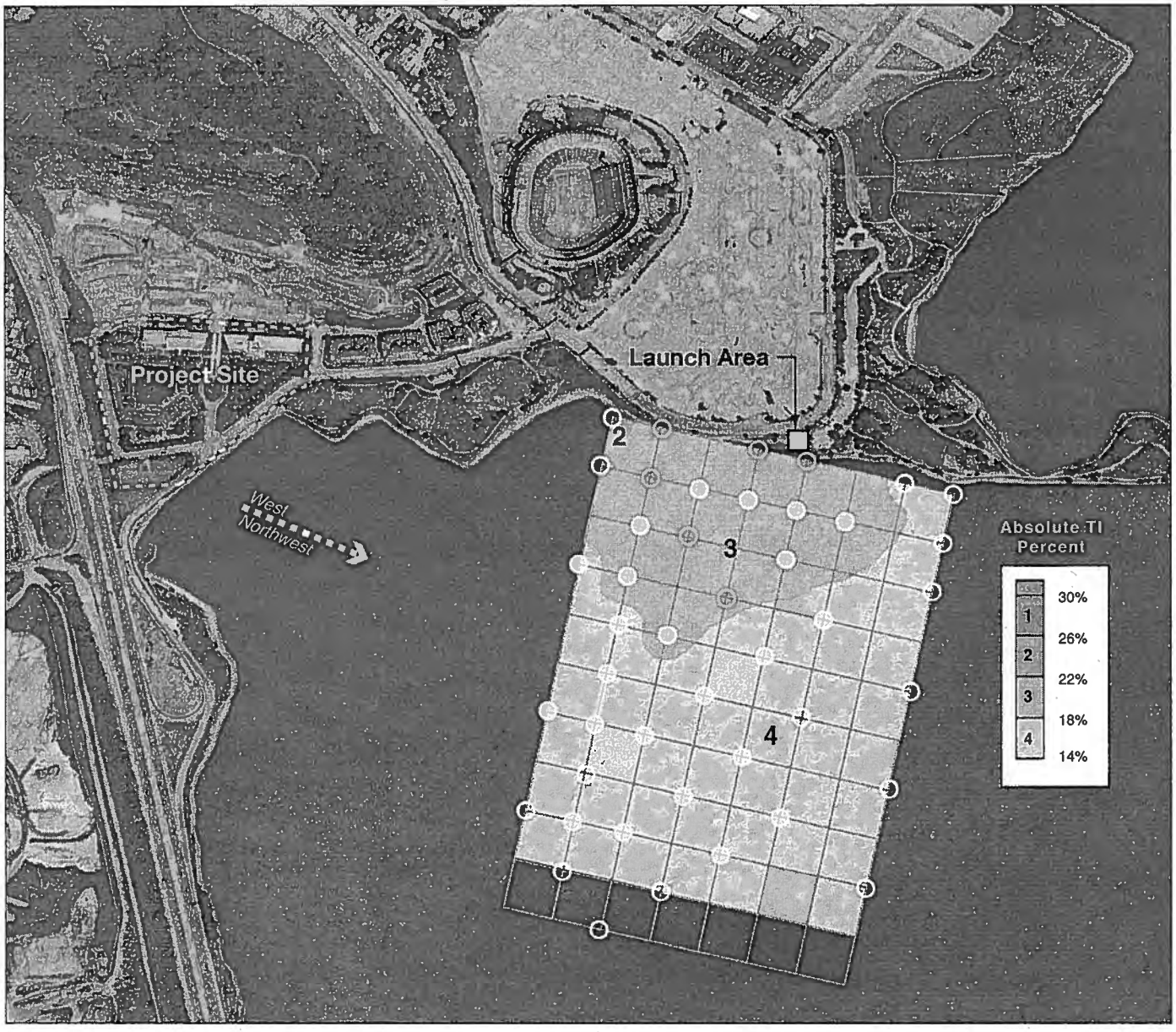
- West wind TI values range from 14% to 18% over almost all of the area, with higher TI values (18% to 22%) in a 1.5 acre± area near the shoreline at the northwest corner of the grid. See Figure 9.



SOURCE: ESA

Executive Park Wind Test . 208449

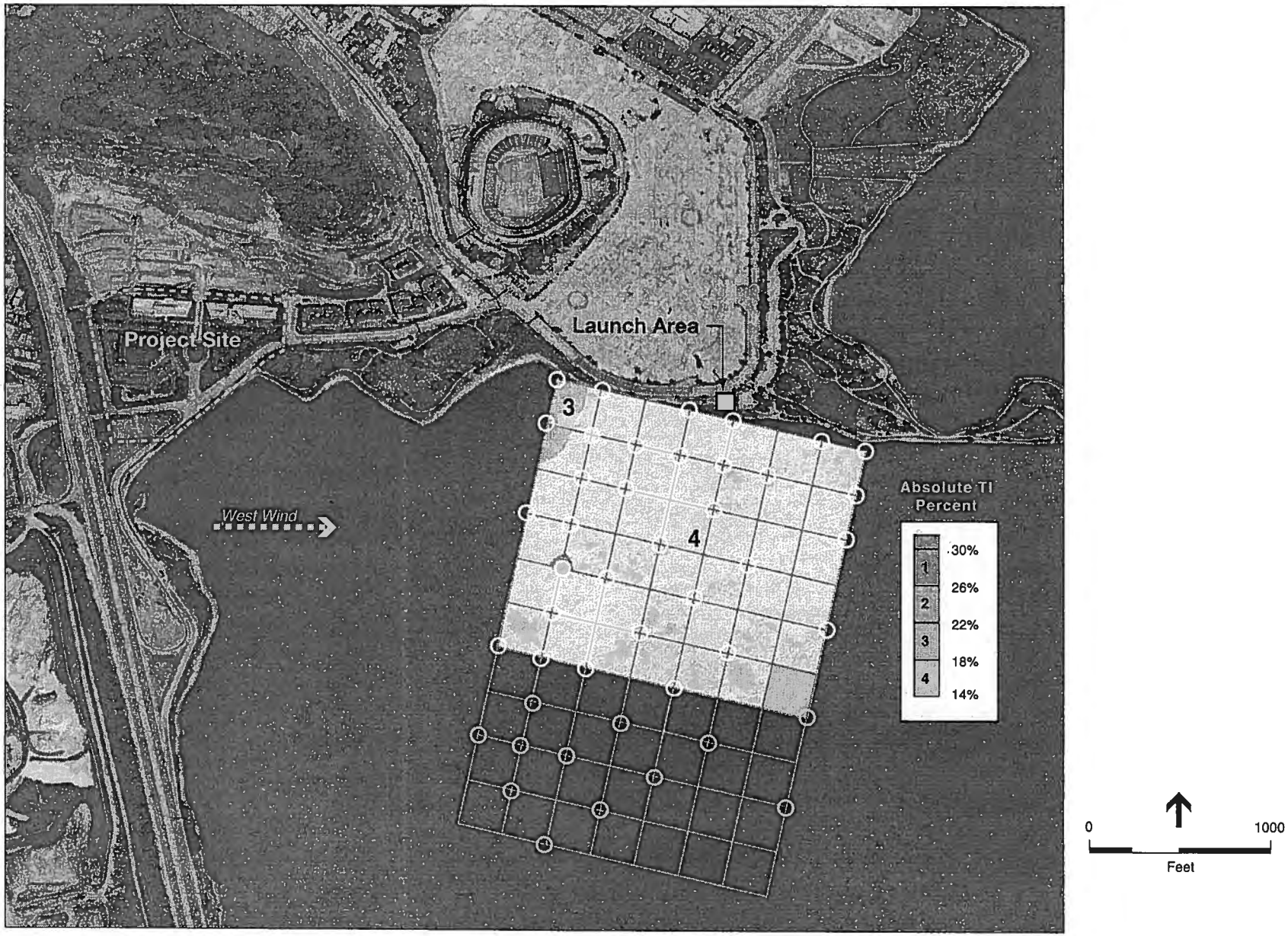
Figure 7
Turbulence Intensity
Northwest Wind
Existing Setting



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 8
Turbulence Intensity
West-Northwest Wind
Existing Setting



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 9
Turbulence Intensity
West Wind
Existing Setting

Test 2: Project

The Project setting consists of plans provided by the architects that were added to the existing setting. The Project includes the demolition of three buildings in the existing setting and the construction of 13 separate buildings (or building clusters) and would range in height from approximately 86 to 293 feet. Some of the buildings would have internal courtyards, walkways, and other common areas.

Wind Speed

The R-values for each wind direction under the Project scenario[12] are as follows:

- Northwest wind R-values range from 0.40 to 0.57 (compared to Existing R-values of 0.39 to 0.58).
- West-Northwest wind R-values range from 0.39 to 0.59 (compared to Existing R-values of 0.47 to 0.60).
- West wind R-values range from 0.47 to 0.60 (compared to Existing R-values of 0.51 to 0.61).

As is evident above, the actual changes in the ranges of R-values between the Existing conditions and the Project scenario for each wind direction are typically not large. Because it is difficult to interpret the changes in the R-values by visually comparing two R-value plots, such as of Project and Existing conditions, it is more instructive to consider the change[13] between R-values for the Project scenario and the corresponding R-values for the Existing conditions, expressed as a percent of the Existing R-values. This method amplifies and clearly shows the relatively small percentage changes in R-values that occur over the area of the grid. Five isopleth values for percentage change in R-value were selected to cover the range of variation and to show sufficient detail to serve the analysis purposes of this study. The four bands or ranges formed by the five isopleths are as follows:

Area "1" - % Change in R-value = +5% to 0%,

Area "2" - % Change in R-value = 0% to -5%,

Area "3" - % Change in R-value = -5% to -10%, and

Area "4" - % Change in R-value = -10% to -20%.

Plots of these percentage differences in R-values are shown in Figures 10 through 12. Because R-values are proportional to wind speed, these plots also show real percentage changes in wind speed.

- For Northwest wind, the largest increase in measured R-values with the Project was 4.6%. The areas marked "1" and "2" in Figure 10 represent changes in R-values, and in wind speed, ranging from an increase of 4.6% to a decrease of 5%. The next largest, area "3", would undergo a decrease in R-values of 5% to 10% (a change in R-values in the range of -5% to -10%).
- For West-Northwest wind, the largest increase in R-values with the Project was 2.4%. Areas "1" and "2" in Figure 11 represent changes of +2.4% to -5% in R-values, and in wind speed. The next largest, area

[12] Plots of the R-values for each wind direction under the Project scenario are presented in Figures 22, 23 and 24, in Appendix 1.

[13] Difference = ($R\text{-value}_{project} - R\text{-value}_{existing}$). The "change" is then the difference divided by $R\text{-value}_{existing}$.

"3", would undergo changes in R-values of -5% to -10%. Area "4", bordering the shoreline, would undergo changes in R-values of -10% to -20%. Area "4" is 2.5 acres± in size, about 2.5% of the area of the grid.

- For West wind, the largest increase in R-values was 2.9%, in area "1" on Figure 12. However, almost all of the grid, area "2" on Figure 12, shows changes of 0% to -5% in R-values, and in wind speed, with the Project.

In summary, the Project scenario would result in wind speed changes, relative to Existing wind speeds, ranging from an increase of 4.6% to a decrease of 10% for Northwest, West-Northwest and West winds over most of the area of the grid. For West-Northwest winds, an area near the shoreline representing approximately 2.5% of the grid area experiences changes in wind speed from -10% to -20%.

Wind Turbulence Intensity

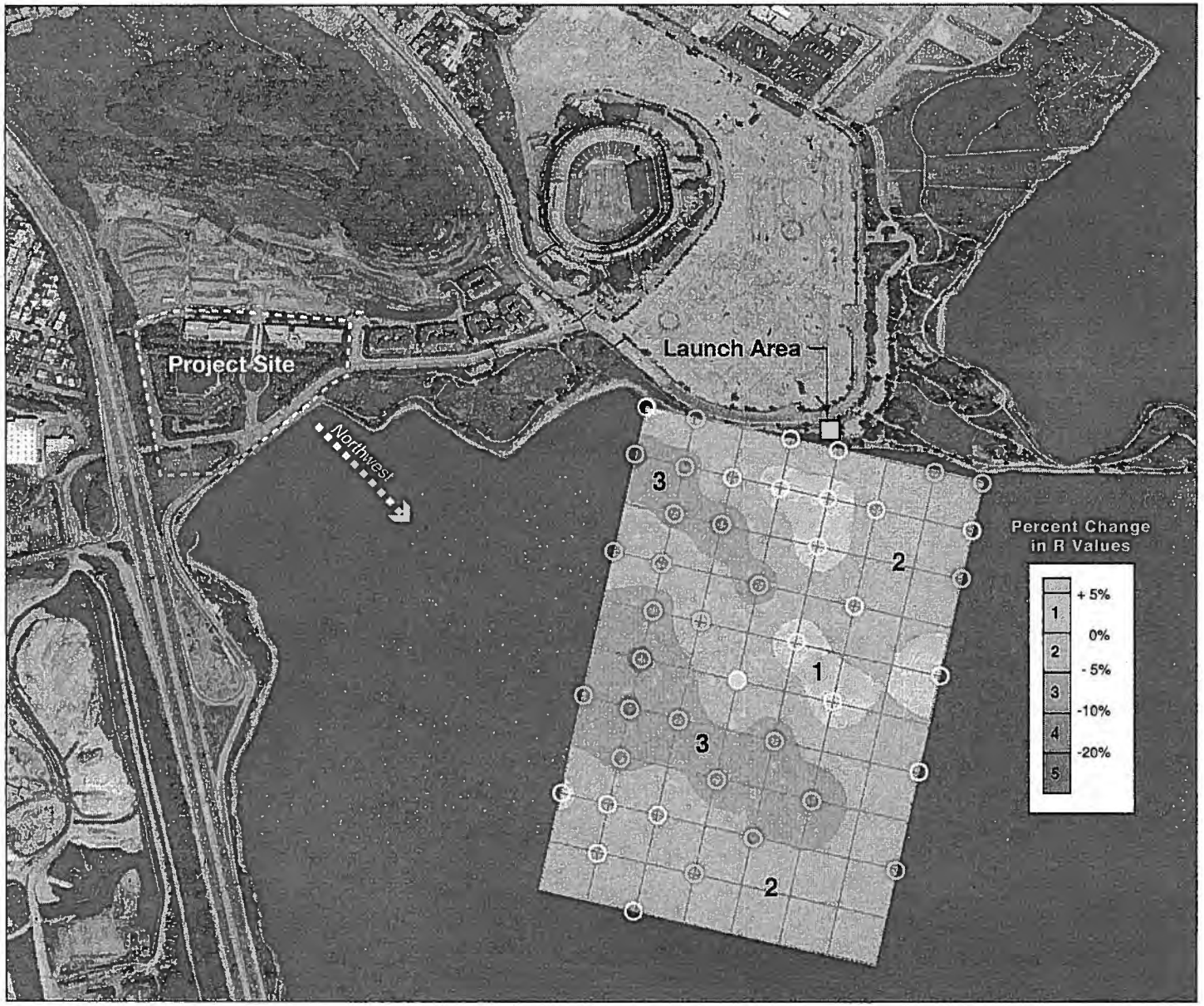
Values of turbulence intensity (TI) were measured for the Project scenario under each of three wind directions: Northwest, West-Northwest and West. No TI values were 14% or less and no TI values were 30% or more.

Figures 13, 14 and 15 show plots that use the predefined TI isopleths, to plot the turbulence intensity (TI) values measured for the Project under each of three wind directions: Northwest, West-Northwest and West. In general, turbulence increases, with the highest values of turbulence occur near the shore and lower values occurring downwind. As in the Existing setting, the highest peak TI values occur under Northwest winds. Lower peak TI values and smaller coverage areas occur for West-Northwest winds, while still lower peak values and much smaller coverage areas occur for West winds.

- Northwest wind TI values with the Project range from 30% near shore to 14% in isolated downwind locations. The highest TI values (22% to 26% and 26% to 30%) cover approximately 25-acre±s along half of the west side of the grid Figure 13, near the shoreline. The Project clearly adds to the high TI of the Existing scenario. Lower TI values (18% to 22%) extend to cover approximately three-quarters of the grid area. TI values range between 14% and 18% over the remaining 3-acre±s of the grid, in two isolated areas far downwind.

- West-Northwest wind TI values with the Project range from 14% to 18% over about half of the grid area, with TI values between 18% and 22% covering over one-third of the grid close to shore, 22% to 26% in more than an 11-acre± area at the shoreline along the northern end of the grid, and reaching 26% to 30% in a half-acre± area at the northwest tip of the grid. See Figure 14.

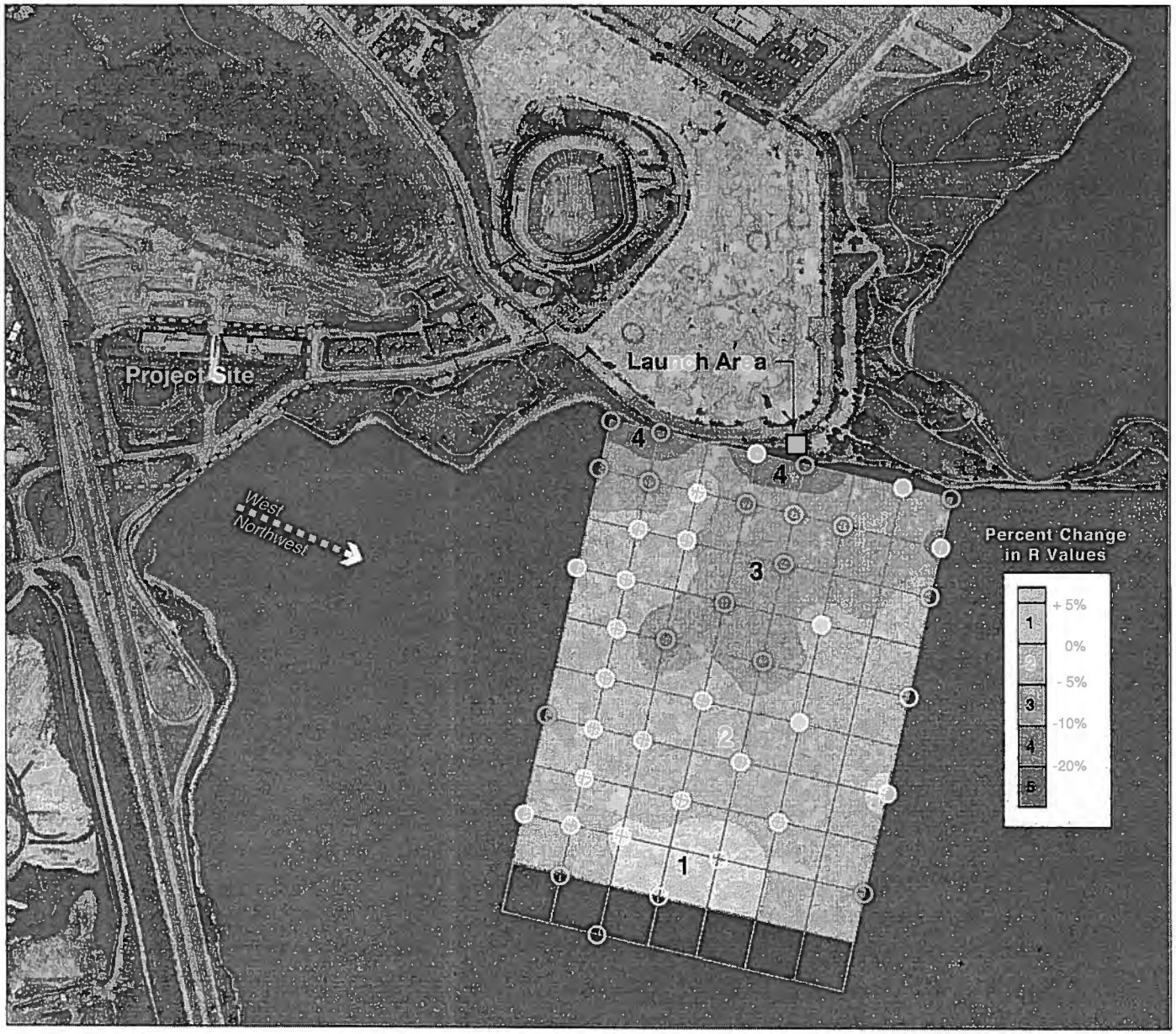
- West wind TI values with the Project were 14% to 18% over about three-quarters of the area, with higher TI values (18% to 22%) in a 23-acre± area at the northwest corner of the grid. See Figure 15.



