

OAAC Adapt Projects

City of Alameda Transportation Commission

November 2024





Oakland Alameda Adaptation Committee (OAAC):

A coalition of shoreline communities, agencies and stakeholders working to coordinate the Oakland Alameda subregion flood and adaptation projects to protect and restore water quality, habitat, equity, transportation and community resilience.



OAAC: Project Partners

Agencies



Community Partners



OAAC ADAPT Projects

- The **Subregional Adaptation Plan** is a long-term plan that details preliminary strategies and pathways for shoreline communities to take as the climate and shorelines change over time
- The **Oakland Alameda Estuary Project** is a near-term sea level rise adaptation design concept to address increased coastal, stormwater, and groundwater flooding for up to two feet of sea level rise over the coming decades
- The **Bay Farm Island Adaptation Project** is a near-term sea level rise adaptation project to address two feet of sea level rise over the coming decades.



OAAC Project: Schedule



OAAC Project: Sea Level Rise Criteria

Near Term

2060 - 2080

35 to 50-year adaptation project lifespan

2' of sea level rise

Protect to elevation +14'

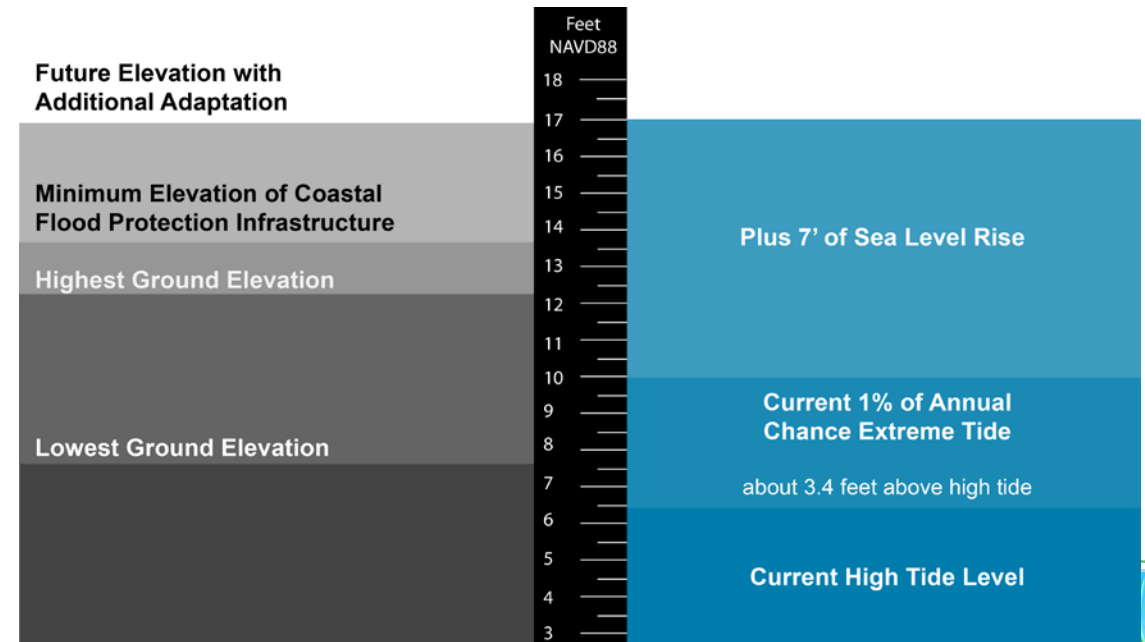
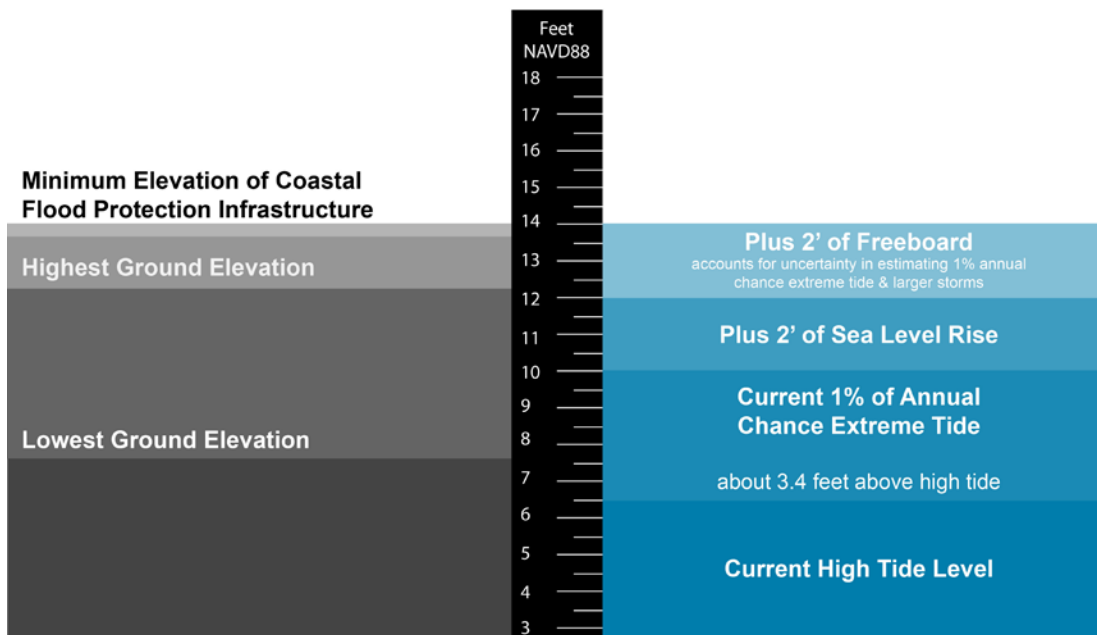
Long Term

