San Leandro Bay/Oakland-Alameda Estuary Adaptation Working Group

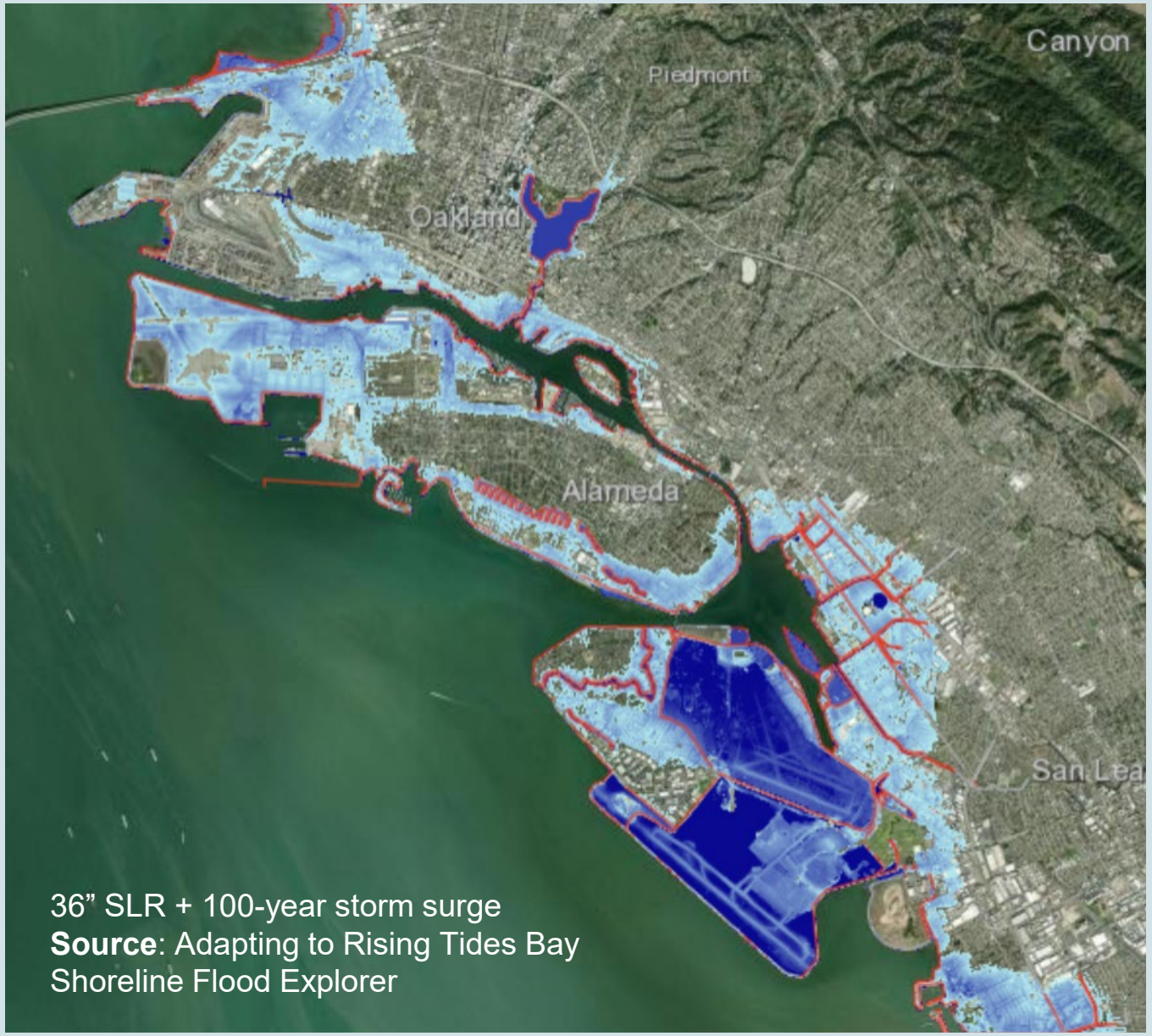
June 21, 2023

San Leandro Bay
Oakland-Alameda Estuary
Adaptation Working Group

Background: Sea Level Rise

2/3 of California's sea level rise impacts will be felt in the Bay Area

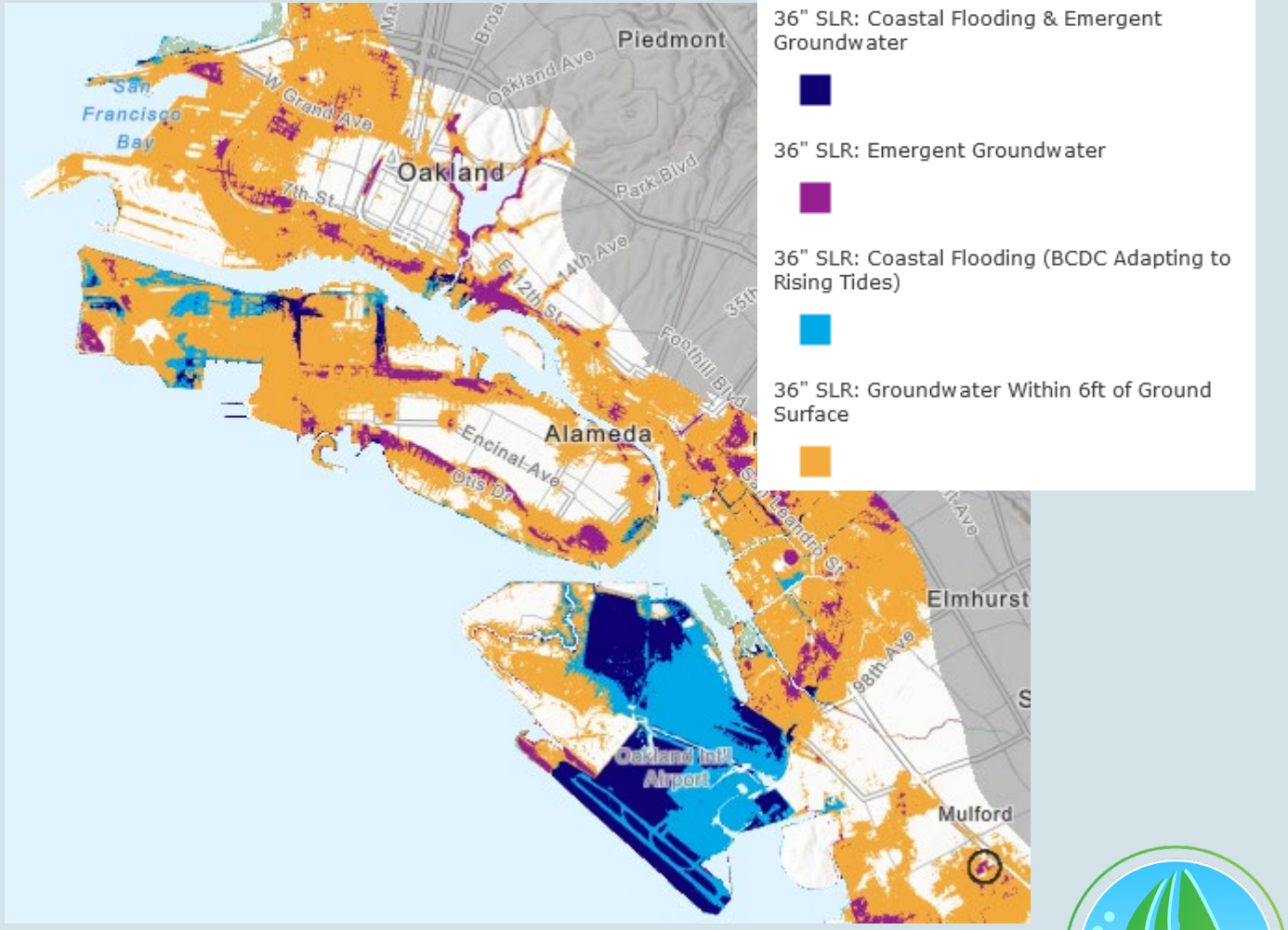
- **Already seen:** +8 inches SLR
- **Projected by 2050:** +12 to 32 inches
- **End of century:** 10+ feet?



36" SLR + 100-year storm surge
Source: Adapting to Rising Tides Bay Shoreline Flood Explorer

Background: Groundwater Rise

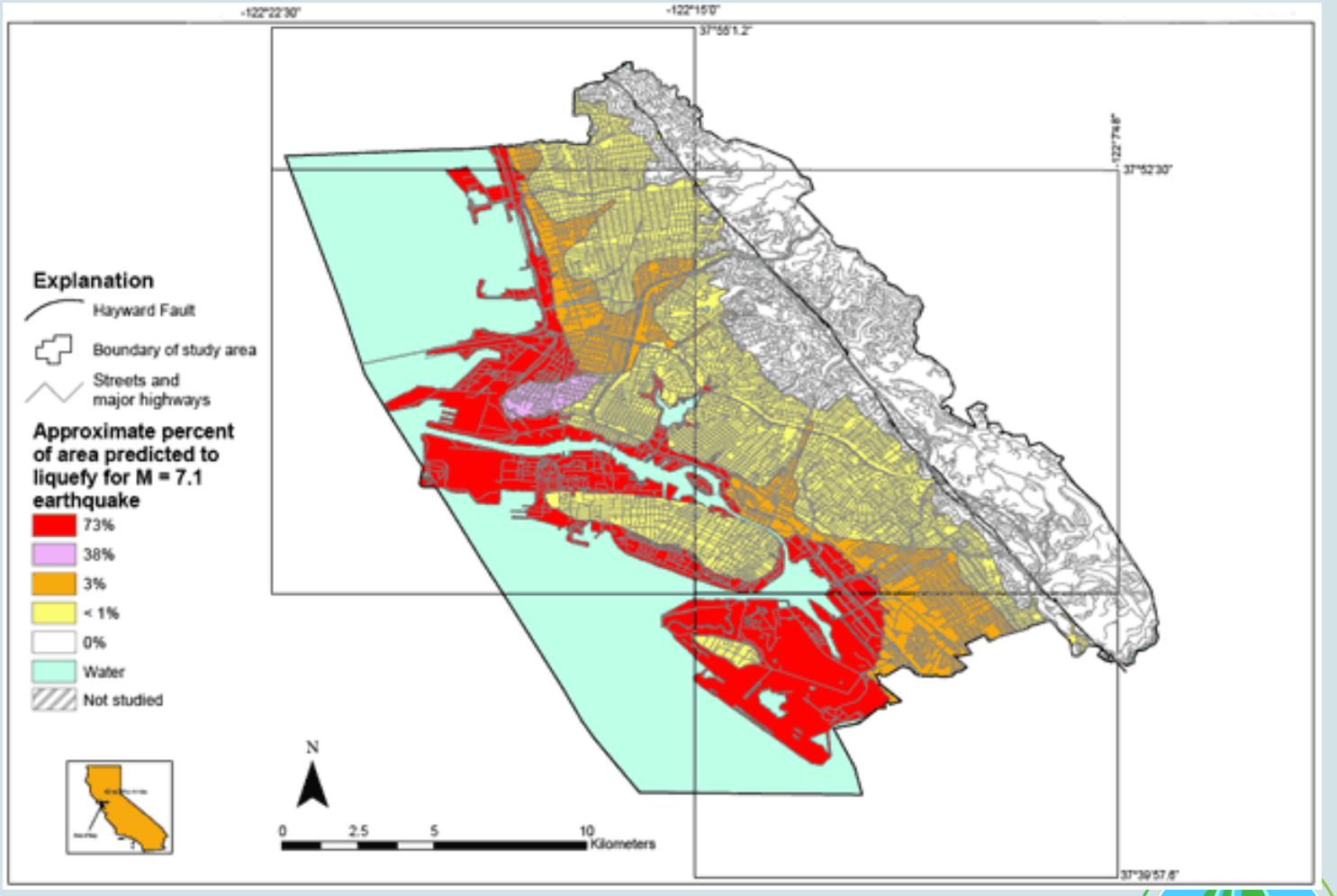
- Infiltration & corrosion of underground infrastructure
- Damage to roads and structures
- Flooding from multiple sources including emergent groundwater
- Contaminated sites
- Increased liquefaction risk



