

EAST END AND TIDAL CANAL

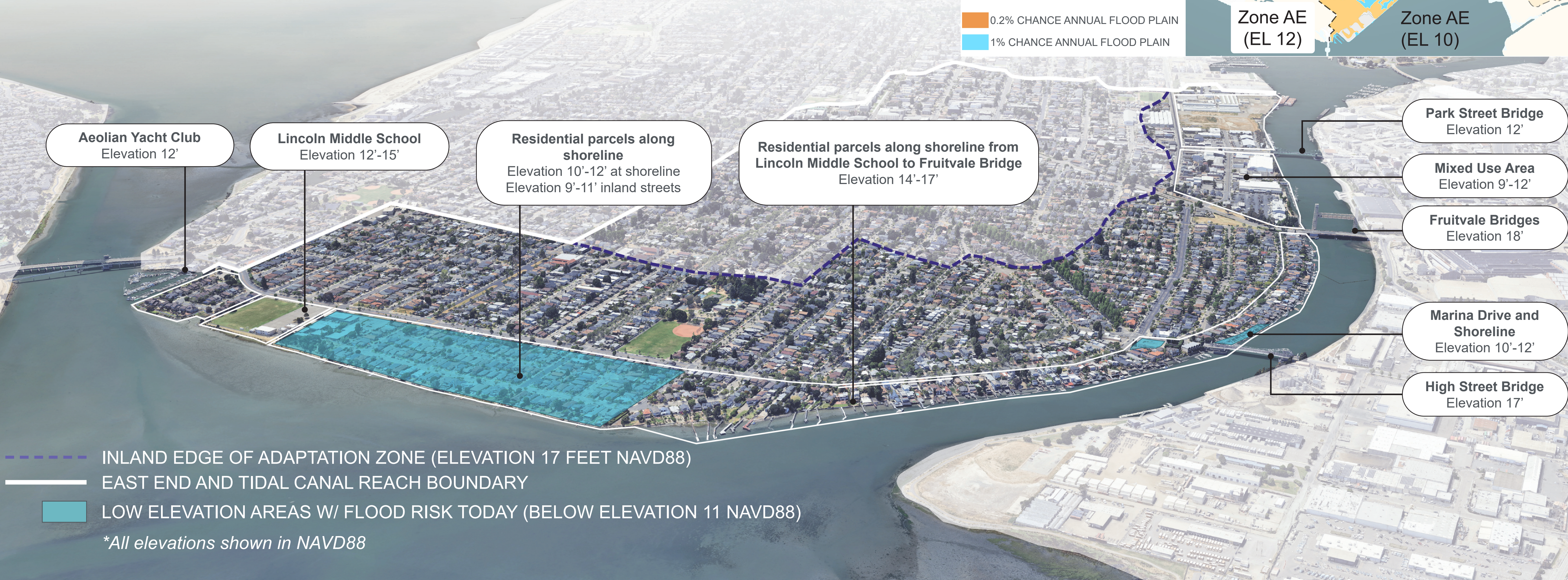
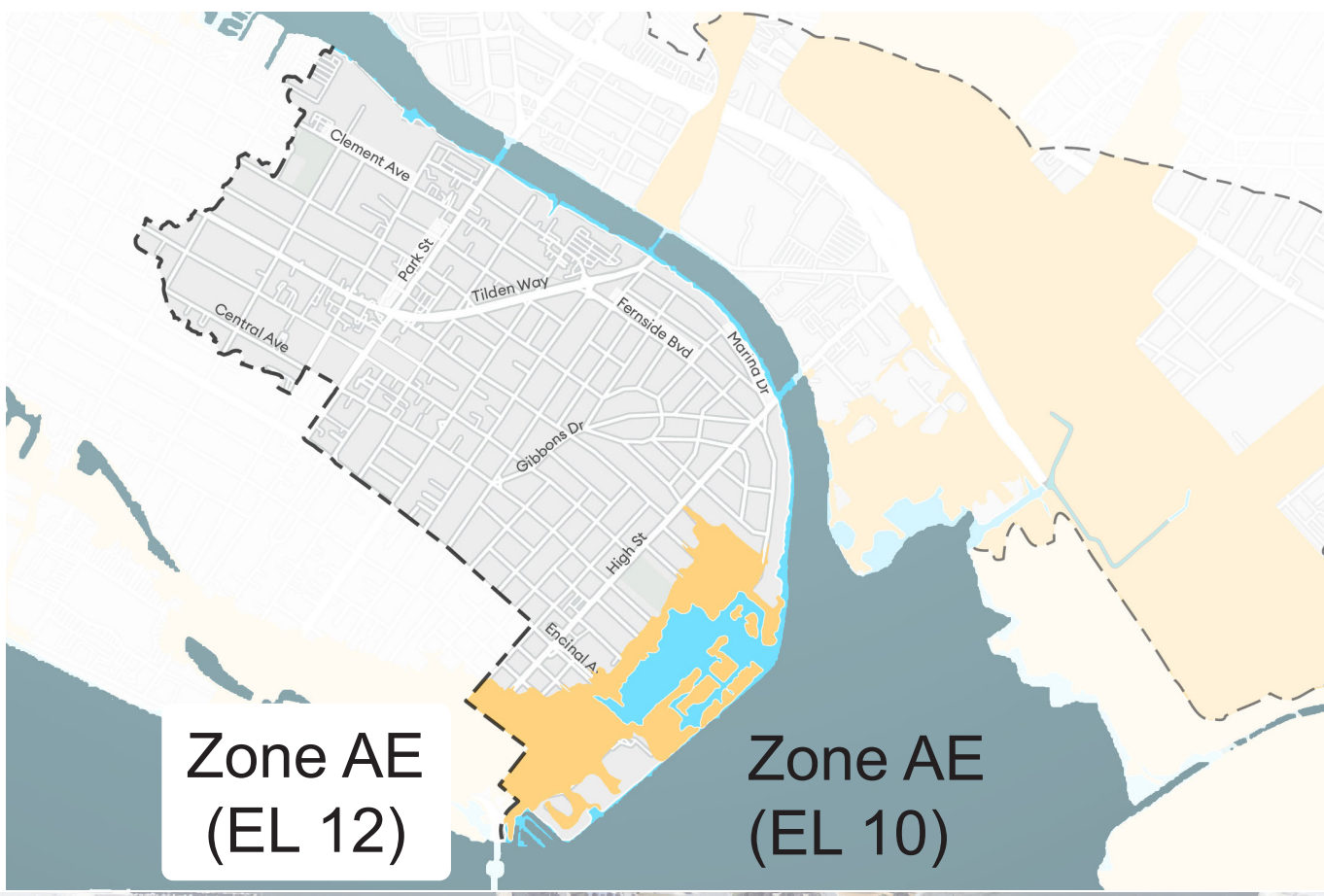
INTRODUCTION

Alameda’s East End and Tidal Canal neighborhood is home to a vibrant waterfront residential community as well as mixed use and industrial areas located along the estuary. However, much of the shoreline is vulnerable to coastal flooding, especially areas that are low elevation. Some of these areas are shown below. **As sea levels rise, this risk will increase and our community will need to decide collectively how and when to adapt.**

Portions of this area are currently at risk of coastal flooding during storms. While this shoreline is relatively sheltered from wave hazards, there are still risks of coastal, especially to **low lying residential neighborhoods and streets.**