SOURCE: ESA

Executive Park Wind Test . 208449

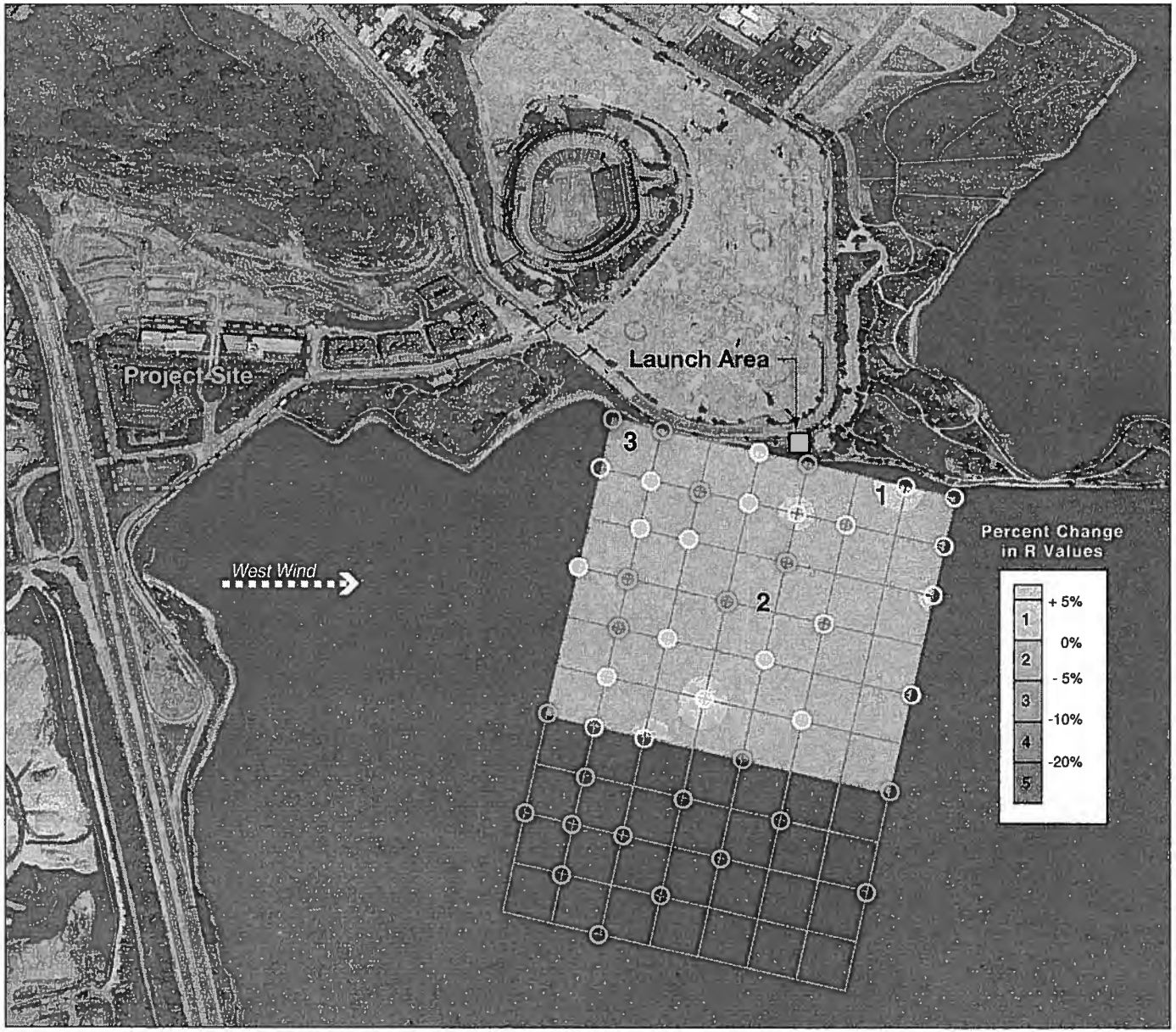
Figure 10
Percentage Change in R Values
Northwest Wind
Project



SOURCE: ESA

Executive Park Wind Test . 208449

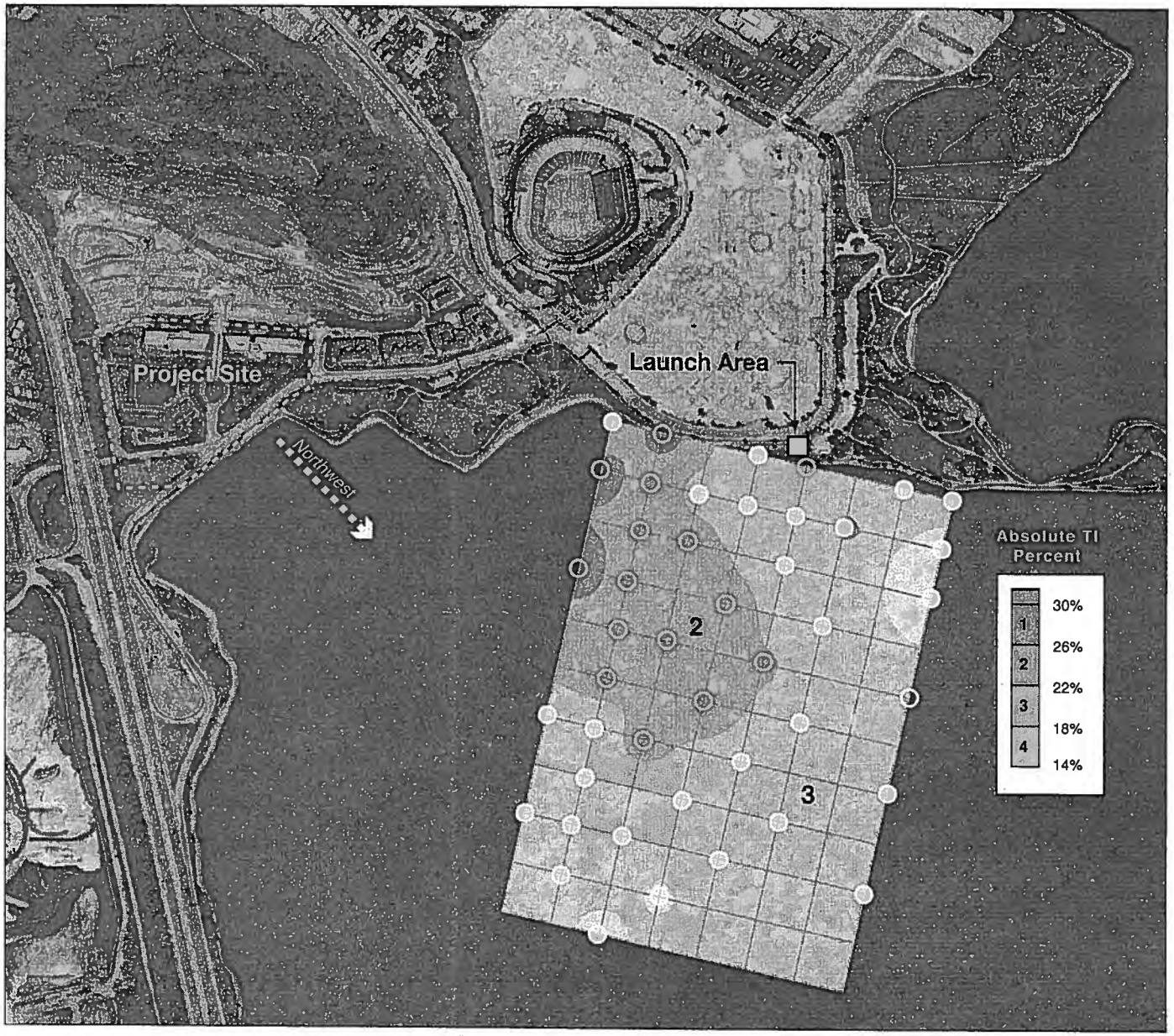
Figure 11
Percentage Change in R Values
West-Northwest Wind
Project



SOURCE: ESA

Executive Park Wind Test . 208449

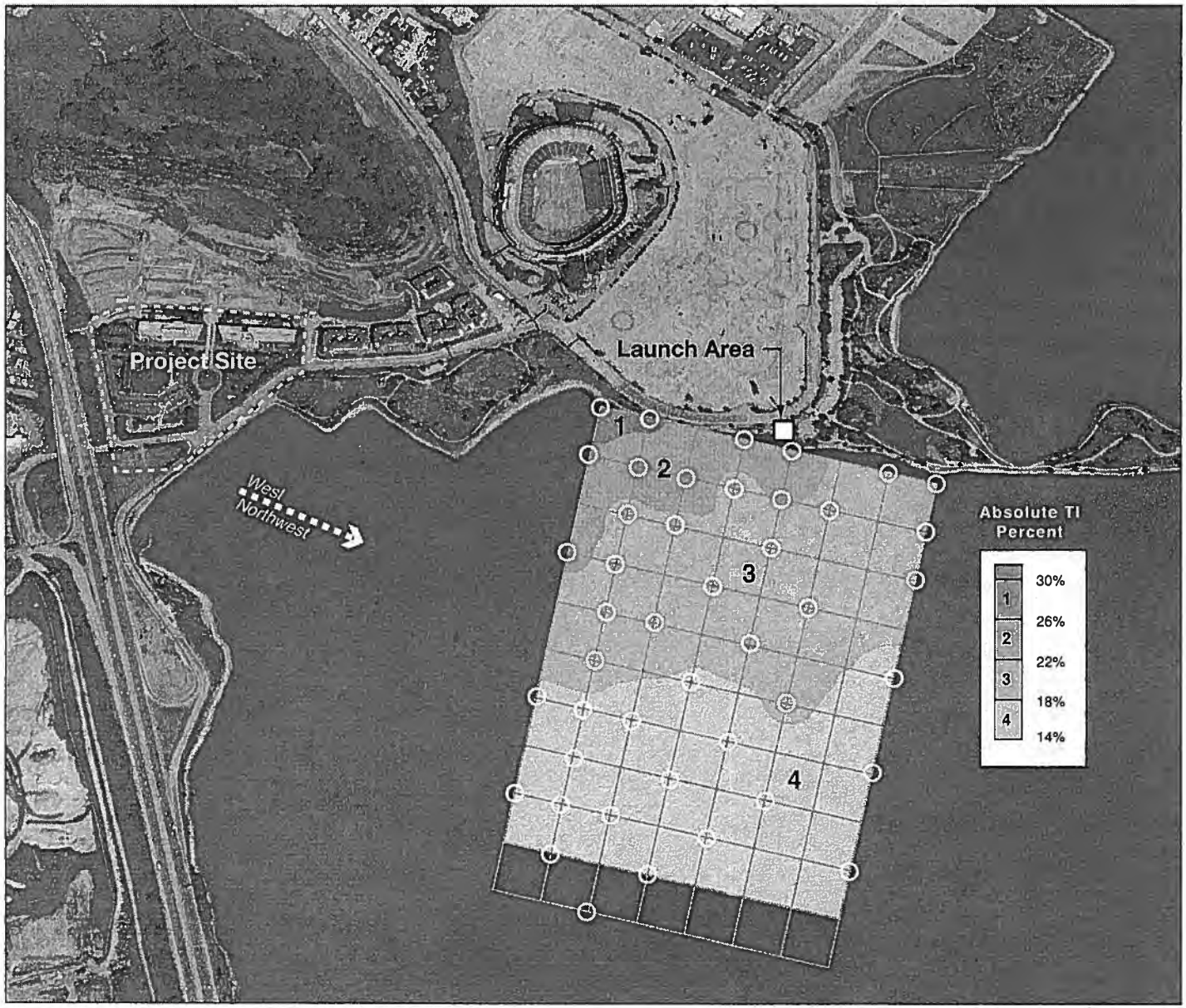
Figure 12
Percentage Change in R Values
West Wind
Project



SOURCE: ESA

Executive Park Wind Test . 208449

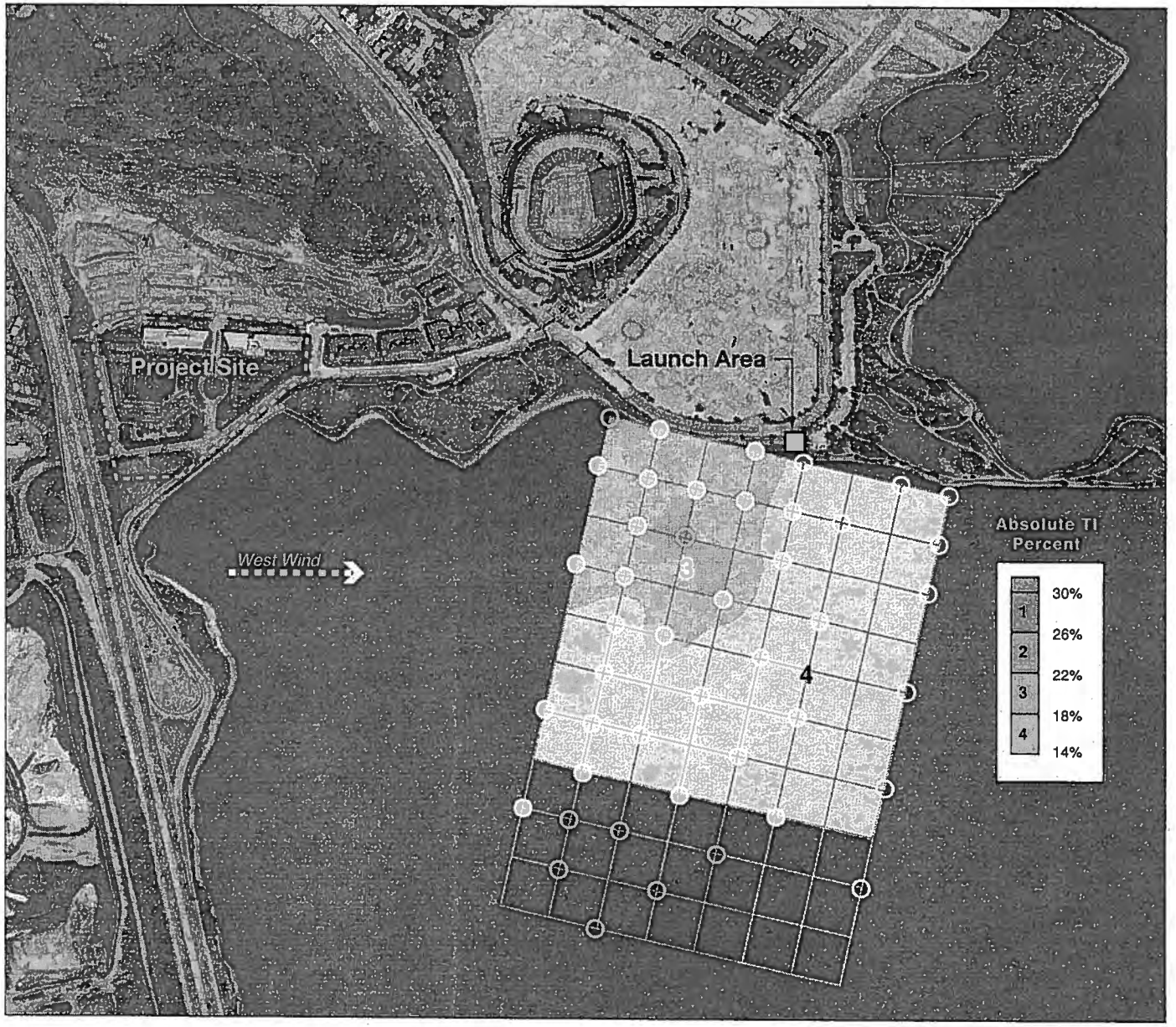
Figure 13
Turbulence Intensity
Northwest Wind
Project



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 14
Turbulence Intensity
West-Northwest Wind
Project



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 15
Turbulence Intensity
West Wind
Project

Test 3: Project plus Cumulative

This scenario consists of the Project together with cumulative development proposed directly north of the windsurfing area in the vicinity of the existing Candlestick Park stadium. In this scenario, the existing Candlestick Park stadium would be demolished.

Wind Speed

The R-values for the Project plus Cumulative scenario[14] for each wind direction are as follows:

- Northwest wind R-values range from 0.35 to 0.57 (compared to Existing R-values of 0.39 to 0.58).
- West-Northwest wind R-values range from 0.40 to 0.59 (compared to Existing R-values of 0.47 to 0.60).
- West wind R-values range from 0.47 to 0.59 (compared to Existing R-values of 0.51 to 0.61).

Comparative plots, showing the ratios of the R-values for the Project plus Cumulative scenario against the R-values for Existing conditions are shown in Figures 16, 17 and 18. These plots clearly show the differences in R-values, as percentage changes. Because of the relationship of R-values to wind speed, Figures 16, 17 and 18 also show true percentage changes in wind speed.

- For Northwest wind, the largest increase in R-values measured was +9.9%. The areas "1" and "2" in Figure 16 show changes that range from +9.9% to -5% in R-values, and in wind speed for the Project plus Cumulative scenario. The next largest, area "3", would undergo changes in R-values of -5% to -10%. Areas marked "4" would undergo changes in R-values of -10% to -20%. Area "4" is also located immediately offshore, but is smaller in comparison to that for the West-Northwest wind. Areas with changes of -10% to -20% for the Northwest wind occupy 7.2 acres±, 7.2% of the grid.
- For West-Northwest wind, the largest increase in R-values measured was +2.4%. The areas marked "1" and "2" in Figure 17 represent changes of +2.4% to -5% in R values, and in wind speed for the Project plus Cumulative scenario. The next largest area, marked "3", would undergo changes in R-values of -5% to -10%. Areas marked "4" would undergo changes in R-values of -10% to -20%. Area 4 extends from the shoreline to approximately 250 feet offshore, occupying a 10 acre± area, 10% of the area of the grid.
- For West wind, the largest increase in R-values measured was +2.7%. Almost the entire grid is area "2" in Figure 18, which shows changes are in the range of 0% to -5% in R-values and in wind speed for the Project plus Cumulative scenario.

In summary, wind speed changes due to the Project plus Cumulative scenario mostly results in wind speed changes ranging from no change to a 10% decrease in wind speed. A 10-acre± area near the shoreline would experience changes in wind speed from -10% to -20% with West-Northwest winds, and a similar 7.2-acre± shoreline area would experience wind speed changes from -10% to -20% with Northwest winds.

