

# Raymond L. Flynn Marine Park -

Final Master Plan Update Transportation Advisory Committee



Planning Department

**CITY of BOSTON**

# AGENDA



- 1** Introductions & TAC Overview
- 2** Article 80 Project Updates
- 3** RLFMP Resilience Planning
- 4** Non-Transportation Maritime Improvement Projects
- 5** Transportation Improvement Projects
  - Pier 10 Ferry
  - FID Kennedy Design
  - Northern Ave/FID Kennedy/Haul Road Intersection Design
  - Tide Line Concept
  - O+P Shuttle
- 6** Transportation Project Financing

# **1 - Introductions and TAC Overview**



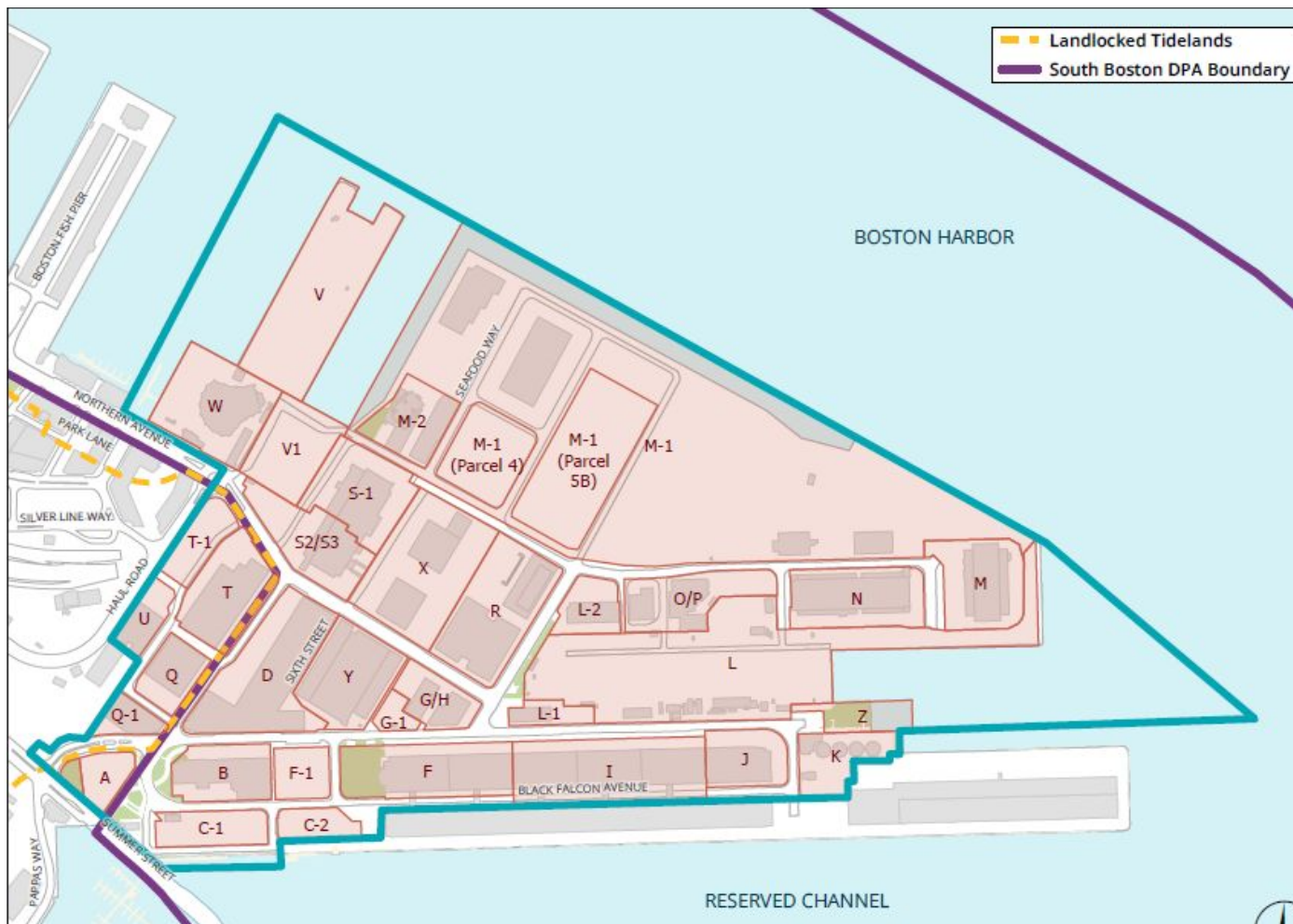
## **Comprised of appointees from:**

- City of Boston Transportation Department;
- BPDA Real Estate and Planning Departments;
- Massport Authority;
- MassDOT;
- MBTA;
- RLFMP Business Association;
- Seaport Transportation Management Association

# RLFMP Master Plan Timeline



- **1999** - Original Master Plan
- **2005** - Master Chapter 91 License
- **2015-2017** - Master Plan Update Study including Stakeholder Engagement
- **December 2017** – Master Plan Update Submittal
- **January 2018** - Certificate
- **May - July 2019** - RLFMP Park Technical Advisory Committee Process
- **February 2020** - Master Plan Update Feedback from State
- **2020-2021** - Additional BPDA analysis and regular meetings with the State
- **February 2022** – Final Master Plan Update Submittal
- **June 2022** - EEA MEPA Certificate Issued on Notice of Project Change
- **July 2022** – EEA MEPA Certificate Special Review Procedure
- **February 2024** – Chapter 91 Consolidated Written Determination DRAFT
- **March 26, 2024** - Chapter 91 Consolidated Written Determination FINAL



## **2 - Article 80 Project Updates**



# RLFMP Active Project Review (Article 80/MEPA/Ch.91)



- **22 Drydock Avenue** Chapter 91 Licensing complete, **Under construction**
- **EMS Station** Chapter 91 Licensing complete, **Under construction**
- **24 Drydock Avenue** BPDA Approved October 2022 - Chapter 91 Licensing complete
- **310 Northern Avenue** BPDA Approved November 2022 - Chapter 91 Licensing complete
- **2 Harbor Drive Phase I** BPDA Approved December 2020, **Completed construction**
- **2 Harbor Drive Phase II** Under Review
- **Parcel U** Under Review
- **MMT Parcel 5C** Under Review - NPC Pending
- **88 Black Falcon** BPDA Approved May 2023

# ACTIVE PROJECTS



★ Construction Complete

★ Under Construction

★ Article 80 Complete

★ Permitting

# **3 - RLFMP Resilience Planning**



## Flood Risk with No Action

RLFMP, like the rest of the Seaport, has existing substantial flood risk, that will increase in the future



### Coastal Flooding by 2070

2023-2070 Cumulative Present Value of Risk, 2070 1% AEP Exposure



**\$1.5  
Billion**

In expected  
losses



**113  
Buildings**

Impacted out  
of 113 total buildings

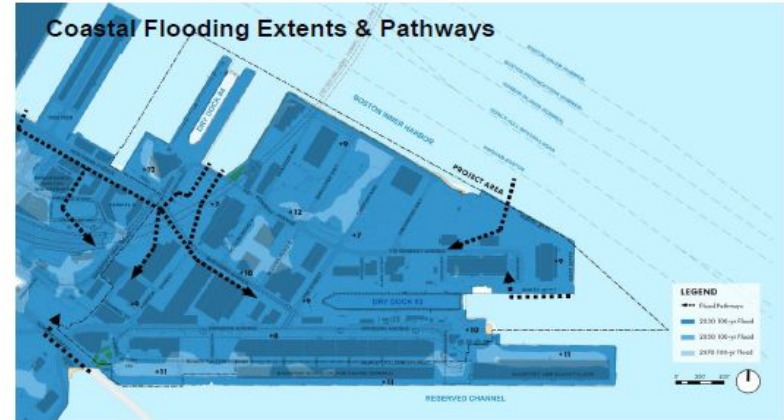


**0  
Residents\***

In impacted homes  
out of 0 residents

*Results represent the cumulative present value of risk from 2020 through 2070 across only the RLFMP area, assuming a 3% discount rate*

\*There are no residential properties within the RLFMP Project Area, therefore no Census data is distributed to buildings in RLFMP. This does not account for the potential for workers or visitors to RLFMP to be exposed or impacted.