Source: SFEI Shallow groundwater response to sea-level rise

Background: Liquefaction

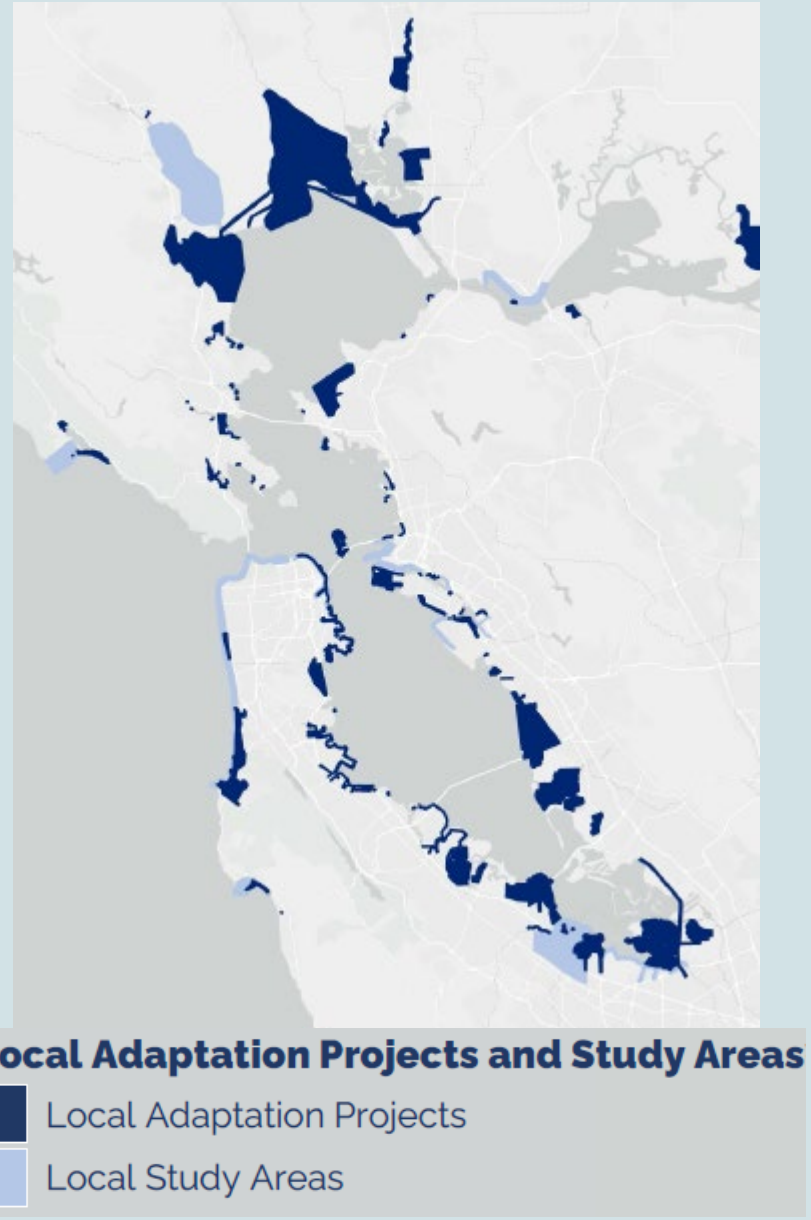
- Areas most at risk of liquefaction are same areas at risk of rising groundwater
- Rising groundwater may increase risk of liquefaction



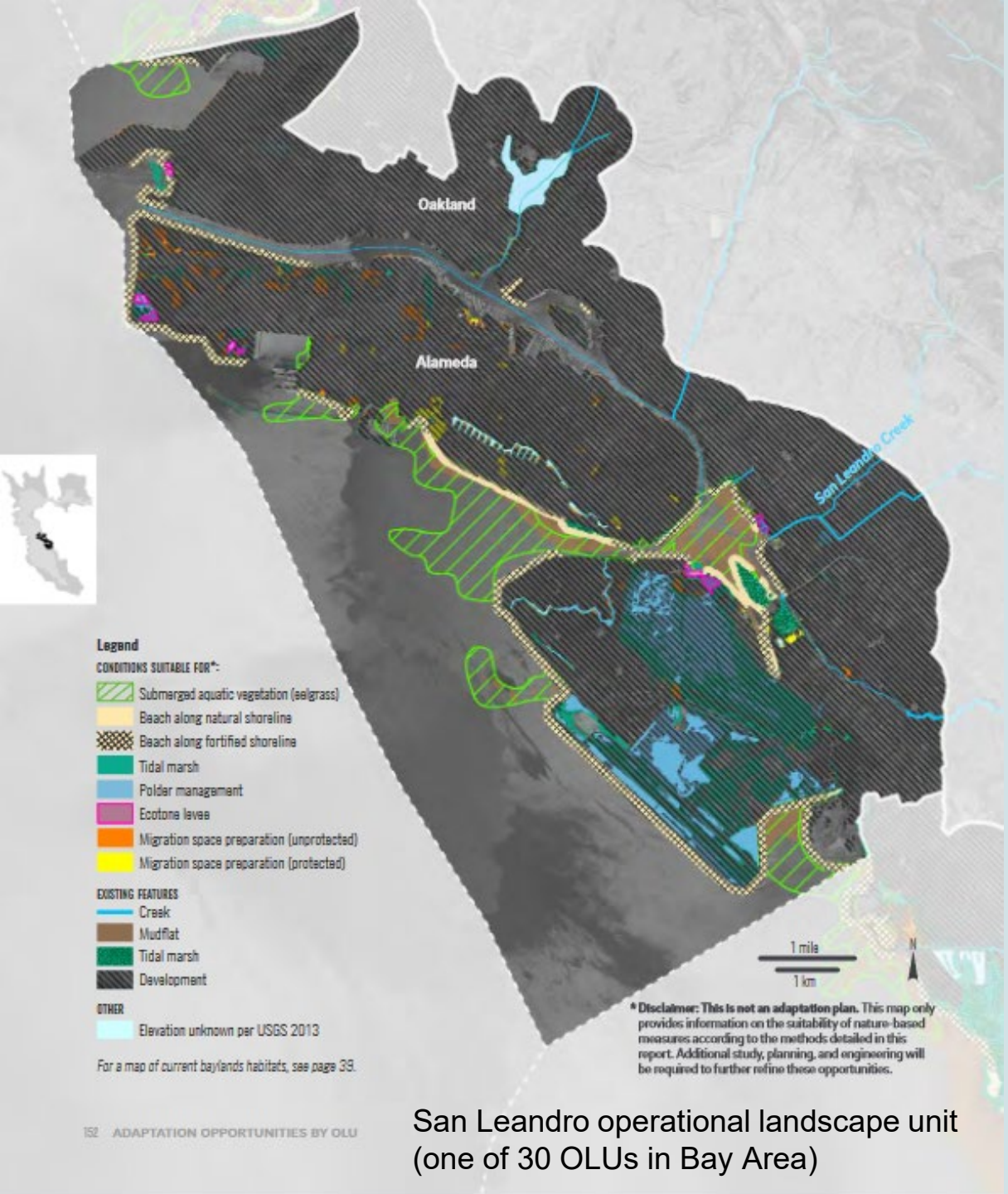
Shaking Hazard Map for Northwestern Alameda County
Source: USGS [Open-file Report 02-296]

Background: Regional Problem & Solutions

- Flooding knows no boundaries
- Communities: Most impacted and fewest resources
- Patchwork of actions
- Inconsistent science
- Competition not collaboration for funding
- Loss of wetlands
- Difficult to measure collective progress



Source: BCDC Sea Level Rise Adaptation Funding and Investment Framework



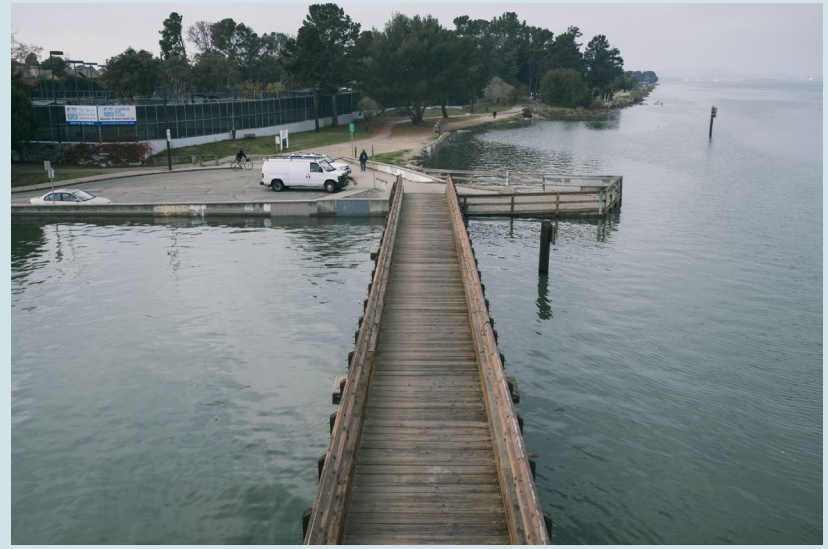
San Leandro operational landscape unit (one of 30 OLUs in Bay Area)

Working Group coordinates San Leandro Bay/Oakland-Alameda Estuary flood and adaptation projects to protect and restore water quality, habitat, recreation and community resilience.

San Leandro Bay
Oakland-Alameda Estuary
Adaptation Working Group

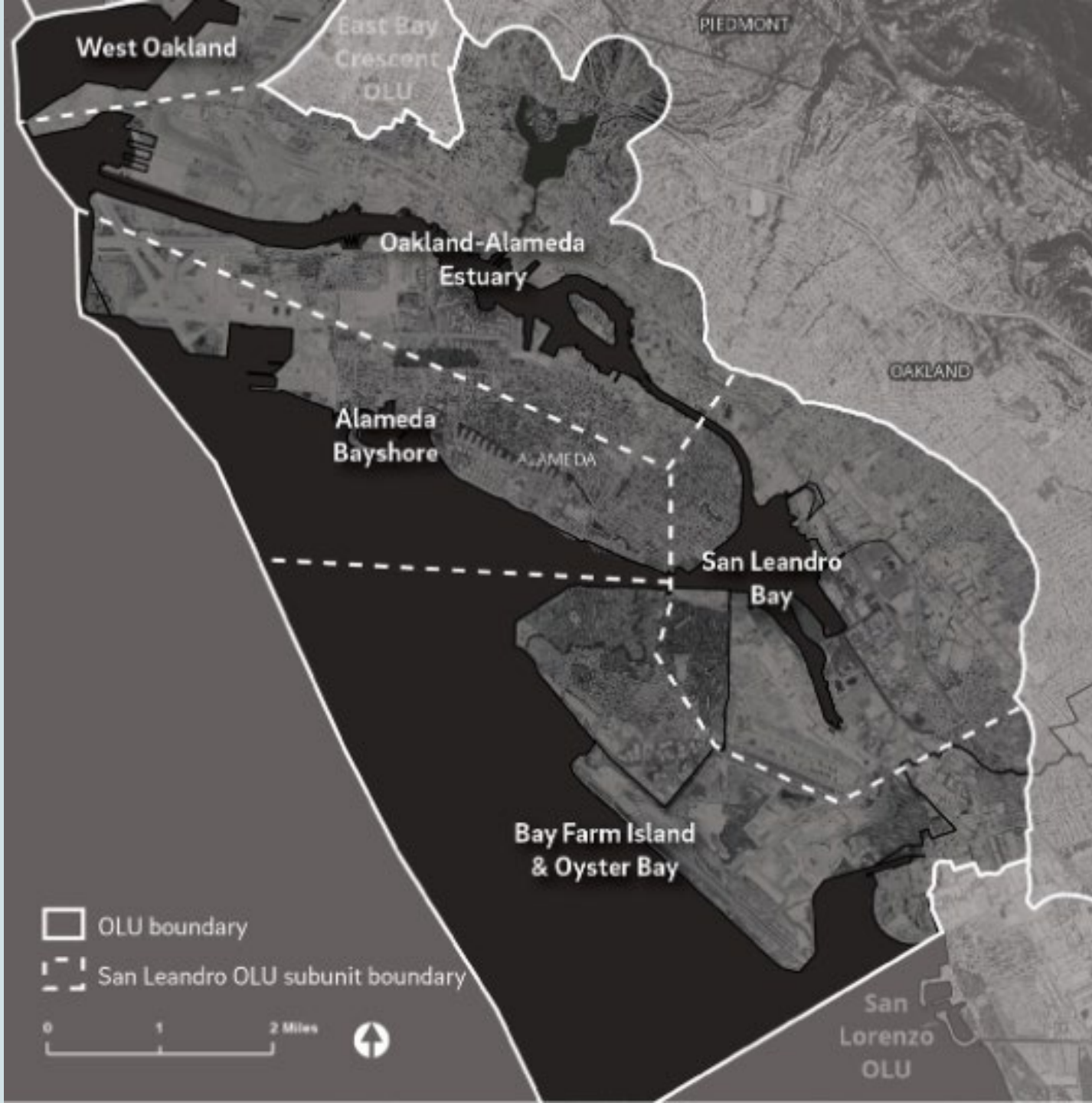
Working Group: Objectives

- **Prepare** for flooding, sea level and groundwater rise
- **Prioritize** habitat, nature-based solutions and green infrastructure
- **Consider** sediment management
- **Improve** recreational access and air quality
- **Provide** benefit to residents and vulnerable communities
- **Contribute** to economic opportunities
- **Advocate** for training and skill development for underserved communities
- **Serve** as example on sub-regional adaptation