2100+

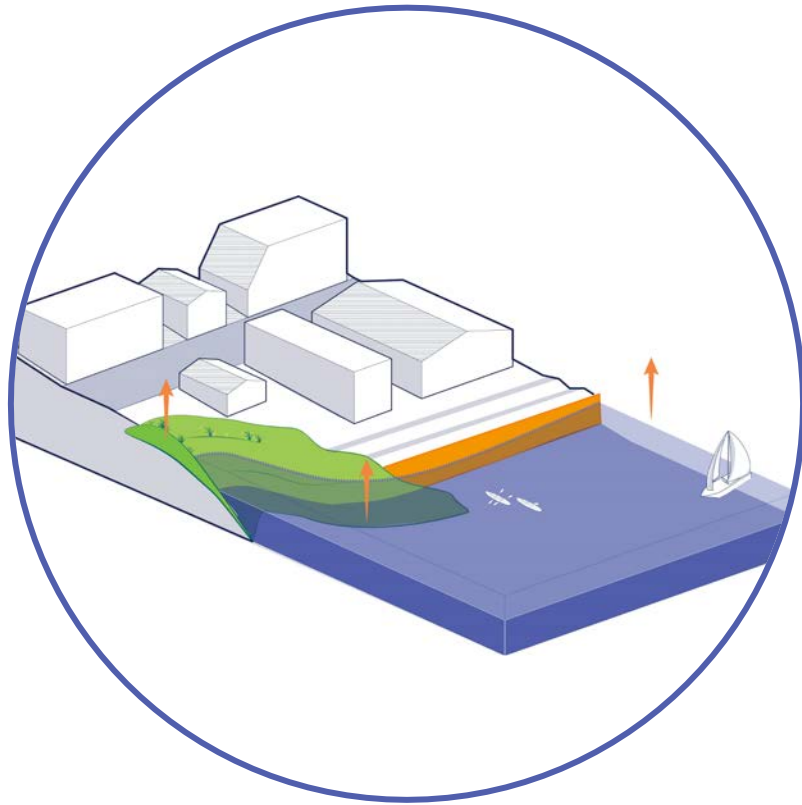
Build upon near term projects

3.5 - 7' of sea level rise

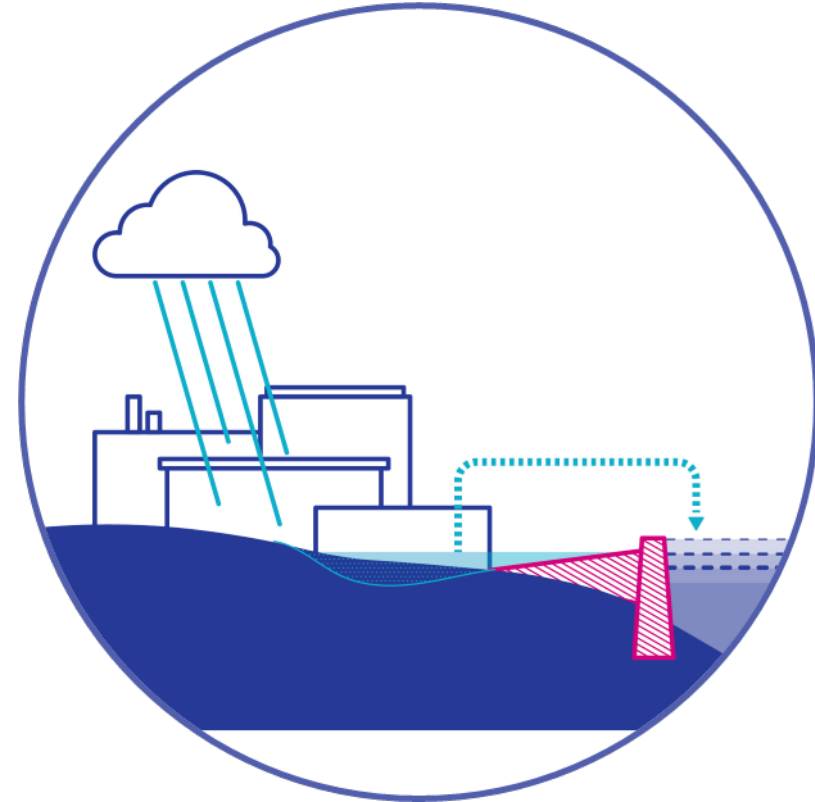
Protect to elevation +17'



OAAC Project: Combined Adaptation



Shoreline elevation to prevent coastal flooding from sea level rise and storm surges



Inland adaptation (green and grey infrastructure) to manage stormwater and groundwater