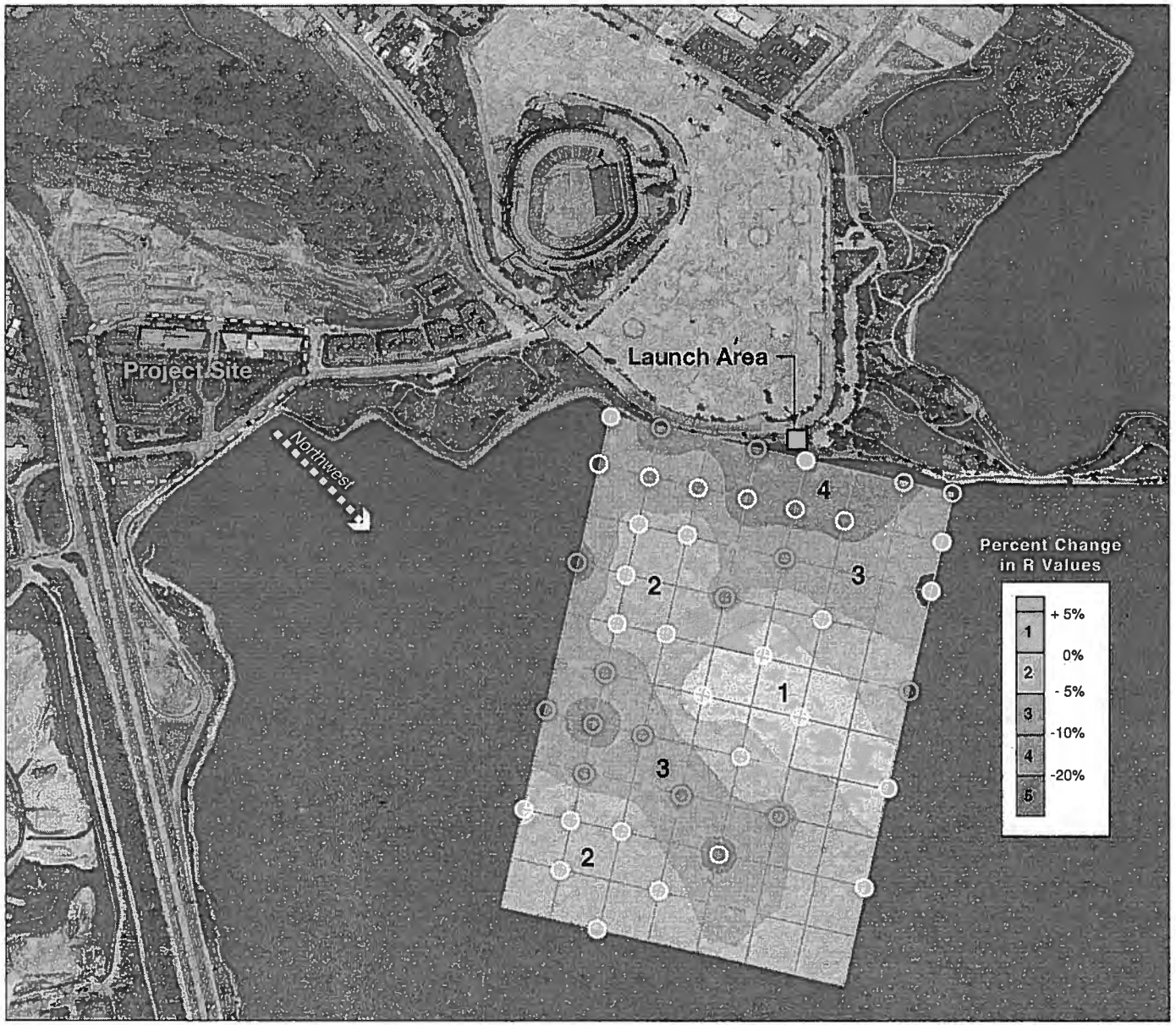
[14] Plots of R-values under the Project plus Cumulative scenario are presented in Figures 25, 26 and 27, in Appendix 1.

Figures 19, 20 and 21 use the five predefined TI isopleths to map the turbulence intensity (TI) values for the Project plus Cumulative scenario and each of three wind directions. In general, turbulence increases, with the highest values of turbulence occur near the shore and lower values occurring downwind.

- Northwest wind TI values range from near 30% near shore to 14% in isolated downwind locations for the Project plus Cumulative scenario. TI values would be between 26% and 30% at a more than 2-acre area at the northwest corner of the grid. TI values from 22% to 26% would cover approximately 27-acres along half of the west side of the grid, near the shoreline. Lower TI values (18% to 22%) would extend to cover the remaining area of the grid.

- West-Northwest wind TI values for the Project plus Cumulative scenario would range from 14% to 18% over a 47-acre± area at the south end of the grid, with TI values between 18% and 22% over a 30-acre± area to the north. TI values from 22% to 26% would occur in a 20-acre± area along the shoreline, including the present CPSRA windsurfing launching and landing area. TI values would be from 26% to 30% in a 1-acre± area at the shoreline at the northwest corner of the grid.

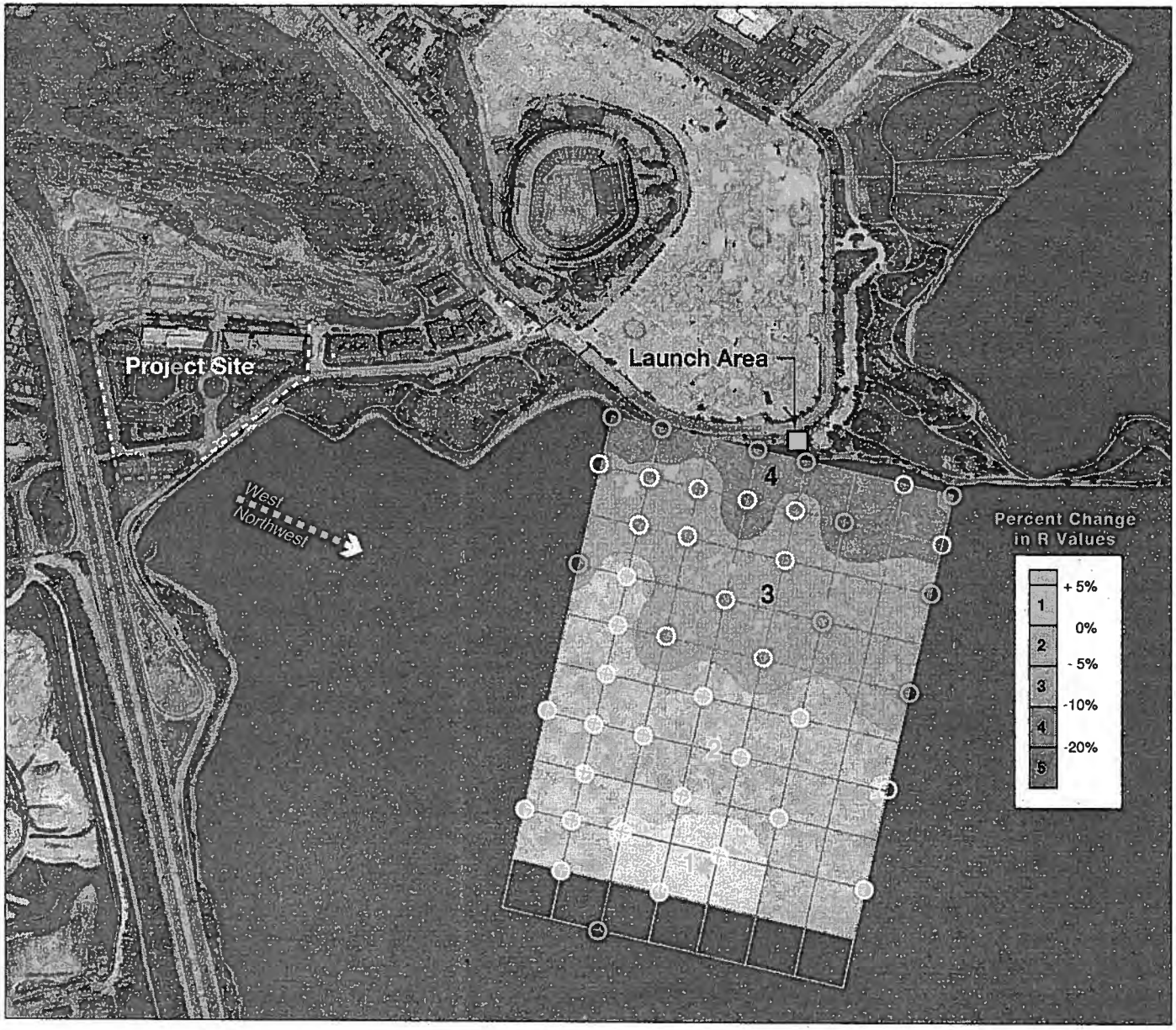
- West wind TI values between 18% and 22% would occur in a 17-acre± area along the shoreline for the Project plus Cumulative scenario. This area would extend from the CPSRA windsurfing launching and landing area to the northwest corner of the grid. TI values would be between 14% and 18% over the rest of the grid area. TI would be high where wind speed is low.



SOURCE: ESA

Executive Park Wind Test . 208449

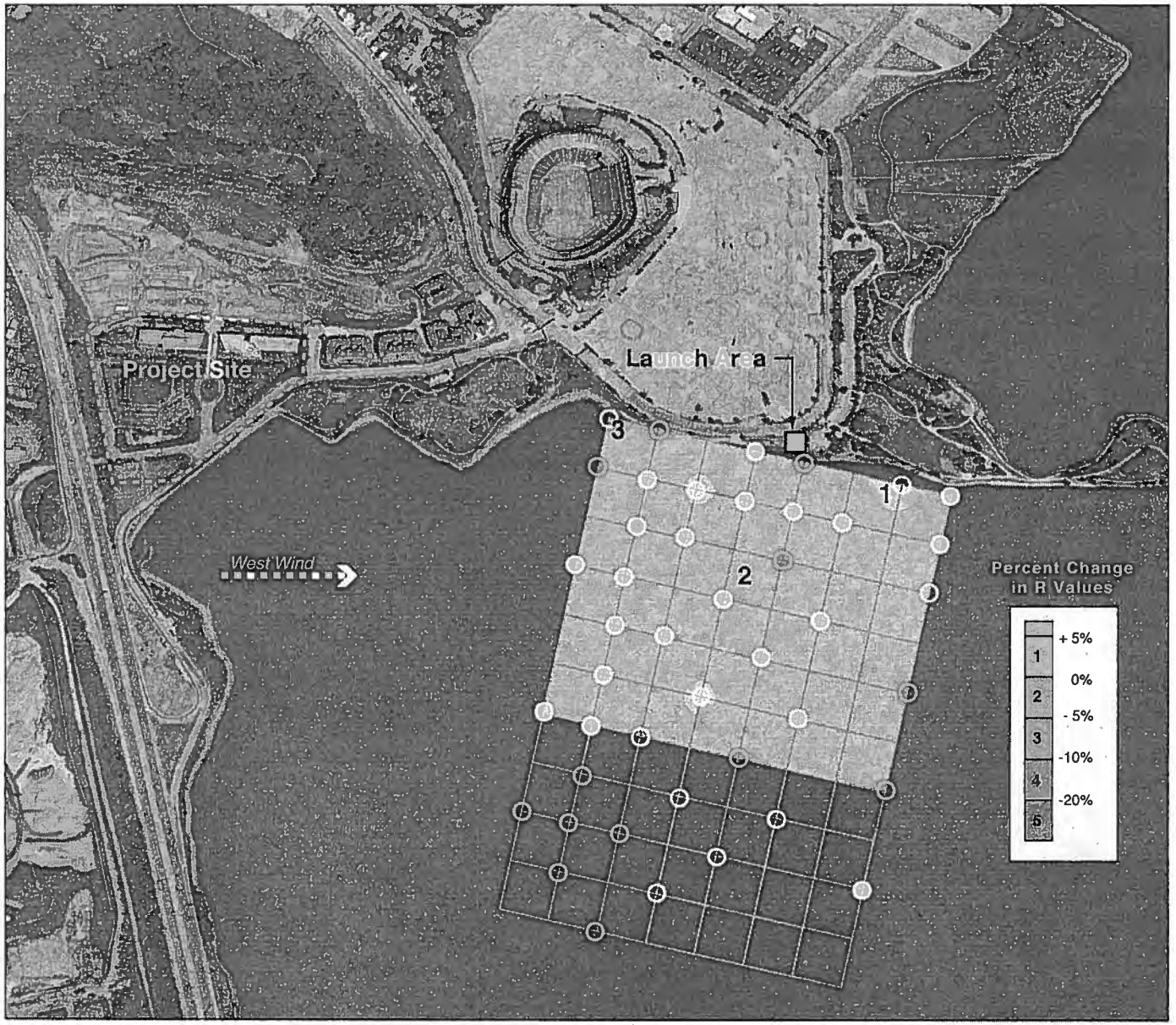
Figure 16
Percentage Change in R Values
Northwest Wind
Project + Cumulative



SOURCE: ESA

Executive Park Wind Test . 208449

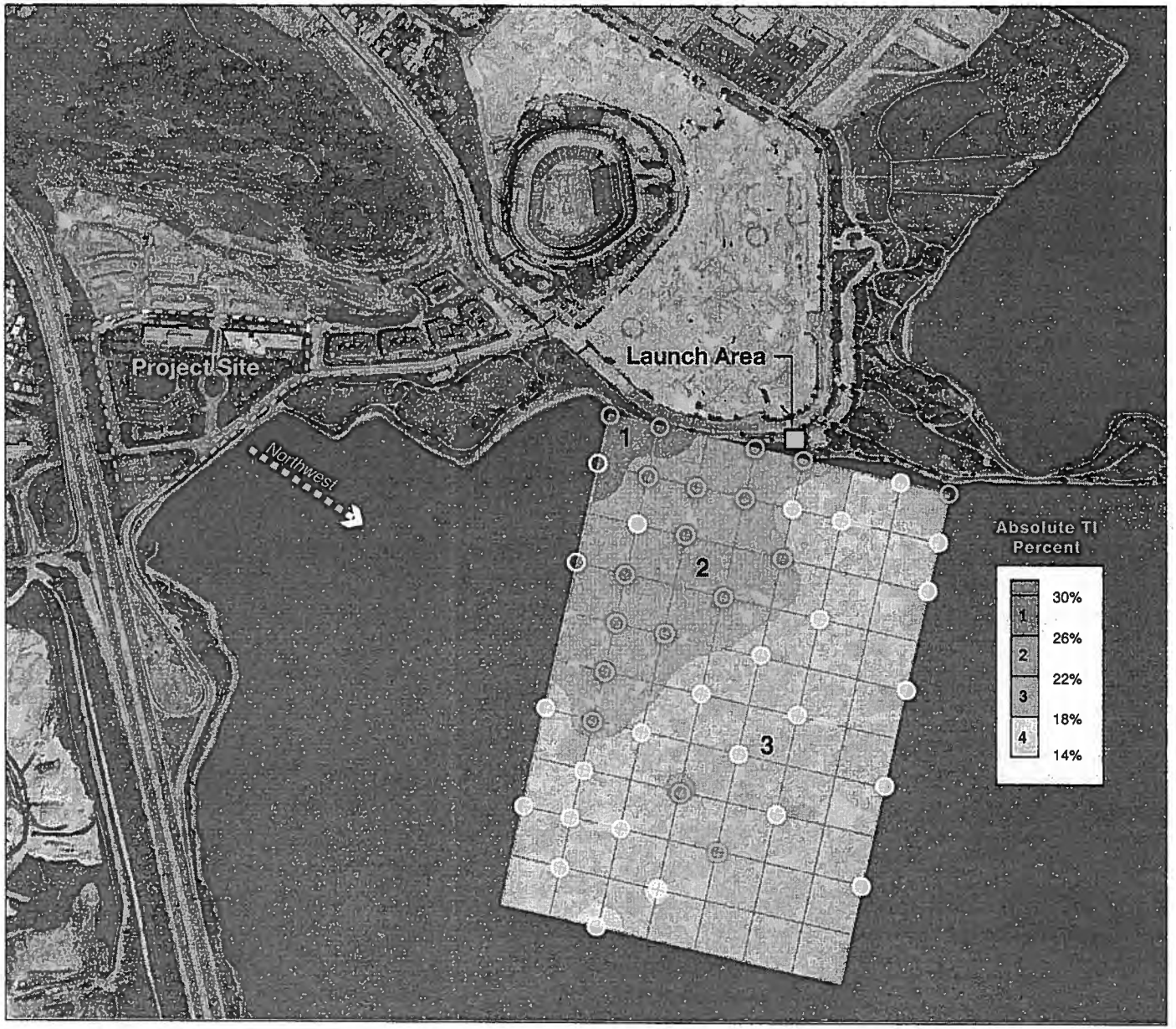
Figure 17
Percentage Change in R Values
West-Northwest Wind
Project + Cumulative



SOURCE: ESA

Executive Park Wind Test . 208449

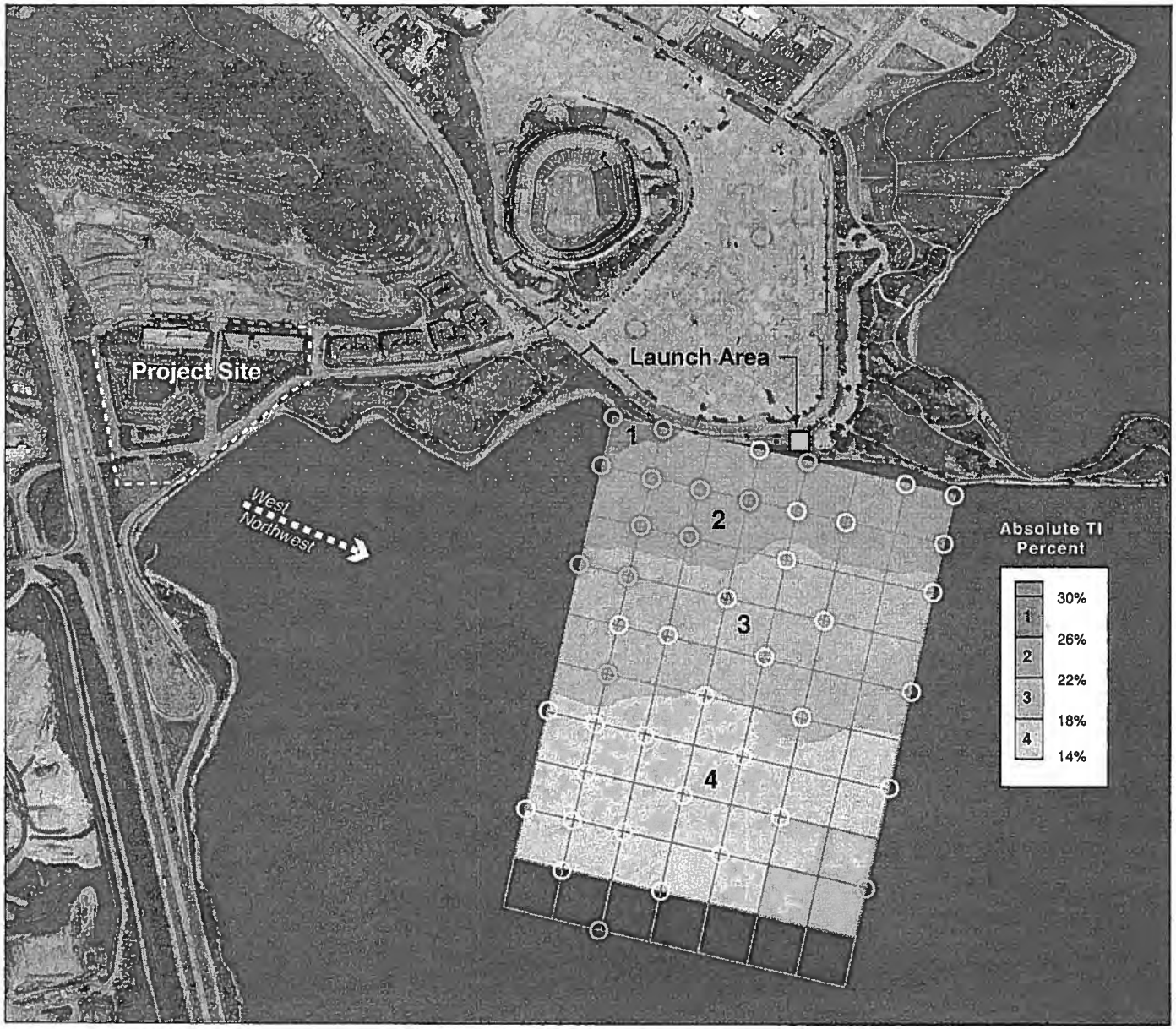
Figure 18
Percentage Change in R Values
West Wind
Project + Cumulative