Flood Risk Today

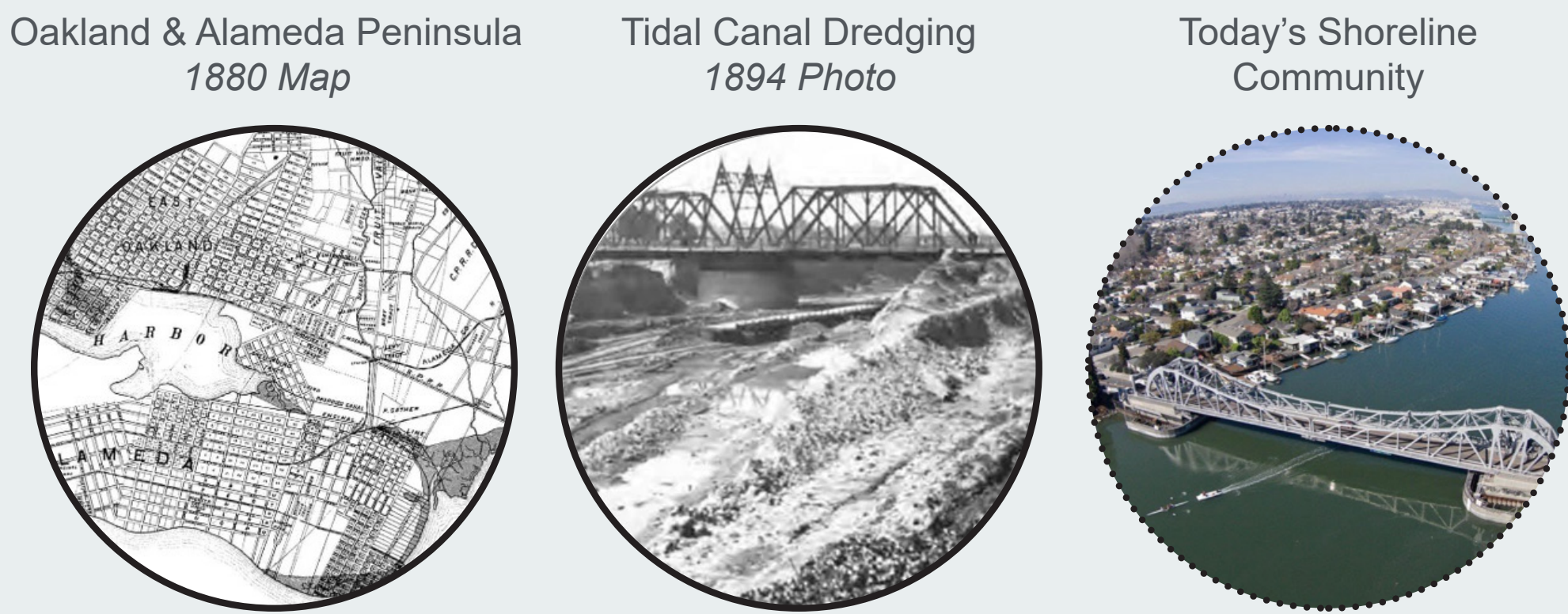
FEMA Flood Hazard Zones
0.2% CHANCE ANNUAL FLOOD PLAIN
1% CHANCE ANNUAL FLOOD PLAIN



ADAPTATION PLANNING - KEY CONSIDERATIONS

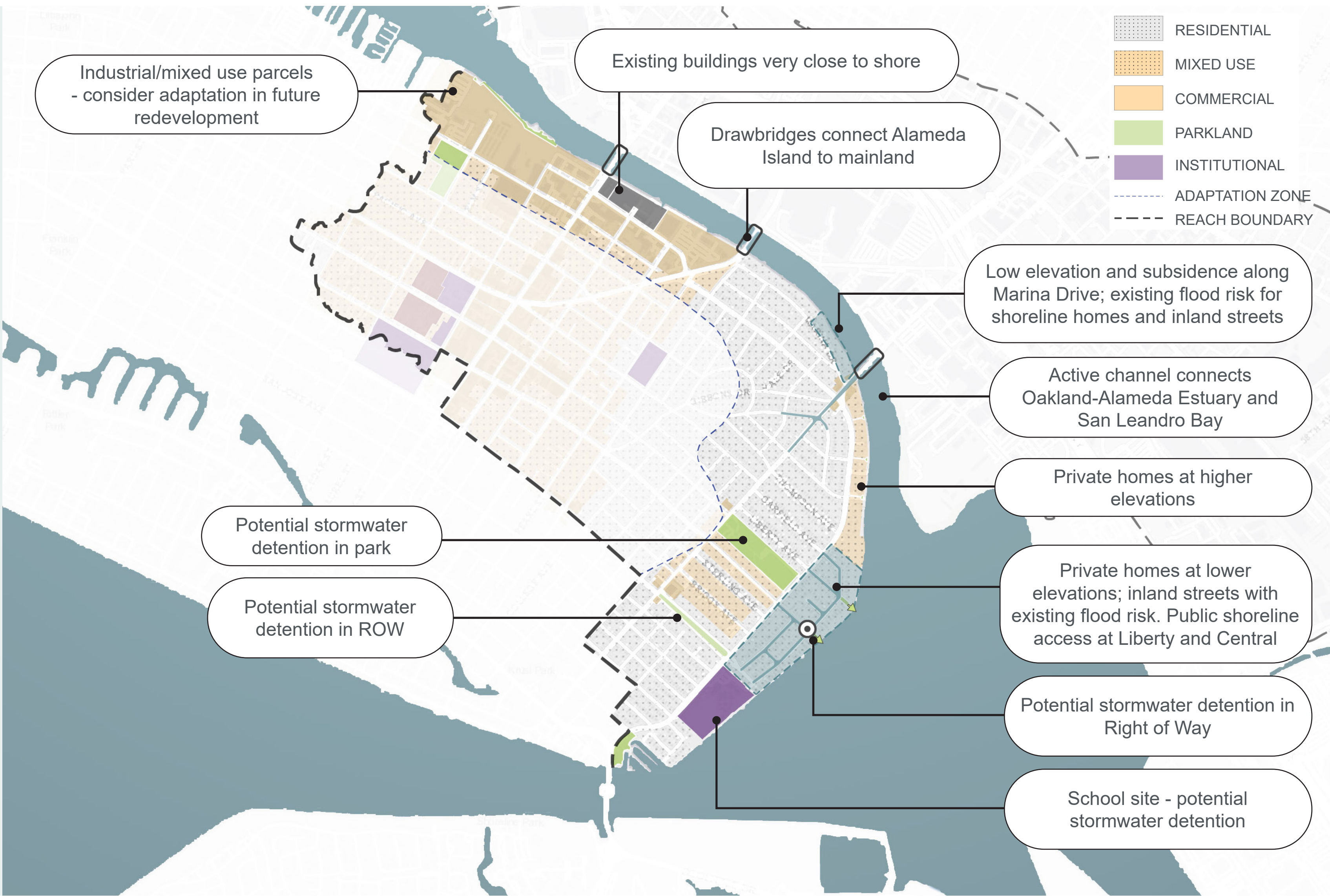
Shoreline Transformation

The East End and Tidal Canal area has changed significantly over the past century. Alameda has not always been an island -- the area between the High Street, Fruitvale, and Park Street Bridges was formerly land that was dredged as park of Port improvements. Today, many residential properties enjoy waterfront access. However, proximity to the East End and Tidal Canal also comes with risks, especially for low lying neighborhoods.