Seawall



Levee with Seawall and the Bay Trail



Levee and Waterfront Park



Waterfront Park with beach access and rocky intertidal habitat



Crane Cove Park, San Francisco



Stormwater green detention basin



Oakland-Alameda Estuary Near-term Adaptation Project

November 2024



Project Area:
Oakland-Alameda Estuary



Jack London Square

Bohol Circle

Oakmont

Barnhill Marina

Marina Village

Shoreline Park

The Landing

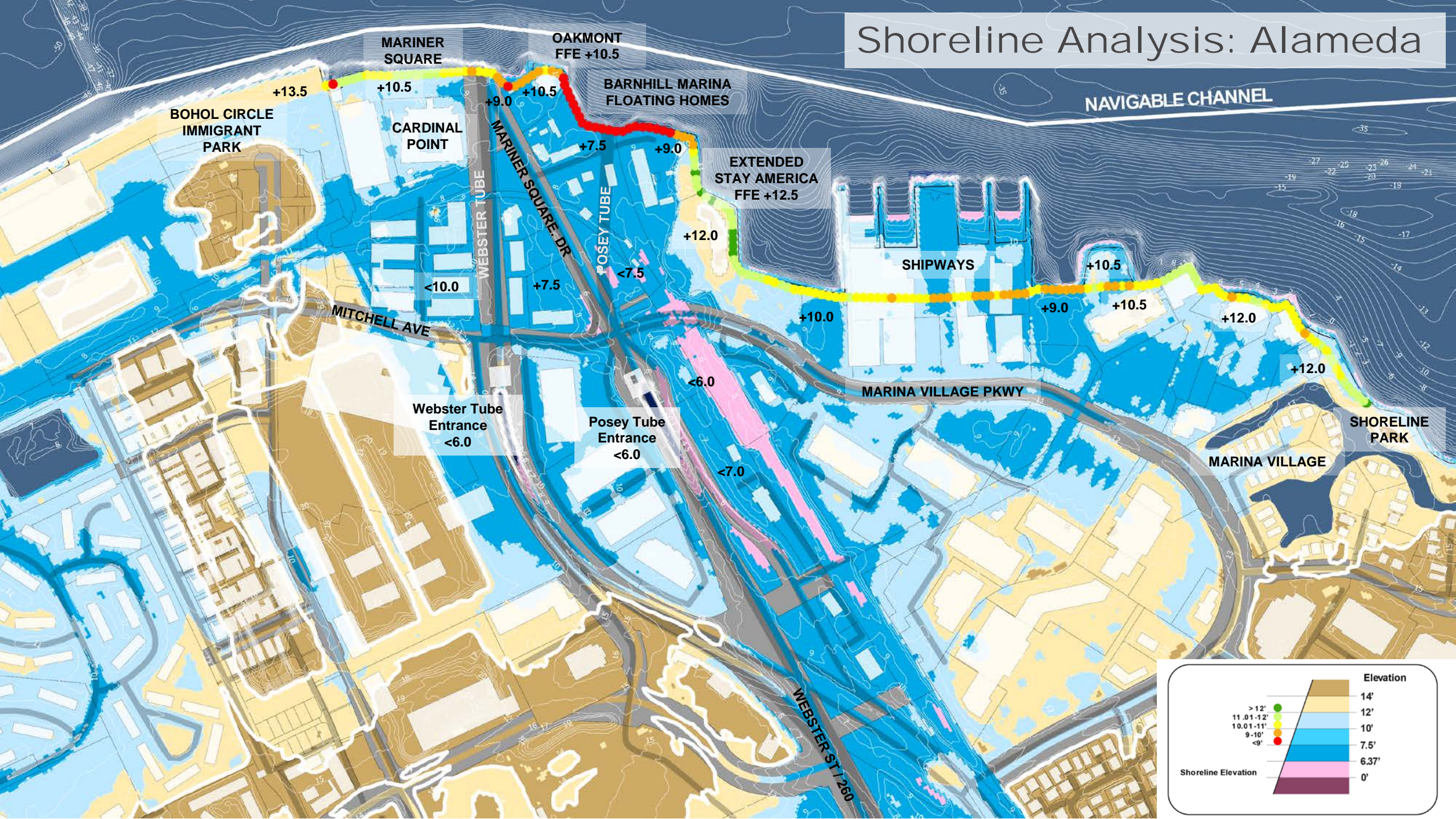
Estuary Park

Lake Merritt Channel

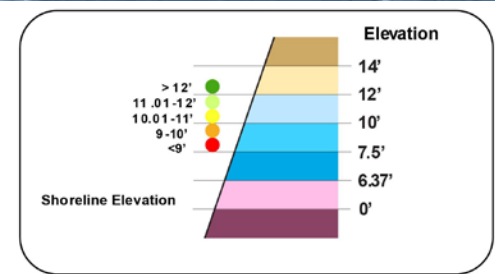
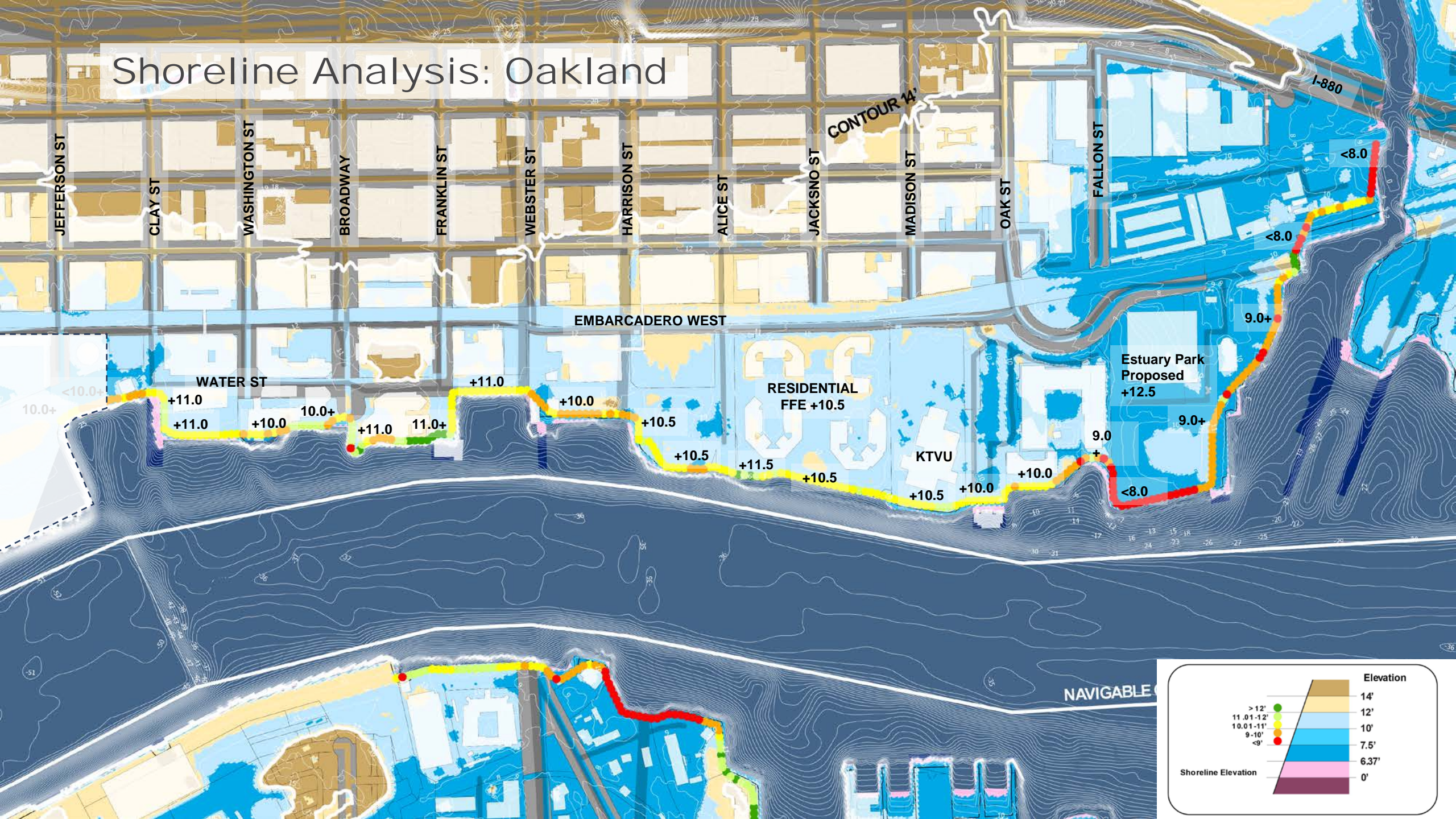
OAKLAND ALAMEDA ESTUARY