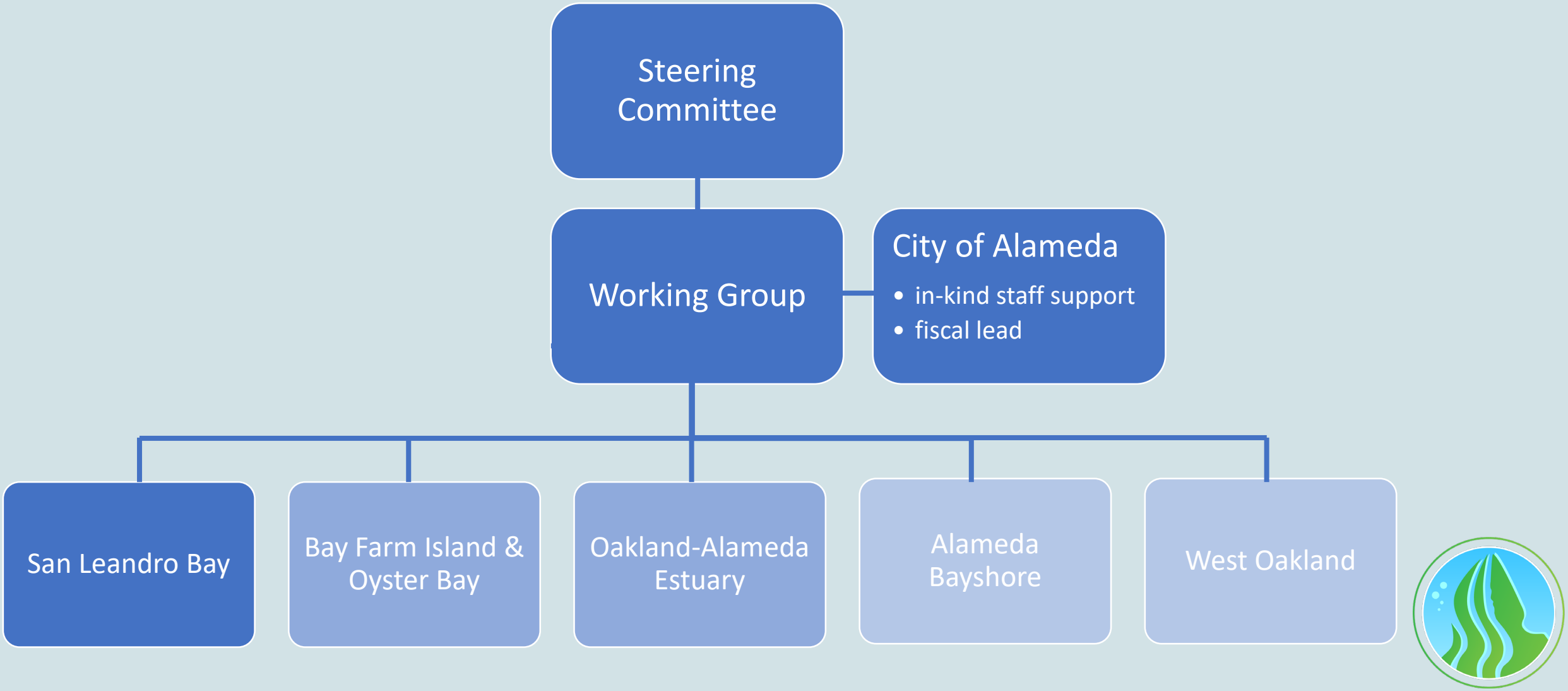


Working Group: Focus Areas

- **West Oakland** – wave exposed with seawalls, quays and subtidal habitat
- **Oakland-Alameda Estuary** – highly urbanized dominated by seawalls
- **San Leandro Bay** – small embayment protected from wave action, patches of marsh habitat and wide mudflats
- **Alameda Bayshore** – wave-exposed with beaches
- **Bay Farm Island & Oyster Bay** – high wave action surrounded by deep subtidal habitat



Working Group: Organizational Structure



Working Group: Steering Committee

- Caltrans
- City of Alameda
- City of Oakland
- Community Action for a Sustainable Alameda
- East Bay Regional Park District
- Greenbelt Alliance
- Hood Planner/East Oakland Neighborhood Initiative
- Port of Oakland/Oakland International Airport
- San Francisco Bay Regional Water Quality Control Board
- Sogorea Te' Land Trust
- West Oakland Environmental Indicators Project

June 2021
First Working Group Meeting

December 2021
Formed San Leandro Bay Subarea Working Group

May 2022
MLK Jr. Shoreline Fieldtrip

September 2022
Oakland Airport Field Trip

June 2023
Awarded contracts to Community Partners

Late 2023
Projects kick-off

2021

2022

2023

December 2021
Adopted logo

February 2022
Formed Steering Committee

September 2022
Adopted Charter

Awarded grant funds for Long-term Adaptation Plan, Oakland-Alameda Estuary Adaptation Project, Bay Farm Adaptation Project

September 2023
Request Alameda City Council approval of consultants

San Leandro Bay
Oakland-Alameda Estuary
Adaptation Working Group

Learn more: www.alamedaca.gov/AdaptationWorkingGroup

Community Partners

- **Role**: Lead community engagement process for three funded adaptation projects
- **Budget**: $323,000
- **Selected** by Steering Committee:
  - Greenbelt Alliance (with REAP Climate Center, Hood Planning Group, Ninth Root, Sogorea Té Land Trust)
  - Community Action for a Sustainable Alameda (CASA)

GREENBELT ALLIANCE

HOOD PLANNING GROUP

Ninth Root

CASA
Community Action for a Sustainable Alameda

SOGOREA TE' LAND TRUST
LED BY URBAN INDIGENOUS WOMEN

REAP CLIMATE CENTER

Sogorea Te' Land Trust

Sogorea Te' Land Trust is an urban Indigenous women-led land trust based in the San Francisco Bay Area that facilitates the return of Indigenous land to Indigenous people. Sogorea Te' is centered in Huchiun, the ancestral homeland of the Confederated Villages of Lisjan, now known as the East Bay.

Through the practices of rematriation, cultural revitalization, and land restoration, Sogorea Te' calls on Native and non-native peoples to heal and transform the legacies of colonization, genocide, and patriarchy and to do the work our ancestors and future generations are calling us to do.

Rematriate: to restore a people to their rightful place in sacred relationship with their ancestral land.

SOGOREA TE LAND TRUST
Led by Urban Indigenous Women

Greenbelt Alliance educates, advocates, and collaborates to ensure the Bay Area's lands and communities are resilient to a changing climate.

Zoe Siegel
Sr Director of Climate Resilience

Victor Flores
Resilience Manager

Tamila “Shy” Walker
Program Director

Ninth Root
connects people to marshes and shorelines through restored, culturally relevant, climate adaptive, spiritual and mental wellness oriented sanctuaries that create thriving habitats for wildlife, and resilient, healing, re-connective space for people.

ninthroot510@gmail.com

Hood Planning Group is an urban planning consultancy that aims to inspire and empower Bay Area ‘hoods’ to reclaim their built environment through community-centered environmental and mobility projects, ‘hood activations, and multi-stakeholder collaboration on policy.

We envision vibrant and strong ‘hoods’ across the Bay Area that have physical, economical and recreational access to healthy shorelines, parks and green spaces, where everyone can reconnect to nature in meaningful ways.

Keta Price, Principal Planner
eohoodplanner@gmail.com

REAP envisions a world where regenerative climate change mitigation is accessible, fun, and equitable for all.

REAP supports equity-driven systems change through scalable workforce development in nature-based solutions.

Our Alameda Campus is a hub for nature-based service providers to work across the San Francisco Bay Area within the urban to urban-rural-interface (URI).

We are part of the process of transitioning over 100 million people into nature-based systems work, and restoring nature along the way.

REAP CLIMATE CENTER

CASA

Community Action for a Sustainable Alameda

CASA is a community-wide coalition dedicated to raising awareness, mobilizing community action, and facilitating the implementation of programs to achieve the goal of the Climate Action and Resiliency Plan (to reduce Alameda's carbon emissions to 50% below 2005 levels by the year 2030) and to increase community sustainability and well-being.
casa-alameda.org

- **Climate Change and Sea Level Rise Adaptation**
- ***Electrification**
- **Transportation**
- **Zero Waste**
- **Climate Education**
- **San Francisco Bay Hope Spot**
- **CASA Youth**
- **Green Schools**
- **Resiliency Hubs**

West Oakland Environmental Indicators Project

West Oakland Environmental Indicators Project

6/21/23

Mission

The West Oakland Environmental Indicators Project is a resident-led, community-based environmental justice organization dedicated to achieving healthy homes, healthy jobs and healthy neighborhoods for all who live, work, learn and play in West Oakland, California.

Our mission is to build grassroots capacity to provide local leadership for positive change. Our work aids residents in understanding the political, social, and natural forces that impact their lives. We give impacted residents the tools to participate in these processes and to drive change from the bottom.

West Oakland Basics

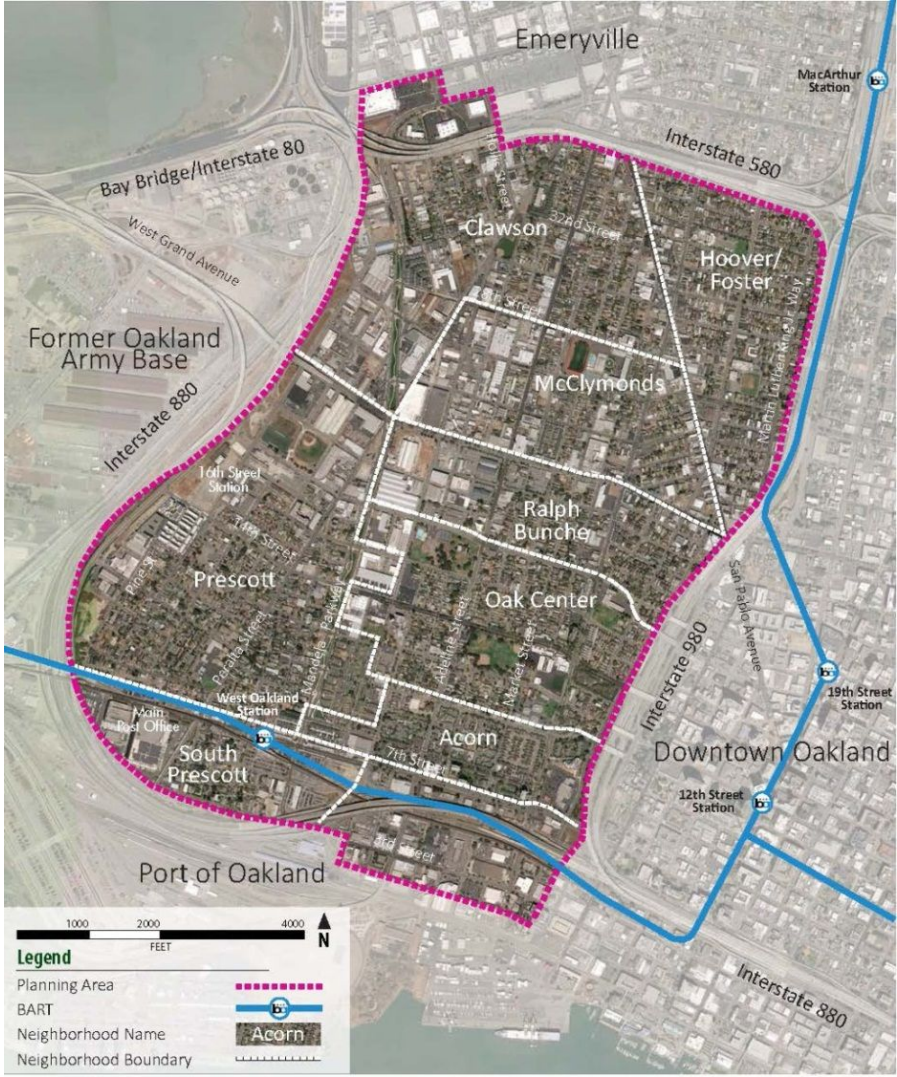
Area: 6.497 square miles

Population: 45,074

- West Oakland: 6,937 people per square mile
- Oakland: 7,725 people per square mile