SOURCE: ESA

Executive Park Wind Test . 208449

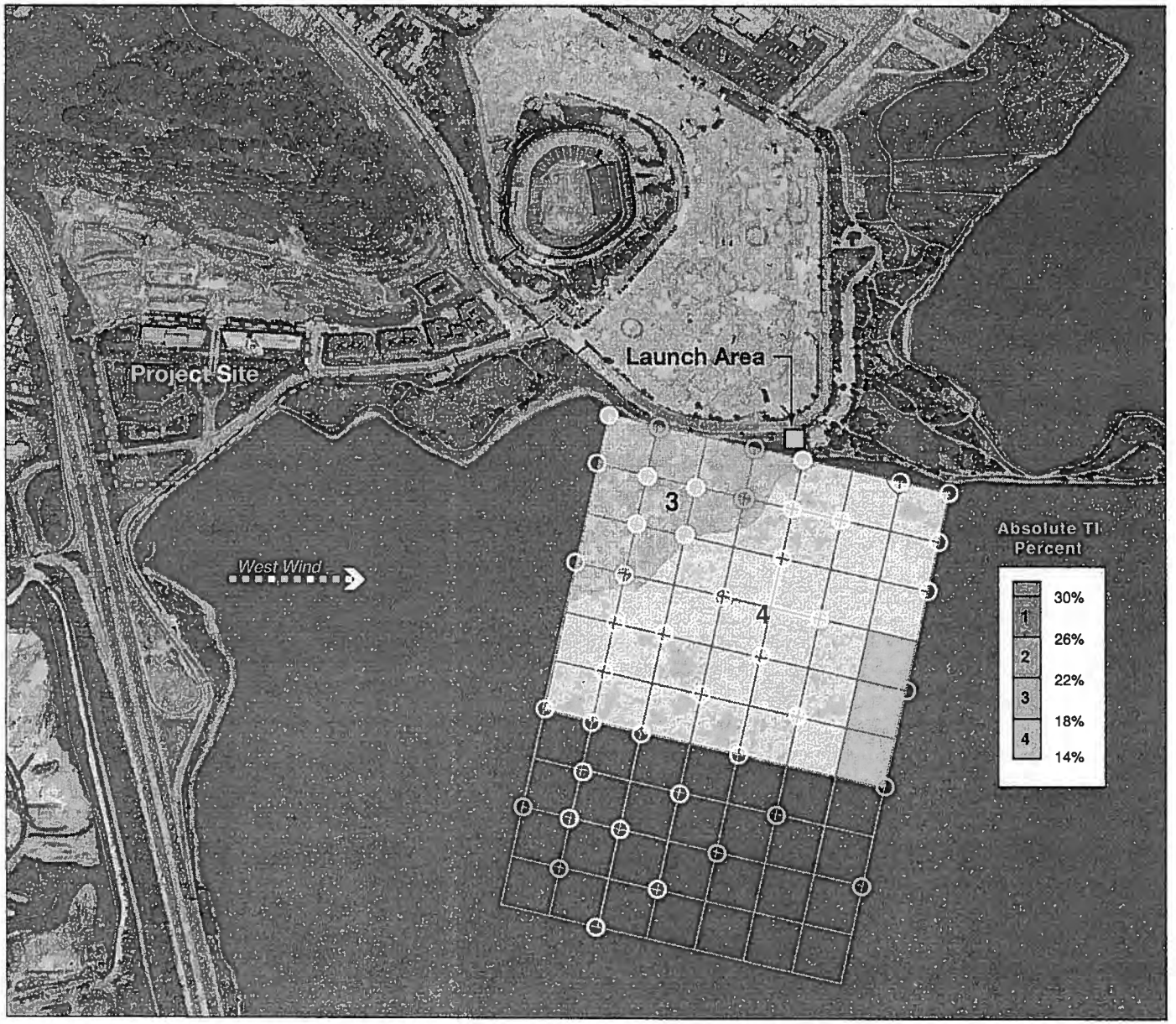
Figure 19
Turbulence Intensity
Northwest Wind
Project + Cumulative



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 20
Turbulence Intensity
West-Northwest Wind
Project + Cumulative



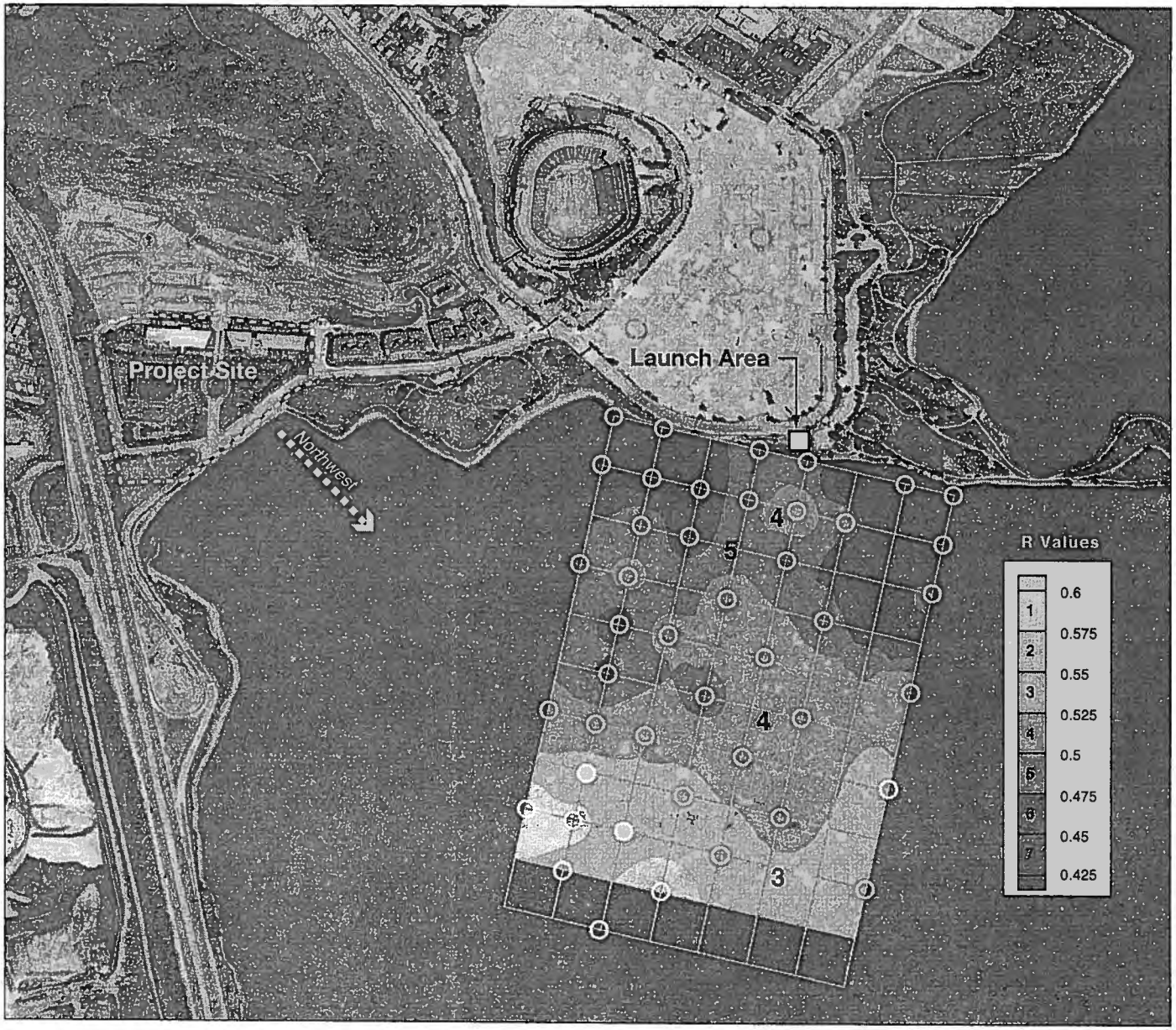
SOURCE: ESA

Executive Park Wind Test . 208449

Figure 21
Turbulence Intensity
West Wind
Project + Cumulative

ATTACHMENT 1 – Supplemental Figures

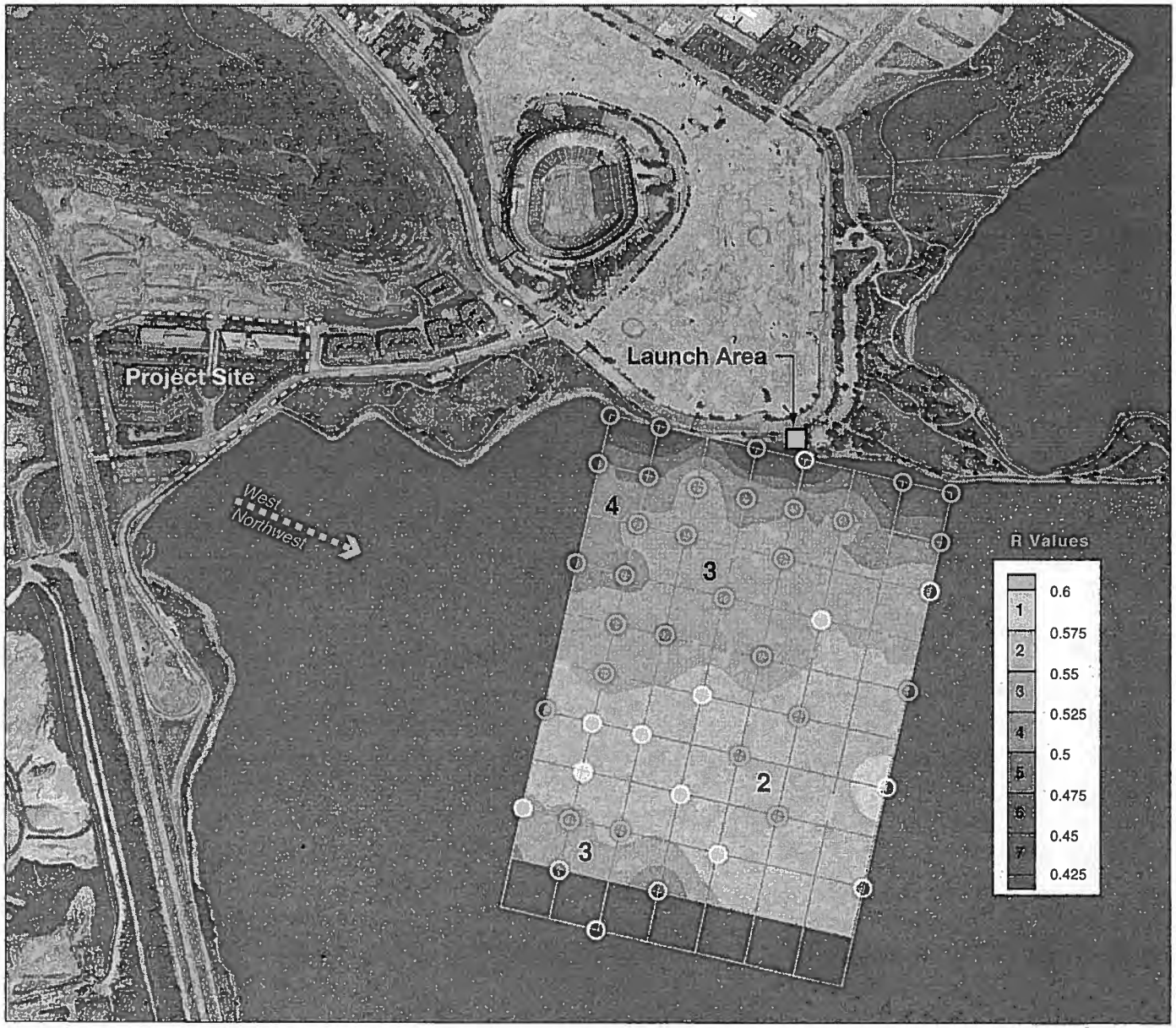
List of Figures



SOURCE: ESA

Executive Park Wind Test . 208449

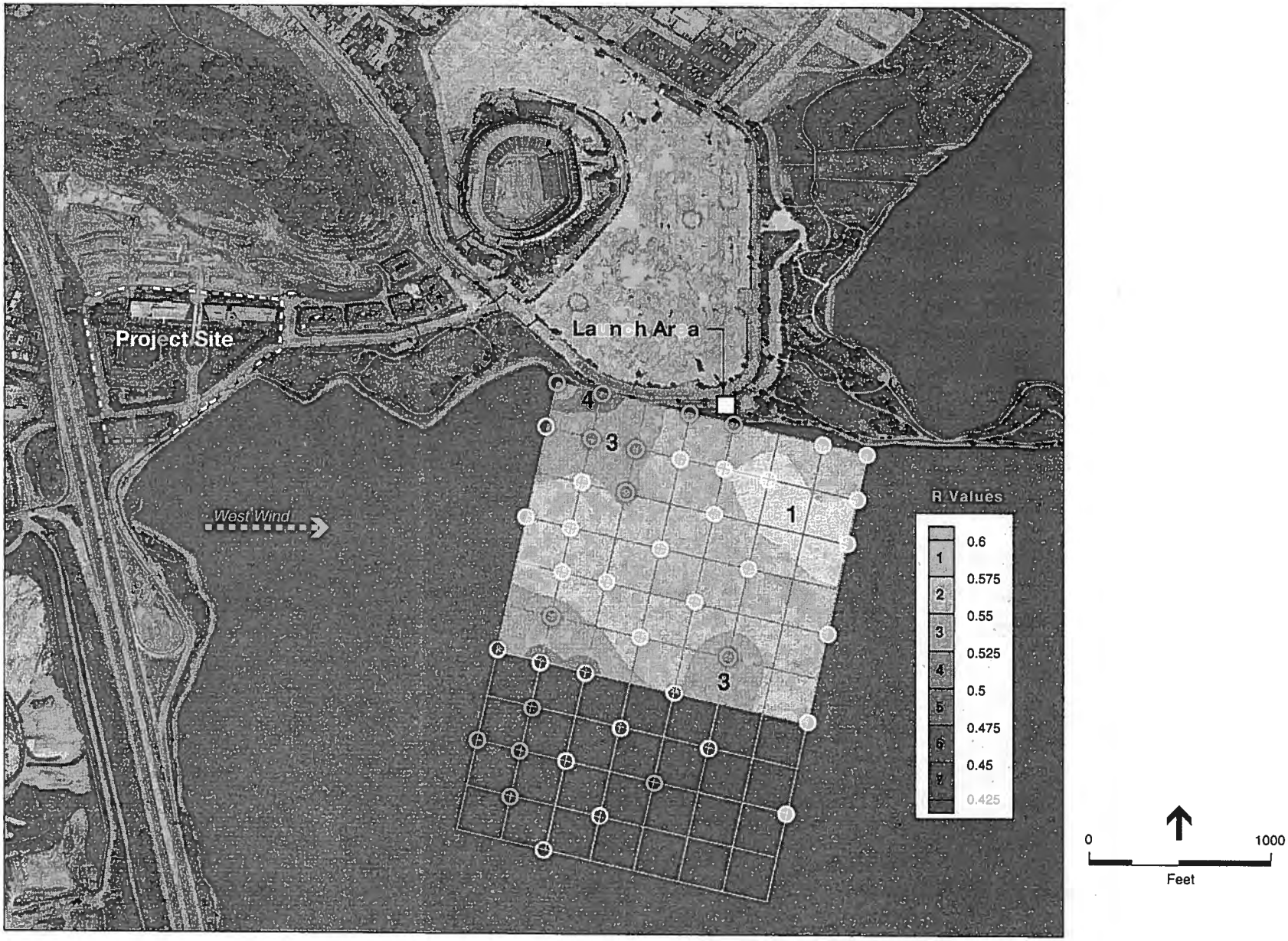
Figure 22
R Values
Northwest Wind
Project



SOURCE: ESA

Executive Park Wind Test . 208449

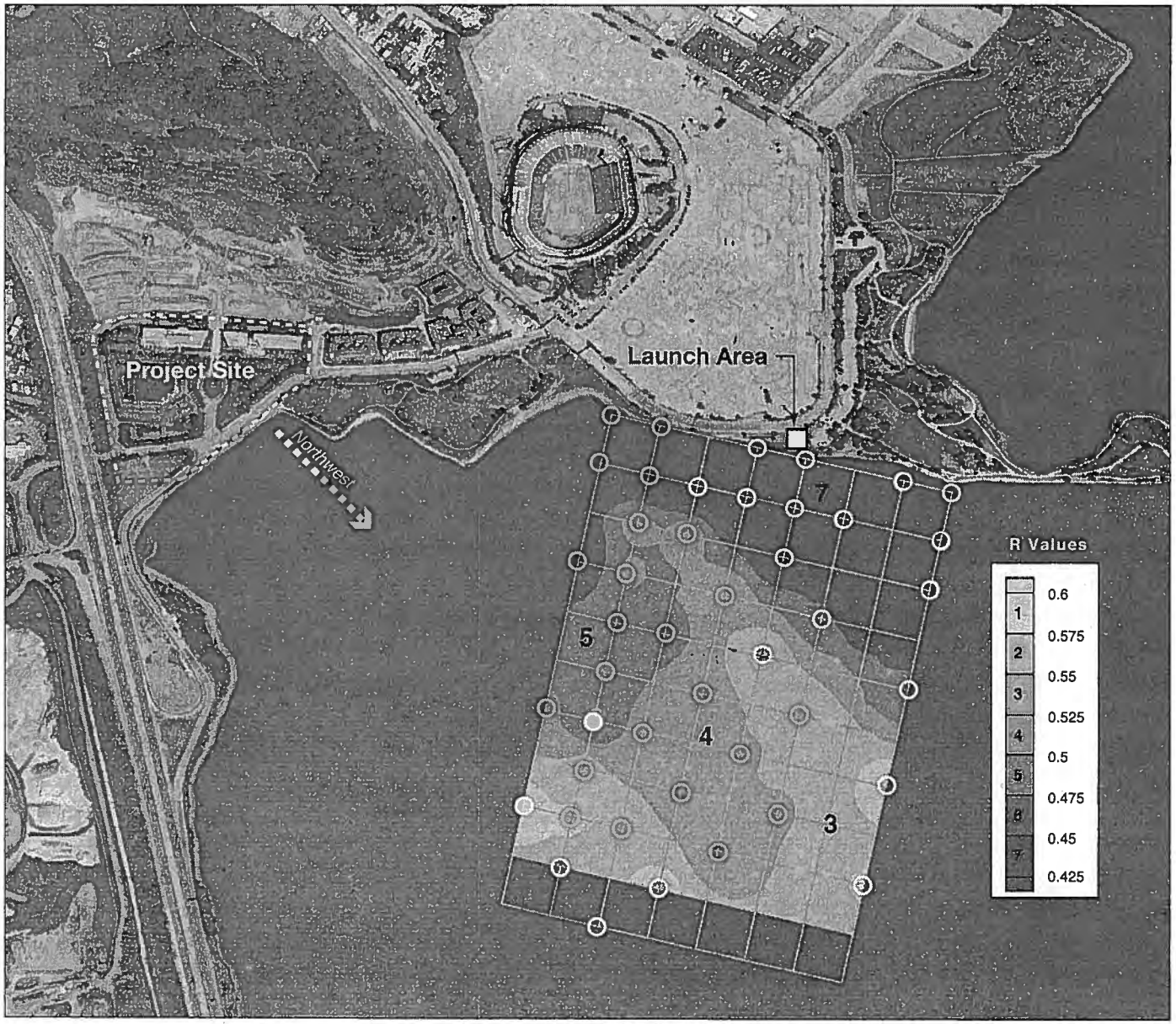
Figure 23
R Values
West-Northwest Wind
Project