I-880

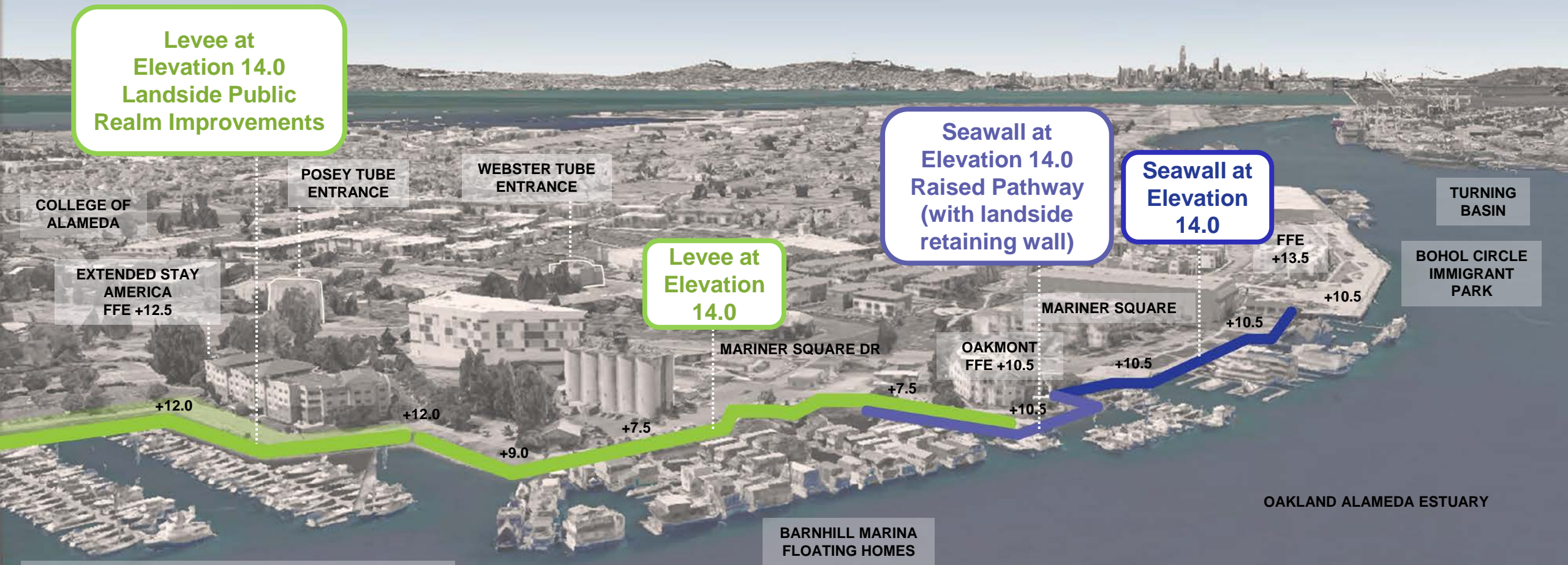
Shoreline Analysis: Alameda



Shoreline Analysis: Oakland



Near-term Adaptation Concept Bohol Circle Immigrant Park to Shipways



ALAMEDA
BOHOL CIRCLE IMMIGRANT PARK - SHIPWAYS

Near-term Adaptation Concept Shipways to Marina Village



Levee - Tie into Elevation 12.0 high ground at Shoreline Park

Redevelop - fill to 14.0

Upland Levee at 14.0 Marsh Terrace & Gravel Beach Below

Shipways new development - fill to 14.0

Levee at Elevation 14.0 Landside Public Realm Improvements

RESIDENTIAL

SHORELINE PARK

MARINA VILLAGE PARKWAY

RESEARCH PARK
FFE+12.0

DOCK Q

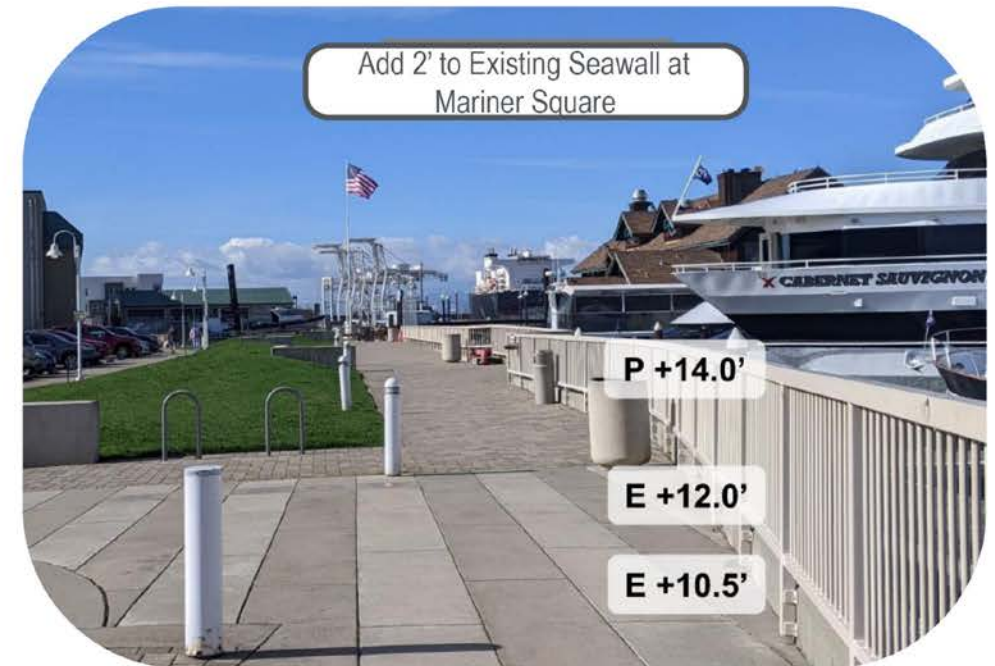
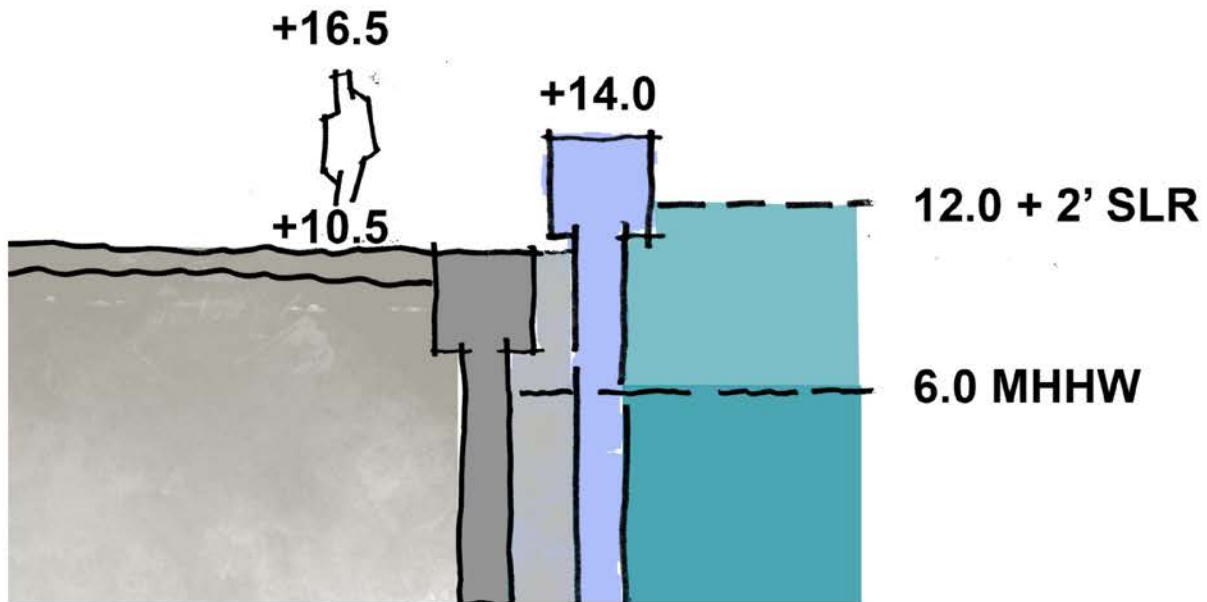
SHIPWAYS

EXTENDED STAY AMERICA

MARINA VILLAGE YACHT HARBOUR

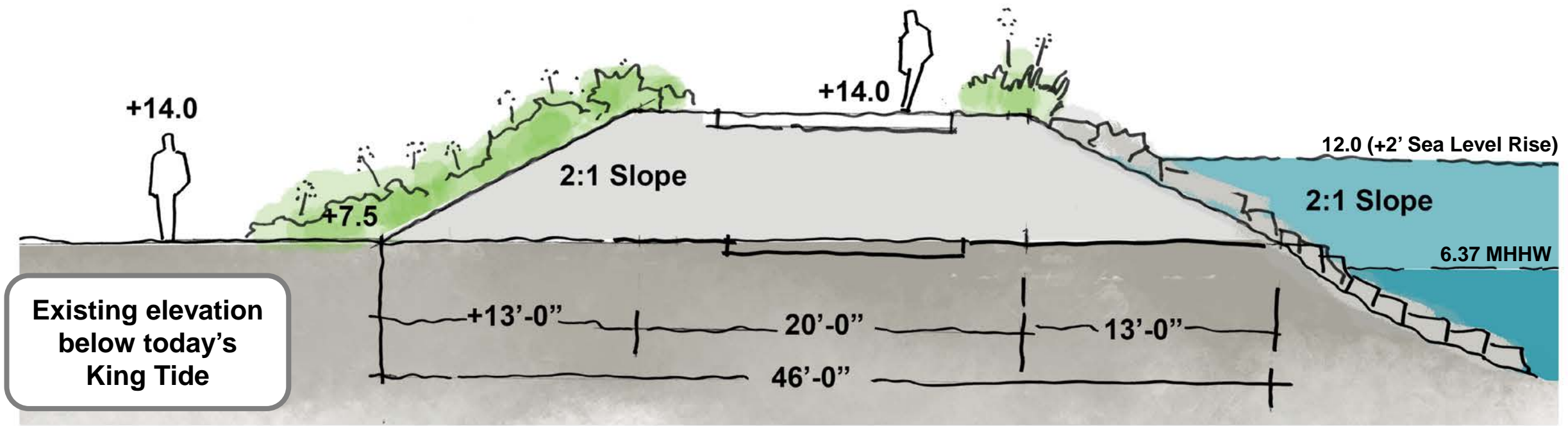
OAKLAND ALAMEDA ESTUARY

Alameda Shoreline – Near-term Adaptation Typical Condition (Oakmont to Bohol Circle) Elevated **Seawall**