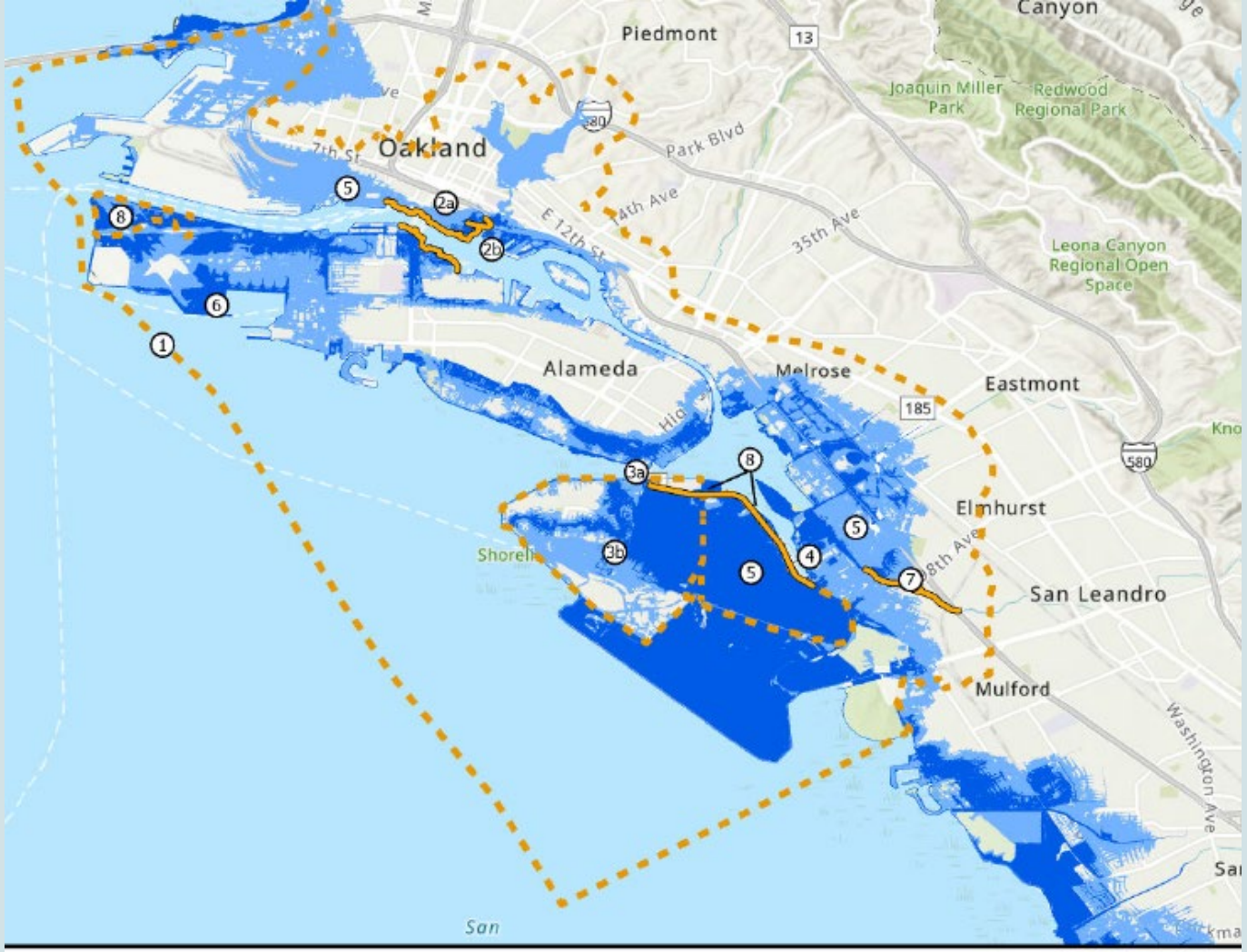
Neighborhoods

- Prescott / South Prescott
- Clawson
- Hoover/Foster
- McClymonds
- Ralph Bunche
- Oak Center
- Acorn




It began
St. Mary's Center
St. Mary's Center


PEOPLE POWER
WE RISE



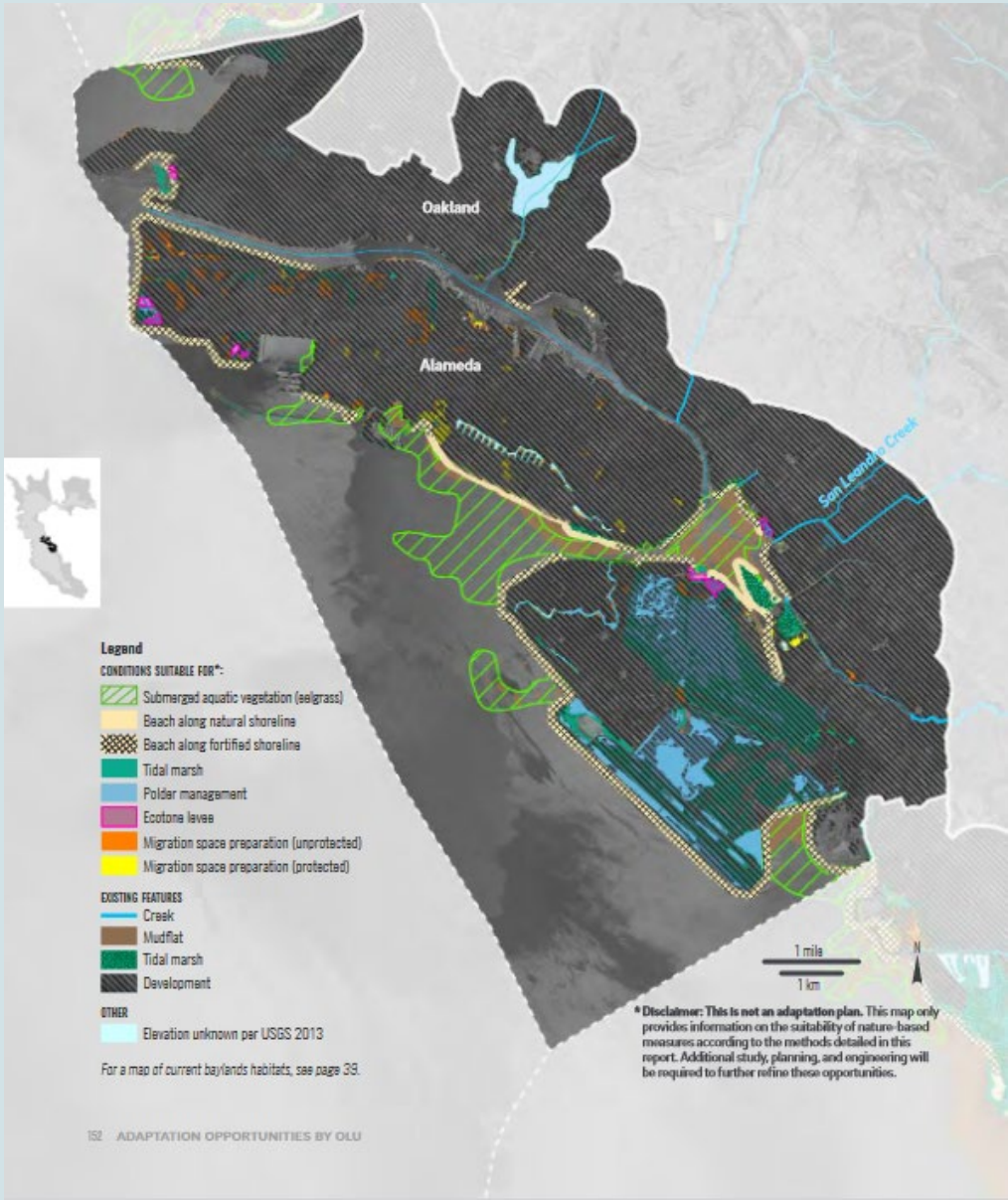
48" Sea Level Rise
84" Sea Level Rise
Project Line
Project Area

Sea Level Rise Adaptation Projects

1. Sub-regional Long-term Adaptation Plan
2a. Oakland-Alameda Estuary Adaptation Project
2b. Estuary Park Renovation and Expansion Project
3a. Bay Farm Island Adaptation Project (short-term)
3b. Bay Farm Island Adaptation Project (long-term)
4. Caltrans Doolittle Drive/SR-61 Sea Level Rise Adaptation
5. Port of Oakland Vulnerability Assessment and Plan
6. De-Pave Park Master Plan
7. San Leandro Creek Trail Restoration Project
8. East Bay Regional Park District SF Bay Trail Gap Closure

Long-term Adaptation Plan

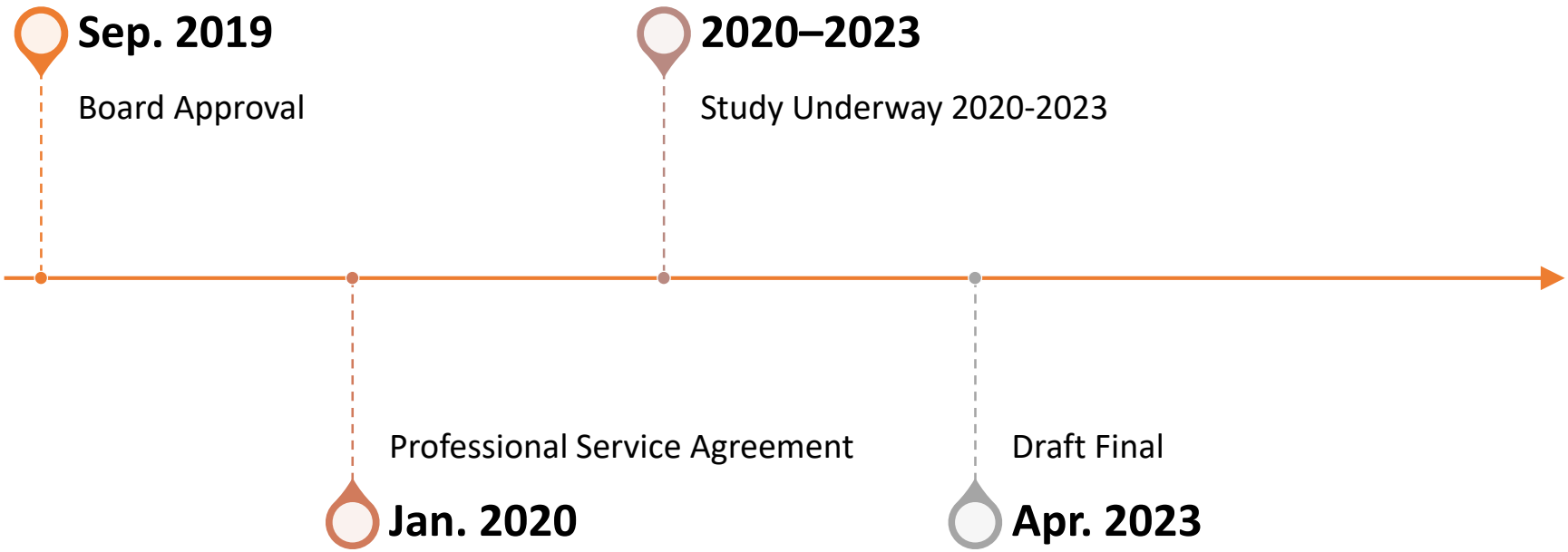
- **Purpose**: Identify actions needed over time as the shoreline changes to protect communities
- **Tasks**:
  - Agency coordination
    - Sub-regional agencies
    - BCDC's Regional Shoreline Adaptation Plan
  - Governance structure analysis and community engagement
  - Draft and final long-term plan
- **Budget**: $840,000 ($300,000 SFEP & $540,000 NFWF)