SOURCE: ESA

Executive Park Wind Test . 208449

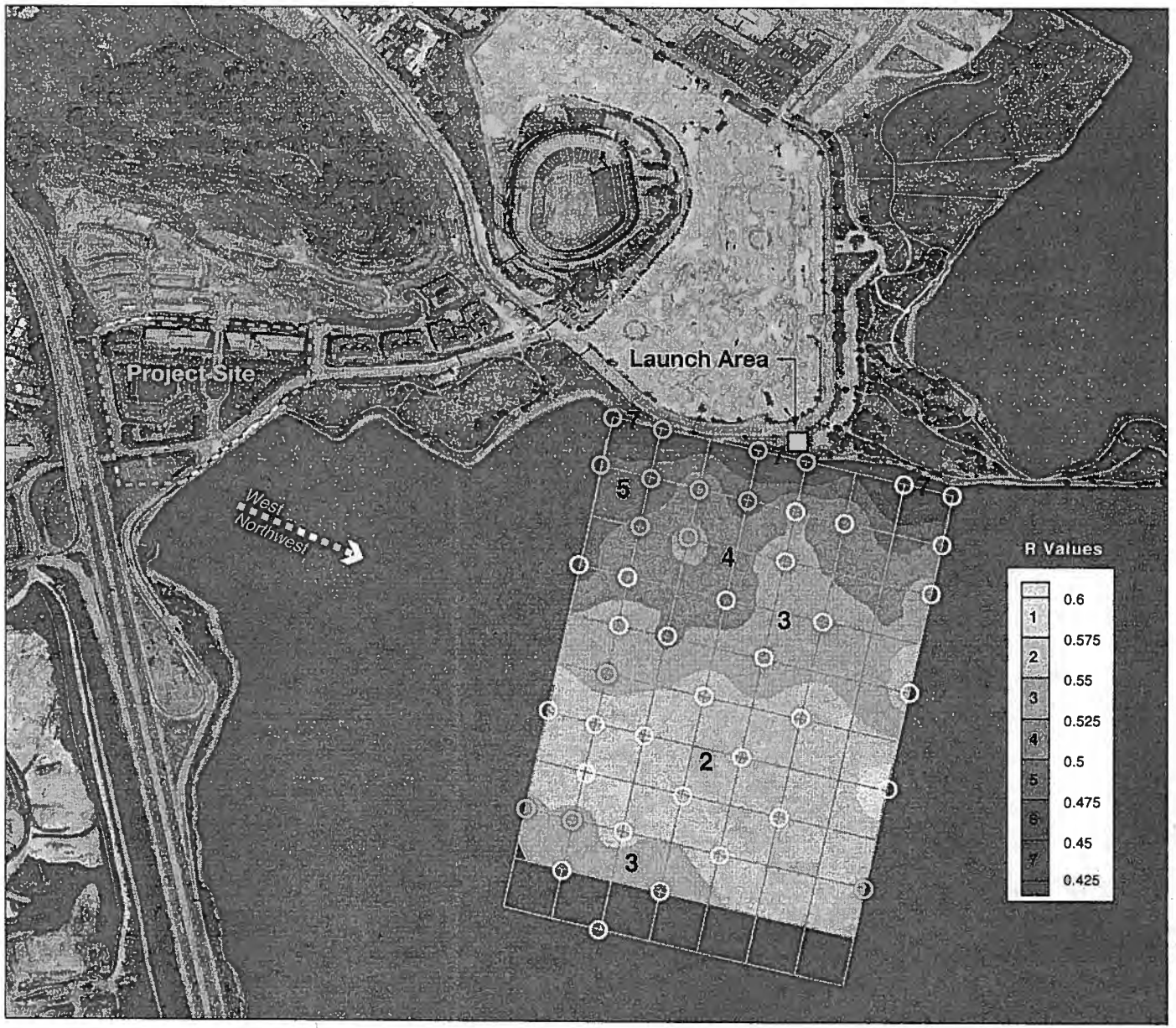
Figure 24
R Values
West Wind
Project



SOURCE: ESA

Executive Park Wind Test . 208449

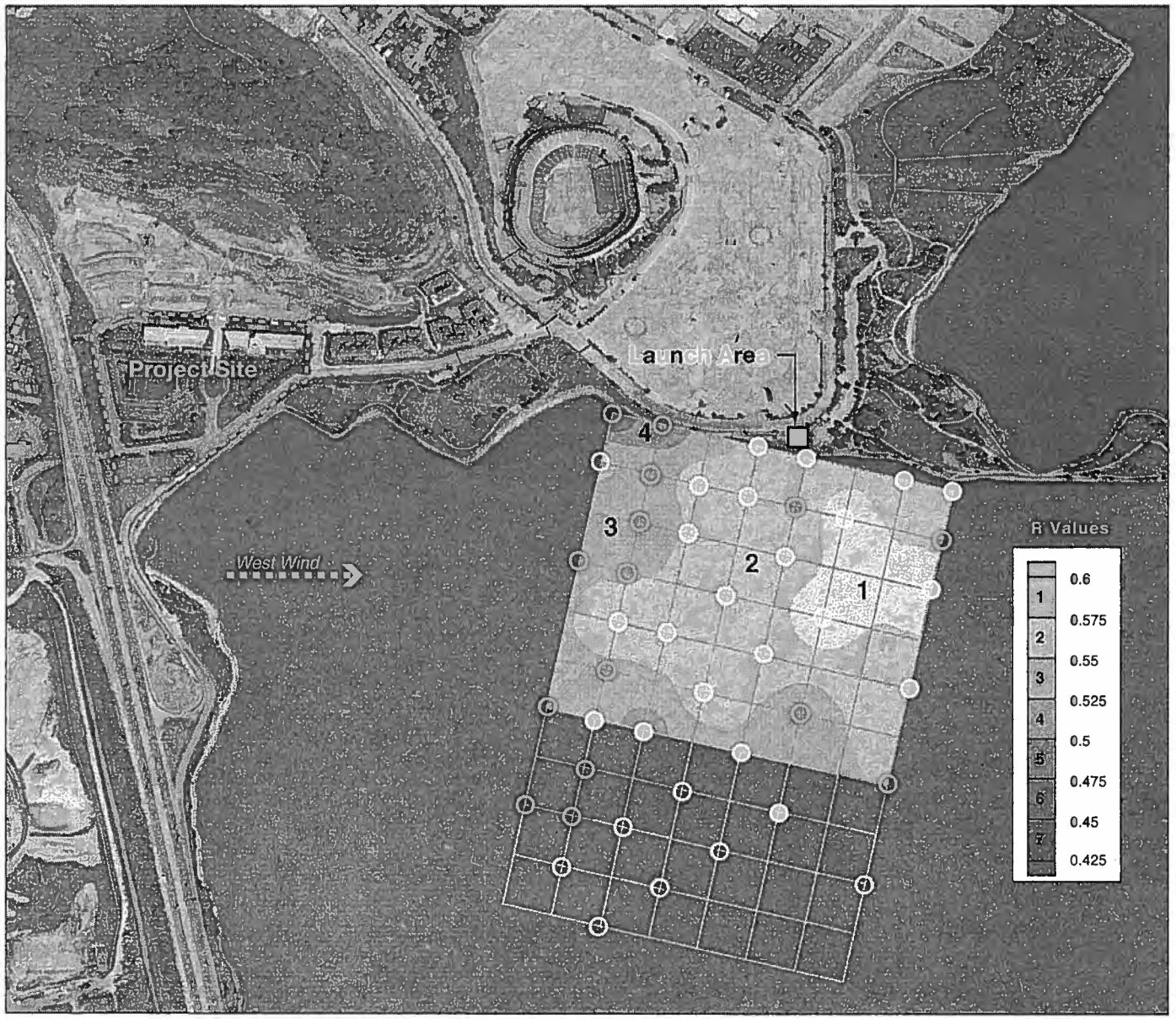
Figure 25
R Values
Northwest Wind
Project + Cumulative



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 26
R Values
West-Northwest Wind
Project + Cumulative



SOURCE: ESA

Executive Park Wind Test . 208449

Figure 27
R Values
West Wind
Project + Cumulative

ATTACHMENT 2 – CANDLESTICK SAILING TRACKS

The following image, showing a GPS-generated track for a board sailor, was provided by Peter Thorner of the San Francisco Boardsailing Association.

Appendix P2 Senate Bill 792 Tidelands and submerged lands: City and County of San Francisco: Hunters Point Naval Shipyard and Candlestick Point, October 11, 2009

Senate Bill No. 792

CHAPTER 203

An act to repeal Section 5006.8 of the Public Resources Code, to repeal Section 3 of Chapter 2 of the Statutes of 1958 of the First Extraordinary Session, to repeal Chapter 1046 of the Statutes of 1998, to repeal Chapter 464 of the Statutes of 2002, and to repeal Chapter 435 of the Statutes of 2003, relating to tidelands and submerged lands.

[Approved by Governor October 11, 2009. Filed with Secretary of State October 11, 2009.]

LEGISLATIVE COUNSEL'S DIGEST

SB 792, Leno. Tidelands and submerged lands: City and County of San Francisco: Hunters Point Naval Shipyard and Candlestick Point.

(1) Existing law grants to the City and County of San Francisco the right, title, and interest of the State of California in and to certain tidelands and submerged lands in trust for certain purposes. The State Lands Commission has jurisdiction over tidelands and submerged lands of the state.

The Hunters Point Shipyard Conversion Act of 2002 granted to, and vested in, the San Francisco Redevelopment Agency, all of the state's right, title, and interest in the Hunters Point trust lands, and, upon conveyance by the federal government to the agency, in appurtenances located on Hunters Point submerged lands, subject to the public trust and the terms and conditions of the act. The Hunters Point Shipyard Public Trust Exchange Act approved an exchange of public trust lands within the Hunters Point Shipyard, whereby certain trust lands that meet specified criteria and are not useful for public trust purposes are freed from the public trust and may be conveyed into private ownership, and certain other lands that are not public trust lands and that are useful for public trust purposes are made subject to the public trust. Existing law authorizes the Director of Parks and Recreation to enter into agreements concerning the development of a project in the City and County of San Francisco and partly within the Candlestick Point State Recreation Area.

This bill would repeal the Hunters Point Conversion Act of 2002 and the Hunters Point Shipyard Public Trust Exchange Act. The bill would also repeal the provision authorizing the Director of Parks and Recreation to enter into agreements concerning that project in the City and County of San Francisco.

This bill instead would grant to, and vest in, the San Francisco Redevelopment Agency, all of the state's right, title, and interest in Candlestick Point and the former Hunters Point Naval Shipyard trust lands, as revised, and, upon conveyance by the federal government to the agency,

in appurtenances located on Hunters Point submerged lands, subject to the public trust, and the terms and conditions of this bill.

This bill would also approve an exchange of public trust lands within the lands conveyed, whereby certain trust lands or interests in lands that meet specified criteria and are not now useful for public trust purposes will be freed from the public trust and may be conveyed into private ownership, and certain other lands or interests in lands that are not now public trust lands and that are useful for public trust purposes will be made subject to the public trust.

The bill would require the agency to deposit all moneys collected by the agency arising out of the use or operation of any of the trust lands into a special fund maintained by the agency. The bill would require the agency to prepare an annual statement of financial conditions and operations and to submit the statement to the State Lands Commission each year on or before October 1.

The bill would authorize the Director of Parks and Recreation to enter in an agreement to transfer to the agency or the City and County of San Francisco an interest in state property held by the department within the Candlestick Point State Recreation Area upon the director making certain findings.

This bill would provide that upon the termination of the redevelopment plan for the project area, consisting of the former shipyard, the Hunters Point submerged lands, and Candlestick Point, or by January 1, 2050, whichever is earlier, the agency shall transfer any trust lands in which it holds fee title to the city, unless the commission approves a later date.

(2) The bill would state findings and declarations of the Legislature regarding the need for special legislation.

The people of the State of California do enact as follows:

SECTION 1. The following definitions apply for purposes of this act:

(a) "1958 Act" means Chapter 2 of the Statutes of 1958 of the First Extraordinary Session.

(b) "Agency" means the San Francisco Redevelopment Agency, or any successor redevelopment agency with jurisdiction over the project area.

(c) "Applicable statutory trust" means either of the following:

(1) Where the agency is the trustee, the terms and conditions of the state's trust grant to the agency under this act.

(2) Where the city is the trustee, the Burton Act trust.

(d) "BCDC" means the San Francisco Bay Conservation and Development Commission.

(e) "Burton Act" means Chapter 1333 of the Statutes of 1968, as amended.

(f) "Burton Act lands" means all those lands within the project area, or immediately adjacent to the project area, owned in fee by the city and held subject to the Burton Act.

(g) "Burton Act transfer agreement" means that certain agreement dated January 24, 1969, between the state and the city, relating to the transfer of the Port of San Francisco from the state to the city, and any amendments to that agreement in accordance with its terms.

(h) "Burton Act trust" means the statutory trust imposed by the Burton Act, and any additional restrictions on use and alienability created by the Burton Act transfer agreement, by which the state conveyed to the city, in trust and subject to certain terms, conditions, and reservations, the state's interest in certain tidelands, including filled lands, and lands dedicated or acquired by the city as assets of the trust. The Burton Act trust does not include the requirements of Section 12 of the Burton Act.

(i) "Candlestick Point" means all that real property situate in the City and County of San Francisco, State of California, described as follows:

Beginning at the intersection of the northeasterly line of Underwood Avenue (formerly 21st Avenue, 80 feet wide) with the southeasterly line of Arelious Walker Drive (formerly F Street, or Fitch Street, 64 feet wide); thence southwesterly along the southeasterly line of said Arelious Walker Drive 1400 feet to a point laying on the northeasterly line of Bancroft Avenue (formerly 26th Avenue, 80 feet wide), said point being also the most westerly corner of the lands designated and shown as "Parcel 1" on that certain map entitled "Record of Survey – Hunters Point Shipyard" and filed in Book "Z" of Maps, at pages 135 through 147, Document No. 2000-G845126 in the office of the City and County of San Francisco Recorder; thence southeasterly along the northeasterly line of said Bancroft Avenue 2592 feet to the northeasterly extension of the northwesterly line of Boalt Street (formerly B Street, 64 feet wide); thence southwesterly along said extension and said northwesterly line of said Boalt Street 35 feet to a point laying on the boundary of those certain lands commonly known as "Candlestick Point State Recreation Area" and described under Exhibit "1" in that certain Quitclaim Deed from the City and County of San Francisco to the State of California, recorded in the office of County Recorder of said county in Book D633 of Official Records, at Image 1952; thence generally southwesterly, southeasterly, southerly and westerly along said boundary of said "Candlestick Point State Recreation Area", in all of its courses, to a point on the San Francisco – San Mateo County boundary line as said line is shown on that certain Board of Tide Land Commissioners map entitled "Map of the Salt Marsh and Tide Lands and Lands Lying Under Water South of Second Street", a copy of which is filed in Map Book "W", pages 46 and 47, in the office of the City and County of San Francisco Recorder, from which point the point of beginning of said boundary described in said Exhibit "1" bears North 44˚39'58" East 103.85 feet, more or less; thence westerly along said county line 15 feet, more or less, to the southeasterly line of Harney Way as shown on that certain map entitled "Map Showing the Opening of Harney Way from Jamestown Avenue to County Line", filed January 28, 1965, in Map Book "U" at pages 64 and 65, in the office of the City and County of San Francisco Recorder; thence continuing westerly along said county line 178.79 feet; thence leaving said county line

North 44˚39’58” East 592.16 feet; thence North 45˚36’16” East 300.04 feet; thence North 56˚25’37” East 104.39 feet; thence North 61˚40’38” East 137.37 feet; thence North 76˚48’21” East 159.25 feet to a point laying at the westerly terminus of the course labeled “North 86˚19’02” West 87.60 feet” on the northerly line of Harney Way as shown on that certain Final Map entitled “Map of San Francisco Executive Park II”, filed in Map Book “X”, pages 8 through 11, Document No. D168468, in the office of the City and County of San Francisco Recorder; thence easterly along the northerly line of said Harney Way, in all of its courses, to the southwesterly line of the lands of Leonoudakis as described in that certain document filed in the office of the City and County of San Francisco in Reel I751 of Official Records, at Image 599, Document No. 2004-H839983, (Lot 008, Assessor’s Block 5023); thence northwesterly along said southwesterly line to the southeasterly line of the lands of Leonoudakis as described in that certain document filed in the office of the City and County of San Francisco in Reel I751 of Official Records, at Image 598, Document No. 2004-H839982, (Lot 8, Assessor’s Block 4977); thence southwesterly and northwesterly along the southeasterly and southwesterly lines of said lands of Leonoudakis to the most southerly corner of the lands of the City and County of San Francisco designated and shown as Lot 6 on Assessor’s Block 4977; thence northwesterly and northeasterly along the southeasterly and northwesterly lines of said lands of the City and County of San Francisco to the southwesterly corner of Lot 276, as shown on that certain Parcel Map filed in Parcel Map Book 45 at page 10, Document No. 2001-G962714, in the office of the City and County of San Francisco Recorder; thence northwesterly along the boundary of said Lot 276, in all of its courses, to the most northerly corner of said lot, being also a point laying on the southwesterly line of Jamestown Avenue; thence northwesterly along the southwesterly line of Jamestown Avenue 135 feet, more or less, to a point; thence northeasterly and perpendicular to the last course 89 feet to the intersection of the southeasterly line of Coronado Street with the northeasterly line of Jamestown Avenue as shown on that certain map entitled “Map Showing the Widening and Extension of Jamestown Avenue from Hunters Point Expressway to Redondo Street” filed in Map Book “U” at pages 60 through 63, in the office of the City and County of San Francisco Recorder; thence southeasterly along said northeasterly line of Jamestown Avenue 725 feet, more or less, to a point; thence northeasterly along a line laying parallel and 350 feet southeasterly of the southeasterly line of Griffith Street (formerly G Street, 64 feet wide), 660 feet to the Line of Ordinary High Tide of 1869 as said line is shown, but not labeled, on that Board of Tide Land Commissioners Block Map No. 9 filed in Map Book “W” at pages 11 through 13, in the office of the City and County of San Francisco Recorder; thence northeasterly along said line, in all of its courses, to the southwesterly line of the lands of the San Francisco Housing Authority designated and shown as Lot 20 on Assessor’s Block 4884; thence northwesterly along a line laying parallel with and distant 100 feet northeasterly of the northeasterly line of Gilman Avenue (formerly 31st

Avenue, 80 feet wide), being also the southwesterly line of said lands of the San Francisco Housing Authority, to the northwesterly line of Hawes Street (formerly H Street, 64 feet wide); thence northeasterly along said northwesterly line of Hawes Street 1020 feet to the northeasterly line of Carroll Avenue (formerly 27th Avenue, 80 feet wide); thence southeasterly along said northeasterly line of Carroll Avenue 728 feet to a point laying on the southeasterly line of Griffith Street (formerly G Street, 64 feet wide), said point laying also at a deflection in the northwesterly boundary of said "Candlestick Point State Recreation Area"; thence in a general northerly and westerly direction, along the boundary of said "Candlestick Point State Recreation Area" as described under Exhibit "1" in said Quitclaim Deed recorded in the office of the City and County of San Francisco Recorder, in Book D633 of Official Records, at page 1952, the following courses: northeasterly along said southeasterly line of Griffith Street 760 feet to the southwesterly line of Yosemite Avenue (formerly 24th Avenue, 80 feet wide); thence northwesterly along said southwesterly line of Yosemite Avenue to the point of beginning of that parcel of land described in the Quitclaim Deed from the United States of America to Julio and Anita Ricci, recorded March 8, 1961 in Book A235, page 208 of Official Records of the City and County of San Francisco; thence northeasterly, parallel with the southeasterly line of Ingalls Street (formerly I Street), 80 feet to a point laying on the northeasterly line of Yosemite Avenue distant thereon southeasterly 205 feet from said southeasterly line of Ingalls Street, said point being the most westerly corner of that certain parcel of land described as Parcel 3523 in the Grant Deed dated November 30, 1979 from R.C. Scarver and Terese Scarver to the State of California recorded February 8, 1980 as Document No. 73057 in Book C942, page 746 of Official Records of the City and County of San Francisco; thence northeasterly along the northwesterly line of said parcel to the most northerly corner of said parcel, said point laying in the southwesterly line of Wallace Avenue (formerly 23rd Avenue, 80 feet wide); thence northeasterly, parallel with said southeasterly line of Ingalls Street, 80 feet to the most westerly corner of the land described as Parcel 3 in the deed from Hibernia Bank to Mike Garza recorded December 20, 1977 in Book C488, page 303 of Official Records of the City and County of San Francisco, said point laying on the northeasterly line of Wallace Avenue, distant thereon 205 feet southeasterly of said southeasterly line of Ingalls Street; thence southeasterly along said northeasterly line of Wallace Avenue to the southeasterly line of Hawes Street (formerly H Street, 64 feet wide); thence northeasterly along said southeasterly line of Hawes Street, 464 feet to the southwesterly line of Underwood Avenue (formerly 21st Avenue, 80 feet wide); thence leaving said "Candlestick Point State Recreation Area" boundary, northeasterly 80 feet to the northeasterly line of said Underwood Avenue; thence southeasterly along the northeasterly line of said Underwood Avenue 75 feet to a point laying on said "Candlestick Point State Recreation Area" boundary; thence along said "Candlestick Point State Recreation Area" boundary the following courses: northeasterly along a line parallel and distant 75 feet southeasterly

from said southeasterly line of Hawes Street, 200 feet to the southwesterly line of Thomas Avenue (formerly 20th Avenue, 80 feet wide); thence southeasterly along said southwesterly line of Thomas Avenue, to the northwesterly line of Griffith Street (formerly G Street, 64 feet wide); thence southwesterly along said northwesterly line of Griffith Street, 200 feet to the northeasterly line of Underwood Avenue (80 feet wide); thence southeasterly along said northeasterly line of Underwood Avenue 664 feet to the northwesterly line of said Arelious Walker Drive; thence leaving said "Candlestick Point State Recreation Area" boundary, northeasterly along said northwesterly line of Arelious Walker Drive, 280 feet to the northeasterly line of said Thomas Avenue; thence southeasterly along said northeasterly line of Thomas Avenue, 64 feet to a point laying on the boundary of said "Candlestick Point State Recreation Area"; thence southwesterly along said boundary and the southeasterly line of said Arelious Walker Drive, 280 feet to the Point of Beginning.