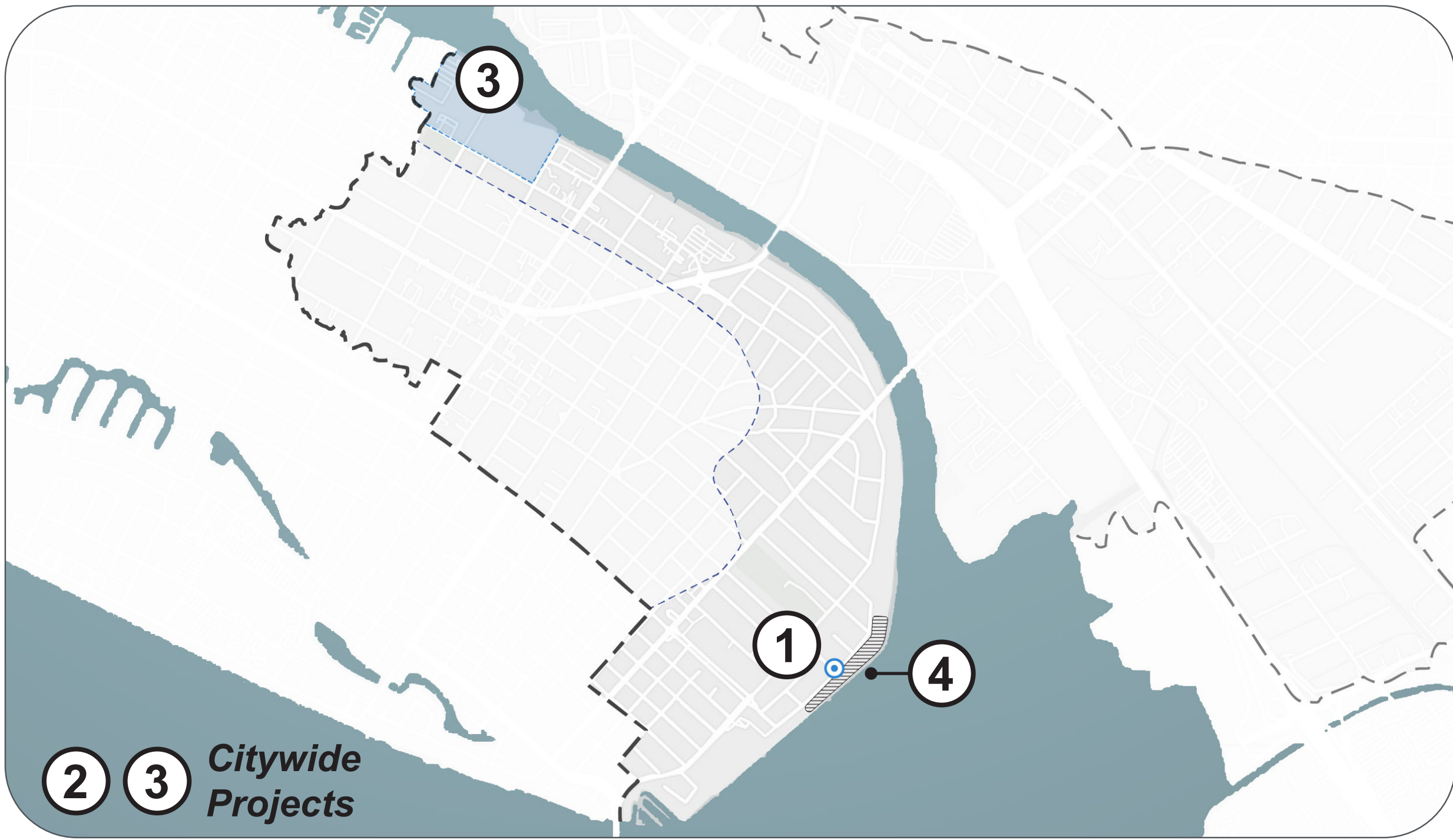


Adapting this area will be complex, especially in shoreline zones with residential properties. Despite these challenges, adaptation may also bring opportunities for positive change, such as increasing public access to the waterfront and improving inland stormwater management systems, while also ensuring long-term community resilience.

Are we missing anything? Please let us know!



IMMEDIATE ACTIONS



Ongoing and Planned Efforts

The City of Alameda has identified strategies for urgent implementation along the East End and Tidal Canal in the Local Hazard Mitigation Plan (2025):

- 1 Golf Course and Eastshore / Central Pump Station Drainage Study
- 2 Basement Flooding Campaign (Citywide)
- 3 Stormwater Management (Citywide)

e.g. Updating stormwater modeling, coordinating stormwater detention facilities with development.

- 4 Verify Shoreline Elevations and Low Points*

*Urgent flood risk reduction measures not yet included in Local Hazard Mitigation Plan.

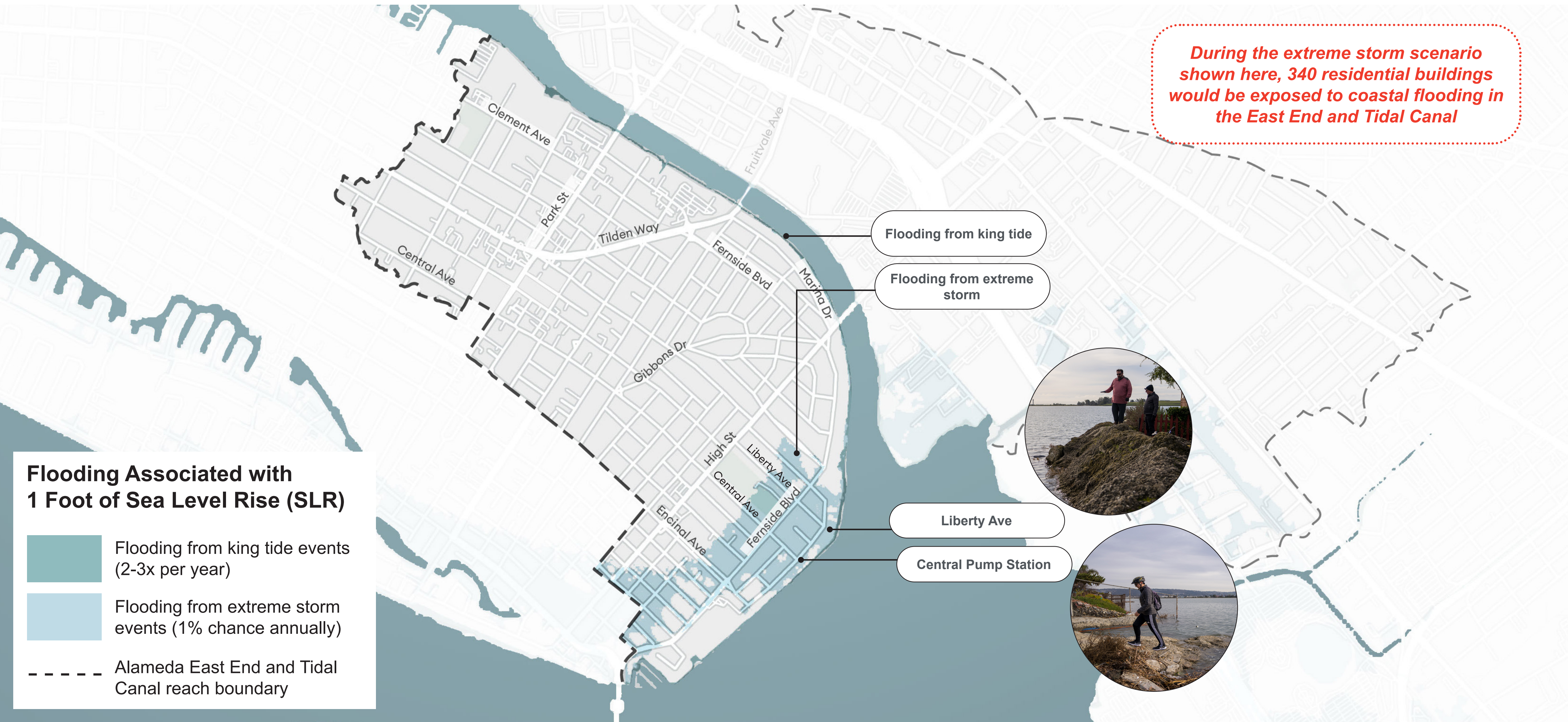


EAST END AND TIDAL CANAL

NEAR-TERM ADAPTATION ALTERNATIVES

1 FOOT OF SEA LEVEL RISE: THE ‘DO NOTHING’ ALTERNATIVE (2040-2060)

The elevation data currently available suggests that there are low points along the East End and Tidal Canal that would allow for flooding of portions of the residential area with an extreme tide under current conditions. City of Alameda staff suspect some or all of these low points may be at higher elevation compared to the historic data. We plan to conduct an aerial survey to better understand the existing elevation, which will inform the urgency of adaptation actions in the East End and Tidal Canal. Sea level rise of 1 foot may occur by 2040-2060.* In the absence of adaptation, coastal flooding is anticipated in the East End and Tidal Canal, with impacts to residential parcels, streets, and infrastructure.