North Field Vulnerability Study – Project Briefing

6/20/2023

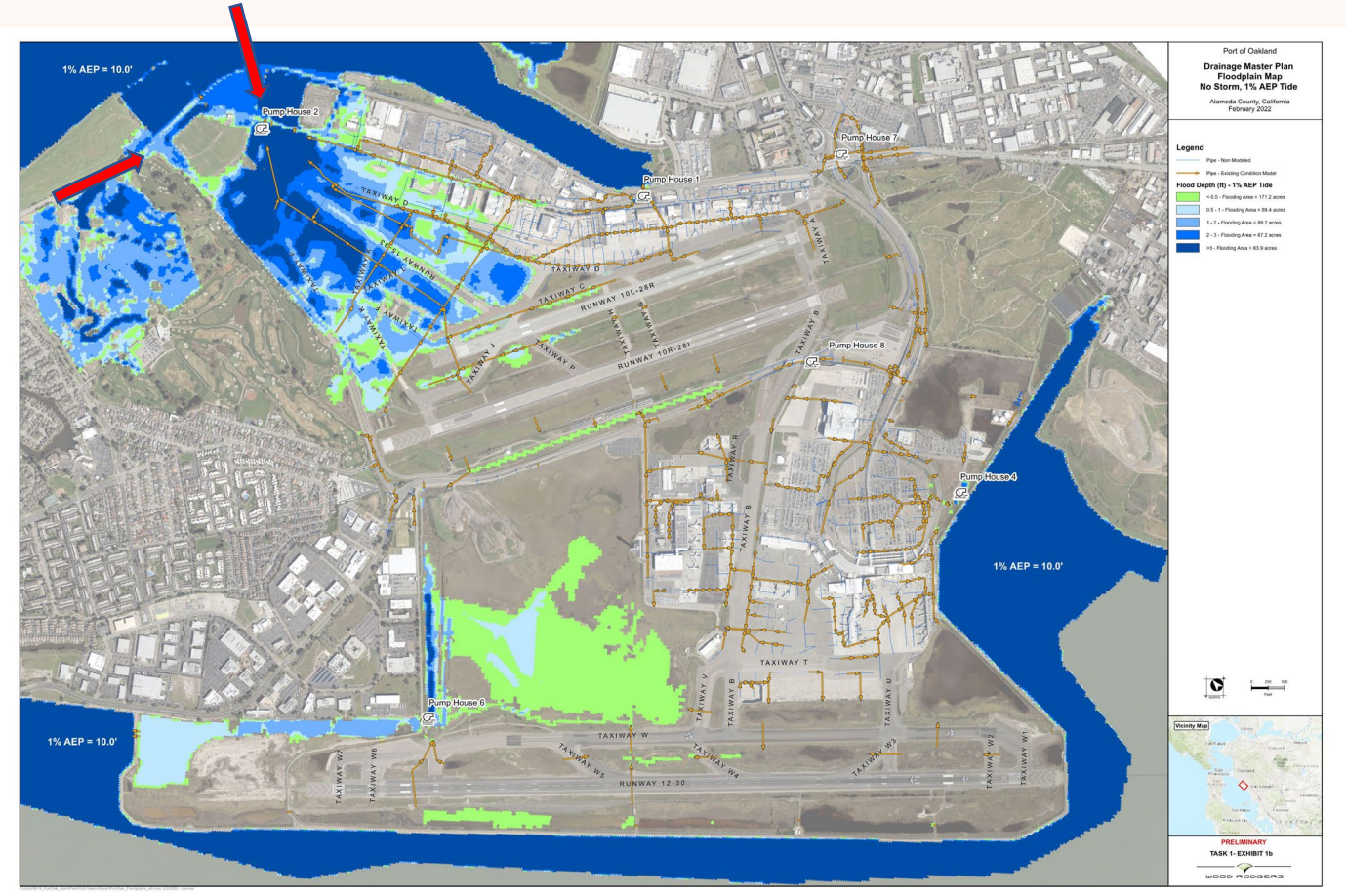
Project Schedule



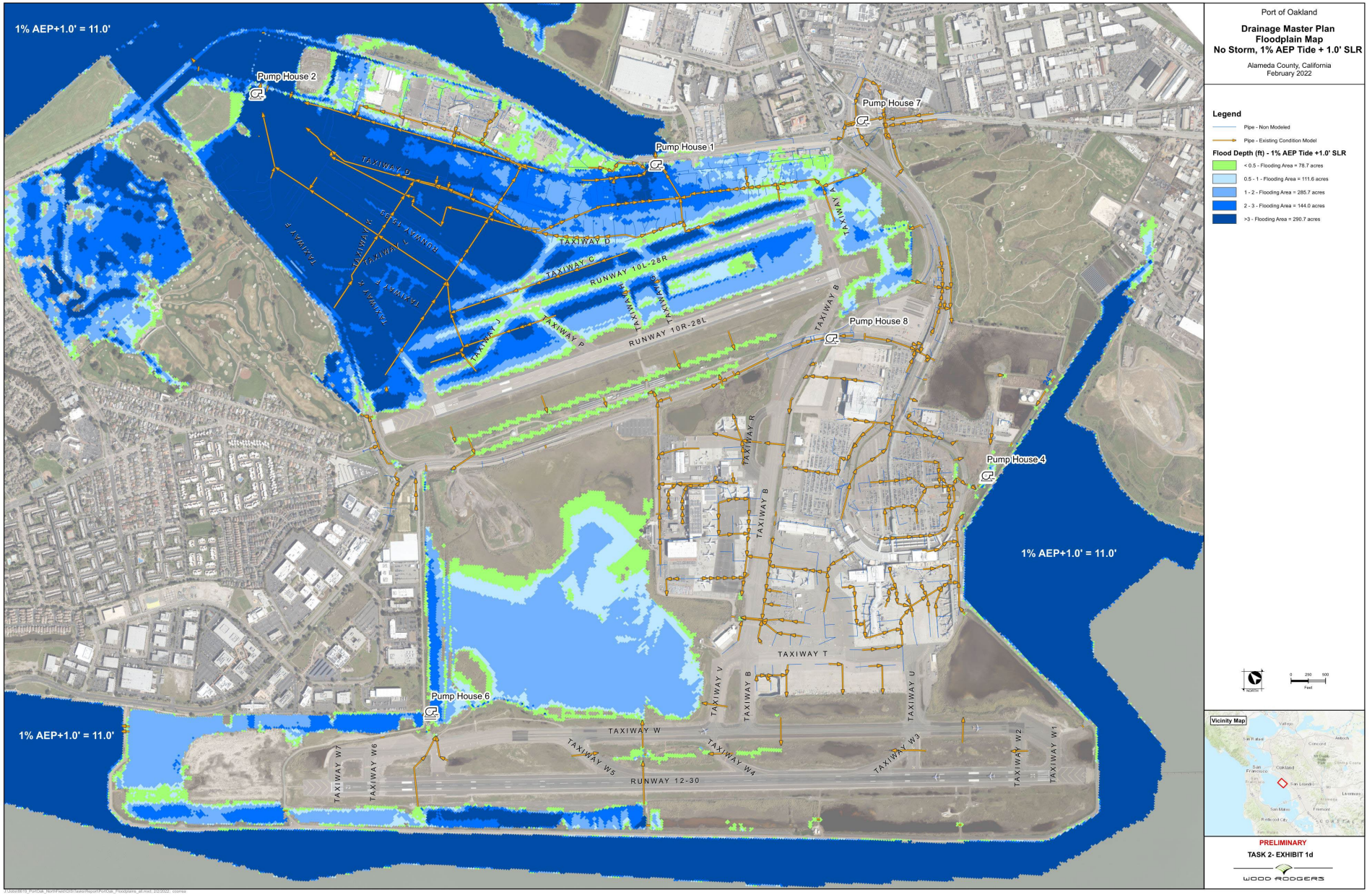
Scope of Study

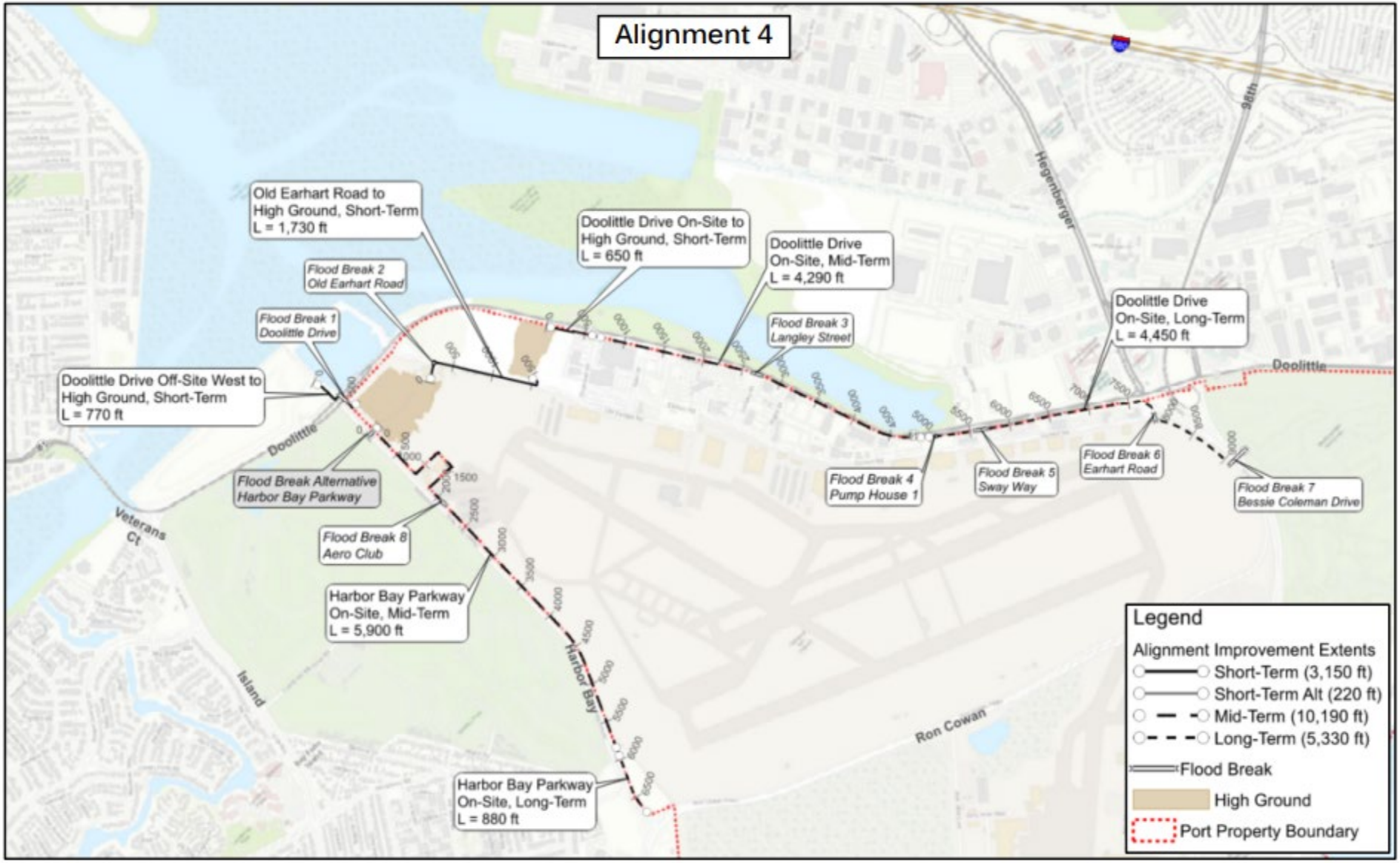
- To identify areas where the North Field is vulnerable to tidal flooding.
- To analyze potential impacts from two perspectives:
  - FEMA (Federal Emergency Management Agency) or Static Analysis– Any tide that is higher than the low point in the area will flood everything past that point
  - Dynamic Analysis (2-D) – High tides are of limited duration, and it takes time for water to flood a large area.
- To consider (SLR) Sea Level Rise and future flood vulnerability
- To develop flood mitigation strategies and preliminary costs.