# COASTAL FLOOD RESILIENCE DESIGN GUIDELINES



## Long-term Strategy

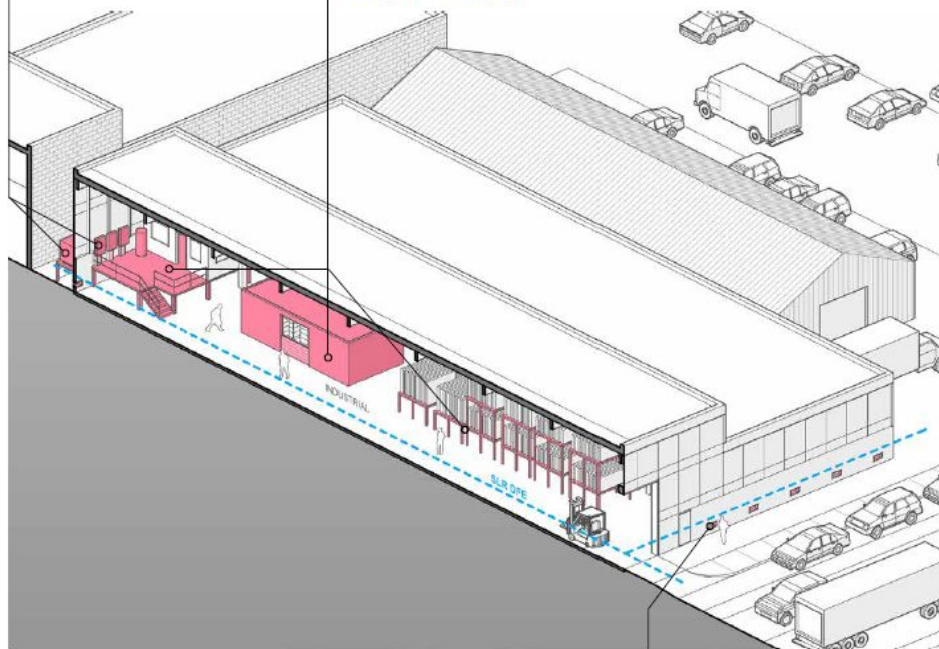
### Building Systems

#### Protect Critical Systems

Locate critical systems above the SLR-DFE. This includes elevating exterior generators or sub-stations onto concrete pads or platforms, elevating electrical panels, and raising mechanical systems. Where space is limited, considering elevating systems onto roofs.

Protect sensitive content inside potentially environment-controlled dry floodproof room with floodgates. Protect general content with elevated storage racks and shelving.

Elevate work stations onto raised platforms or mezzanines to reduce flood damage and help restore operations more quickly.



### Building Envelope and Access

#### Wet Floodproofing

Install flood vents at basement walls in order for water to enter and balance hydrostatic forces.

Use water-damage-resistant materials below the SLR-DFE.

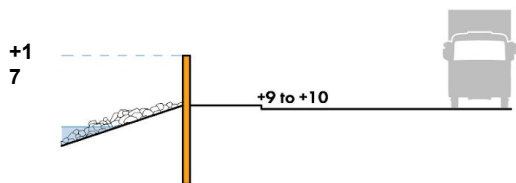
## DESIGN

### What does it look like?

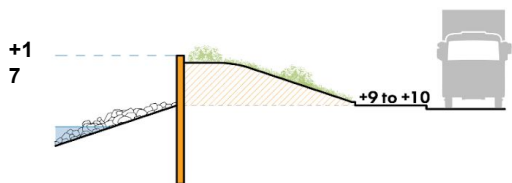


## Considered in Future Project Phases

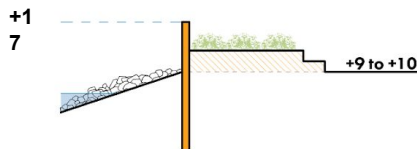
# COASTAL FLOOD PROTECTION APPROACHES



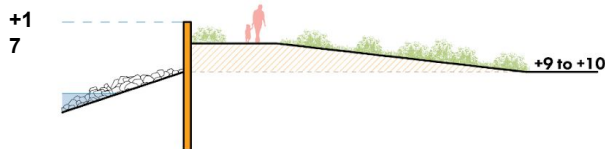
Flood Wall at Shoreline with Truck Access



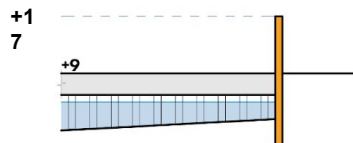
Flood Wall and Berm with Truck Access



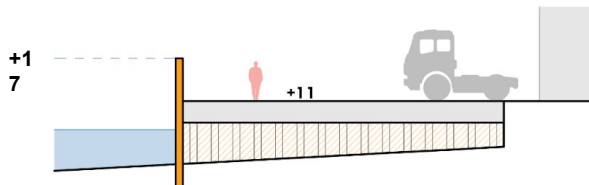
Flood Wall with Raised Planter



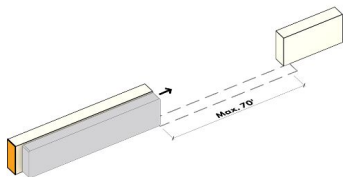
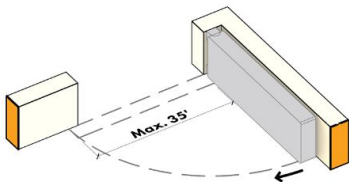
Flood Wall with Raised Park or Landscape



Flood Wall on Bulkhead at Back of Jetty



Floodwall at Water's Edge



Flood Wall Gates Types: Swing (top) and Roller (bottom)

# EVALUATION CRITERIA

## EFFECTIVENESS

The alternative reduces long-term flood risk to businesses and infrastructure within RLFMP.

## FEASIBILITY

The alternative integrates with industrial business operations, minimizes disruption to shorefront activities, is consistent with laws and regulations, and is technically achievable.

## DESIGN LIFE AND ADAPTABILITY

The alternative provides protection through at least 2050 and can be adapted to higher levels of flood protection in the future.