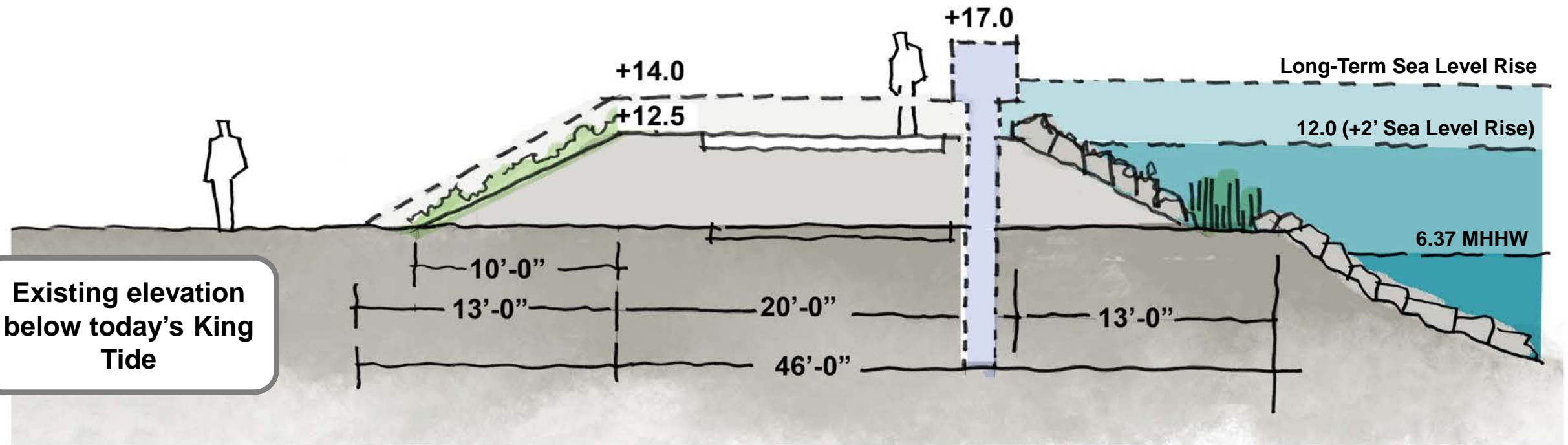
Alameda Shoreline – Near Term Adaptation Typical Condition (Shipways to Barnhill Marina) Shoreline **Levee**

Levee elevated to +14.0.
Over 6 feet tall relative to
adjacent grade.



Alameda Shoreline – Long-term Adaptation Typical Condition (Shipways to Barnhill Marina) Shoreline **Levee with Seawall**

**Levee elevated to +12.5 Near-Term
+14.0 with 3' Seawall Long-Term**



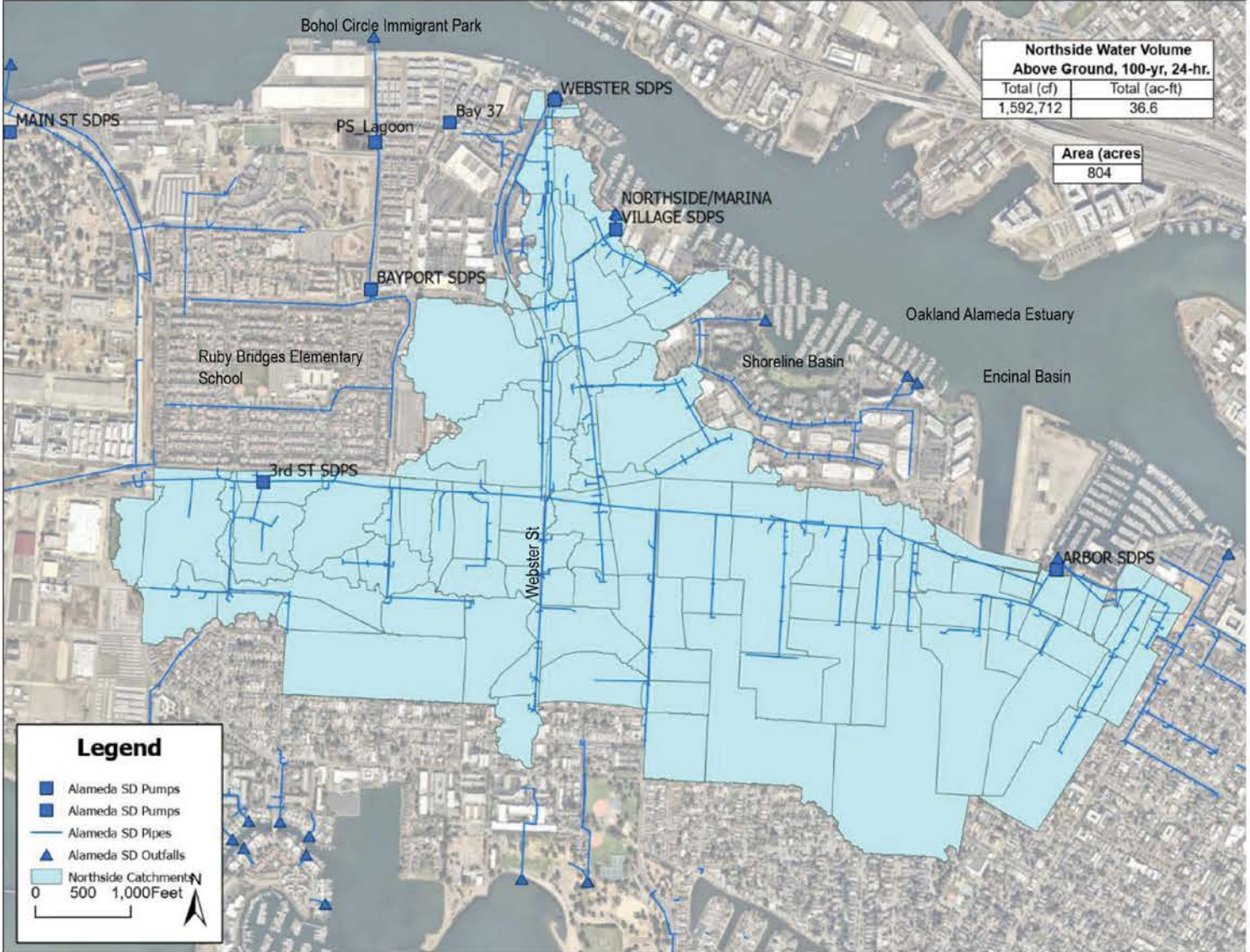
Inland Flooding Analysis

Stormwater: Northside of Alameda

- Volume of water above ground (stormwater flooding) currently generated by 100-yr, 24-hr storm: 36.6 acre-feet
- This is the volume of water that does not fit in Alameda's storm drain system today.
- Analysis includes stormwater detention for today's volume with added capacity for future increases.