Dynamic Analysis Flooding - 100-Year Tide



Dynamic Analysis Flooding – 100 Year Tide + 1-Foot of Sea Level Rise

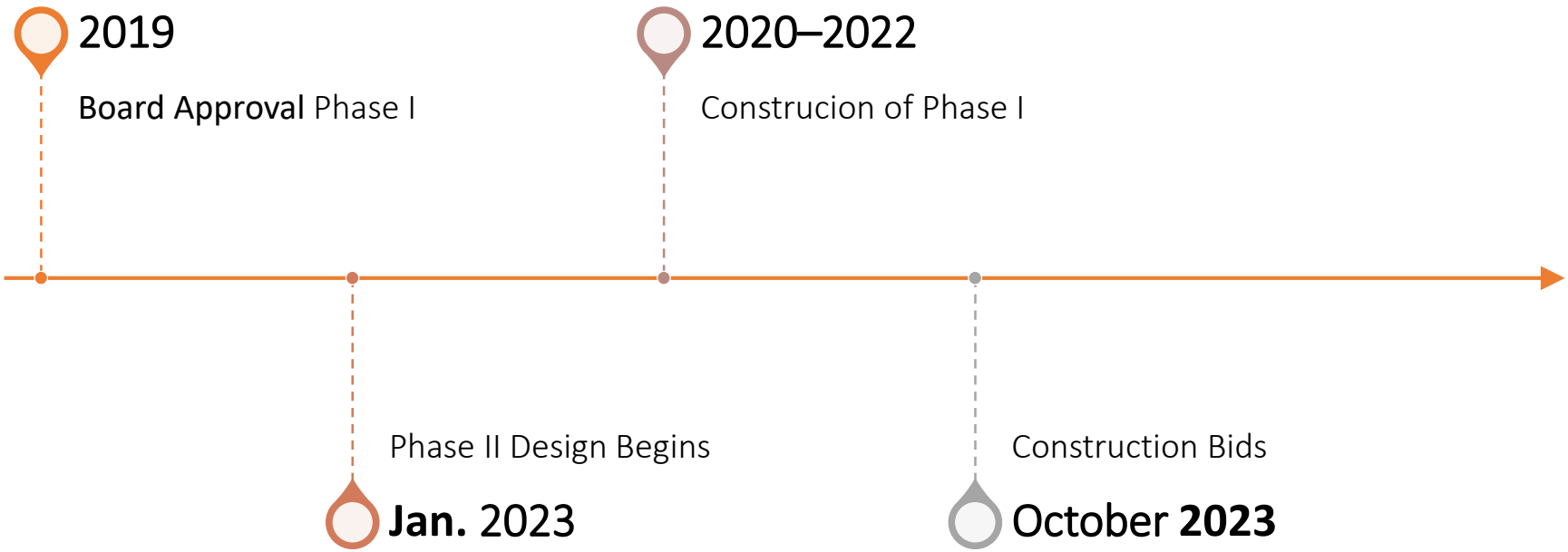



Alignment 4
Old Earhart Road to High Ground, Short-Term L = 1,730 ft
Doolittle Drive On-Site to High Ground, Short-Term L = 650 ft
Doolittle Drive On-Site, Mid-Term L = 4,290 ft
Doolittle Drive On-Site, Long-Term L = 4,450 ft
Doolittle Drive Off-Site West to High Ground, Short-Term L = 770 ft
Flood Break 1 Doolittle Drive
Flood Break 2 Old Earhart Road
Flood Break 3 Langley Street
Flood Break 4 Pump House 1
Flood Break 5 Sway Way
Flood Break 6 Earhart Road
Flood Break 7 Bessie Coleman Drive
Flood Break Alternative Harbor Bay Parkway
Flood Break 8 Aero Club
Harbor Bay Parkway On-Site, Mid-Term L = 5,900 ft
Harbor Bay Parkway On-Site, Long-Term L = 880 ft
Doolittle
Veterans Ct
Island
Harbor Bay
Ron Cowan
Hegenberger
98th
Legend
Alignment Improvement Extents
Short-Term (3,150 ft)
Short-Term Alt (220 ft)
Mid-Term (10,190 ft)
Long-Term (5,330 ft)
Flood Break
High Ground
Port Property Boundary

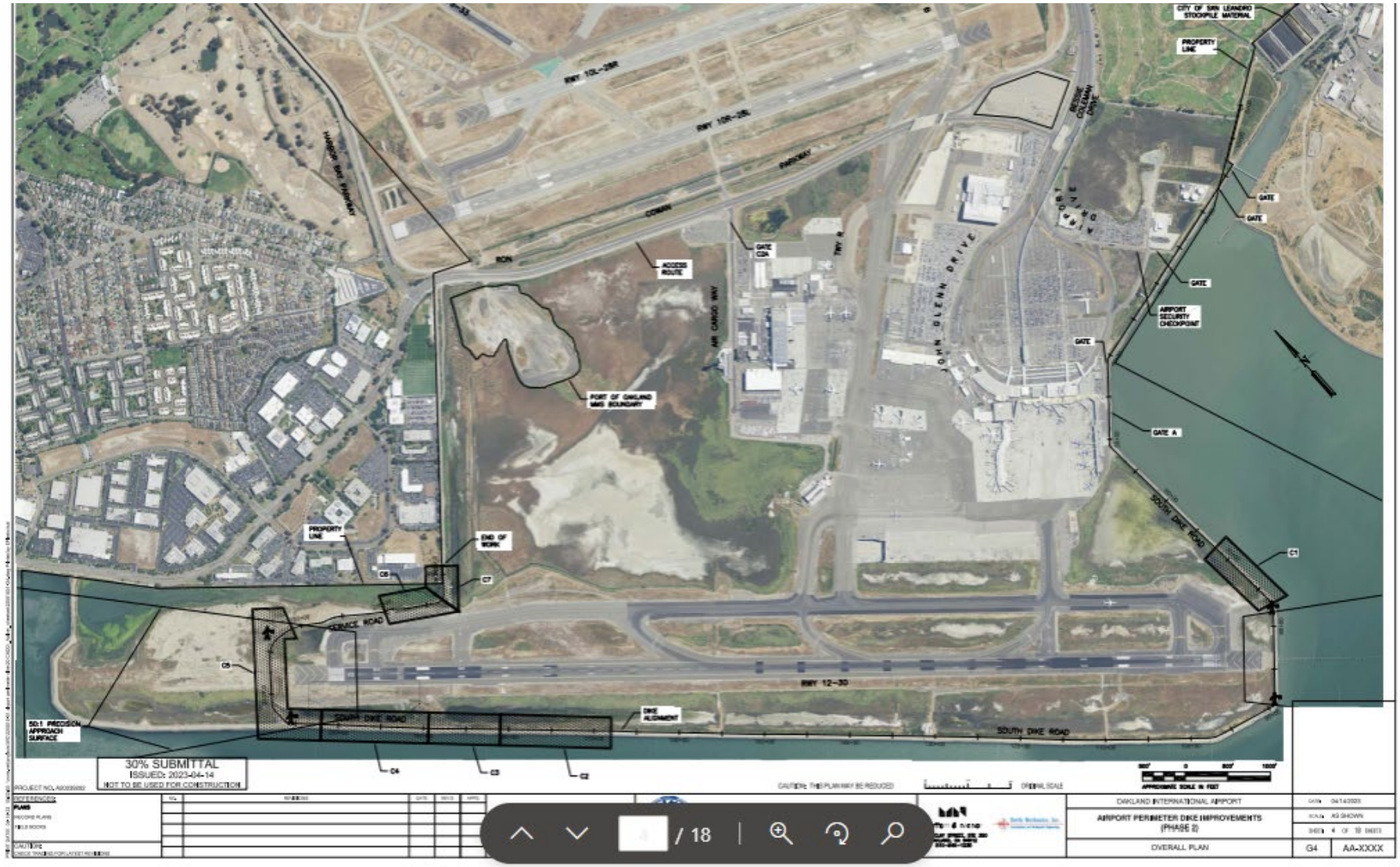
Airport Perimeter Dike Phase II – Project Briefing