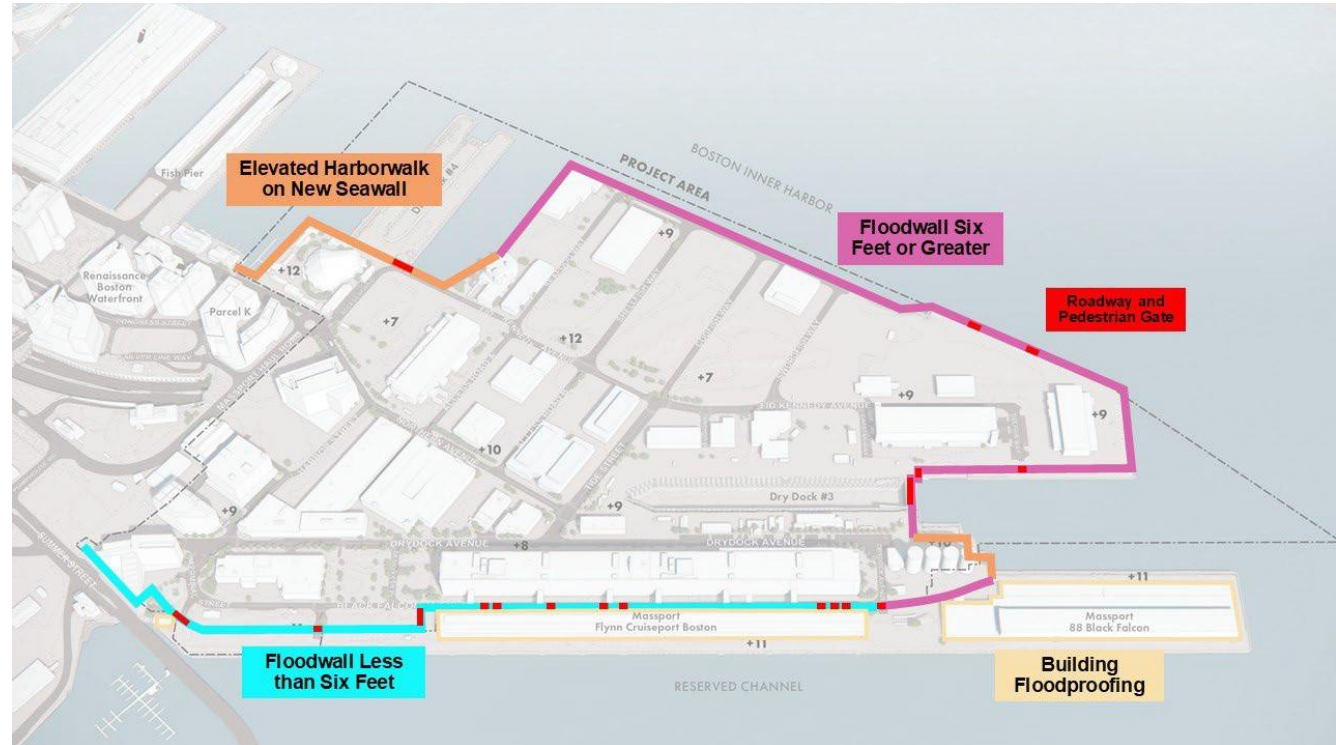


## Preferred Alignment: Option A5

The preferred alignment (Option A5) includes construction of a FBS along the northern and eastern coastal perimeter of RLFMP, moving to an inland alignment along Black Falcon Avenue. Based on feedback received during stakeholder engagement, this alignment excludes the following infrastructure from the coastal flooding line of protection:

Massport-owned sites at 88 Black Falcon Avenue and the Cruiseport and a building between Parcels C1 and A outside of EDIC property.

The primary differentiator of the preferred alignment is that it includes protection to the designated DFE for all structures located on EDIC-owned land within RLFMP. Additional tie-ins, to be developed in future phases of the Project, are necessary to achieve the full long-term flood mitigation benefits of the preferred FBS alignment.



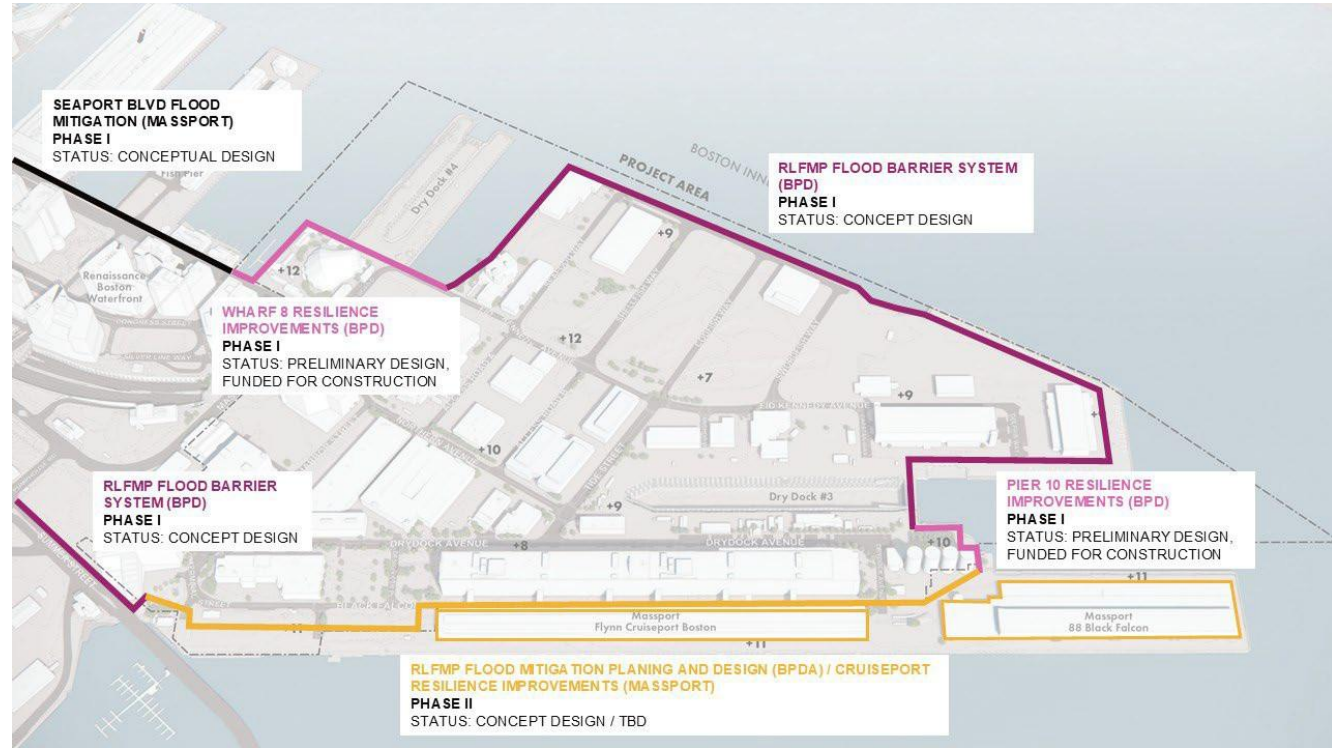
# Phasing Strategy

## Phase I

- Recommended implementation by 2030 at the 2050 DFE (higher if feasible)
- Stormwater infrastructure should be upgraded prior to or concurrent with Phase I

## Phase II

- Recommended implementation by 2050 (segment between Parcel K and Parcel A)
- Building level flood protection at the Cruiseport and 88 Black Falcon Ave should be implemented prior to 2050



