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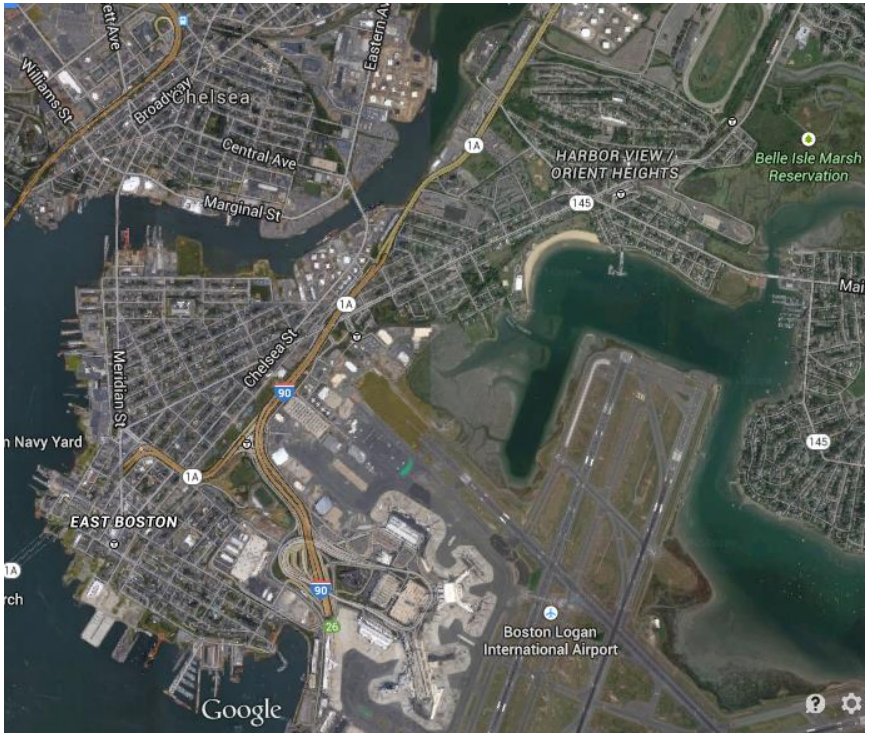
ULI Boston/New England
Technical Assistance Panel (TAP) Program

Advancing Resiliency in East Boston



East Boston, MA

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ULI – the Urban Land Institute

Mission

To provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.

ULI is a research and education institution with over 34,000 members worldwide representing the entire spectrum of land use and real estate development disciplines, working in private enterprise and public service.

ULI at the local level

The Boston/New England District Council covers nearly all of New England with over 1,200 Members—developers, architects, planners, public officials, financiers, students, etc.

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Technical Assistance Panels (TAPs)

ULI Boston/New England is committed to supporting the communities of New England in making sound land use decisions and creating better places. A Technical Assistance Panel (TAP) brings together of a group of ULI members with a range of professional expertise to provide focused, collaborative consultation to a local government or qualifying non-profit organization.

East Boston TAP

Sponsored by Neighborhood of Affordable Housing and the Kresge Foundation
Panelists include experts in the fields of architecture, public policy, engineering, real estate law, landscape architecture, and planning.

Panelists have donated their time
Final Deliverable – Written report will be available in 6-8 weeks

Panelists

Panelists

Nina Chase, Sasaki
Varoujan Hagopian, GEI Consultants
Paul Kirshen, University of New Hampshire
David Lewis, Goulston & Storrs
John Macomber, Harvard Business School
John Schmid, Nitsch Engineering
Gretchen Schneider, Boston Society of Architects & CDRC
Brian Swett, Former Chief of Environment, Energy, and Open Space, City of Boston
Bob Uhlig, Halvorson Design Partnership
Jordan Zimmermann, Chair, Arrowstreet

Sarah Barnat, Executive Director
Calvin Hennick, Report Writer
Ileana Tauscher, Associate

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The Process

Briefing

Panelists participated in a community meeting attended by East Boston residents and public agency representatives on March 25, 2015

Agencies represented: MassDOT, Massport, MWRA, BWSC, MEMA, City of Boston

Site Visit

Panelists toured East Boston neighborhoods: Maverick, Orient Heights, Eagle Hill, Jeffries Point

Panel interviewed representatives from ULI's partner organization, NOAH:

Magdalena Ayed – Community Liaison
Philip Giffee – Executive Director
Chris Marchi – Director of Community Building & Environment

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East Boston Economic & Demographic Data

Airport
Over **1000 flights** and **90,000 passengers** daily
Daily Revenue – **$19.2M**

MBTA
Over **65,000 daily riders** on the
Blue and Silver line

Ted Williams Tunnel
Over **70,000 vehicles** daily
Nearly **$310,000** in toll revenue