NEAR-TERM ADAPTATION STRATEGIES (2040-2060)

The proposed near-term adaptation strategies focus on addressing low areas within public easements along the shoreline where flooding already occurs during king tides. Homeowners may choose to voluntarily make flood resilience retrofits to their homes via elevation, waterproofing, or construction of floodwalls within property boundaries. Commercial and mixed use areas should consider adaptation in the case of redevelopment or significant capital improvements. Stormwater management improvements could be implemented such as a larger pump station and pipe and electrical upgrades.



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MID- TO LONG-TERM ADAPTATION

3 FEET OF SEA LEVEL RISE: THE ‘DO NOTHING’ ALTERNATIVE (2070-2100)

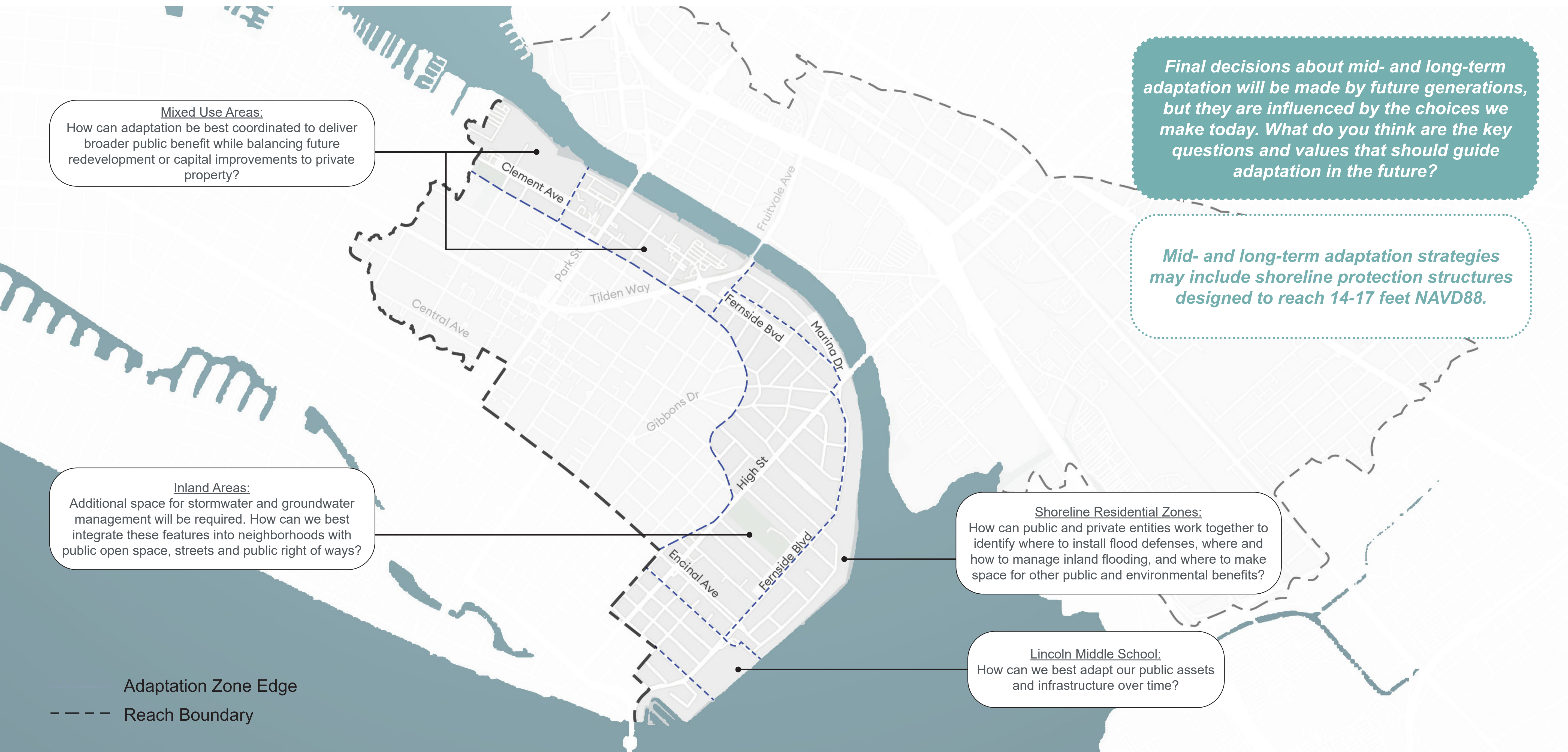
If adaptation measures are not implemented in the near term, coastal flooding will continue to increase in severity and frequency, bringing substantial impacts to the East End and Tidal Canal neighborhoods. Overtopping may also occur near the Park Street Bridge. Flooding from groundwater and extreme rainfall events will also impact inland areas, public roadways, and infrastructure.

**Based on approximate High and Intermediate projections (OPC, OST, and CA Sea Level Rise Task Force 2024) in comparison to a 2000 baseline*



MID- TO LONG-TERM ADAPTATION (2070-2100)

Two feet of sea level rise is a critical tipping point for shoreline neighborhoods and private residences. Flood protection for most private parcels will be feasible in the near term. Beyond 2 feet of sea level rise flooding will become more frequent, severe, and will compromise the public realm. Before we reach that point, collective action will be required – the city, shoreline homeowners, and the broader community will need to work together to determine the best approach to adaptation in this complex stretch of shoreline.