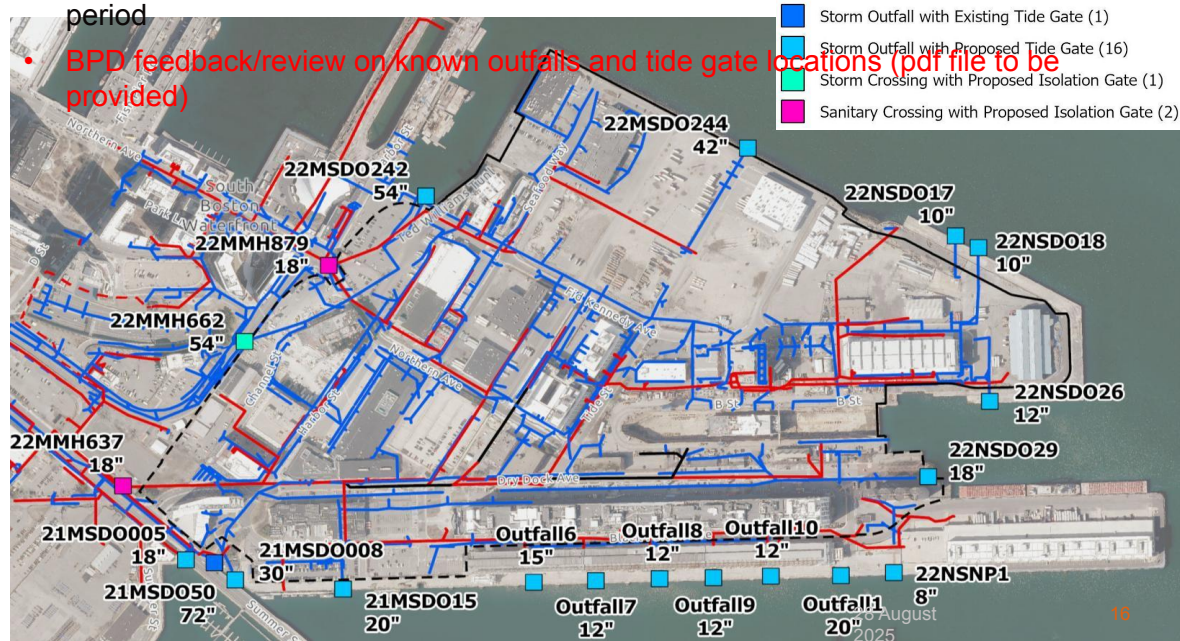
# Sewer Outfalls, Tide Gates, and Isolation Gates

ID	System	Pipe Size (inches)	Invert Elevation (ft NAVD88)	Structure Type
21MSDO50	Storm	72	-2.79	Existing Tide Gate
21MSDO005	Storm	18	1.51	Proposed Tide Gate
21MSDO008	Storm	30	0.71	Proposed Tide Gate
21MSDO15	Storm	20	-3.30	Proposed Tide Gate
22MSDO242	Storm	54	-6.48	Proposed Tide Gate
22MSDO244	Storm	42	5.49	Proposed Tide Gate
22NSDO17	Storm	10	3.78	Proposed Tide Gate
22NSDO18	Storm	10	3.80	Proposed Tide Gate
22NSDO26	Storm	12	4.13	Proposed Tide Gate
22NSDO29	Storm	18	3.22	Proposed Tide Gate
22NSNP1	Storm	8	6.11	Proposed Tide Gate
Outfall1	Storm	20	4.00	Proposed Tide Gate
Outfall10	Storm	12	6.56	Proposed Tide Gate
Outfall6	Storm	15	5.32	Proposed Tide Gate
Outfall7	Storm	12	6.45	Proposed Tide Gate
Outfall8	Storm	12	6.44	Proposed Tide Gate
Outfall9	Storm	12	6.68	Proposed Tide Gate
22MMH662	Storm	54	-3.81	Proposed Isolation Gate
22MMH637	Sanitary	18	-2.72	Proposed Isolation Gate
22MMH879	Sanitary	18	-1.35	Proposed Isolation Gate

note: All pipes are

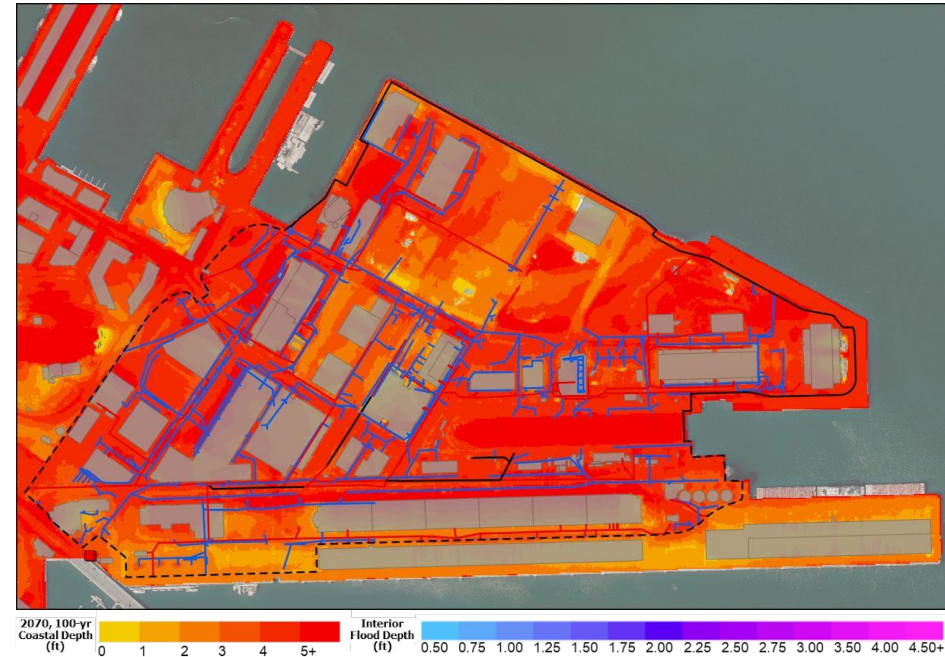
- Isolating the sewer system from storm surge and inland, unprotected areas prevents backflow through sewers and helps meet FEMA accreditation requirements
- The three isolation gates will require future discussions with DOT and BWSC, and consideration of management of sanitary flows generated on-site during closure period

BPD feedback/review on known outfalls and tide gate locations (pdf file to be provided)