Sumner Tunnel
Over **17,000 vehicles** daily
Nearly **$75,000** in toll revenue

SUMMARY

Average of **250,000 people** coming into and out of East Boston each day

Average of **$500K** MassDOT (T revenue, tunnels)

Average of almost **$20M** from airport

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East Boston Economic & Demographic Data

41,128 Total Population
30% Children & Elderly
30.3% Linguistically isolated
16.5% Households below poverty level

$22,403 per capita income
22,132 civilian employed population

40% of employed are service workers
Who earn an aggregate of **$631,000**
per 8 hour shift

Housing Stock
10,890 total rental
4,398 total ownership

Panelists touring Jeffries Point

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Previous Workshops

BAC students conduct neighborhood surveys

BAC students discuss surveys with NOAH youth

Agency + Neighborhood Workshop 1

Impromptu Resident Interviews

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The Panel's Assignment

1. How do public agency needs & assets overlap with community needs & assets in East Boston?

2. What current and future actions can be taken to address both present and future vulnerabilities?

3. What policies and financial options exist that can be used to preserve and protect East Boston's assets?

Use Strategies to Address 3 Challenges

Mitigation – lessen energy use, change dependence to renewable energy sources

Adaptation – prepare for climate change as it specifically relates to your area and community

Social cohesion – connecting among individuals and networking to foster equity

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Neighborhood Strengths

- Long history of successful community engagement in neighborhood
- History of successful agency engagement
- History of extensive study and planning
- Diverse population
- Existing infrastructure of community organizing
- Clear neighborhood boundaries

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Opportunities

- Proximity to Downtown Boston
- Connection to Metro Boston infrastructure
- Strong political capital at both city and state level
- Shared assets and neighborhood with Massport, an important transit hub for the region
- Overlapping agency interests
- Recent influx of capital
- Defined vulnerabilities

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Agency Assets

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Agency Assets in Flood Plain

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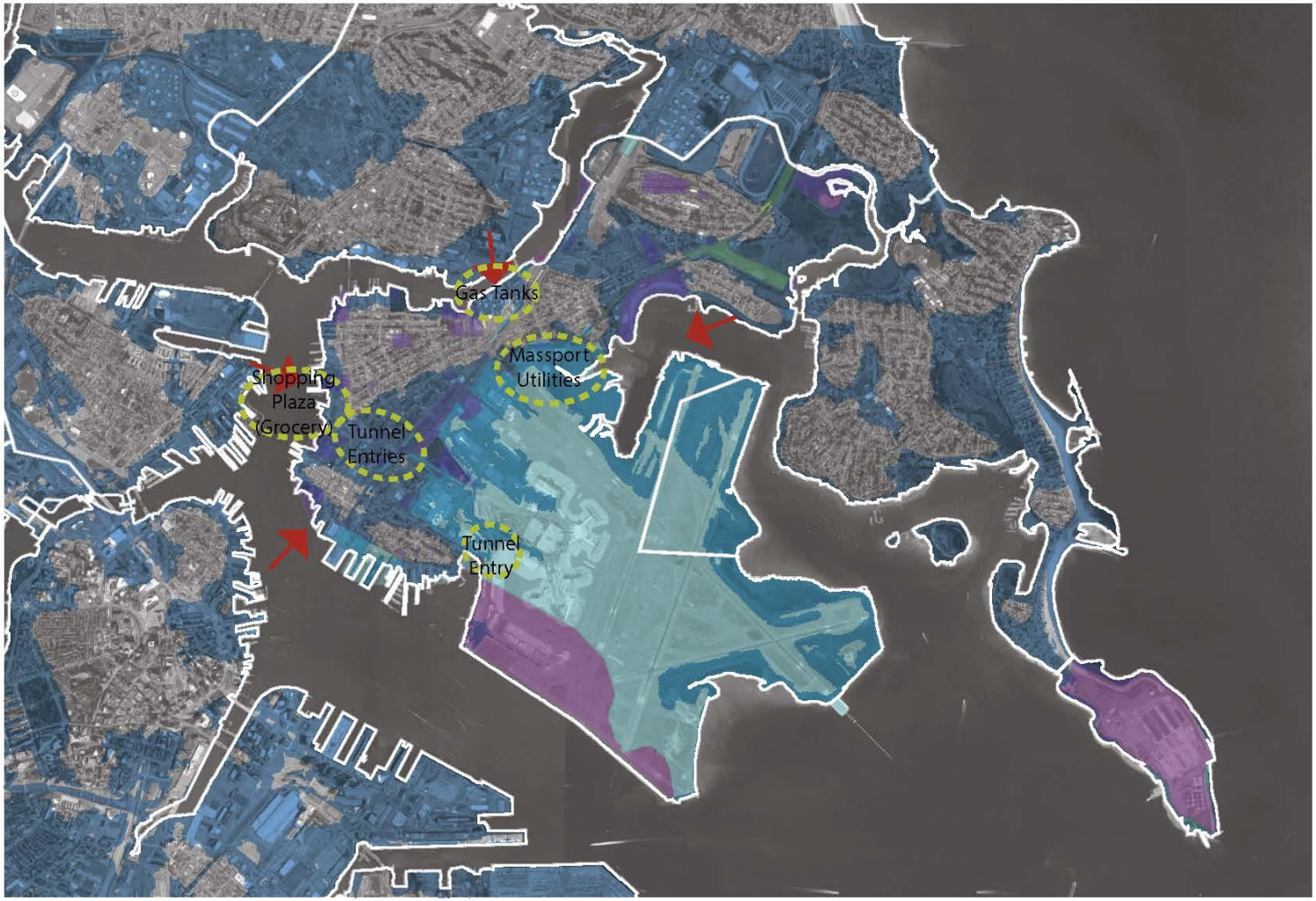
2050 + Major Storm Flooding (7 ft.)