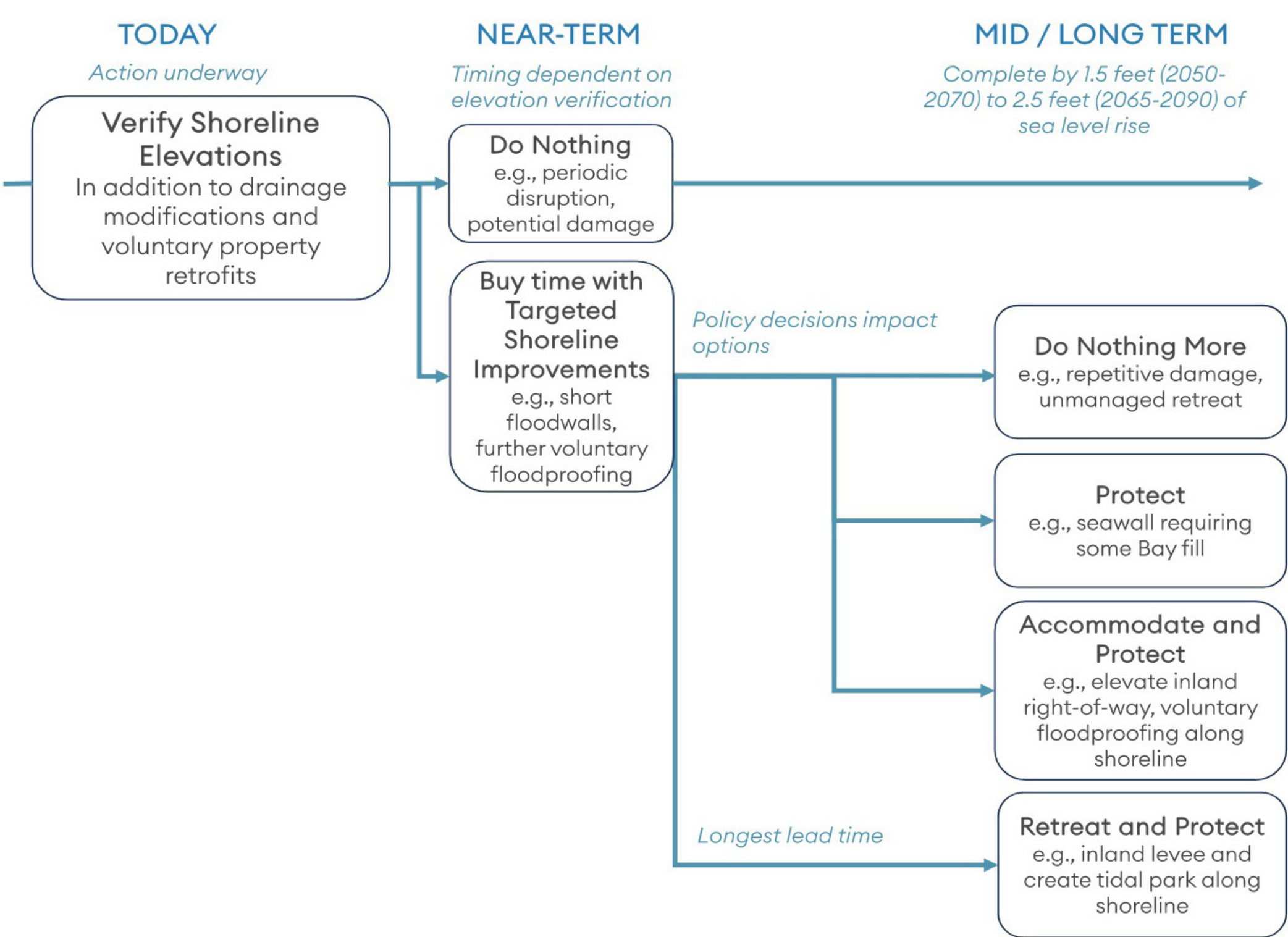
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DEEP DIVE: EAST END RESIDENTIAL AREAS

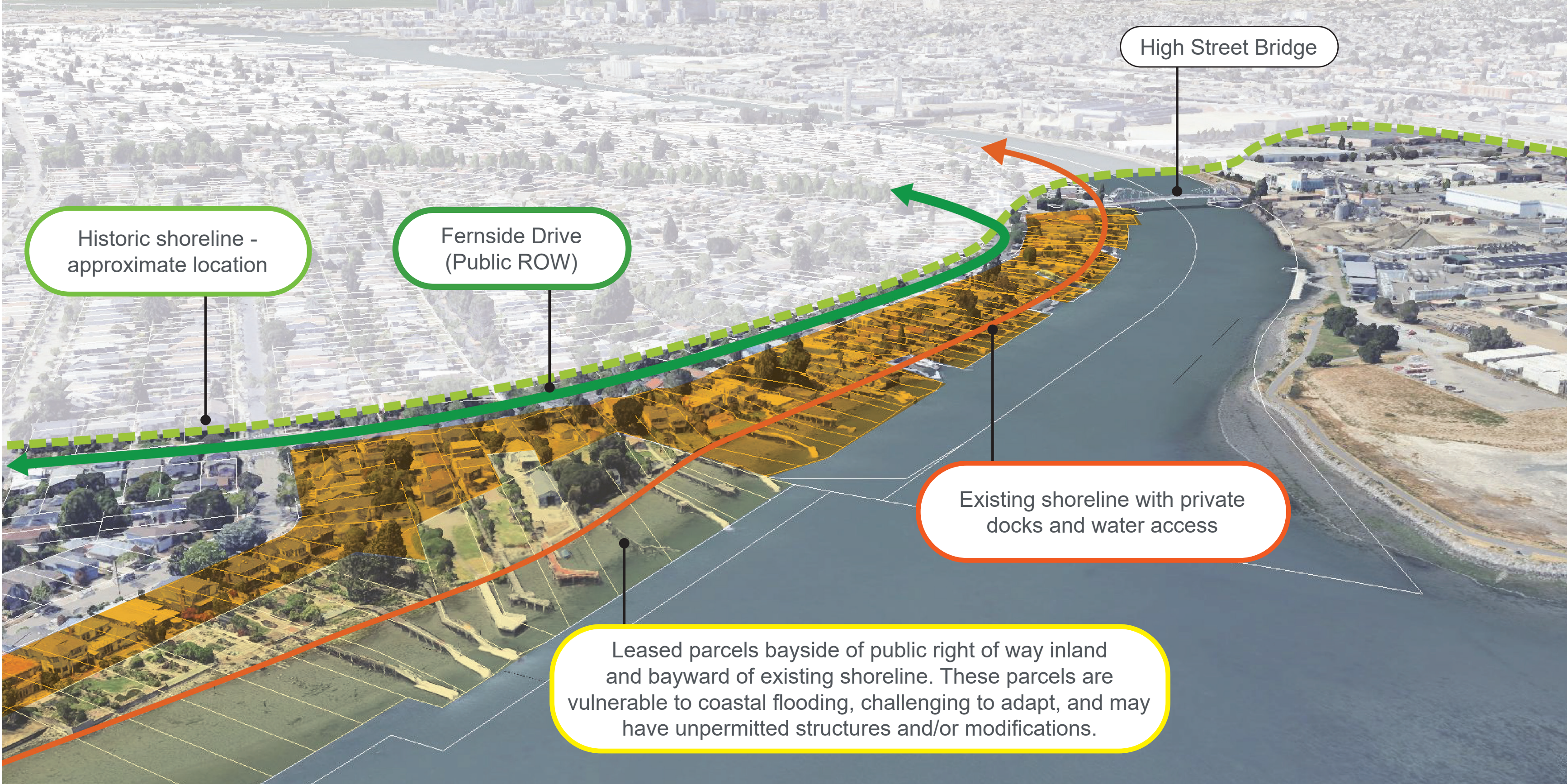
EXISTING CONDITIONS: PRIVATE AND PUBLIC-LEASED SHORELINE PARCELS

Shoreline landownership has implications for adaptation. The shoreline of the East End and Tidal Canal is a complex mix of areas that are privately owned and include water access structures within leased, city-owned parcels. Many of these parcels are within high risk areas, requiring near and longer term adaptation. Planning for long-term adaptation will require conversations about land use in this area. **Given the complexity of these issues, it is important to start the discussion now.**