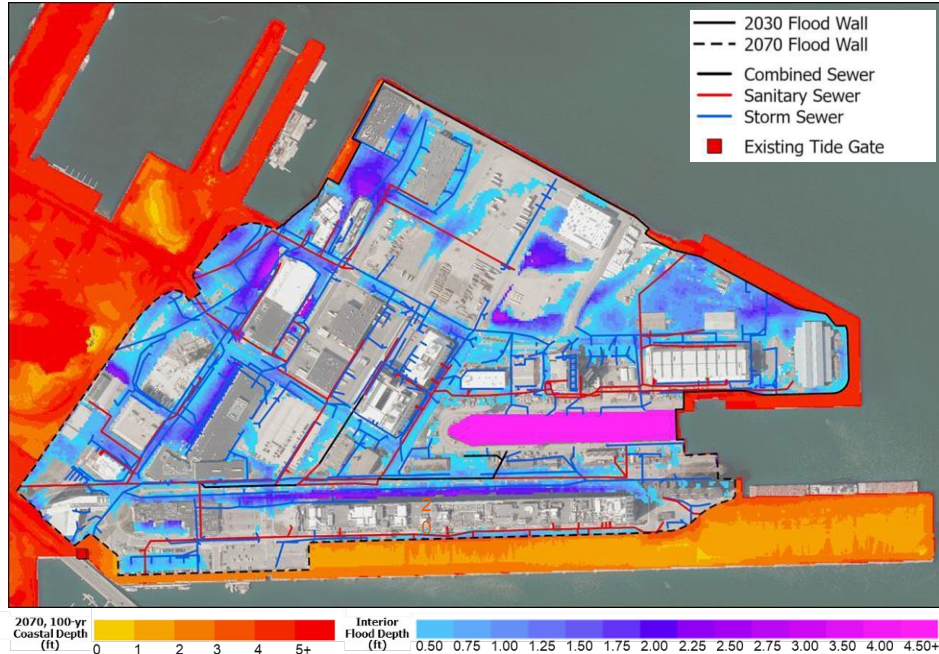


# Residual Coastal Flooding After Proposed Coastal Flood Mitigation

## No Coastal Flood Protection



## Coastal Flood Protection Without Sewer Isolation



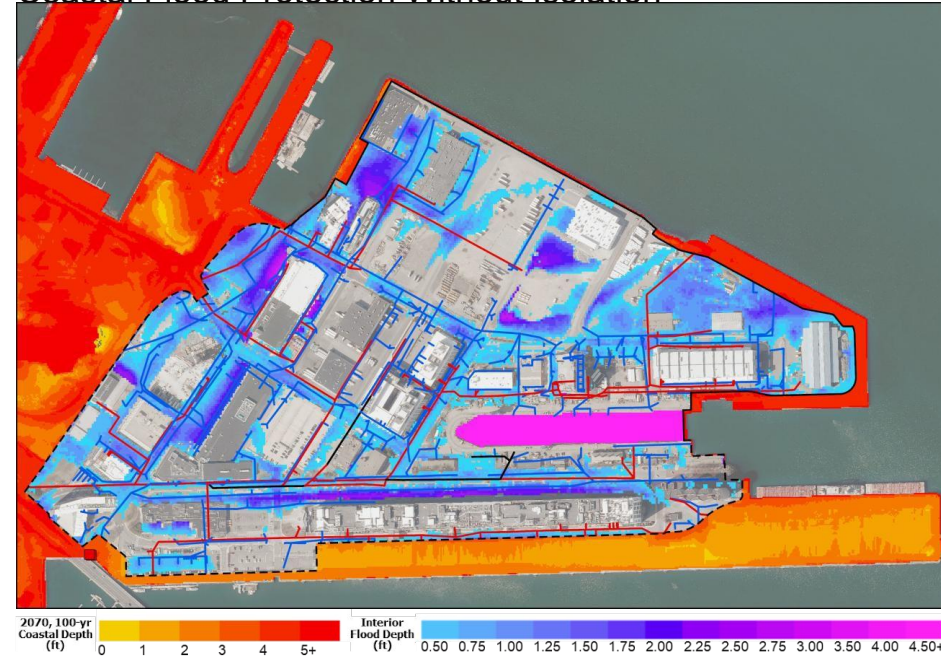
Results shown for 2070 100-yr surge event without rainfall. See prior slides for event details

All Model Results assume no wall overtopping and no seepage

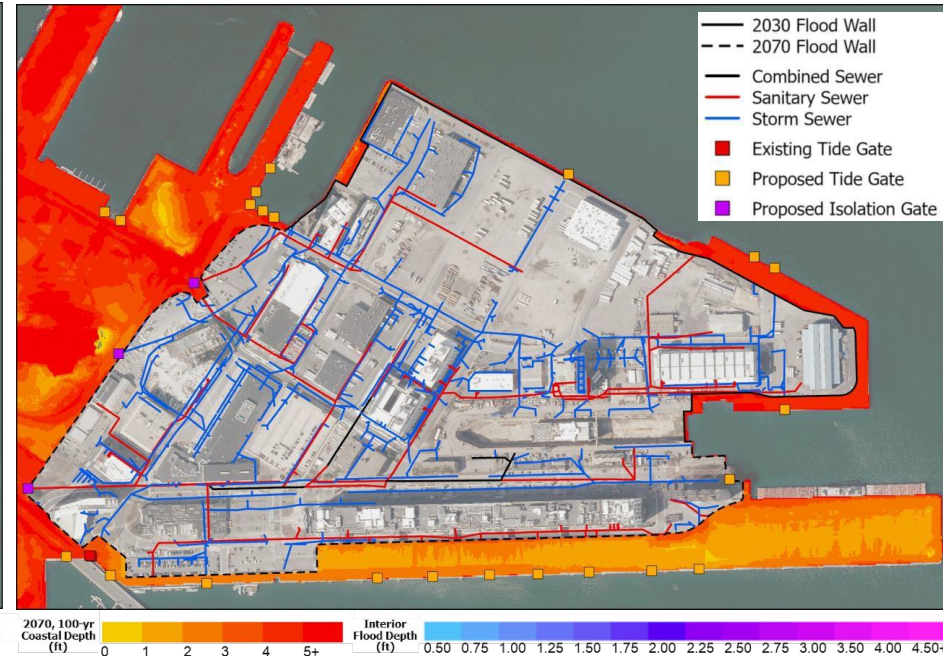
Model Results with Proposed Solutions also assume Sewer Isolation (see prior slide detailing sewer isolation)

# Residual Coastal Flooding After Proposed Coastal Flood Mitigation (No Rainfall)

## Coastal Flood Protection Without Isolation



## Coastal Flood Protection With Isolation



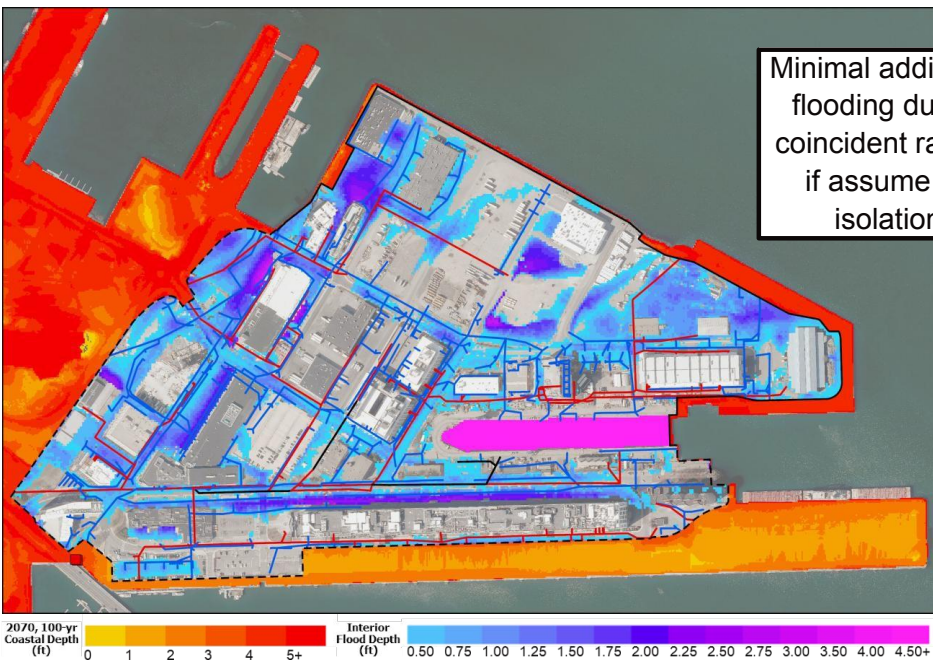
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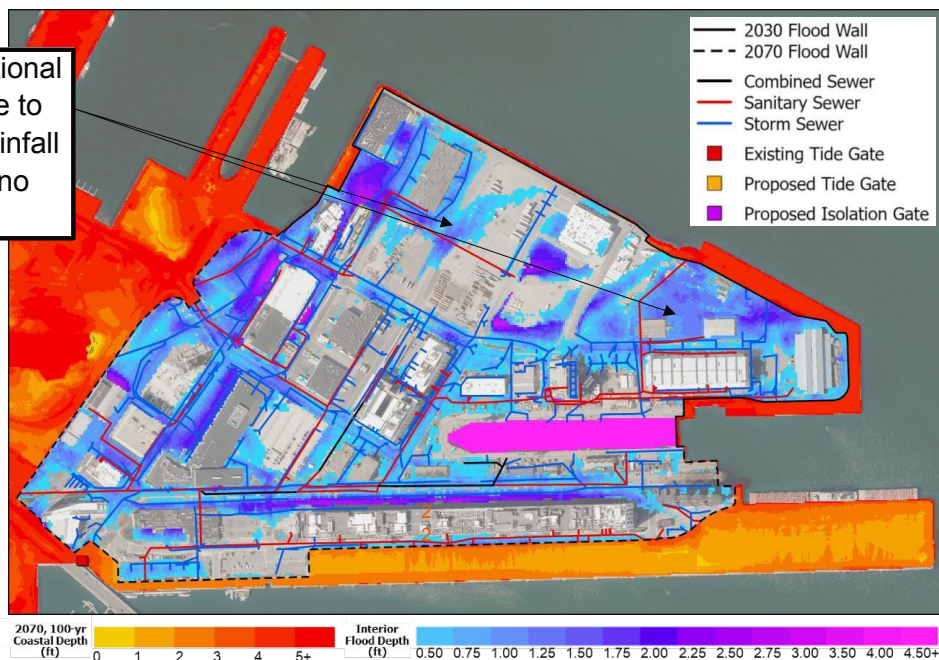
# Impact of Coincident Rainfall Without Isolation