Excepting therefrom any portion lying outside said City and County of San Francisco.

(j) "City" means the City and County of San Francisco, a charter city and county, and includes the City and County of San Francisco acting by and through its Port Commission.

(k) "Commission" means the State Lands Commission.

(*l*) "Community Redevelopment Law" means Part 1 (commencing with Section 33000) of Division 24 of the Health and Safety Code.

(m) "Department" means the Department of Parks and Recreation.

(n) "Director" means the Director of Parks and Recreation.

(o) "Hillside open space" means that area of land so designated as depicted in the diagram in Section 25 of this act.

(p) "Hunters Point submerged lands" means all that real property situate in the City and County of San Francisco, State of California, described as follows:

Beginning at the intersection of the northeasterly prolongation of the southeasterly line of Earl Street (64 feet wide) with the 1948 Bulkhead Line as shown on the map entitled "Real Estate Summary Map NAVFAC Drawing No. 1045757" on file at the Department of the Navy, WESTDIV, San Bruno, California; thence southeasterly along said 1948 Bulkhead Line and the northeasterly line of that certain property conveyed in declaration of taking, Civil Action No. 22147 as shown on said summary map to a line parallel with and 450 feet southeasterly of the southeasterly line of Boalt Street (64 feet wide); thence southwesterly along said parallel line to the northeasterly line of the land described in the deed filed in Book 3677 of Official Records at page 349 in the Office of the County Recorder of said county, said northeasterly line being the arc of a curve, concave southwesterly and having a radius of 1,800 feet; thence southeasterly and southerly along said arc to the southeasterly prolongation of the northeasterly line of Evans Avenue (80 feet wide); thence northwesterly along said prolongation and said northeasterly line of Evans Avenue to the 1941 Bulkhead Line as shown on said summary map; thence southerly along said 1941 Bulkhead Line to

the northeasterly line of that certain property conveyed in declaration of taking, Civil Action No. 36272 as shown on said summary map; thence southeasterly along said northeasterly line to said 1948 Bulkhead Line as shown on said summary map; thence southerly along said 1948 Bulkhead Line to the line dividing the City and County of San Francisco from the County of San Mateo; thence easterly along said county line to the United States Pierhead Line as shown on the map entitled "Hunters Point Naval Shipyard, General Development Map, Key Map No. 1174922" on file at the Department of the Navy, Western Division San Bruno, California; thence northeasterly and northwesterly along said Pierhead Line as shown on said General Development Map to said northeasterly prolongation of the southeasterly line of said Earl Street (64 feet wide); thence southwesterly along said prolongation of the southeasterly line of said Earl Street to the said 1948 Bulkhead Line and the point of beginning.

(q) "Project" means the integrated development of a combination of uses on Candlestick Point and the shipyard, including, but not limited to, residential, commercial, public trust, and recreational uses, in accordance with the redevelopment plan.

(r) "Project area" means the shipyard, Hunters Point submerged lands, and Candlestick Point.

(s) "Proposition G" means Proposition G, also known as the "Mixed Use Development Project for Candlestick Point and Hunters Point Shipyard," approved by the voters of the city in June 2008.

(t) "Public trust" or "trust" means the common law public trust for commerce, navigation, and fisheries.

(u) "Redevelopment plan" means the Hunters Point Shipyard Redevelopment Plan, and those portions of the Bayview-Hunters Point Redevelopment Plan pertaining to the redevelopment of Candlestick Point, adopted by the agency pursuant to Chapter 4.5 (commencing with Section 33492) of the Community Redevelopment Law, as those plans may be amended from time to time.

(v) "Reserved street area" means a portion of the reserved streets.

(w) "Reserved streets" means all those portions of the trust lands that were reserved to the state for street purposes by the Board of Tidelands Commissioners pursuant to the "Act to survey and dispose of certain salt marsh and tide lands belonging to the State of California," Chapter 543 of the Statutes of 1868, as depicted on the map entitled "Map of the Salt Marsh and Tide Lands and Lands Lying Under Water South of Second Street and Situate in the City and County of San Francisco" prepared by the Board of Tide Land Commissioners and dated March 19, 1869.

(x) "Shipyard" or "Hunters Point Shipyard" means all that real property situate in the City and County of San Francisco, State of California, described as follows:

Beginning at the intersection of the southeasterly line of Fitch Street (64 feet wide) with the northeasterly line of Palou Avenue (80 feet wide), said intersection also being in the southerly line of the Lands of Lowpensky as described in that document filed in the Office of the County Recorder of

said County in Book D238 Official Records at page 80; thence easterly along the southerly line of said Lands of Lowpensky to the southeasterly corner of the said Lands of Lowpensky being also the southwesterly corner of the Lands of the Regents of University of California as described in that document filed in the Office of the County Recorder of said County in Book C562 Official Records at page 582; thence easterly, northerly and northwesterly along the southerly, easterly and northeasterly lines of said Lands of the Regents to the northwesterly corner of said Lands of the Regents and also being the northeasterly corner of said Lands of Lowpensky. Thence northwesterly along the northeasterly line of said Lands of Lowpensky to the most westerly corner of said Lands of Lowpensky, being also a point in the northeasterly line of said Palou Avenue; thence northwesterly along the northeasterly line of said Palou Avenue to the southeasterly line of Griffith Street (64 feet wide); thence northeasterly along the southeasterly line of said Griffith Street 200 feet to the southwesterly line of Oakdale Avenue (80.00 feet wide); thence northwesterly along the southwesterly line of said Oakdale Avenue, 32 feet to the centerline of said Griffith Street; thence northeasterly along the centerline of said Griffith Street 600 feet to the centerline of McKinnon Avenue (80 feet wide); thence southeasterly along the centerline of said McKinnon Avenue 664 feet to the centerline of said Fitch Street (64 feet wide); thence northeasterly along the centerline of said Fitch Street 320 feet to the northeasterly line of La Salle Avenue (80 feet wide); thence southeasterly along the northeasterly line of said La Salle Avenue, 632 feet to the northwesterly line of Earl Street (64 feet wide) and an angle point in the northwesterly boundary of Inchon Village as shown on the "Map of Inchon Village" filed in the Office of the County Recorder of said County in Book 17 of Condominium Maps at pages 112 through 130; thence southwesterly along the northwesterly boundary of said Inchon Village to the centerline of McKinnon Avenue (80 feet wide) and the most northerly corner of the Lands of Crisp Building, Inc., described in that certain document filed in the Office of the County Recorder of said County in Book D767 Official Records at page 1051; thence southwesterly, southeasterly and northeasterly along the northwesterly, southwesterly and southeasterly lines of said Lands of Crisp Building, Inc. to the most easterly corner of said Lands of Crisp Building, Inc., being also the most southerly corner of the land shown on the "Parcel Map of Inchon and Solomon Village" filed in the Office of the County Recorder of said County in Book 17 of Parcel Maps at page 77 and the centerline of said McKinnon Avenue; thence northeasterly along the southeasterly line of said Inchon and Solomon Village to the most easterly corner of said Inchon and Solomon village and the southwesterly line of Innes Avenue (80.00 feet wide); thence northwesterly along the southwesterly line of said Innes Avenue 641 feet to the centerline of said Earl Street (64 feet wide); thence northeasterly along the centerline of said Earl Street 40 feet to the centerline of said Innes Avenue; thence southeasterly along the centerline of said Innes Avenue 32 feet to the southeasterly line of said Earl Street; thence northeasterly along the southeasterly line of said Earl Street and its prolongation 3,151 feet to

the 1948 Bulkhead Line as shown on the map entitled "Real Estate Summary Map NAVFAC Drawing No. 1045757" on file at the Department of the Navy, WESTDIV, San Bruno, California; thence southeasterly along said 1948 Bulkhead Line and the northeasterly line of that certain property conveyed in declaration of taking, Civil Action No. 22147 as shown on said summary map 2,553 feet more or less to a point on a line parallel with and 450 feet southeasterly of the southeasterly line of Boalt Street (64 feet wide), thence southwesterly along said parallel line a distance of 52 feet more or less to the northeasterly line of the land described in the deed filed in Book 3677 of Official Records at page 349 in the Office of the County Recorder of said County, said northeasterly line being the arc of a curve, concave southwesterly and having a radius of 1,800 feet; thence southeasterly and southerly along said arc to the southeasterly prolongation of the northeasterly line of Evans Avenue (80 feet wide); thence northwesterly along said prolongation and said northeasterly line of Evans Avenue, to the 1941 Bulkhead Line as shown on said summary map; thence southerly along said 1941 Bulkhead Line, to the northeasterly line of that certain property conveyed in declaration of taking, Civil Action No. 36272 as shown on said summary map; thence southeasterly along said northeasterly line to said 1948 Bulkhead Line as shown on said summary map; thence southerly along said 1948 Bulkhead Line to the line dividing the City and County of San Francisco from the County of San Mateo; thence westerly along said county line 127 feet more or less to the southeasterly prolongation of the northeasterly line of Bancroft Avenue (80 feet wide); thence northwesterly along said prolongation and said northeasterly line of said Bancroft Avenue 7,484 feet more or less to the southeasterly line of said Fitch Street (64 feet wide); thence northeasterly along the southeasterly line of said Fitch Street 2,800 feet to the point of beginning.

(y) "State" means the State of California.

(z) "State property" means the property or interests in property owned by the state located within the project area, and includes both proprietary land and sovereign land.

(aa) "State recreation area" means the Candlestick Point State Recreation Area.

(ab) "Tidelands" means tide and submerged lands.

(ac) "Trustee" means the owner and trust administrator of trust lands granted pursuant to this act or the Burton Act, and is either the agency, with respect to lands owned by the agency, or the city, with respect to lands owned by the city.

(ad) "Trust lands" means all lands, including tide and submerged lands, within the project area that are presently, or upon conveyance out of federal ownership will be, subject to the public trust. Following a trust exchange, trust lands shall include all lands within the project area that have been impressed with the trust pursuant to the exchange, and shall not include any lands that have been removed from the trust pursuant to the exchange.

SEC. 2. The Legislature finds and declares all of the following:

(a) The purpose of this act is to facilitate the productive reuse of the lands within the areas of San Francisco known as Candlestick Point and the former Hunters Point Naval Shipyard in a manner that furthers the purposes of the public trust and the Community Redevelopment Law. To effectuate this purpose, this act grants the state's sovereign interest in the lands comprising the shipyard to the agency upon the transfer of those lands out of federal ownership, and approves and authorizes the commission, provided that it makes the necessary findings supporting the exchange, to carry out an exchange of lands that will place or confirm the public trust on lands within the project area with substantial value for the public trust, and terminate the public trust in project area lands that are no longer useful for trust purposes. This act also authorizes the director on behalf of the department to enter into an agreement to transfer certain lands within the Candlestick Point State Recreation Area to the agency or the city, provided that the agreement provides an overall benefit to the state recreation area and meets certain other conditions set forth in this act.

(b) The project area, including both the shipyard and Candlestick Point, encompasses lands that were historically tidelands subject to the public trust, as well as historic uplands that were not subject to the trust. Beginning in 1861, certain of the area's tidelands were conveyed into private ownership by the state pursuant to various state statutes. Portions of those tidelands were subsequently filled and reclaimed. The trust status of portions of the reclaimed tidelands is uncertain. Due to differences in the various statutes authorizing the conveyance of certain portions of the tidelands into private ownership, as well as other historical circumstances, some of the reclaimed tidelands, including lands located well inland from the current shoreline, have remained subject to the public trust, while other reclaimed tidelands, including most of the lands adjacent to the shoreline, may have been freed from the trust. In addition, a portion of the lands that are subject to the trust consist of reserved streets that were mapped but never built, and a railroad right-of-way, forming a grid pattern that is not consistent with the existing or planned street system for the lands, and most of these lands are no longer useful for trust purposes.

(c) In 1939, the United States began acquiring lands for purposes of constructing and operating what came to be known as the Hunters Point Naval Shipyard. The shipyard was used primarily as a United States Navy industrial operation for the modification, maintenance, and repair of ships. The shipyard was closed in 1974, resulting in adverse economic impacts on the economic base of the surrounding Bayview Hunters Point neighborhood. Pursuant to Section 2824(a) of the National Defense Authorization Act for fiscal year 1991, as amended by Section 2834 of the National Defense Authorization Act for fiscal year 1994, the United States Navy is authorized to convey the shipyard, or portions of the shipyard, to the city or to a local reuse authority approved by the city. The agency is the approved local reuse authority for the shipyard. Pursuant to a 2004 conveyance agreement with the agency, the United States Navy has conveyed

a portion of the shipyard to the agency and has agreed to transfer the remainder to the agency following hazardous materials remediation.

(d) The state's sovereign interest in the filled tidelands at Candlestick Point consists primarily of reserved streets and portions of a former railroad right-of-way. In 1958, the state, through the 1958 Act, authorized the sale of a portion of these lands to the city for the purpose of developing a sports stadium. The state received consideration for the sale. The intent of the 1958 Act was to terminate the public trust on the transferred lands, but the statute required that the lands be used only for purposes of general statewide interest. Pursuant to the 1958 Act, the city acquired the lands free of the trust and constructed the stadium commonly referred to as Candlestick Park, which is now nearing the end of its useful life.

(e) In 1968, the Legislature enacted the Burton Act, which granted the state's remaining interest in tidelands within the city, including the state's sovereign interests in the portion of Candlestick Point outside of the stadium site, to the city, subject to the public trust and the Burton Act trust. In 1973, the Legislature authorized the department to acquire and develop real property at Candlestick Point for the state park system. The state subsequently acquired private lands along the shoreline of Candlestick Point to create the Candlestick Point State Recreation Area. In 1984, the city conveyed back to the state those lands within the state recreation area boundaries that the city had acquired under the 1958 Act and the Burton Act. The state recreation area was the first California state park unit developed in an urban environment and is a critical component of the state park system. At present, however, much of the state recreation area is underutilized and in need of substantial restoration and improvement.

(f) The shipyard and Candlestick Point are adjacent to one another and are located on either side of South Basin, with a common boundary at Yosemite Slough. Together, they comprise approximately 760 acres and make up the largest area of underused land in the city. The shipyard, once a source of economic opportunity for the surrounding Bayview Hunters Point community, has stood dilapidated and abandoned for over 30 years and now stands as a barrier to public health, open space, and the waterfront, and a blight on one of San Francisco's poorest communities. The revitalization of Candlestick Point has been contemplated for over 10 years to create much needed economic and public benefits, affordable housing for Bayview Hunters Point residents, and other tangible benefits to the Bayview Hunters Point community. The stadium at Candlestick Point is nearing the end of its useful life and is in need of replacement, the nearby public housing development at Alice Griffith requires a complete rebuilding, and the restoration and improvement of the adjoining state recreation area has been a long-time goal of the state, the city, and the Bayview Hunters Point community.

(g) Until 2007, efforts to redevelop the shipyard and Candlestick Point proceeded separately from one another. In 1997, the agency and the city adopted the Hunters Point Shipyard Redevelopment Plan to provide for the economic revitalization of the shipyard upon its transfer out of federal

ownership. In anticipation of the transfer of the shipyard to the agency, the Legislature enacted the Hunters Point Shipyard Conversion Act of 2002 (Chapter 464 of the Statutes of 2002), and the Hunters Point Shipyard Public Trust Exchange Act (Chapter 435 of the Statutes of 2003), which together granted in trust to the agency all of the state's sovereign interest in certain lands within and adjacent to the shipyard and authorized a shipyard-wide public trust exchange, subject to certain terms and conditions.

(h) Chapter 1046 of the Statutes of 1998, which repealed and added Section 5006.8 of the Public Resources Code, was enacted for the purpose of facilitating the redevelopment of Candlestick Point in accordance with Propositions D and F, which were approved by voters of the city on June 3, 1997. Those measures authorized development of a stadium, retail and entertainment center, and associated support uses on the site. In 2006, the city and the agency adopted the Bayview Hunters Point Redevelopment Plan, which included provision for a stadium project consistent with Propositions D and F. Subsequently, the primary tenants of the stadium, the San Francisco Forty Niners, announced their intention to build a new stadium in a location other than Candlestick Point.

(i) In 2007, the city and the agency undertook a new, integrated planning effort for the shipyard and Candlestick Point, which resulted in the adoption of a conceptual framework for development. The conceptual framework calls for a mixed use project on the project area that will provide, among other things, much needed parks and open space, including a major renovation of the state recreation area to enhance access by residents and visitors to the waterfront; new business and employment opportunities; new housing opportunities affordable for residents of the neighboring Bayview Hunters Point community; a site for a new sports stadium on the shipyard, with alternative uses if the San Francisco Forty Niners elect to build a new stadium elsewhere; and other economic and public benefits for the community and the city as a whole and the statewide public.

(j) In June 2008, the voters of the city approved Proposition G, the "Mixed Use Development Project for Candlestick Point and Hunters Point Shipyard." Proposition G repealed Propositions D and F and promulgated city policy encouraging the timely development of the project area with a mixed-use project including: over 300 acres of public park and open space; between 8,500 and 10,000 homes; about 700,000 square feet of retail space; about 2,150,000 square feet of green office, science and technology, research and development, and industrial space; a possible arena or other public performance site; a site in the shipyard for a new stadium for the San Francisco Forty Niners; and additional green office, science and technology, research and development, and industrial space, or additional housing, if a new stadium is not built. Proposition G specifically contemplated a mix of stacked flats, attached town homes and, in appropriately selected locations, low-rise, mid-rise, and high-rise towers, to help ensure the economic feasibility of the development and provide a varied urban design. Proposition G also made it city policy that the project be consistent with the following objectives: producing tangible community benefits for residents of the

Bayview Hunters Point neighborhood and the city; reconnecting the shipyard and Candlestick Point with the Bayview Hunters Point neighborhood and protecting the Bayview Hunters Point neighborhood character for existing residents; producing substantial new housing, both affordable and market-rate, and encouraging the rebuilding of the Alice Griffith Housing Development; incorporating environmental sustainability; encouraging the San Francisco Forty Niners to remain in San Francisco; and requiring the project to be financially sound, with or without a new stadium.

(k) This legislation is necessary for the successful redevelopment of the project area and to realize the resulting public benefits, including, but not limited to, the elimination of blight, the provision of affordable housing, the creation of new public open space, and increased public access to the waterfront. This legislation is also needed to improve the configuration of the public trust lands in furtherance of trust purposes.

(*l*) The existing configuration of trust and nontrust lands within the project area is such that the purposes of the public trust cannot be fully realized. A substantial portion of the reclaimed trust lands are interior lands that have been cut off from access to navigable waters, or are reserved streets laid out in a grid pattern that is not useful to the trust. Most of these lands are no longer needed or required for the promotion of the public trust. Other lands within the project area adjacent to the waterfront or otherwise of high value to the public trust are currently not subject to the public trust. Absent a trust exchange, substantial portions of the lands within the shipyard that are located along the waterfront or are otherwise of high value to the public trust would be free of the public trust, would not be required to be put to uses consistent with the public trust, and could be cut off from public access. In addition, certain interior lands not useful for trust purposes would be restricted and could not be used for residential or other nontrust uses essential to the redevelopment of the project area.