6/20/2023

Project Schedule – APD Phase II Seismic

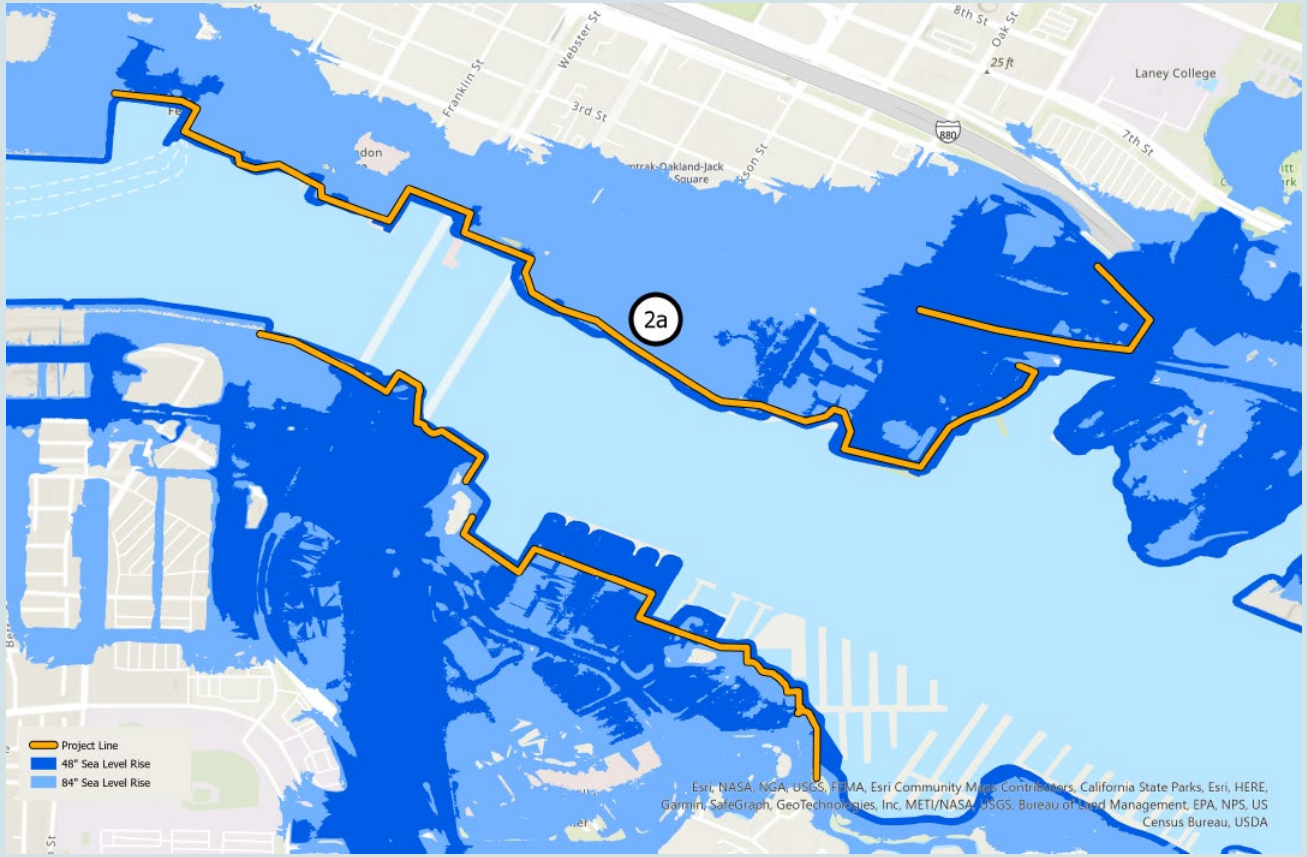


Seismic Improvement Zones



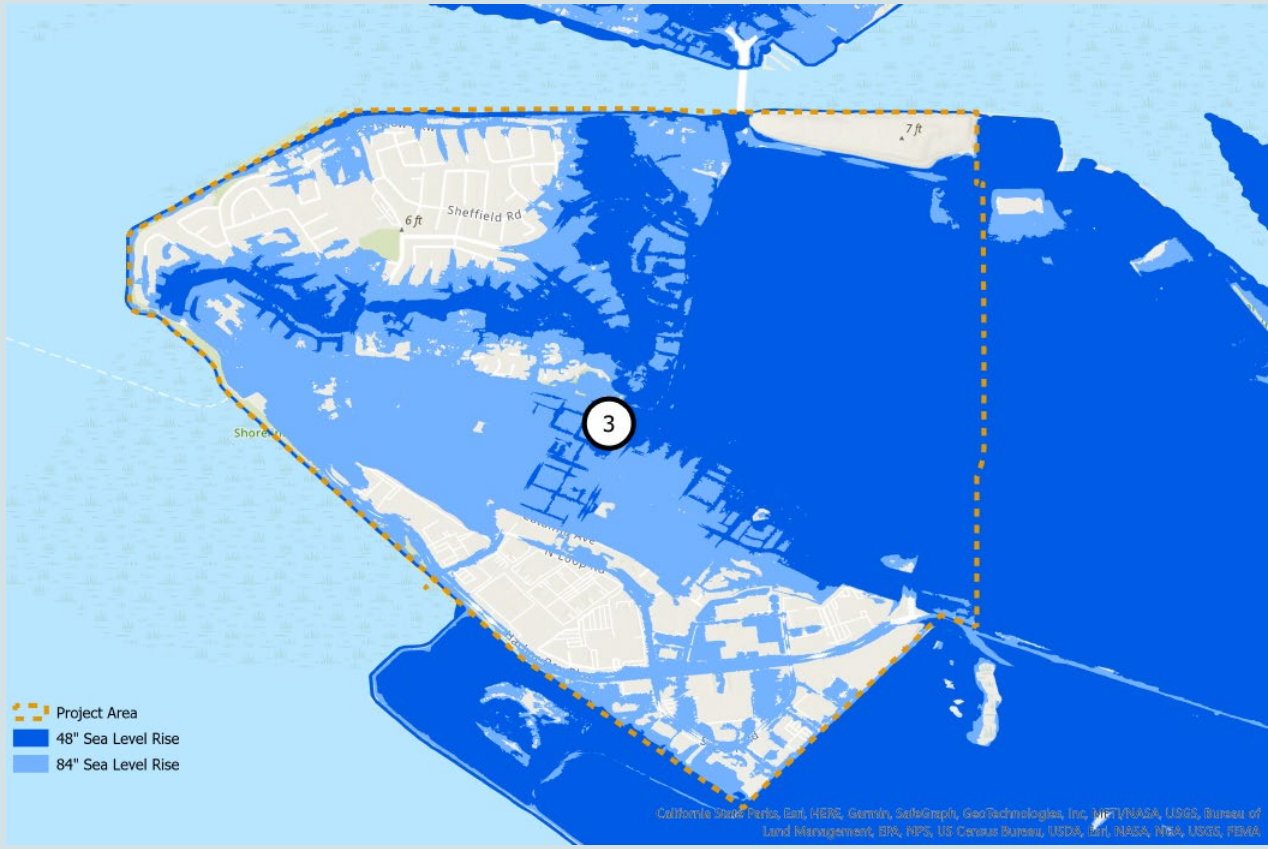
Oakland-Alameda Estuary Adaptation Project

- **Purpose**: Develop adaptation design concept to protect downtown Oakland/Jack London Square and Alameda's northern shoreline/Posey-Webster Tubes
- **Tasks**:
  - Structural/nature-based alternatives
  - Public outreach
  - Draft and final concept (10% design) with cost estimates
- **Budget**: $500,000 ($425,000 Caltrans & $75,000 Alameda)



Bay Farm Island Adaptation Project

- **Purpose**: Develop long-term plan for entire Bay Farm Island and designs for short-term fixes at northern waterfront low spots.
- **Tasks**:
  - Feasibility alternatives and design
  - Public outreach
  - Northern waterfront design
  - Coordinate with permitting agencies
  - Draft and final long-term concept
- **Budget**: $2 million ($1.5 million FEMA & $530,000 Alameda)



Doolittle Drive Sea Level Rise (SLR) Adaptation and Bay Trail Gap Closure (1Y130)

Caltrans is developing a Project Study Report – Project Development Support (PSR-PDS) for the SLR Adaptation and Bay Trail Gap Closure of Doolittle Drive

- **Purpose** – The purpose of this study is to present alternatives to address the impacts of SLR/flooding on Route 61 and provide necessary complete streets improvements to close two transportation gaps along Doolittle Drive
- **Need** – Route 61 is vulnerable to being permanently inundated due to SLR. Doolittle Drive has several low elevation points along the road, which risk overtopping and may cause widespread flooding. In addition, the current bicycle and pedestrian facilities on Doolittle Drive leave users feeling unsafe within substandard infrastructure, narrow shoulders, and adjacent fast-moving traffic

Doolittle Drive Sea Level Rise (SLR) Adaptation and Bay Trail Gap Closure (1Y130)

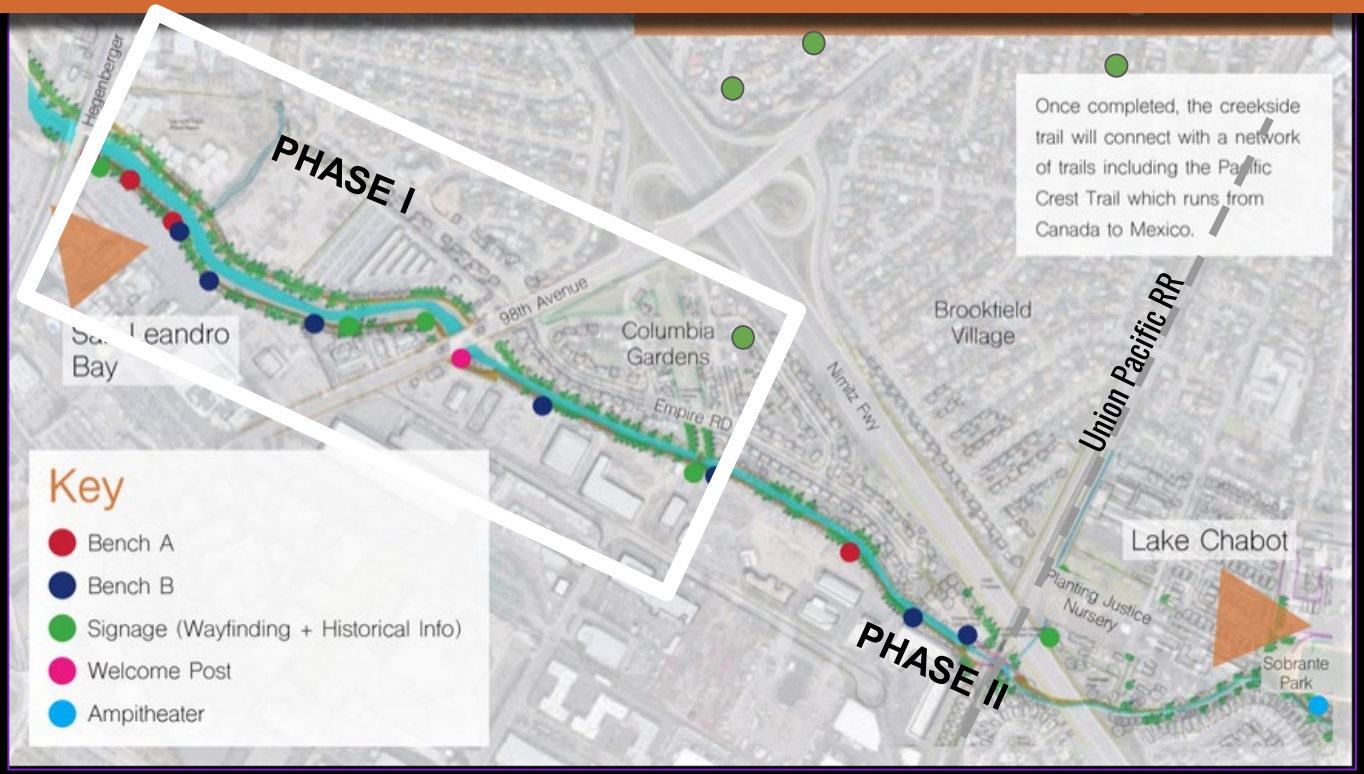
SEA LEVEL RISE ADAPTATION

SWAN WAY TO BAY FARM ISLAND BRIDGE
POST MILE: 16.475/18.6

TRANSPORTATION GAP CLOSURE IMPROVEMENTS
SEGMENT 1: AIRPORT ACCESS ROAD TO SWAN WAY
POSTMILE (SEGMENT 1): 15.925/16.47

SEGMENT 2: MLK SHORELINE CENTER TO HARBOR BAY PKWY
POST MILE (SEGMENT 2): 17.442/18.018

San Leandro (Lisjan) Creek Greenway 2024 Completi



.8 Mile
Class 1
Bike/Ped
Trail &
Native
Vegetation

$2.1 Million Ca Natural Resources Agency Grant to Alameda County Flood Control and Water Conservation District

INTERPRETIVE SIGN BOARDS

- Connects the community to Martin Luther King Jr Shoreline
- Community Designed natural and Social History Signs & App

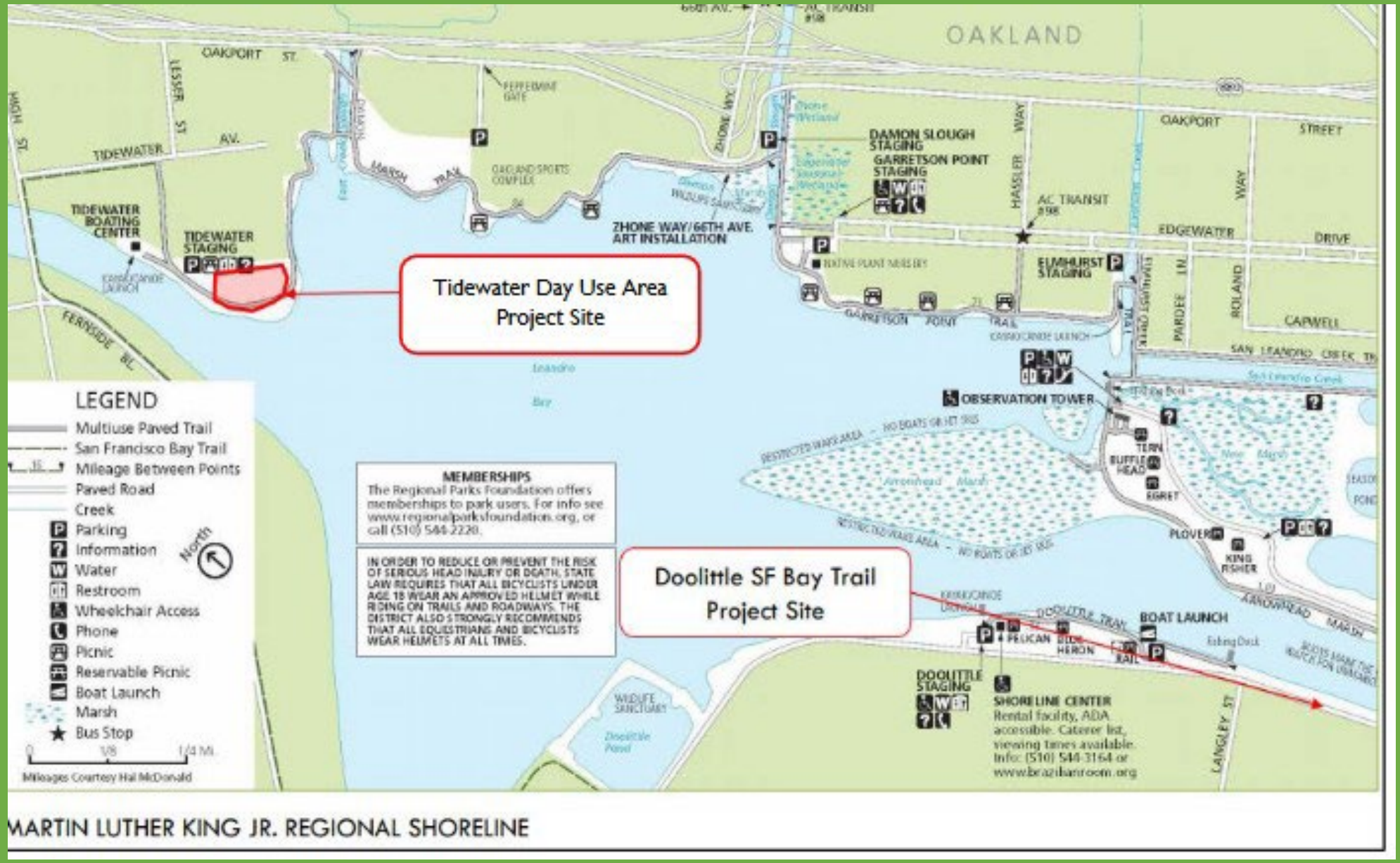
browerdellumsinstitute.org

Adaptation Working Group

East Bay Regional Park District--June 21, 2023

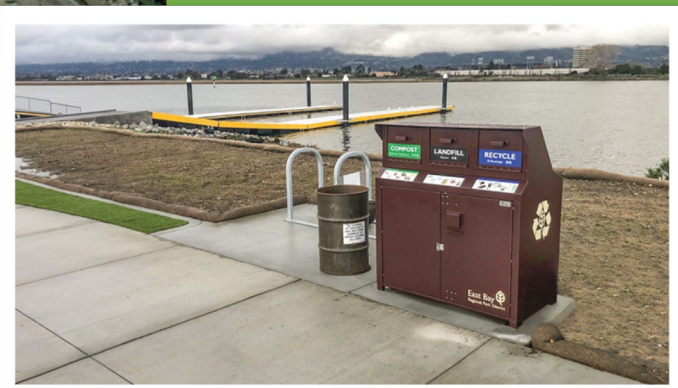
Devan Reiff, Principal Planner

East Bay Regional Park District



Bay Trail Connection and MLK Shoreline Improvements

East Bay Regional Park District



- Collaboration with Caltrans
- Budget: $11m
- Grand opening 2023

Doolittle Drive Bay Trail & Shoreline Improvements

East Bay Regional Park District

- Project Start 2025
- Project Completion 2026

East Bay Regional Park District

OAKLAND ESTUARY PARK RENOVATION + EXPANSION PROJECT

OAKLAND ALAMEDA WORKING GROUP SITE TOUR

06/21/2023

WRT

CITY OF OAKLAND

AGENDA

1. Introductions
2. City Vision
3. Estuary Park & the San Leandro OLU
4. SCC Grant to explore nature-based solutions and long-term SLR at JLAC