Coastal Flood Protection Without Isolation – **No Rainfall**



Minimal additional  
flooding due to  
coincident rainfall  
if assume no  
isolation

Coastal Flood Protection Without Isolation + **Rainfall**



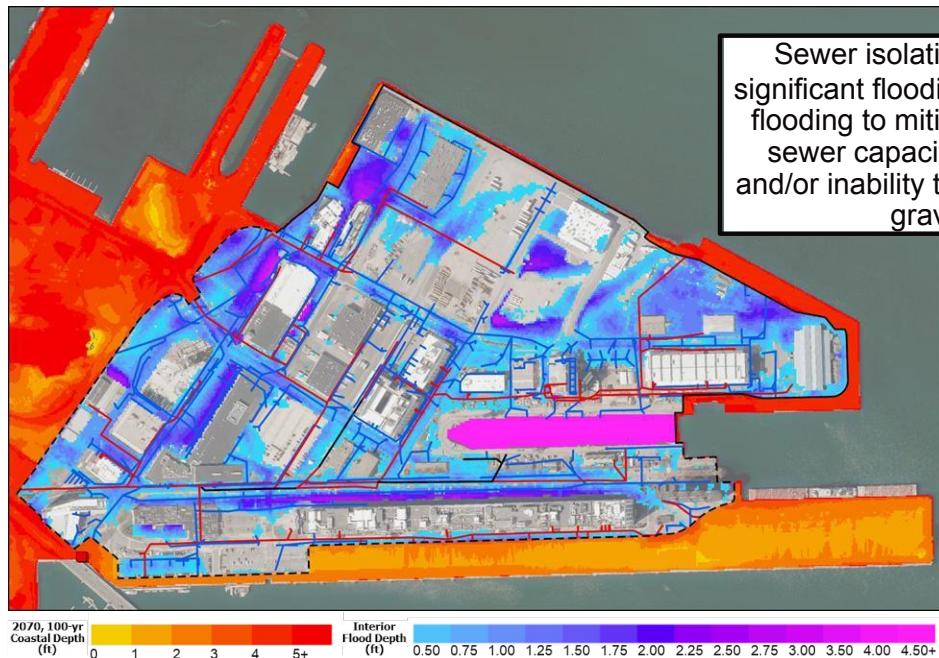
Results shown for 2070 coincident 100-yr surge event and 10-yr, 24-hr rainfall event. See prior slides for event details

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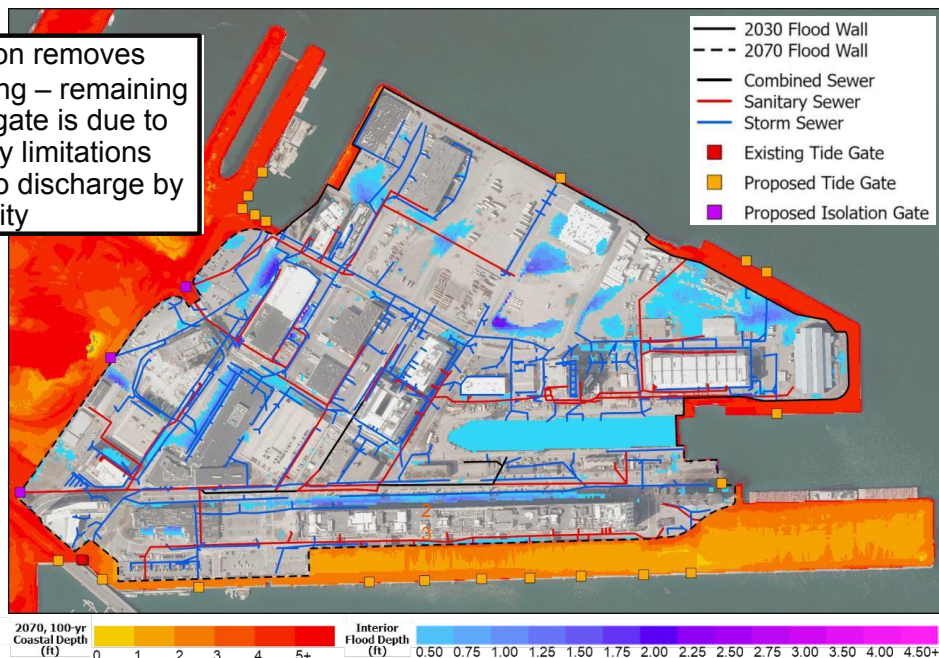
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# Impact of Coincident Rainfall With Isolation