(m) A trust exchange resulting in the configuration of trust lands substantially similar to that depicted on the diagram in Section 25 of this act maximizes the overall benefits to the trust, without interfering with trust uses or purposes. Following the exchange, the entire waterfront within the project area, as well as certain interior lands that have high trust values, will be subject to the public trust. The lands that will be removed from the trust pursuant to the exchange have been cut off from navigable waters, are no longer needed or required for the promotion of the public trust, and constitute a relatively small portion of the granted lands within the city. This act requires the commission to ensure that the lands added to the trust pursuant to the exchange have a monetary value equal to or greater than the monetary value of the lands taken out of the trust.

(n) Several historic buildings in the shipyard have been identified by the State Historic Preservation Officer as contributors to the Hunters Point Commercial Drydock Historic District. These contributor buildings convey a sense of the shipyard's early maritime history, enhance the open-space experience along the waterfront, and should be preserved and restored. Uses of the contributor buildings that support their preservation and restoration,

but which are not otherwise consistent with the trust, may be authorized under certain conditions set forth in this act.

(o) The hillside open space provides substantial value to the trust as an open space and recreational resource affording exceptional views of San Francisco Bay and the waterfront. To protect the trust value of the hillside open-space area, it is important that significant view corridors to the waterfront be protected and adequate public access be provided in the manner set forth in this act.

(p) The state recreation area is presently in need of substantial improvement, restoration, and reconfiguration. A substantial portion of the park currently serves as a parking area for stadium events. In other areas, the park does not contain enough land adjacent to the shoreline to provide the desired level of public access. The park lacks needed improvements, and many of the improvements that do exist are in a state of disrepair. Proposition G calls for improving and restoring the state recreation area, including enhancing access to the waterfront for public use, providing views of San Francisco Bay, and extending the Bay Trail system through the park. This act approves a reconfiguration of the state recreation area and to that end authorizes the director to enter into an agreement for the transfer of state recreation area lands to the agency or the city in exchange for park improvements, funding for park operation and maintenance, lands to be added to the state recreation area, and other consideration, provided the agreement will result in an overall benefit to the park and meets the other requirements of this act regarding the transfer of state recreation area lands.

(q) This legislation advances the statewide purposes of the Community Redevelopment Law and the public trust, and is in the best interests of the people of this state.

SEC. 3. Section 5006.8 of the Public Resources Code is repealed.

SEC. 4. Chapter 464 of the Statutes of 2002, The Hunters Point Shipyard Conversion Act of 2002, as amended by Chapter 435 of the Statutes of 2003, is repealed.

SEC. 5. Chapter 435 of the Statutes of 2003, The Hunters Point Shipyard Public Trust Exchange Act, is repealed.

SEC. 6. (a) All of the state's right, title, and interest, acquired by virtue of its sovereignty, in any trust lands in which the agency holds or acquires fee title, is hereby granted to and vested in the agency, subject to the public trust and the terms and conditions of this act.

(b) Upon conveyance by the federal government to the agency of any piers or other appurtenances located in part on Hunters Point submerged lands, the grant of the state's right, title, and interest in the Hunters Point submerged lands to the city pursuant to the Burton Act is revoked, and all of the state's right, title, and interest in those lands is granted to and vested in the agency, subject to the public trust and the terms and conditions of this act.

(c) The agency shall hold the trust lands in trust for the benefit of all the people of the state for purposes of commerce, navigation, and fisheries, and for other public trust purposes, subject to the terms and conditions of this

act. Any trust lands held by the agency pursuant to this act shall not be subject to the Burton Act trust.

SEC. 7. Notwithstanding Section 6359 of the Public Resources Code or any other provision of law, the grant of the state's interest in trust lands to the agency pursuant to this act shall be deemed effective as follows:

(a) On January 1, 2010, with respect to trust lands held in fee by the agency on that date.

(b) With respect to trust lands acquired by the agency after January 1, 2010, upon the agency's acquisition of those lands.

(c) With respect to the Hunters Point submerged lands, upon conveyance by the federal government to the agency of any piers or other appurtenances located in part on the Hunters Point submerged lands, at which time any prior grant of the state's right, title, and interest in the Hunters Point submerged lands to the city pursuant to the Burton Act shall be deemed revoked and the lands shall cease to be subject to the Burton Act trust.

SEC. 8. (a) The agency may use, conduct, operate, maintain, manage, administer, regulate, improve, lease, and control (collectively referred to as "use") the trust lands and do all things necessary in connection with that authority that conform with the terms of this act and the public trust. Except as provided in this act, the agency shall use the trust lands only in a manner that is consistent with, necessary and convenient for, or incidental or ancillary to, the purposes of the public trust.

(b) In the management, conduct, operation, and control of the trust lands, or any improvements, betterments, or structures on the trust lands, the agency shall make no discrimination in rates, tolls, or charges for a use or service in connection with that management.

SEC. 9. The agency shall not grant, convey, give, or alienate the trust lands, or any part of the lands, to an individual, firm, corporation, or governmental agency (not including the commission) for any purpose, except as provided in this act or as otherwise provided by statute.

SEC. 10. There is reserved in the people of the state the right to hunt and fish in and over the waters on the trust lands, together with the right of convenient access to the waters over the trust lands for those purposes.

SEC. 11. The state shall reserve from the grant made in Section 6 of this act, and from any other conveyance pursuant to this act of the state's interest, or any portion of the state's interest, in any lands, all minerals and all mineral rights in the lands of every kind and character now known to exist or hereafter discovered, including, but not limited to, oil and gas and rights thereto, together with the sole, exclusive, and perpetual right to explore for, remove, and dispose of those minerals by any means or methods suitable to the state or to its successors and assignees, except that, notwithstanding the Burton Act or Section 6401 of the Public Resources Code, this reservation shall not include the right of the state or its successors or assignees in connection with any mineral exploration, removal, or disposal activity, to do either of the following:

(a) Enter upon, use, or damage the surface of the lands or interfere with the use of the surface by a grantee or by the grantee's successors or assignees.

However, a lease, franchise, permit, or license of the property shall contain a provision specifying at least one point from which, and the manner in which, the right of ingress or egress to the subsurface deposits may be exercised, which point or points may be outside the area of the leasehold, franchise, permit, or license, as long as the point or points are adequate to permit the rights reserved to the state to be exercised.

(b) Conduct any mining activities of any nature whatsoever above a plane located 500 feet below the surface of the lands without the prior written permission of a grantee of the lands or the grantee's successors or assignees.

SEC. 12. The state has the right to use, without charge, any transportation, land or storage improvements, wharves, docks, piers, slips, quays, or other improvements constructed upon the trust lands, for a vessel or other watercraft, aircraft, or railroad owned or operated by the state.

SEC. 13. (a) The state reserves the right to amend, modify, or revoke any and all rights in the trust lands granted to the agency under this act.

(b) No amendment or revocation, in whole or in part, of the granted rights in the trust lands, or any transfer of trust lands between the agency and the city, shall impair or affect the rights or obligations of third parties, including debt, security, or bond holders, lessees, lenders for value, and holders of contracts conferring the right to the use or occupation of, or the right to conduct operations upon or within, the trust lands, arising from leases, contracts, or other instruments lawfully entered into prior to the effective date of the amendment, revocation, or transfer. For purposes of this section, the term "bonds" includes, without limitation, tax increment bonds, revenue bonds, certificates of participation, and any other bonds or forms of indebtedness secured by or payable from, in whole or in part, revenues derived from trust lands.

(c) If a lease, contract, or other instrument described in subdivision (b) is in effect on the effective date of an amendment or revocation of the granted rights in the trust lands, the state, at its option exercised by and through the commission, may succeed to the agency's interest in the lease, contract, or instrument. Otherwise, the agency's interest in the instrument, property, and revenue shall continue during the term or other period during which the instrument shall remain in effect. If a lease, contract, or other instrument described in subdivision (b) is in effect on the effective date of a transfer of trust lands between the agency and the city, the transferee shall succeed to the transferor's interest in the lease, contract, or other instrument, unless the agency and the city agree otherwise. An action taken by the state, or a transfer of trust lands between the agency and the city, shall not cause the agency or the city to breach or default under a lease, contract, or instrument in effect on the effective date of an amendment or a revocation. All bonds or securities issued by the agency or the city and payable out of revenues from the trust lands shall continue to be so payable, directly or indirectly, and secured in all respects as provided in the proceedings for their issuance, and the revenues of the trust lands shall be pledged and applied to the payment of the bonds or securities in all respects as though no amendment or revocation had taken place.

SEC. 14. The agency may grant franchises, permits, privileges, licenses, easements, or leasehold interests (leases) in connection with the trust lands, or any part of the trust lands, each for a term not exceeding 66 years. A lease of the trust lands shall be solely for uses that are consistent with, necessary and convenient for, or incidental or ancillary to, the purposes of the public trust, except that a lease may be entered into for other uses if the agency has made all of the following determinations:

(a) There is no immediate trust-related need for the property proposed to be leased.

(b) The proposed lease is of a duration of no more than five years and provides that the agency shall have the right to terminate the lease in favor of trust uses as trust needs arise.

(c) The proposed lease prohibits the construction of new structures or improvements on the subject property that, as a practical matter, could prevent or inhibit the property from being converted to a permissible trust use if necessary.

(d) The proposed use of the leased property would not interfere with commerce, navigation, fisheries, or any other existing trust use or purpose.

SEC. 15. (a) Notwithstanding any other provision of this act or the Burton Act, the buildings, or any portion of a building, identified by the State Historic Preservation Officer as contributors to the Hunters Point Commercial Drydock Historic District, commonly known as the Gatehouse (Building 204), Pumphouse 2 (Building 205), Pumphouse 3 (Building 140), and the Tool and Paint Building (Building 207), may be used or leased for purposes not otherwise consistent with the public trust, provided the trustee makes a finding that there are no trust uses available that would allow for the restoration and preservation of the space. A lease renewal, extension, or granting of a new lease for a nontrust purpose shall require a new finding that no trust uses are then available that would allow for the restoration and preservation of the building, or a part of it.

(b) If a building described in subdivision (a) is used for a nontrust purpose, and is remodeled, renovated, or used in a manner that is inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings, the building shall be put to a public trust use from the commencement of the inconsistent remodel, renovation, or use, unless the continued nontrust use is authorized to continue under Section 14 of this act, if the agency is the trustee, or under the Burton Act, if the city is the trustee.

(c) If a building described in subdivision (a) is demolished, subsequent use of the land and any replacement structure shall be consistent with the public trust and the applicable statutory trust.

SEC. 16. (a) The agency shall deposit all moneys collected by the agency arising out of the use or operation of any of the trust lands, including all revenues derived from leases or other rights to use or occupy the lands, into a special fund maintained by the agency. The agency shall use the money

in or belonging to the fund only for uses and purposes consistent with the public trust and the requirements of this act.

(b) The agency shall prepare an annual statement of financial conditions and operations and submit it to the commission each year on or before October 1. The statement shall include a statement of all revenues and expenditures related to trust lands and trust assets, including obligations incurred, but not yet paid.

(c) The requirements of this section implement and do not supersede the requirements of Section 6306 of the Public Resources Code.

SEC. 17. (a) The agency may exchange portions of the trust lands with a state agency, political subdivision, person, entity, or corporation, or the United States or a political subdivision of the United States, for other lands, if the agency determines, and the commission adopts a resolution finding and declaring, all of the following:

(1) The portions of the trust lands or interests in lands to be exchanged out of the trust have been filled and reclaimed, are cut off from access to the waters of San Francisco Bay and are no longer in fact tidelands or submerged lands or navigable waterways, are relatively useless for trust purposes, and constitute a relatively small portion of the granted lands within the city.

(2) The lands or interests in lands to be acquired by the agency have a monetary value equal to or greater than the value of the lands for which they are to be exchanged and are useful for the particular trust purposes authorized by this act.

(3) No substantial interference with trust uses and purposes, including public rights of navigation and fishing, will ensue by virtue of the exchange.

(4) The lands or interests in lands to be acquired by the agency in the exchange will provide a significant benefit to the public trust.

(5) The exchange is otherwise in the best interest of the state.

(b) Upon adoption of the resolution by the commission, the lands conveyed by the agency shall be free from the public trust, and the lands received by the agency in exchange shall be held subject to the public trust and to the terms of this act.

(c) The exchange authority granted by this section shall be in addition to, and shall not operate as a limitation on, the exchange authority granted by Sections 20 to 25, inclusive, of this act.

SEC. 18. Upon written agreement between the agency and the city, acting by and through its Port Commission, the agency may transfer to the city some or all of the trust lands in which the agency holds fee title, provided that the commission has approved the transfer. All of the right, title, and interest granted to the agency under this act in any lands transferred to the city under this section shall, upon transfer, be granted to and vest in the city. The city shall hold the transferred lands subject to the public trust and shall assume authority as trustee over those lands. Lands transferred to the city pursuant to this section shall be subject to the Burton Act trust and shall cease to be subject to the terms and conditions of this act, except that Sections 13 and 15 of this act shall remain applicable to those lands. Nothing

in this section shall preclude the city from including trust lands held by the city as part of an exchange authorized by this act.

SEC. 19. (a) Notwithstanding the restriction on alienation in the Burton Act or any other provision of law, upon approval by the commission, the city may transfer to the agency some or all of the Burton Act lands. All of the right, title, and interest granted to the city under the Burton Act in any lands transferred to the agency under this section shall, upon transfer, be granted to and vest in the agency. The agency shall hold the transferred lands subject to the public trust and the requirements of this act, and shall assume authority as trust administrator over those lands. Lands transferred to the agency under this section shall cease to be subject to the Burton Act trust.

(b) Notwithstanding subdivision (a), no later than the date on which the redevelopment plan terminates as to the entirety of the project area or January 1, 2050, whichever is earlier, the agency shall transfer any trust lands in which it holds fee title to the city and the city shall become the sole grantee of the trust lands, unless the commission approves a later date by which the agency shall transfer trust lands to the city. The city shall hold the transferred trust lands subject to the Burton Act trust and the lands shall cease to be subject to the terms and conditions of this act, except that Sections 13 and 15 of this act shall remain applicable to those lands. This subdivision shall not apply to any trust lands for which fee title is held by the state. This subdivision shall not affect the rights and obligations of the agency pursuant to the Community Redevelopment Law.

SEC. 20. The Legislature hereby approves an exchange of public trust lands within the project area, whereby certain trust lands that meet the criteria set forth in this act and therefore are not now useful for public trust purposes will be freed from the public trust and of the associated restrictions on use and alienation, and certain other lands that are not now public trust lands and that are useful for public trust purposes will be made subject to the public trust, provided that the commission determines that the exchange furthers the public trust and approves the exchange and that all of the following conditions are met:

(a) The exchange results in a configuration of trust lands substantially similar to that shown on the diagram in Section 25 of this act.

(b) The lands to be subject to the public trust are configured so as to be accessible from the streets as finally configured in the project area.

(c) The exchange otherwise complies with the requirements of this act.

(d) The exchange is consistent with and furthers the purposes of the public trust and this act.

SEC. 21. All lands exchanged into the trust under this act shall be held by the trustee subject to the public trust and the applicable statutory trust, and all lands exchanged out of the trust under this section shall be free of the public trust and the applicable statutory trust.

SEC. 22. The precise boundaries of the lands to be taken out of the trust and the lands to be put into the trust pursuant to the exchange shall be determined by the trustee or trustees with authority over the lands to be

exchanged, subject to the approval of the commission. The commission is authorized to settle by agreement with the trustees any disputes as to the location of the mean high tide line in its last natural state, the boundaries of tidelands conveyed into private ownership pursuant to various statutes, and any other boundary lines which the commission deems necessary to effectuate the exchange.

SEC. 23. (a) The commission is authorized to approve an exchange of public trust lands within the project area that meets the requirements of this act. Pursuant to this authority, the commission shall establish appropriate procedures for effectuating the exchange. The procedures shall include, but are not limited to, provisions for ensuring that lands or interests in lands at the shipyard are not exchanged into the trust until either of the following has occurred:

(1) All remedial action necessary to protect human health and the environment with respect to the hazardous substances on the land has been completed as determined by the United States Environmental Protection Agency, the California Department of Toxics Substances Control, and the regional water quality control board, pursuant to the Federal Facilities Agreement for the shipyard dated January 22, 1992, as amended, and the United States has provided a warranty in accordance with Section 9620(h)(3)(A) of Title 42 of the United States Code.

(2) The United States has obtained a warranty deferral, approved by the Governor in accordance with Section 9620(h)(3)(C) of Title 42 of the United States Code, involving land for which the commission has determined to execute a certificate of acceptance of title, and the commission finds that sufficient liability measures and implementation measures will be in place upon the completion of the exchange. Prior to approving a warranty deferral, the Governor and the Department of Toxic Substances Control, the regional water quality control board, or other appropriate state oversight agency with expertise in hazardous materials remediation shall confer and consult with the commission to reasonably ensure that the terms of the warranty deferral and underlying documents and agreements provide sufficient standards and financial assurances to ensure that the remediation of any affected trust lands will be completed in a manner consistent with the intended public trust use of these lands and in a reasonable period of time.

(b) The commission may not approve the exchange of any trust lands unless it finds all of the following:

(1) The portions of the trust lands or interests in lands to be exchanged out of the trust have been filled and reclaimed, are cut off from access to the waters of San Francisco Bay and are no longer in fact tidelands or submerged lands or navigable waterways, are relatively useless for public trust purposes, and constitute a relatively small portion of the granted lands within the city.

(2) The lands or interests in lands to be impressed with the public trust have a monetary value equal to or greater than the monetary value of the lands or interests in lands to be exchanged out of the trust. In the event that the monetary value of the lands or interests in lands to be exchanged out of

the trust is greater than the monetary value of the lands or interests in lands to be exchanged into the trust, the commission may consider a deposit of funds into the Land Bank Fund established pursuant to Section 8610 of the Public Resources Code to be held solely for acquisition of property, in an amount equal to the difference in value.

(3) No substantial interference with trust uses and purposes, including public rights of navigation and fishing, will ensue by virtue of the exchange.

(4) The lands or interests in lands impressed with the public trust will provide a significant benefit to the public trust and are useful for the particular trust purposes authorized by this act.

(5) The configuration of trust lands within the project area upon completion of the exchange is substantially similar to the configuration shown on the diagram in Section 25 of this act, includes all lands within the project area that are presently below mean high tide, and consists of lands suitable to be impressed with the public trust.

(6) The final layout of streets in the project area will provide access to the public trust lands and be consistent with the beneficial use of the public trust lands.

(7) Streets and other transportation facilities located on public trust lands shall be designed to be compatible with the public trust and to serve primarily public trust purposes of access to shoreline improvements and shoreline circulation rather than serving nontrust purposes.

(8) Any surveys or legal descriptions required for the parcels in conjunction with the exchange shall be approved by the commission.

(9) Each trustee who owns or will own fee title in any of the lands to be exchanged has approved the exchange.

(10) The exchange otherwise complies with the requirements of this act.

(11) The exchange is consistent with and furthers the purpose of the public trust and this act.

(12) The exchange is otherwise in the best interest of the statewide public.

(c) The commission may impose additional conditions on the exchange authorized by this act if the commission determines that these conditions are necessary to protect the public trust. At a minimum, the commission shall ensure all of the following:

(1) The streets and other transportation facilities located on trust lands are designed to be compatible with the public trust.

(2) The trust values of the hillside open space are preserved. To this end, the commission shall ensure all of the following:

(A) The final trust configuration maintains reasonable public pedestrian and vehicular access between the hillside open space and the waterfront, and in addition, between the top of the hillside open space and other areas of the city.

(B) View corridors are maintained and protected so that visitors to the hillside open space can enjoy substantial vistas of San Francisco Bay.

(C) Direct vehicular and pedestrian access from the lower portions of the shipyard to the top of the hillside open space area is provided.

(D) No liability to owners of adjacent upslope property, for subjacent support or otherwise, is created by virtue of the trustee's taking title to the hillside open space.

(E) No moneys from the trust fund described in Section 16 of this act may be used to provide direct benefit to the residential development or to other uses of the nontrust portion of the hilltop area adjacent to the hillside open space, or to offset or mitigate impacts caused by those uses.