EXISTING CONDITIONS

Lake Merritt Context

Adjacent Land Uses

EXISTING CONDITIONS

West entry adjacent to Portobello apartments

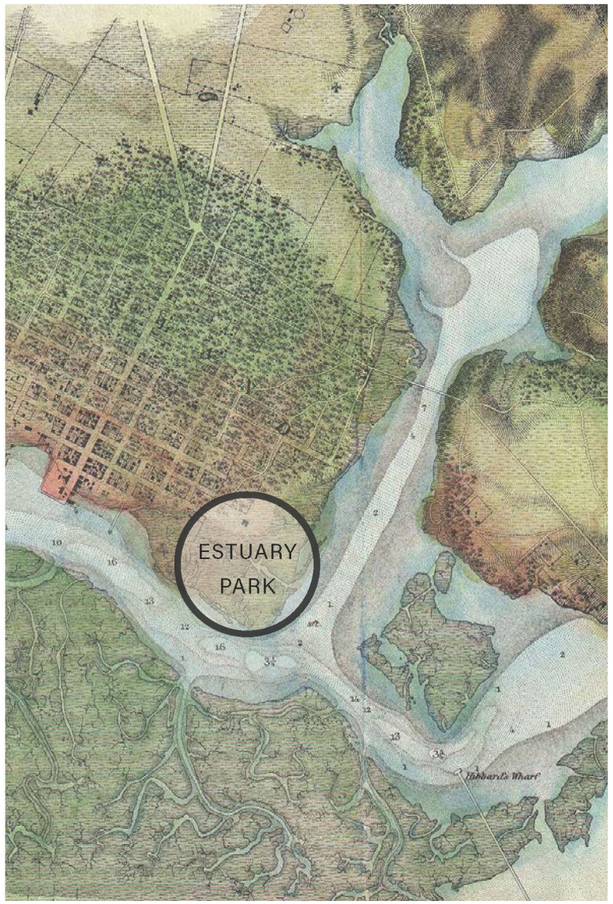
East Side South Shoreline and Pier

Tree allée path

Coastal shoreline rip-rap and piers

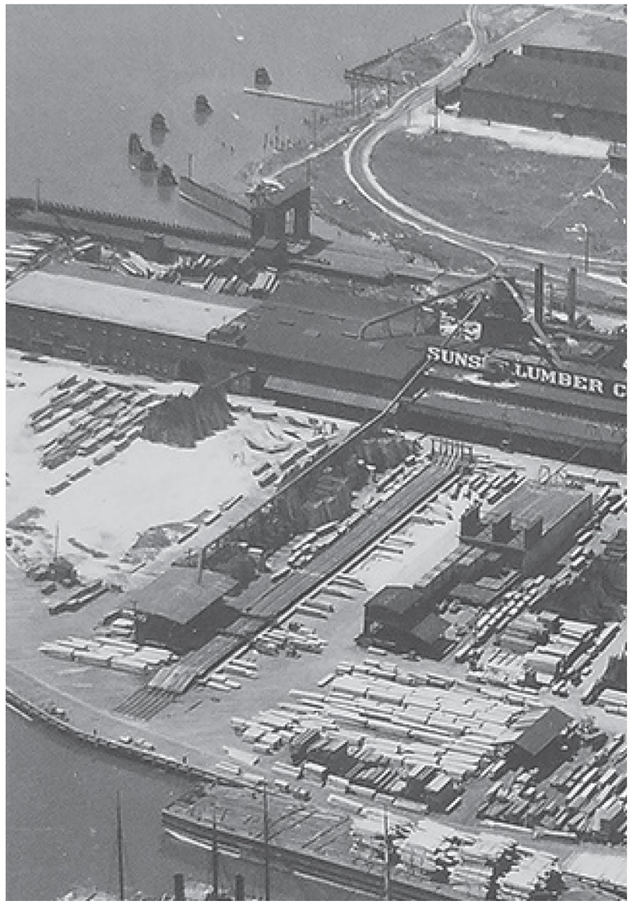
SITE HISTORY

Marshland



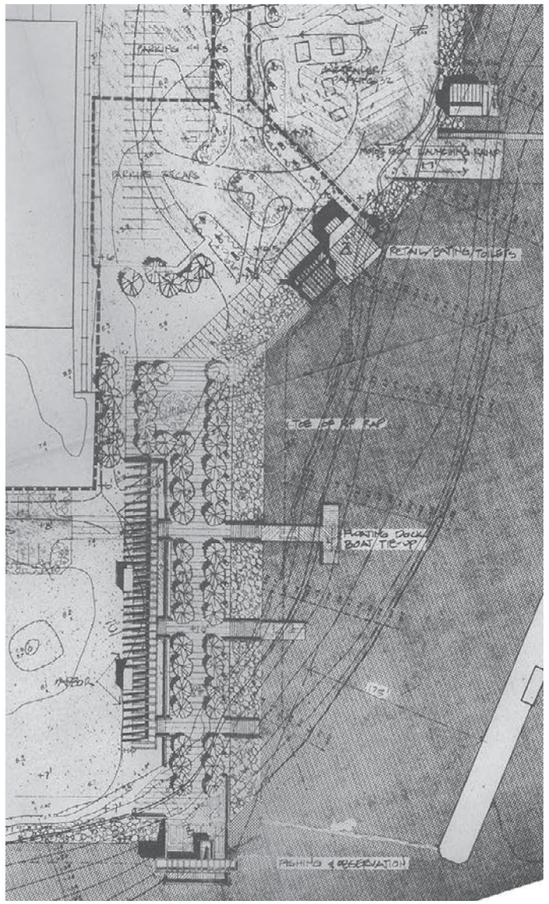
1857

Sunset Lumber



1929

Halprin Design



1976

Today's Park

2022

WRT

CITY OF OAKLAND

OAKLAND ESTUARY PARK

COMMUNITY VISION

OAKLAND ESTUARY PARK

BIRDS EYE VIEW OF SITE PLAN

WRT

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ESTUARY PARK & THE SAN LEANDRO OLU

HABITAT

INFRASTRUCTURE

PEOPLE AND PARKS

OLU BOUNDARY

WRT

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ESTUARY PARK & THE SAN LEANDRO OLU & LONG-TERM SLR

HABITAT

INFRASTRUCTURE

PEOPLE AND PARKS

OLU BOUNDARY

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CITY OF OAKLAND

SCC GRANT OPPORTUNITIES: Scope

Task 1 Project Management

Task 2 Augmented Shoreline Design Phase: Conceptual Design Review, Analysis, Design Modification, & Implementation Strategy

- Subtask 2.1 - Technical Studies
- Subtask 2.2 - Conceptual Design Criteria and Basis of Design Report
- Subtask 2.3 - Waterfront Recreation Adaptation Plan for the Jack London Aquatic Center
- Subtask 2.4 - City Department, Public, Tribal, Stakeholder and TAC Engagement

Task 3 Schematic Design (30% Design)

Task 4 CEQA Compliance

Task 5 Construction Documents

SCC GRANT OPPORTUNITIES: Habitat Explorations

E-concrete textured armoring

Subtidal habitat examples – Artificial reef balls

Coarse-grained beaches

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OAKLAND ESTUARY PARK

SCC GRANT OPPORTUNITIES: Long-term SLR Planning at JLAC

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SCC GRANT OPPORTUNITIES: Long-term SLR Planning at JLAC

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SCC GRANT OPPORTUNITIES: Long-term SLR Planning at JLAC

OAKLAND ESTUARY PARK

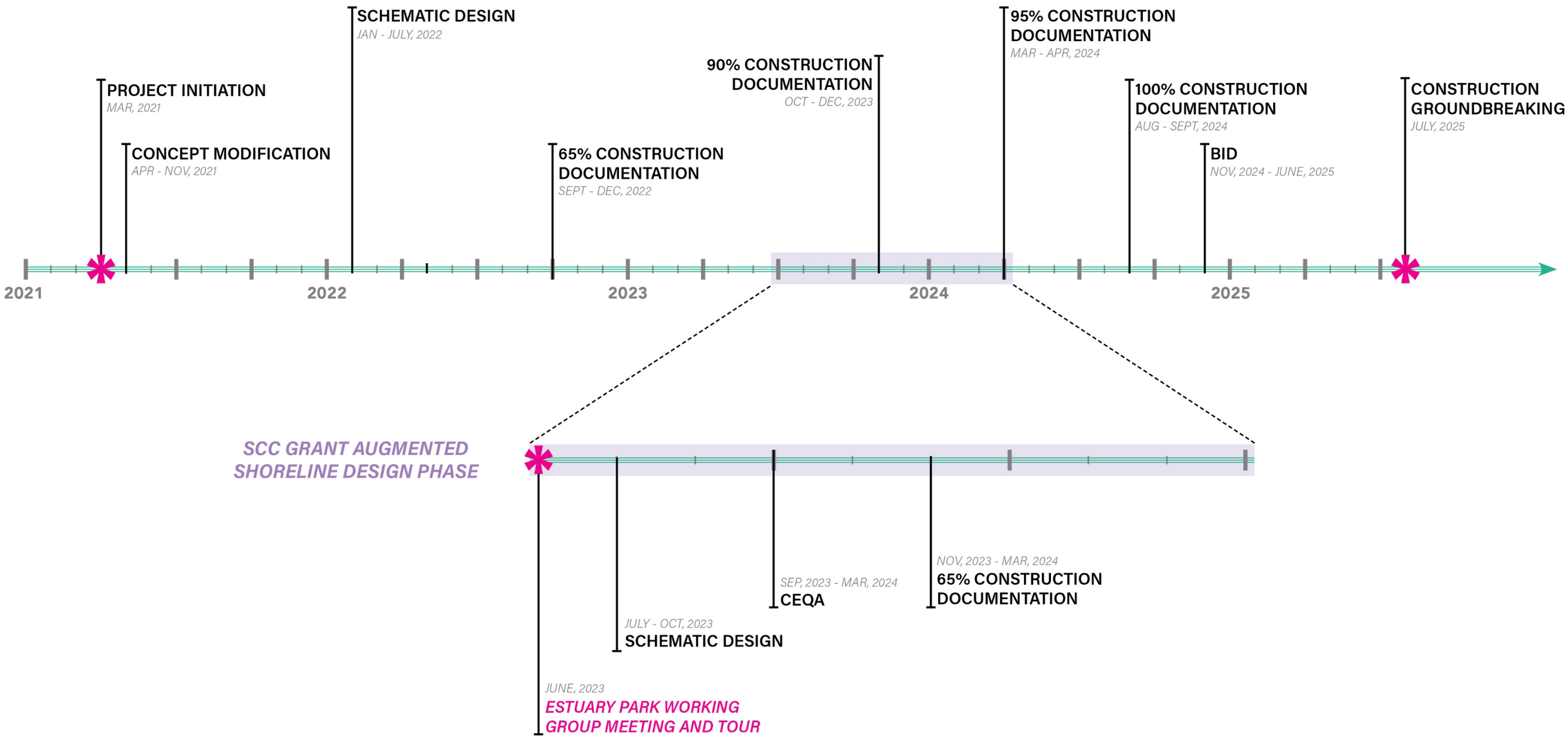
Renderings

OAKLAND ESTUARY PARK

Renderings

OAKLAND ESTUARY PARK

PROJECT SCHEDULE



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