Without Isolation



With Isolation

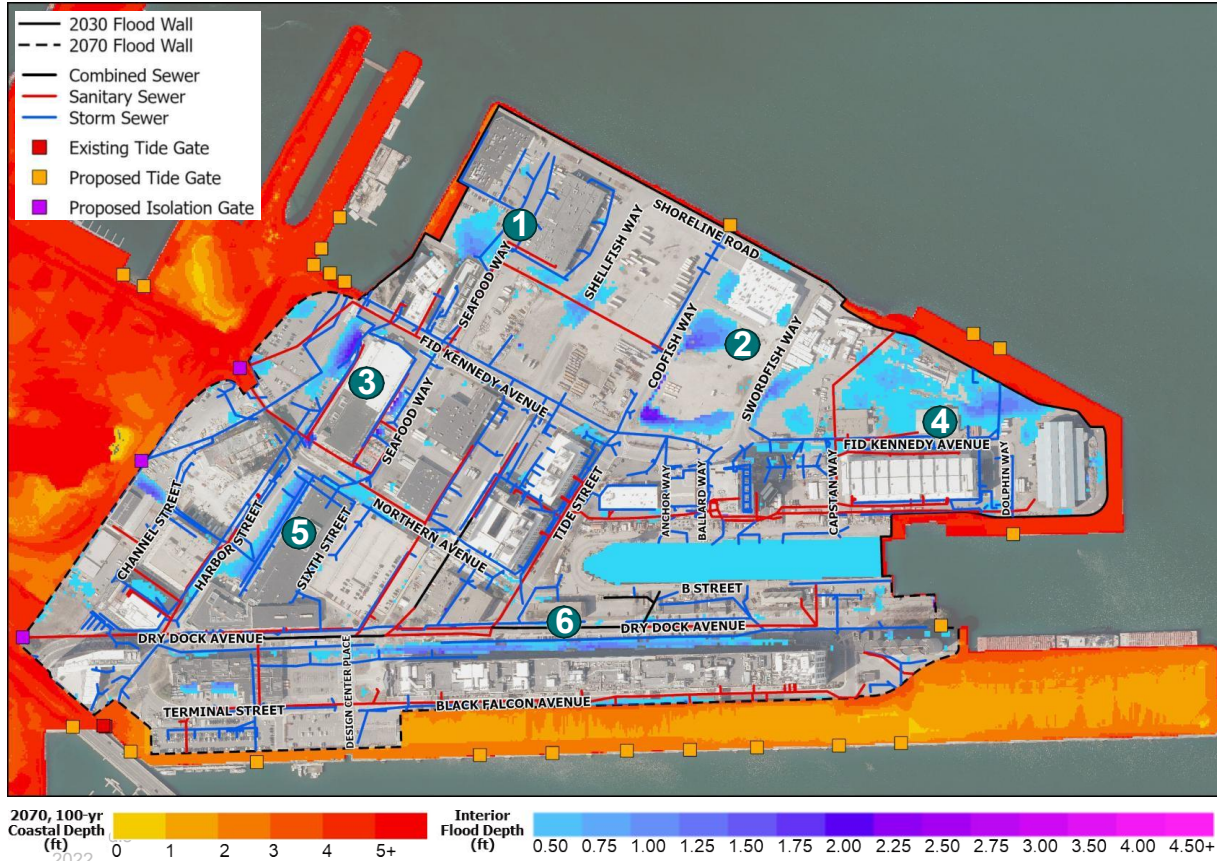


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# Managing Residual Stormwater Flooding



Are some areas of flooding more critical to mitigate?

Future question as conceptual design progresses: are some more expensive / disruptive?

# **4 - Non-Transportation Maritime Improvement Projects**



# SOUTH JETTY BULKHEAD REPLACEMENT

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*Replacement of the 1940's steel sheet-pile bulkhead at the East end of the South Jetty and demolition of the failed wharf structure.*

**NOVEMBER 2025**

**SUBSTANTIAL COMPLETION**

**UNDER CONSTRUCTION**



**COLLINS**  
ENGINEERS INC.

**COASTAL**  
MARINE CONSTRUCTION LLC

# RLFMP: BERTH 10 REPAIRS

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*Engineering and construction of repairs to Berth 10 in the RLFMP identified by the agency-wide waterfront infrastructure assessment.*

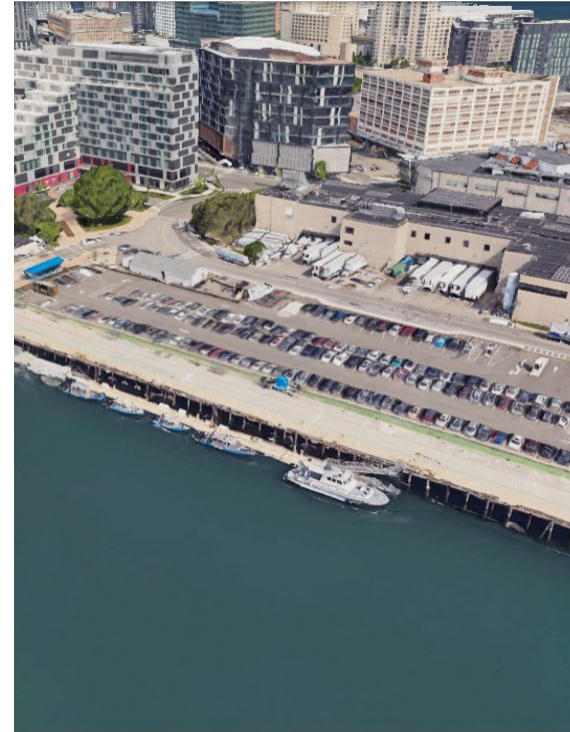
**FEBRUARY 2025**

DESIGN KICKOFF

**6 MONTHS**

DESIGN DURATION

**UNDER DESIGN**

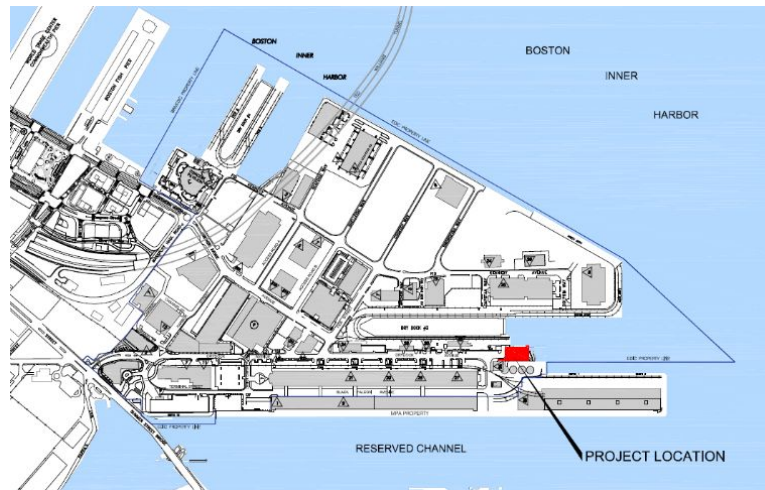
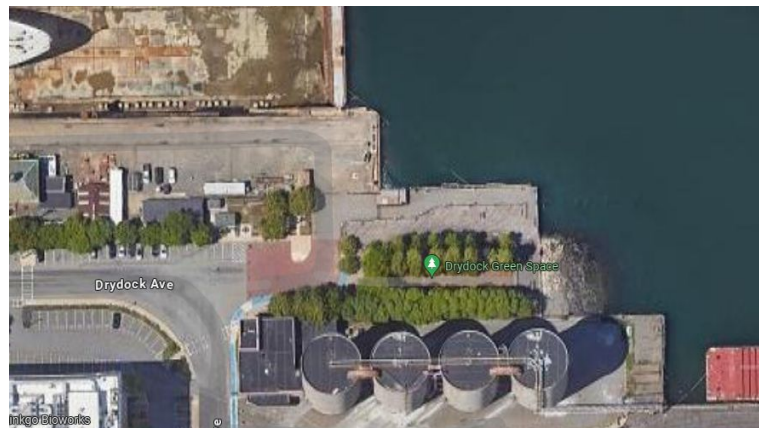


# **5 - Transportation Improvement Projects**



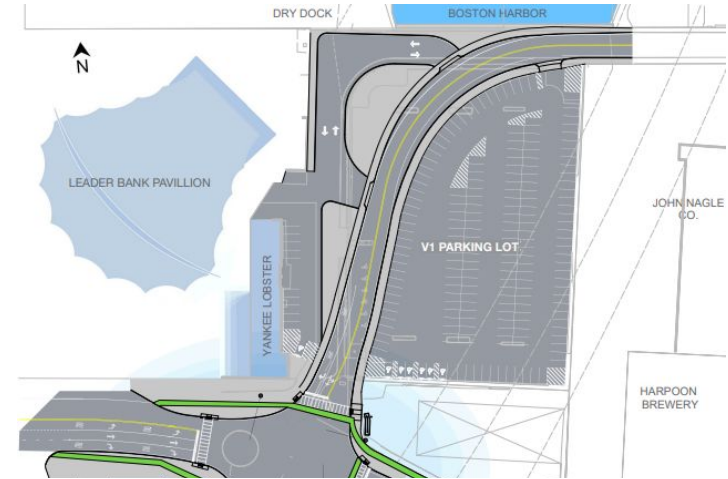
# Pier 10 Ferry Service

- Service Started June 2nd!!!
- North Station - Fan Pier - Pier 10
- 15-20 minute frequencies Monday - Friday in AM/PM peak periods