(F) Street parking on the parkway adjacent to the top of the hillside open space may not be restricted for residential parking and shall remain accessible to the public for regional and statewide use. In addition, adequate parking areas accessible to the public to support regional and statewide use of the hillside open space shall be dedicated in an area adjacent to the lower portion of the hillside open space. Public access to the hillside open space and the availability of parking accessible to the public shall be publicized with appropriate signage.

(d) For purposes of effectuating the exchange authorized by this section, the commission is authorized to do all of the following:

(1) Receive and accept on behalf of the state any lands or interest in lands conveyed to the state by the parties to the exchange agreement, including lands that are now and that will remain subject to the public trust.

(2) Convey by patent all of the right, title, and interest of the state in lands that are to be free of the public trust and applicable statutory trust, upon completion of an exchange of lands as authorized by this act and as approved by the commission.

(3) Convey to the trustee or trustees by patent all of the right, title, and interest of the state in lands that are to be subject to the public trust and the applicable statutory trust upon completion of an exchange of lands as authorized by this act and as approved by the commission, subject to the terms, conditions, and reservations as the commission may determine are necessary to meet the requirements of this act.

(4) Receive and accept from the department any lands or interests in lands within the state recreation area, as it may be reconfigured by the director pursuant to Section 26, that are to be subject to the public trust upon completion of an exchange of lands as authorized by this act and as approved by the commission.

(5) Transfer to the department any lands or interests in lands within the state recreation area, as it may be reconfigured by the director pursuant to Section 26, that are to be free of the public trust upon completion of an exchange of lands as authorized by this act and as approved by the commission.

(e) The exchange authorized by this section may include lands adjacent to the project area to the extent consistent with the purposes of this act and approved by the commission. Lands outside the project area that are impressed with the trust as part of an exchange authorized by this act shall be deemed trust lands for purposes of this act.

(f) If the department holds an interest in any of the lands to be received or conveyed by the exchange authorized by this section, the department shall be a party to the exchange agreement.

(g) Nothing in this act shall be construed as conditioning or otherwise limiting the authority of the state, the city, or the agency to undertake a public trust exchange or other conveyance authorized by any other provision of law, including, but not limited to, Section 17 of this act.

SEC. 24. An exchange of public trust land pursuant to Section 23 of this act may proceed in multiple phases, provided that with respect to each phase, the commission, in addition to the findings required by Section 23 of this act, finds both of the following:

(a) The cumulative monetary value of all of the lands or interests in lands exchanged into the trust in the proposed phase and completed phases is equal to or greater than the cumulative monetary value of all of the lands or interests in lands exchanged out of the trust in the proposed phase and completed phases. If, in connection with the approval of the exchange agreement or a completed phase of the exchange, the commission has previously determined the value of any lands that have been or are proposed to be exchanged, the commission, for purposes of making the finding required by this subdivision, shall utilize the value of those lands as previously determined by the commission, adjusted for inflation using an appropriate inflation index as determined by the commission.

(b) The lands or interests in lands exchanged into the trust at each phase are configured in a way that furthers the purposes of the overall exchange, including, but not limited to, having access to streets as finally configured in the project area.

SEC. 25. The following diagram is a part of this act:

PRINTER PLEASE NOTE: TIP-IN MATERIAL TO BE INSERTED

SEC. 25.2. If the commission has not approved the trust exchange authorized by Section 23 of this act by January 1, 2020, Section 20 and Sections 22 to 25, inclusive, of this act shall terminate and shall no longer be effective, unless an extension not to exceed five years is approved by the commission.

SEC. 25.5. (a) For purposes of Section 3 of Article X of the California Constitution, the Legislature hereby finds and declares that the reserved streets in Candlestick Point were reserved to the state solely for street purposes, and that those portions of the reserved streets that are found by the commission to meet the criteria set forth in paragraph (1) of subdivision (b) are no longer useful or necessary for navigation purposes.

(b) The trustee may, pursuant to Section 3 of Article X of the California Constitution, sell any portion of the reserved street areas within Candlestick Point free of the public trust and the applicable statutory trust. A sale made pursuant to this section shall not be effective unless and until the commission, at a regular open meeting with the proposed sale as a properly scheduled agenda item, finds all of the following:

(1) The reserved street area has been filled and reclaimed, is cut off from access to the waters of San Francisco Bay, and is no longer needed or required for the promotion of the public trust, and no substantial interference with the public trust uses and purposes will ensue by virtue of the sale.

(2) Termination of the trust in the reserved street area occurs in conjunction with or subsequent to a land exchange authorized by this act and approved by the commission.

(3) Termination of the trust in the reserved street area is substantially consistent with the proposed trust land configuration depicted in Section 25 of this act, as finally approved by the commission.

(4) The trustee will receive consideration for the sale equal to or greater than the fair market value of the land or interest sold.

(c) Any moneys received by the trustee for a sale pursuant to this section shall be deposited in a separate account in the fund required by Section 16 of this act or Section 4 of the Burton Act, and shall be expended only for acquisition of lands by the trustee or public access improvements on trust lands, or other uses and purposes consistent with the public trust and applicable statutory trust as determined by the commission. The funds in the special account may not be expended for overhead or administration costs by the trustee.

(d) The total reserved street area sold pursuant to this section shall not be more than 20 percent of the total reserved street areas in Candlestick Point.

(e) For purposes of this section, the term “sale” includes, without limitation, a sale, lease, transfer, or other conveyance of land or interest in land.

(f) Nothing in this section shall be construed as imposing additional requirements or limitations on the conveyance of reserved street areas free of the public trust and applicable statutory trust as part of an exchange authorized by this act or otherwise authorized by law.

(g) The Legislature hereby finds that the conditions set forth in this section will protect the public interest in accordance with Section 3 of Article X of the California Constitution.

SEC. 26. (a) The Legislature hereby approves a reconfiguration of the state recreation area in substantial conformance with the diagram included as Section 27 of this act, provided that the requirements of this section are met. Notwithstanding any other provision of law, the director may authorize the removal of land from the state recreation area, and may enter into an agreement to convey to the agency or the city an interest in the state property so removed, provided that the director makes in writing all of the following findings:

(1) (A) The state will receive consideration consisting of the forms set forth in paragraph (2) and having a value that equals or exceeds the greater of either of the following:

(i) The fair market value of the state property conveyed.

(ii) Fifty million dollars ($50,000,000). If the state property is to be conveyed in phases pursuant to paragraph (3) of subdivision (h), the minimum consideration under this clause shall be prorated for the state property conveyed at each phase, in proportion to the total area of state property to be conveyed under the agreement.

(B) The consideration referenced in clause (ii) of subparagraph (A) is not intended to be reflective of the fair market value of the property and shall not be used as a basis for determining value in any appraisal of the property.

(2) The form of consideration for the state property conveyed pursuant to paragraph (1) consists of the following:

(A) The provision of future funding for the operation and maintenance of the state recreation area.

(B) The cost of planning and constructing improvements to the state recreation area that enhance its use as a public park, which may include, without limitation, walking and biking trails, picnic facilities, recreational equipment, piers, overlooks, visitor centers, amphitheaters, entryways, restrooms, concession facilities, site furnishings, landscaping, habitat restoration, infrastructure, and improvements to protect the state recreation area from the effects of sea level rise, provided that these sea level rise improvements primarily benefit the state recreation area.

(C) Land within the project area to be added to the state recreation area.

(D) The amount of any reimbursement paid to the state by or on behalf of the city or the agency for the state's legal, transactional, planning, or other costs associated with actions carried out pursuant to this section.

(E) Monetary consideration, if determined appropriate by the director and if the monetary consideration received under this paragraph is dedicated and used for planning, improvement, maintenance, or operation of the state recreation area.

(3) The agreement will provide an overall benefit to the state recreation area and will further the objective of preserving the park's natural, scenic, cultural, and ecological values for present and future generations.

(4) The reconfiguration of the state recreation area will substantially conform to the configuration shown on the diagram included as Section 27 of this act, and as more particularly illustrated on the map on file with the city's planning department entitled "Proposed State Park Land Exchange" and dated September 3, 2009, for the area depicted on the map; provided, however, that the director may agree to additional modifications of the park configuration if the modifications are consistent with the overall financial feasibility of the project and the director determines that the modifications are necessary to fulfill the state recreational purposes of the state recreation area, taking into account public access, circulation and parking needs; wildlife habitat values; future sea level rise and the proposed responses thereto; and other relevant factors.

(5) The project, including the reconfiguration of the state recreation area, will not result in a significant adverse effect on biological resources, and will include habitat enhancement measures to benefit migratory birds and other wildlife. In making this determination, the director shall take into consideration any mitigation measures incorporated into the project during the environmental review process pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code).

(6) Any applicable requirements of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. Sec. 460l-4 et seq.) have been satisfied.

(7) It is the intent of this act that approximately 20 percent of the total consideration value required by paragraph (1) be in the form of operation and maintenance funding pursuant to subparagraph (A) of paragraph (2). If the agreement contains a lower amount of operation and maintenance funding, the director shall provide a report to the Legislature explaining the reasons for determining that the lower amount is appropriate in light of the overall benefits of the agreement.

(b) The director shall modify the boundaries of the state recreation area as necessary to reflect any conveyances made pursuant to this section.

(c) Notwithstanding any other provision of law, the director, on behalf of the department, and the commission, may acquire, convey, or transfer real property pursuant to the agreement authorized by this section, provided that the other requirements of this section are met, and the fair market value of any real property acquired or transferred has been determined by an appraisal prepared by the commission or an appraisal approved by the commission or the Real Estate Services Division of the Department of General Services and prepared by an independent appraiser certified by the Office of Real Estate Appraisers pursuant to Part 3 (commencing with Section 11300) of Division 4 of the Business and Professions Code. For purposes of compliance with this subdivision, the director may rely on an appraisal prepared in connection with a trust exchange authorized by this act.

(d) If the commission holds an interest in any of the lands to be removed from the state recreation area, the commission shall be a party to any agreement authorized by this section.

(e) The agreement authorized by this section may be combined with a trust exchange agreement authorized by this act. Pursuant to a trust exchange agreement, the department may transfer to the commission any lands or interests in lands within the reconfigured state recreation area that are to be subject to the public trust, and may receive and accept from the commission lands within the reconfigured state recreation area that are to be free of the public trust. Notwithstanding any other provision of law, the commission may lease to the department for state park purposes any trust lands it owns within the reconfigured state recreation area for a term not exceeding 66 years.

(f) The requirements of this section shall govern an agreement entered into, or conveyance made pursuant to the agreement, and shall supersede any other provision of law pertaining to the department's authority to acquire or transfer real property, or to enter into an agreement to acquire or transfer real property, including, but not limited to, Article 1 (commencing with Section 11000) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code, Part 11 (commencing with Section 15850) of Division 3 of Title 2 of the Government Code, and Chapter 1 (commencing with Section 5001) and Chapter 1.695 (commencing with Section 5096.500) of Division 5 of the Public Resources Code, or as those provisions may be hereafter amended.

(g) Notwithstanding anything to the contrary in Section 5002.2 of the Public Resources Code, the department is not required to revise the general plan for the state recreation area prior to taking any action pursuant to this section, including, but not limited to, the approval of an agreement authorized by this section, the acquisition, conveyance or transfer of interests in real property pursuant to such agreement, or the modification of the state recreation area boundary. Nothing in this act shall be construed as exempting the development of new facilities within the state recreation area from compliance with the general plan revision requirements of Section 5002.2 of the Public Resources Code.

(h) (1) Neither the director, on behalf of the department, nor the commission shall convey out-of-state ownership an interest in land within the state recreation area pursuant to this section prior to the receipt by the state of consideration meeting the value requirements of paragraph (1) of subdivision (a), except as provided in this subdivision.

(2) For consideration in the form of construction of future park improvements or in the form of the provision of future funding for operation and maintenance, a binding and enforceable commitment to construct the improvements or to provide the funding shall be deemed to satisfy the requirements of this subdivision if the director determines that adequate financial assurances have been provided to ensure that work will be completed or the funds will be provided, as specified in the agreement. Financial assurances under this paragraph may include, without limitation, performance or other surety bonds, insurance, or financial guarantees.

(3) (A) The agreement may provide for phased conveyances if the total consideration received by the state, or committed in accordance with

paragraph (2) of this subdivision, at or before each phase meets the value requirements of paragraph (1) of subdivision (a) with respect to the state property conveyed in that phase and any prior phases. For purposes of implementing this paragraph, if the consideration is based on fair market value, the director shall use the fair market value of the state recreation area lands as determined by the director at the time the agreement is approved.

(B) If the agreement provides for phased conveyances, the consideration tendered to the state at each phased closing may be in any of the forms set forth in paragraph (2) of subdivision (a), or any combination of those forms, as may be established by the agreement, if the agreement requires consideration meeting all of the requirements of paragraph (2) of subdivision (a) to be tendered prior to the final closing. For purposes of this subparagraph, final closing means a closing after which all of the state property within the state recreation area to be conveyed under the agreement will have been conveyed.

(i) Any monetary consideration received by the department pursuant to an agreement authorized by this section shall be deposited in a separate account maintained by the department and shall be expended only for planning, improvement, maintenance, or operation of the state recreation area.

(j) In order to allow public review of and comment on the findings required by subdivision (a), the director shall cause proposed findings to be published in the California Regulatory Notice Register no less than 30 days prior to making final findings. The director shall also cause the final findings to be published in the California Regulatory Notice Register.

SEC. 27. The following diagram is a part of this act:

PRINTER PLEASE NOTE: TIP-IN MATERIAL TO BE INSERTED

SEC. 27.5. Nothing in this act shall be construed as requiring the director or the commission to enter into any agreement authorized by this act.

SEC. 28. (a) The Legislature finds that the lands conveyed to the city pursuant to the 1958 Act have been cut off from water access, are relatively small in area, have been filled and reclaimed as part of a highly beneficial program of harbor development, and are no longer useful for public trust purposes. The Legislature further finds and confirms that the lands conveyed pursuant to the 1958 Act are free from the public trust.

(b) The Legislature finds and declares that the project will further the important statewide interests in redevelopment, the elimination of blight, the provision of affordable housing opportunities, the generation of new sales tax revenues, property taxes and other tax revenues to the state and state agencies, the creation of thousands of new jobs, and enhanced access of the public to use and enjoy the state recreation area, and that the development of the project will further the statewide purposes contemplated in Section 3 of the 1958 Act. The Legislature further finds and declares that it is necessary and in furtherance of important statewide interests for any restrictions or other encumbrances on title arising from Section 3 of the 1958 Act to be eliminated so as to facilitate disposition of property within the project area in furtherance of development of the project.

(c) At the request of the city or the agency, the executive officer of the commission shall, on behalf of the state, reasonably cooperate with the requesting parties to cause to be prepared and recorded any necessary deeds, patents, agreements, or other instruments for the purpose of removing any deed restrictions or other encumbrances on title arising from Section 3 of the 1958 Act.

SEC. 29. Section 3 of Chapter 2 of the Statutes of 1958 of the First Extraordinary Session is repealed.

SEC. 30. Chapter 1046 of the Statutes of 1998 is repealed.

SEC. 31. An exchange or other agreement made pursuant to this act is hereby found to be of statewide significance and importance. Therefore, no ordinance, charter provision, or other provision of local law inconsistent with this act applies to that exchange or agreement.

SEC. 31.5. (a) Notwithstanding any other provision of law, the requirements of subdivision (f) of Section 10310 of Title 14 of the California Code of Regulations shall be deemed satisfied for any part of the project requiring a BCDC permit if the agency submits in a form acceptable to BCDC an approved development and disposition agreement for the project, any required amendments to the redevelopment plan, and city final approval of all conforming amendments to the city's general plan, planning code, and zoning maps.

(b) Notwithstanding any other provision of law, the requirement of subdivision (g) of Section 66605 of the Government Code and of Section 11721, Appendix F of Title 14 of the California Code of Regulations, that an applicant for a BCDC permit demonstrate adequate legal interest in the underlying property shall be deemed satisfied if the agency submits in a form acceptable to BCDC an agreement authorized by Section 23 or 26 of

this act, provided the agreement is fully executed, all parties with an interest in the property are parties to the agreement, and the terms of the agreement allow the applicant to undertake the proposed construction and uses for which the permit is sought.

(c) This section does not affect BCDC's jurisdiction and authority, or its discretion to approve, disapprove, or condition a permit application subject to this section in accordance with applicable law.

SEC. 32. (a) Nothing in this act may be construed to nullify the city or the agency's obligations for increasing, improving, and preserving the community's supply of low- and moderate-income housing imposed by the Community Redevelopment Law, including, but not limited to, the requirements of Sections 33334.2 and 33413 of the Health and Safety Code.

(b) Nothing in this act shall be construed as creating an exemption from or in any way modifying the requirements of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code).

SEC. 33. Nothing in this act may be construed to authorize residential uses or other nontrust uses on public trust land except as provided in Sections 14 and 15.

SEC. 33.5. This act shall not be construed as creating a cloud on title to any real property within the project area in which the state has no claim of interest.

SEC. 34. A deed, patent, agreement, or other instrument executed in furtherance of this act, or an action of the city, state, or agency, to approve the use, lease, or conveyance of a city, state, or agency property subject to this act, or any portion thereof, or to approve project agreements, grant entitlements or permits, or issue bonds or other indebtedness in connection with the use and development of that property, shall be conclusively presumed to be valid unless held to be invalid in an appropriate proceeding in a court of competent jurisdiction to determine the validity of the agreement commenced within 60 days after the recording of the agreement.

SEC. 35. (a) An action may be brought under Chapter 4 (commencing with Section 760.010) of Title 10 of Part 2 of the Code of Civil Procedure to establish title to any lands conveyed pursuant to this act, or by the parties to any agreement entered into pursuant to this act to confirm the validity of the agreement. Notwithstanding Section 764.080 of the Code of Civil Procedure, the statement of decision in the action shall include a recitation of the underlying facts and a determination as to whether the conveyance or agreement meets the requirements of this act, Sections 3 and 4 of Article X of the California Constitution, if applicable, and any other law applicable to the validity of the agreement.

(b) For purposes of Section 764.080 of the Code of Civil Procedure and unless otherwise agreed in writing, an agreement entered into pursuant to this act shall be deemed to be entered into on the date it is executed by the executive officer of the commission, or, if the commission is not a party, by the director, who shall be the last of the parties to sign prior to the signature of the Governor. The effective date of the agreement shall be

deemed to be the date on which it is executed by the Governor pursuant to Section 6107 of the Public Resources Code.

(c) An action may be brought under Chapter 9 (commencing with Section 860) of Title 10 of Part 2 of the Code of Civil Procedure to determine the legality and validity of a deed, patent, agreement, or other instrument executed in furtherance of or authorized by this act, or an action of the city or agency to use, lease, or convey any property, or to approve project agreements, grant entitlements or permits, or issue bonds or other indebtedness in connection with the use and development of that property. Before the filing of an action, the Attorney General, the director, and the executive officer of the commission shall be provided written notice of the action and a copy of the complaint. An action authorized by this subdivision may be combined with an action authorized by subdivision (a).

SEC. 36. If a provision of this act, or its application to a person, property, or circumstance, is held invalid by a court, the invalidity or inapplicability of that provision shall not affect any other provision of this act or the application of that provision to any other person, property, or circumstance, and the remaining portions of this act shall continue in full force and effect, unless enforcement of this act as so modified by and in response to that invalidation would be grossly inequitable under all of the circumstances, or would frustrate the fundamental purposes of this act.

SEC. 37. It is the intent of the Legislature that the department shall give strong consideration to keeping open Candlestick Park State Recreation Area any time the department undertakes the process of identifying state parks or state recreation areas for closure, whether seasonal, partial, full, or otherwise. This consideration is based upon the funding provided in Section 26 for operation and maintenance of Candlestick Park State Recreation Area.

SEC. 38. The Legislature finds and declares that, because of the unique circumstances applicable only to the lands described in this act, a statute of general applicability cannot be enacted within the meaning of subdivision (b) of Section 16 of Article IV of the California Constitution. Therefore, this special statute is necessary.

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