Potential Timeline: East End and Tidal Canal Residential Areas



Shoreline Jurisdiction

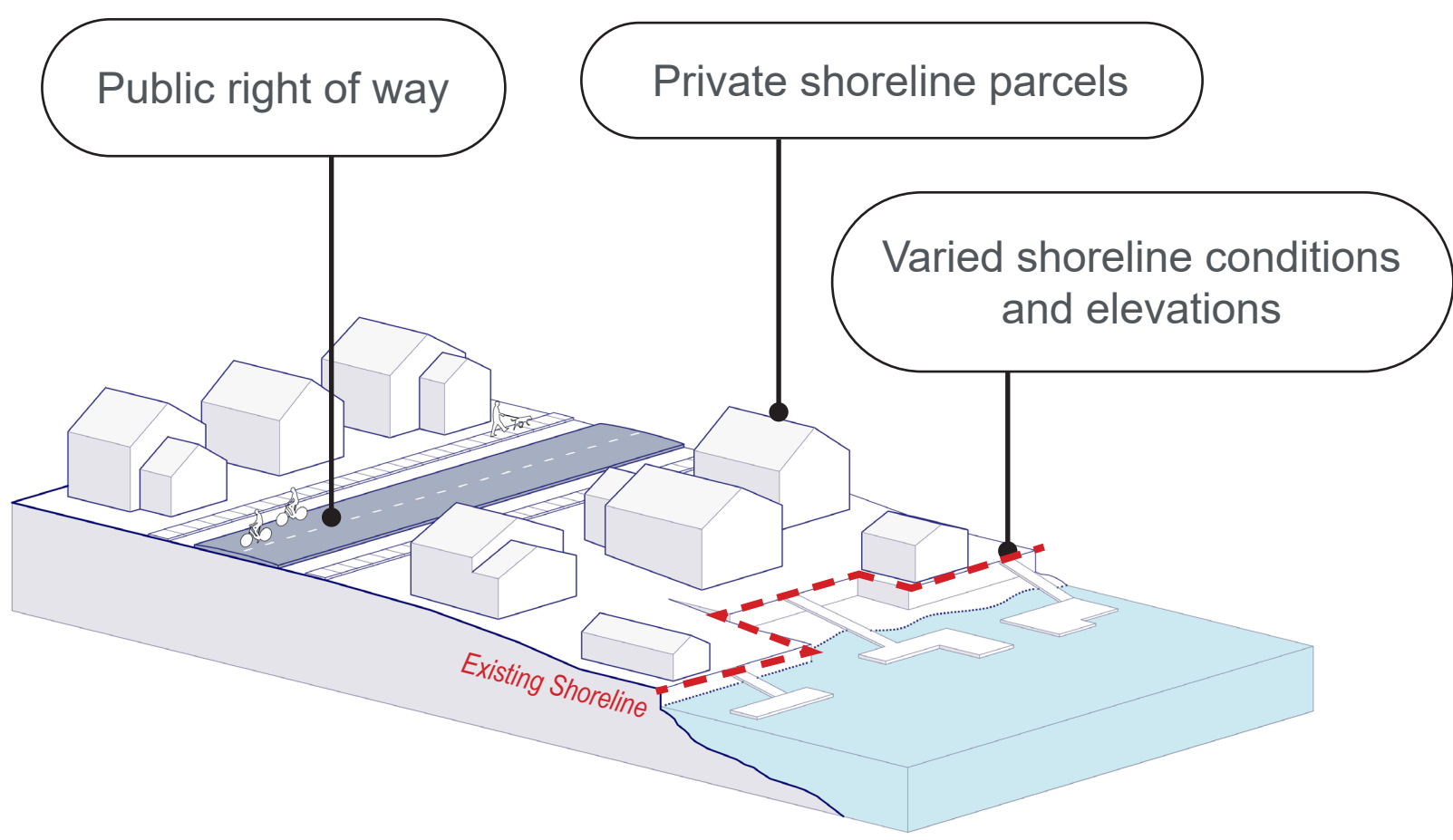


NEAR-TERM ADAPTATION (2040-2060)

Near-term adaptation concepts are focused on individual properties and are largely voluntary. Homeowners may choose to adapt depending on localized risks to private property and relative sensitivity of their properties to damage from coastal flooding.

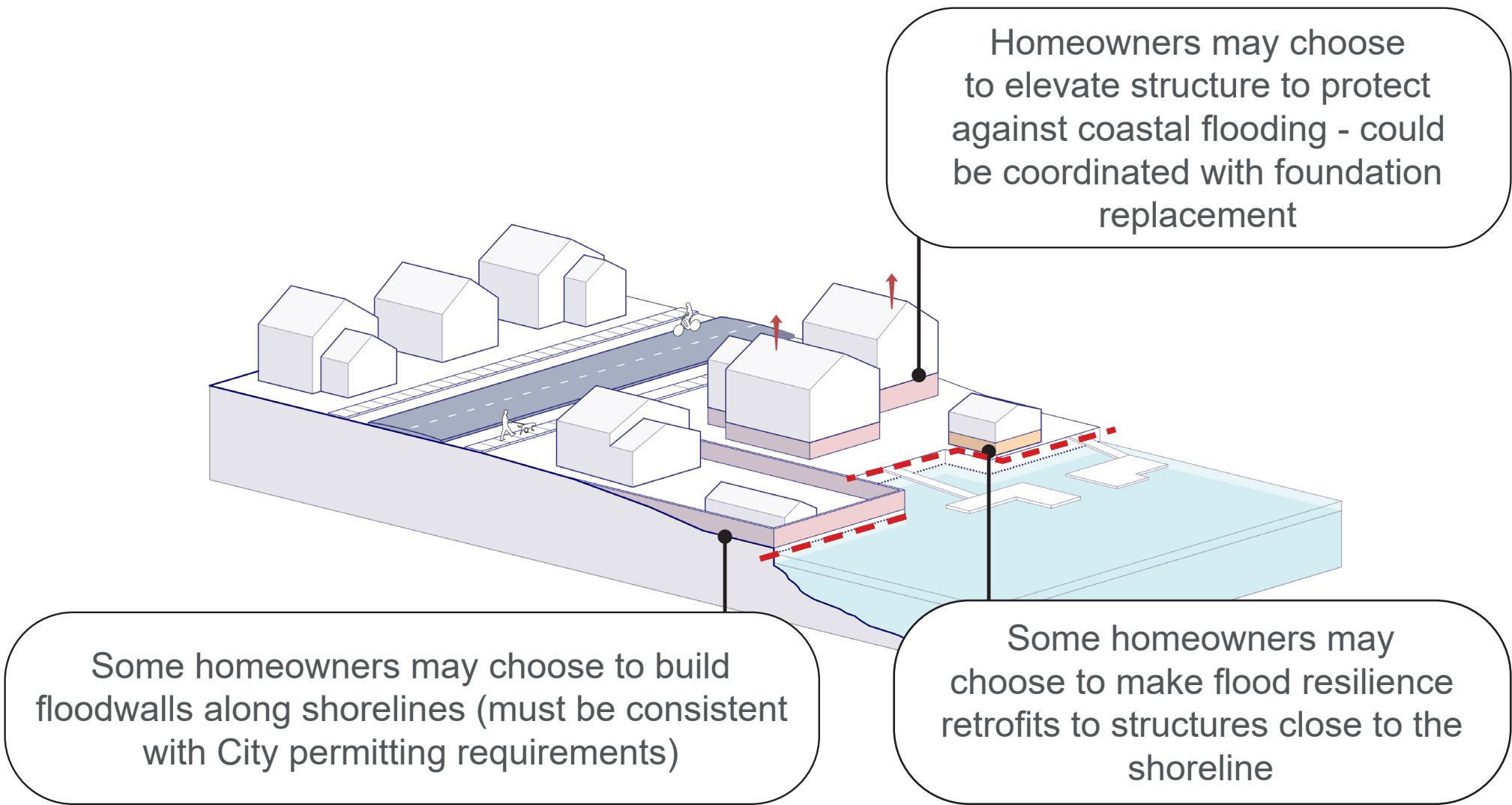
Flood resilience retrofitting of private property must conform with City of Alameda building code and permit requirements, including verification of lease status for publicly owned shoreline parcels.