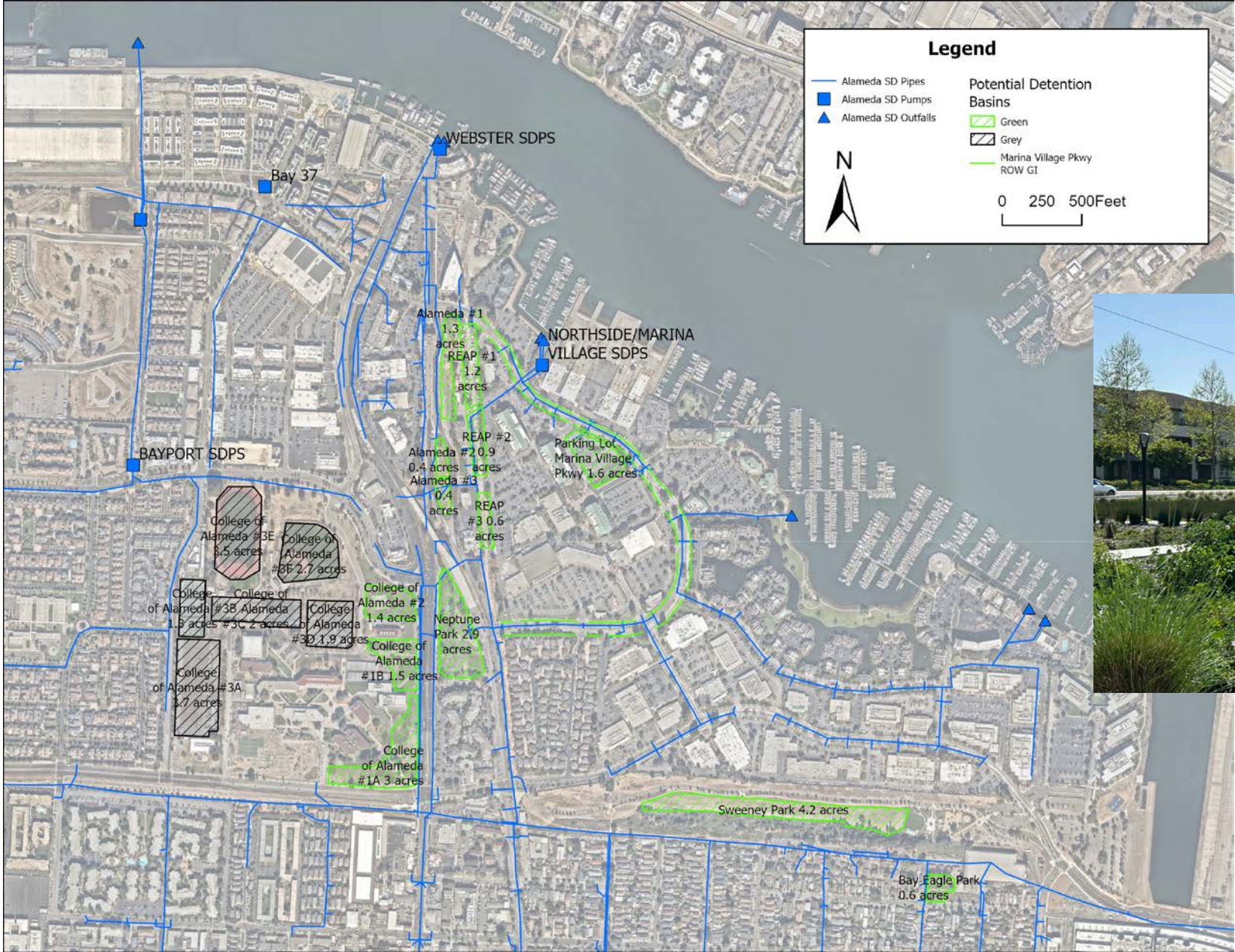
Estimated Future Precipitation % Increase With Climate Change

		10-yr	100-yr
2050	3-hr	21.6%	25.8%
	24-hr	17.9%	22.1%
2060	3-hr	27.8%	32.7%
	24-hr	22.2%	26.8%
2070	3-hr	33.7%	39.3%
	24-hr	25.9%	31.2%
2080	3-hr	40.7%	47.1%
	24-hr	30.7%	36.6%
2090	3-hr	49.6%	56.9%
	24-hr	37.1%	43.7%
2100	3-hr	59.0%	67.2%
	24-hr	43.6%	51.0%