# FID Kennedy Design Concept

- BPDA originally presented 3 concepts for consideration for the FID Kennedy Realignment
- Based on MPBA feedback, a new 4th concept (Compromise Option) was proposed
- BPDA received a letter of support from the MPBA for the Compromise Option
- At the February 2024 Board meeting, BPDA received authorization to release an RFP for the full design of the concept which will include continued tenant engagement
- Project is fully funded and BPDA expects target bidding in Winter 2025/2026 with a 12 month delivery timeline



# Massport Haul Road/Fid Kennedy Ave Realignment Project



- Massport, BTD, and BPDA consultant team working on revising alternative to incorporate feedback and to advance to a finalized concept level design

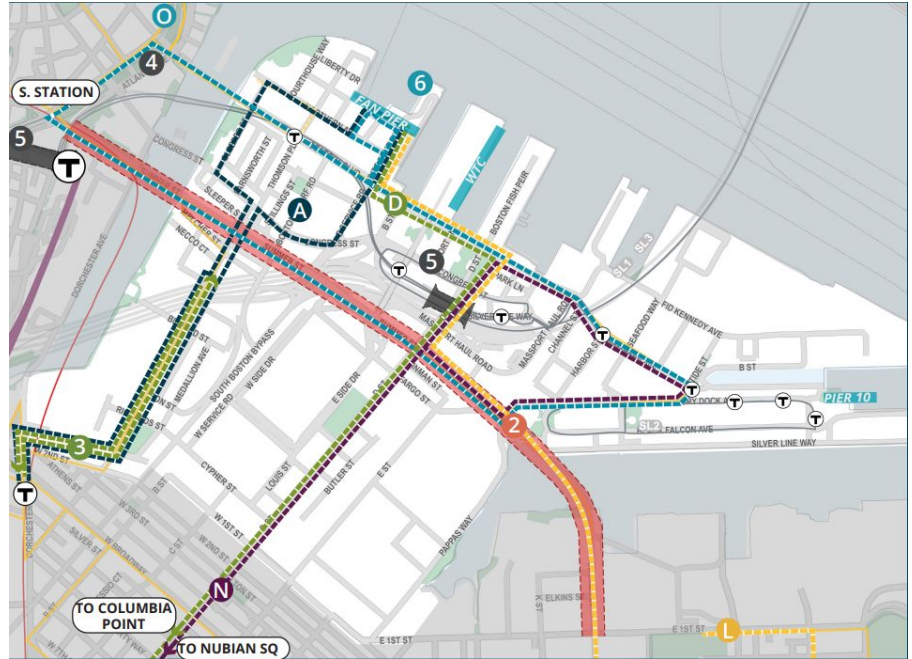
# Seaport Safety and Mobility Action Plan

- **Near Term Improvements:** project will plan, design, and implement near-term quick-build improvements focused safety, accessibility, and public realm. These may include:
  - Crosswalk improvements
  - Daylighting
  - Signal timing changes
  - Curb use regulation changes
  - Pedestrian wayfinding
  - Tactile public realm



# Seaport Safety and Mobility Action Plan

- **Long Term Planning:** This project will advance transit recommendations identified in previous planning efforts including:
  - Go Boston 2030
  - Seaport South Boston Strategic Transit Plan
  - South of Summer Study
- This will include prioritization, feasibility, and concept-level design for select projects. Any further design and implementation would be advanced through separate processes



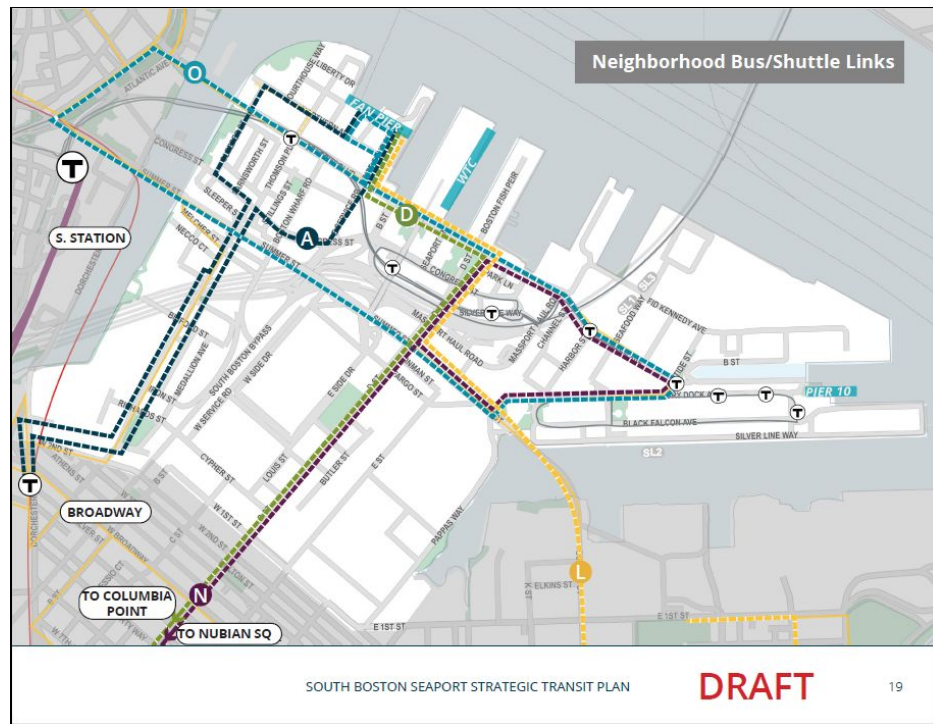
# Link Bus Shuttle Service (Parcel O+P)

- As part of the redevelopment of Parcel O/P, Marcus Partners committed in their TAPA to deliver a shuttle service
- Shuttle expected start TBD

- Precursor to the Boston Link Seaport Circulator service



## Initial Shuttle Route by O+P



# **5 - Transportation Project Financing**



# Transportation Mitigation Funds from Development Projects



## Receipts

Parcel O&P	\$269,774
Parcel X (310 Northern Ave)	\$450,000
<b>Total Received</b>	<b>\$719,774</b>

## Disbursements

Massport	(\$100,000)
Northern Ave Improvements	(\$269,774)
<b>Total Disbursed</b>	<b>(\$369,774)</b>
<b>Balance</b>	<b>\$350,000</b>

# Additional Infrastructure Funding Sources

- **Maritime Capital Reserve Fund**

- Utilizing the revenue generated through its real estate portfolio, specifically from general industrial redevelopment in the RLFMP, the BPDA is committed to leveraging independently-generated funds to accelerate investment in maritime infrastructure.
- Funds will be set aside from the BPDA General Fund to exclusively invest in maritime infrastructure improvement projects.
- *Note: This includes all maritime infrastructure and not just transportation improvements*

- **RLFMP Climate Resiliency Infrastructure Funding Mechanism**

- Public-private cost sharing mechanism where each participating RLFMP tenant's share of the BPDA and/or City of Boston resiliency investments will be determined by their percentage of the RLFMP's total built square footage

- **Supplemental Funding Sources**

- Local, state and federal funds including TIGER, Massworks, Seaport Economic Council and City of Boston Capital Funds

THANK YOU

# Raymond L. Flynn Marine Park -

Final Master Plan Update Transportation Advisory Committee



Planning Department

CITY of **BOSTON**