Private Shoreline Parcels (Existing Condition)



Voluntary Private Flood Resilience Retrofits

**Already underway for some property owners*

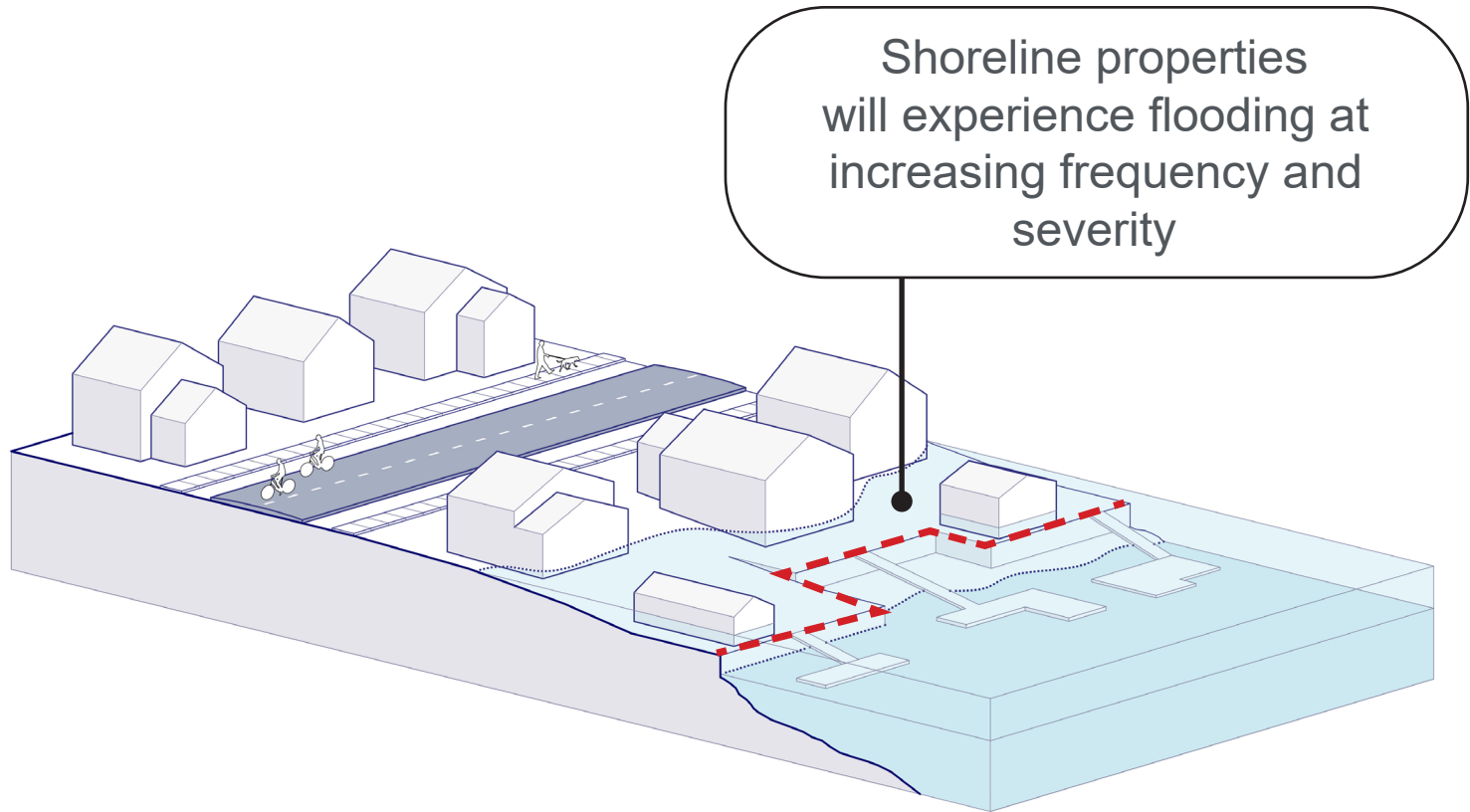


LONG-TERM ADAPTATION OPTIONS (2070-2100)

Two feet of sea level rise is a critical threshold for shoreline neighborhoods and private residences.

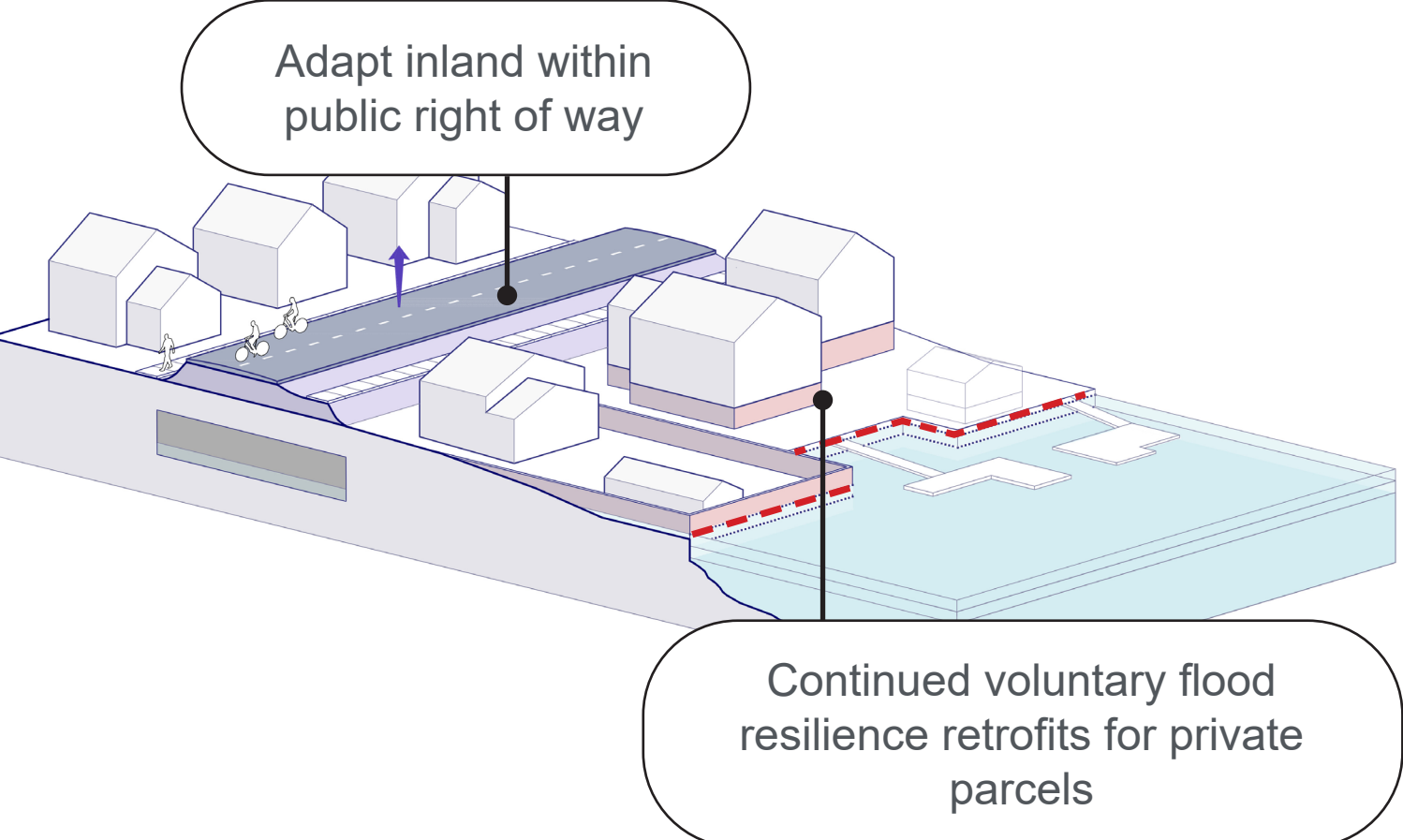
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Do Nothing