San Francisco Bay Area Domain SSP5-8.5

Inland Flooding Conceptual Detention Basin Locations

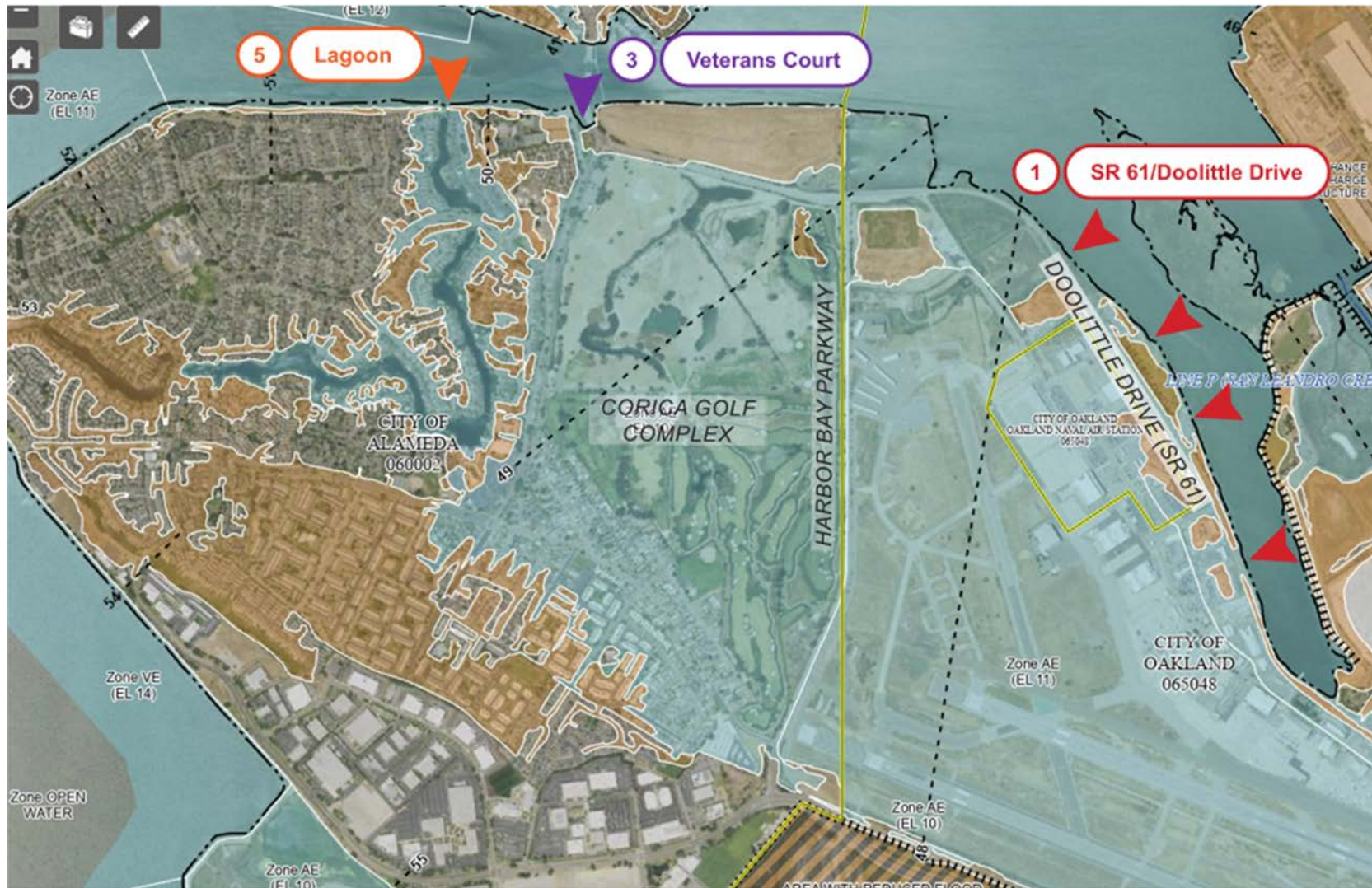


Bay Farm Island Adaptation Project

November 2024



BFI Project: Current Flood Conditions



BFI Project: Near-term Project Area



BFI Project: Preferred Near-term Alternative

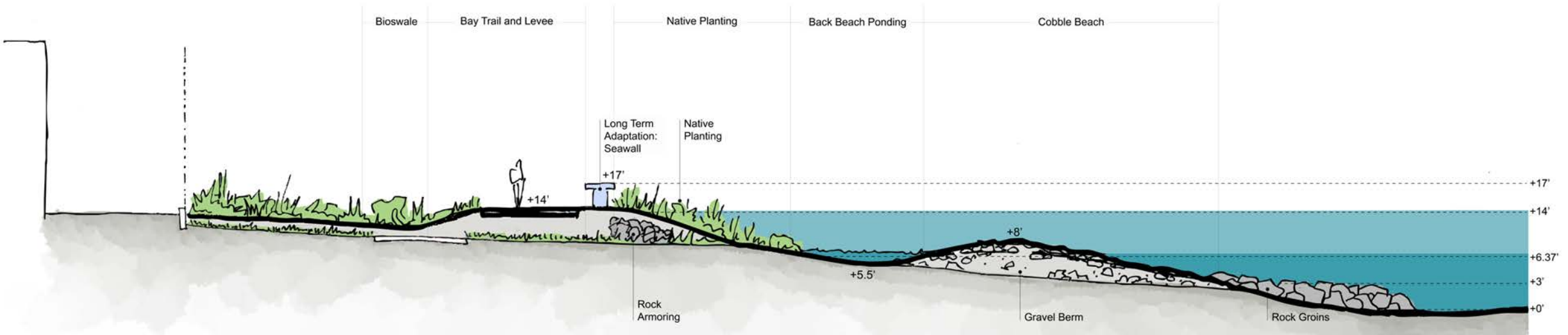
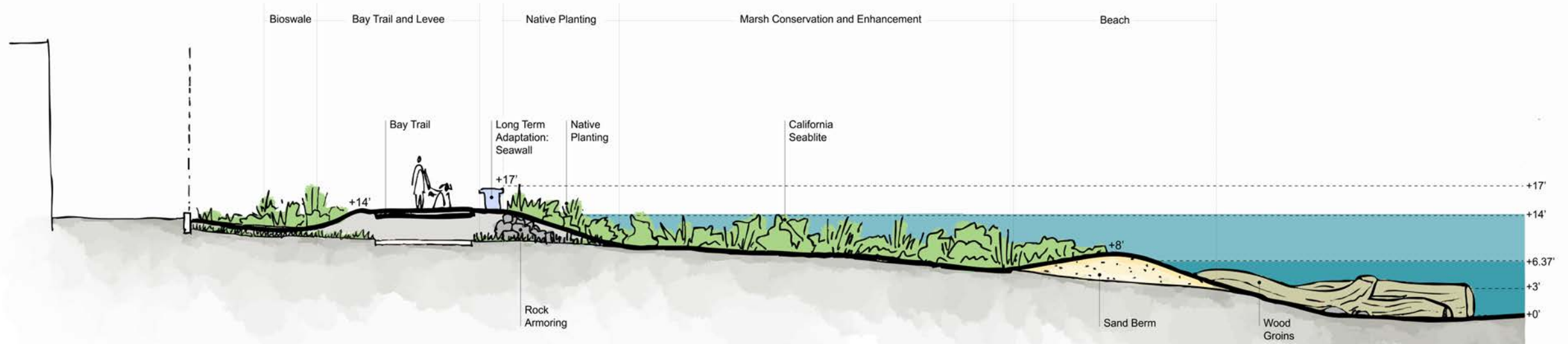
- Nature-based solutions
- Levee from lagoon to Veterans Court
- Lagoon management: Tide gate & pump station replacement
- Storm drain system modifications to remove penetrations
- Marsh expansion at Veterans Court

Nature-Based Solutions

Levee & Floodwall & Nature-Based Solutions



BFI Project: Levee / Bay Trail / Habitat Concepts



BFI Project: Veterans Court Adaptation



- Losing public road/parking past Park
- Currently 40 parallel parking spaces
- 20-25 formal spaces maintained, including ADA spaces
- Access & maintenance of proposed levee
- Coordinating with Caltrans and EBRPD on options for future bicycle/pedestrian bridge and access



FEMA BRIC Grant: Near-term Project (Phase 1)



**BRIC federal: \$50 m
(90%)**

**Non-federal: \$5.5 m
(10%)**

Total: \$55.5 m

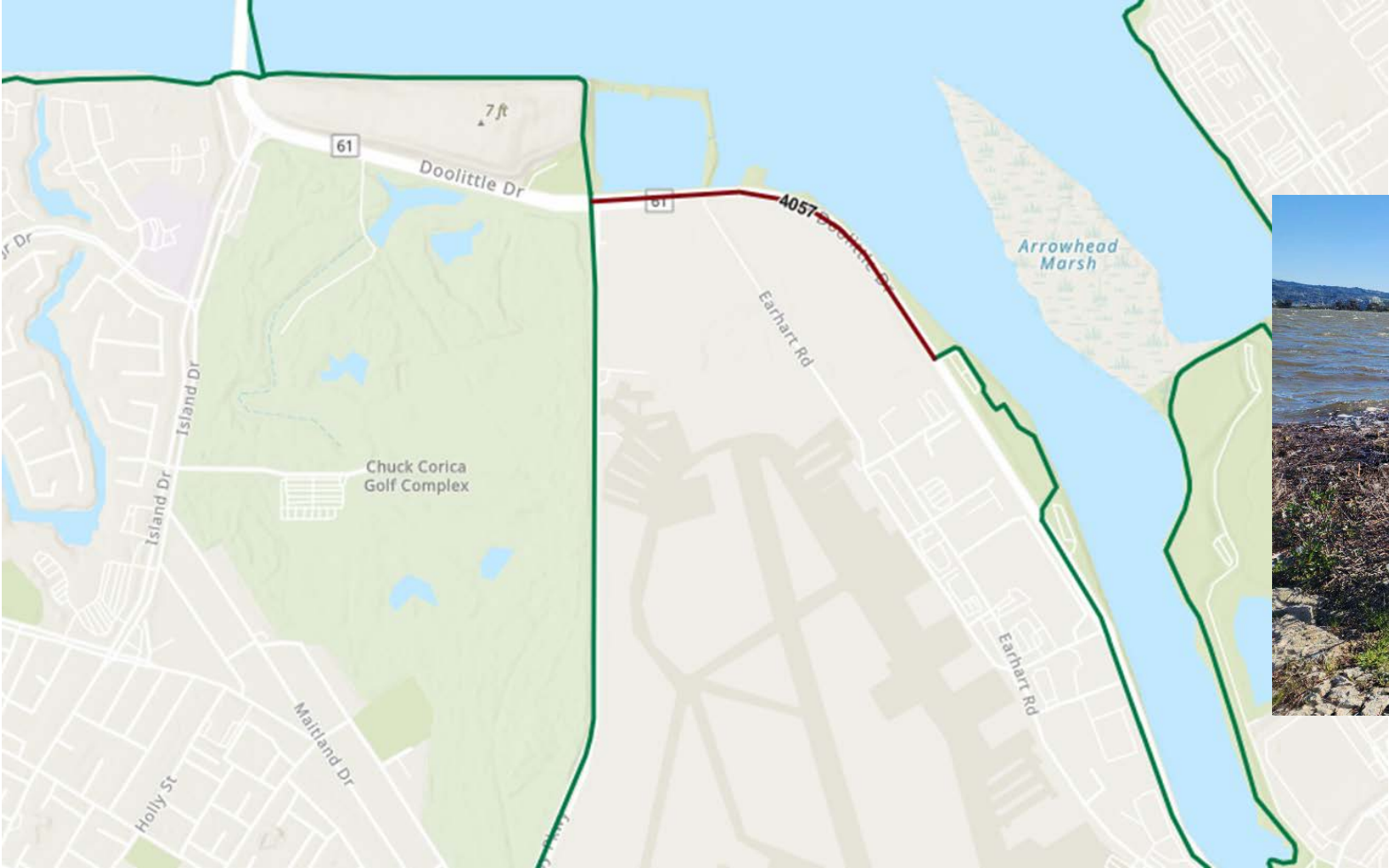
**Recommended for
further review by
FEMA**