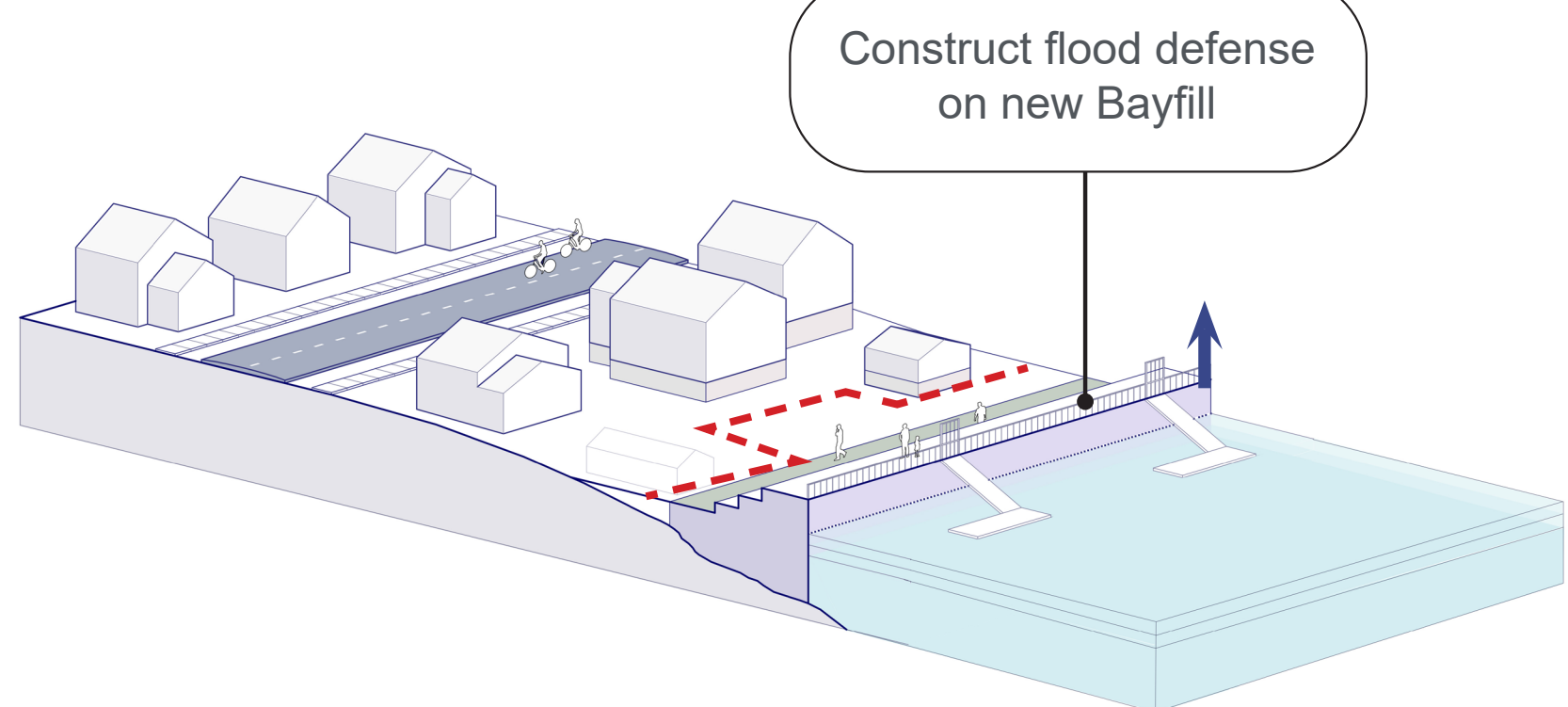
Accommodate and Protect

Inland Right of Way

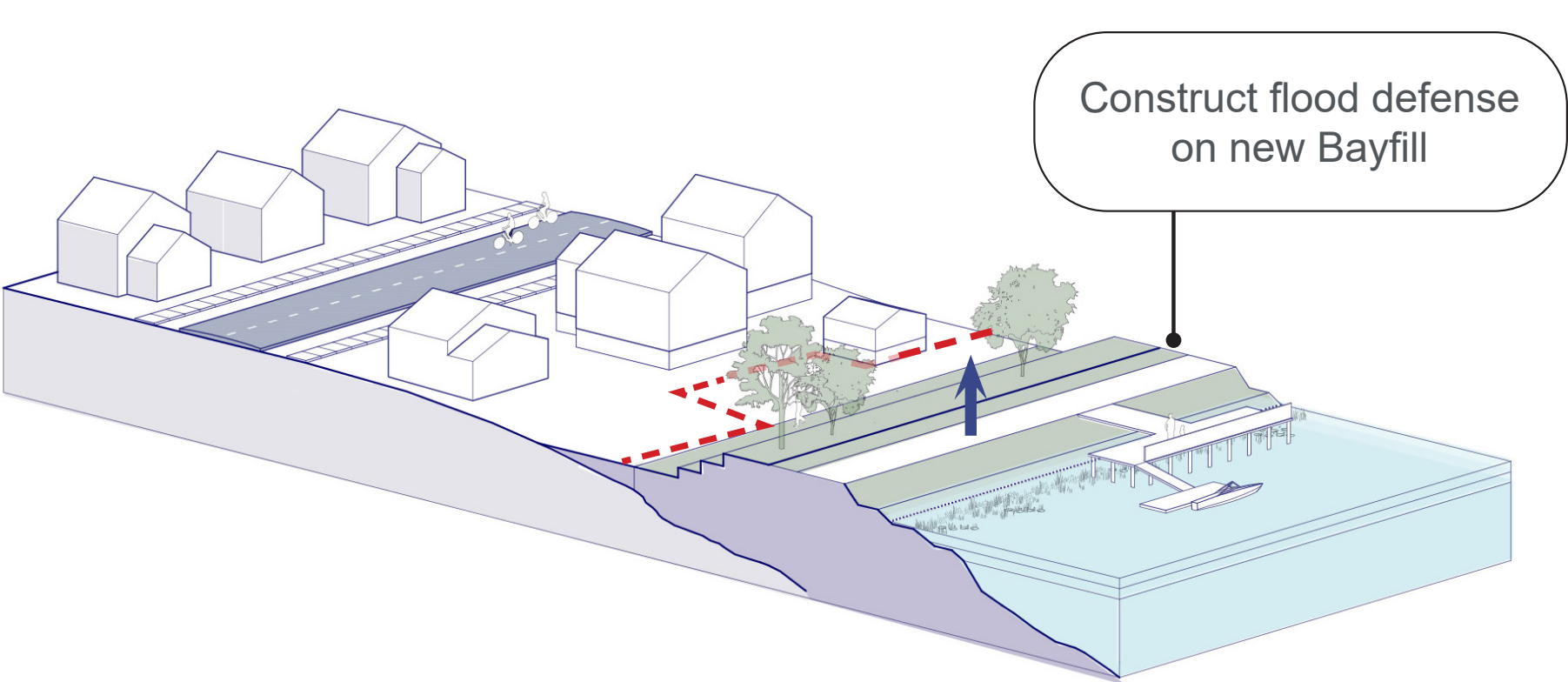


Protect

Seawall with Bayfill



Bayfill and Levee



Retreat and Protect

Tidal Park