Start: 2025?

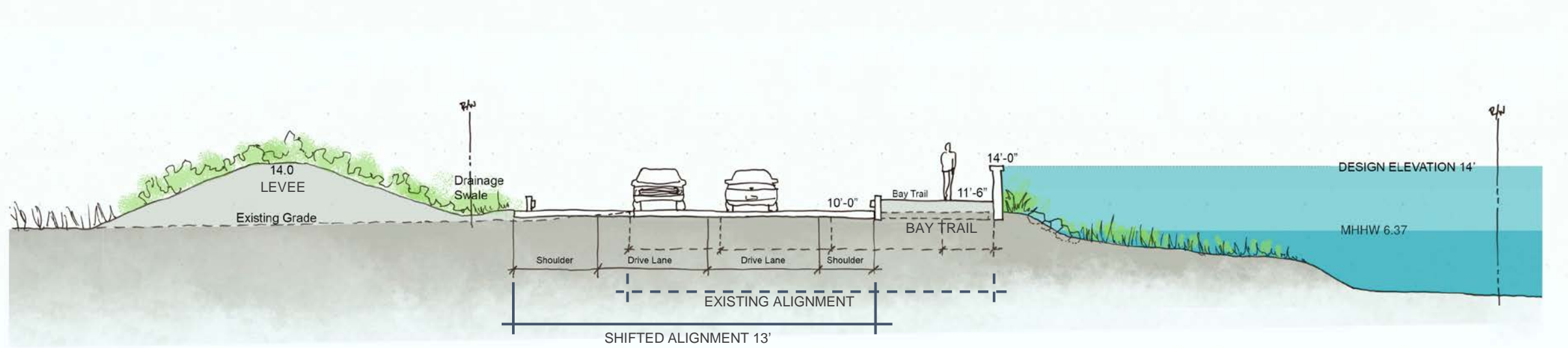
Construction: 2030



FEMA BRIC Grant: Bay Trail Gap Closure



FEMA BRIC Grant: Proposed Adaptation - Doolittle Drive



- BAY TRAIL
- SHIFT DOOLITTLE SOUTHWEST 13'
- LEVEE TO ELEVATION 14'



Subregional Adaptation Planning

November 2024



Subregional Adaptation Plan Process

Oct 2023 – Mar 2024

Charting the Course

Apr 2024 – Mar 2025


Strategy Development

Apr – Jun 2025

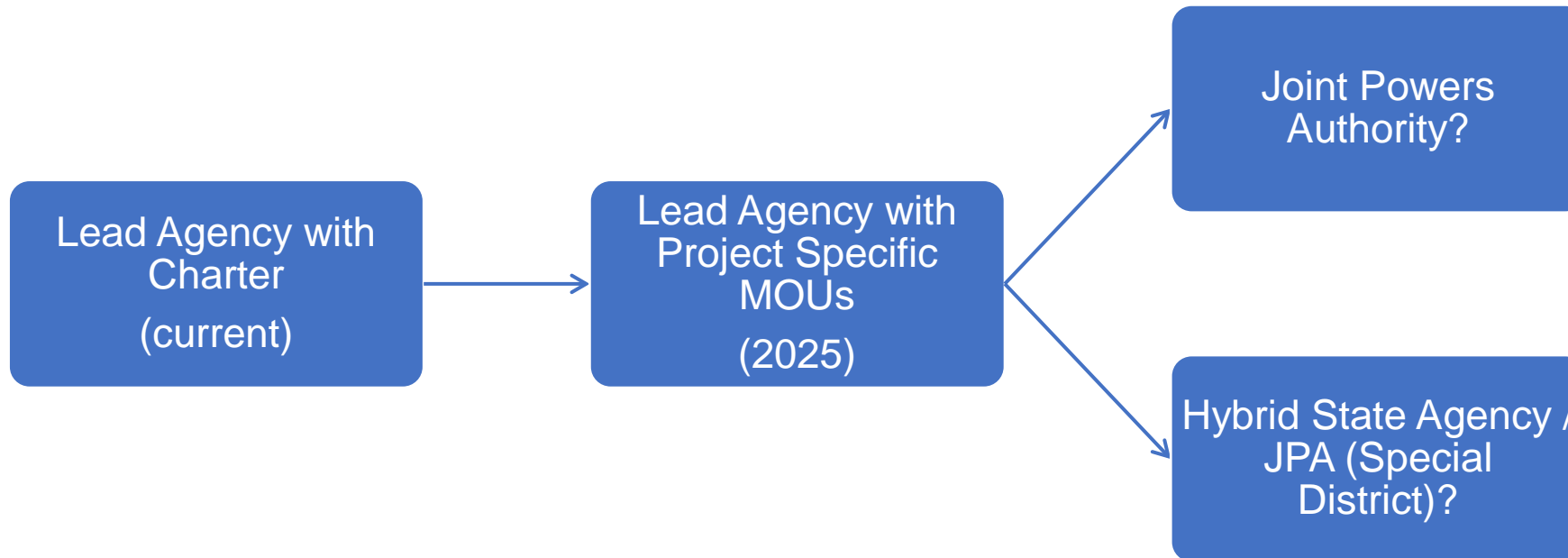
Public Input &
Strategy Refinement

Jul – Sep 2025

Plan Completion &
Council Hearings



Governance: Recommended Evolution



Governance: Project-specific MOUs

Project	Funding source	MOU partners	Other potential partners
Bay Farm Island/Doolittle Project	BRIC	<ul style="list-style-type: none">• City of Alameda• City of Oakland• Port of Oakland	<ul style="list-style-type: none">• Caltrans• EBRPD• Community Partners
Estuary Project	WRDA	<ul style="list-style-type: none">• City of Alameda• City of Oakland• Port of Oakland	<ul style="list-style-type: none">• Caltrans• Community Partners