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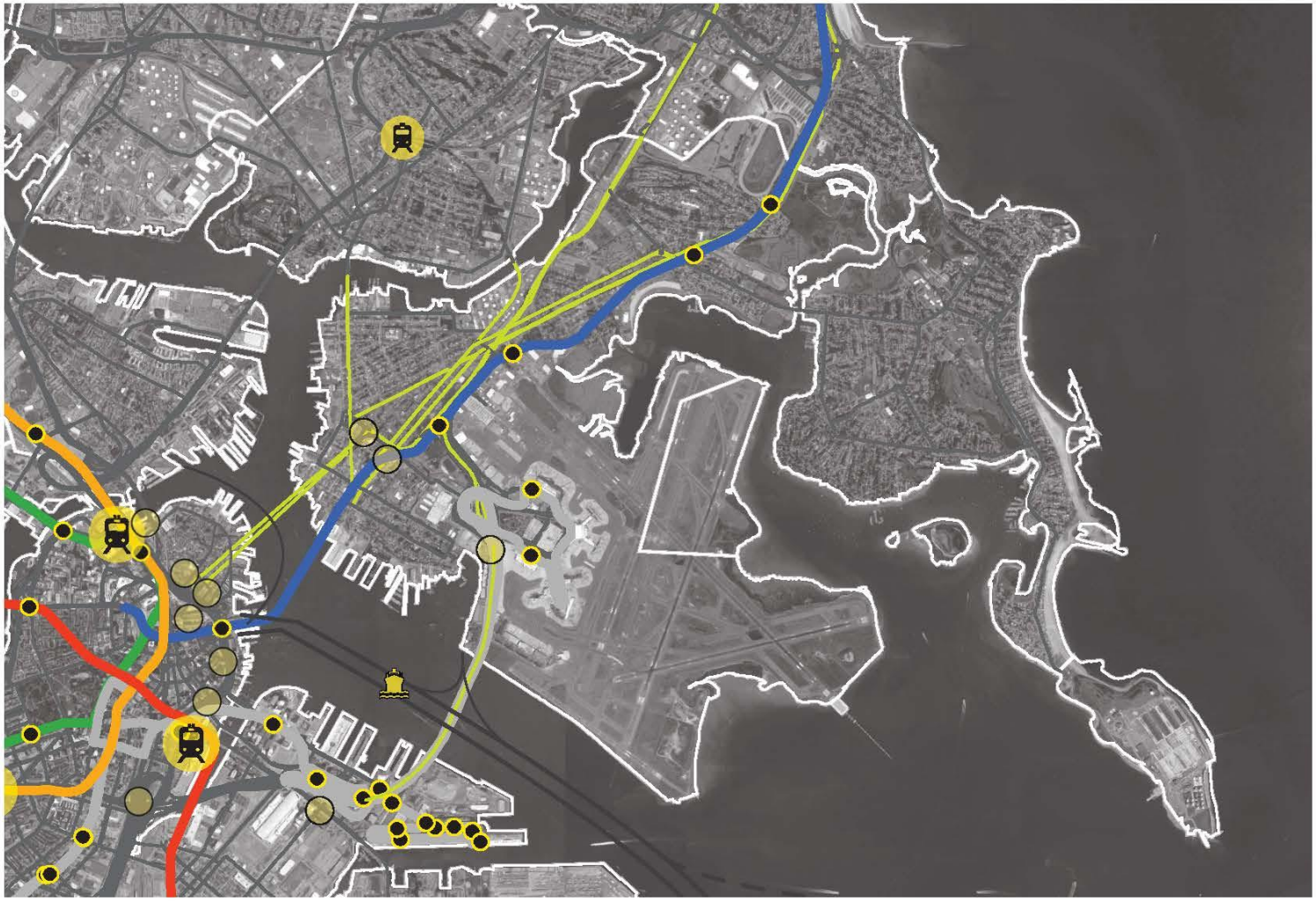
Transit – MBTA, Major Roads, Tunnel Entry/Exit



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Transit Assets in Flood Plain

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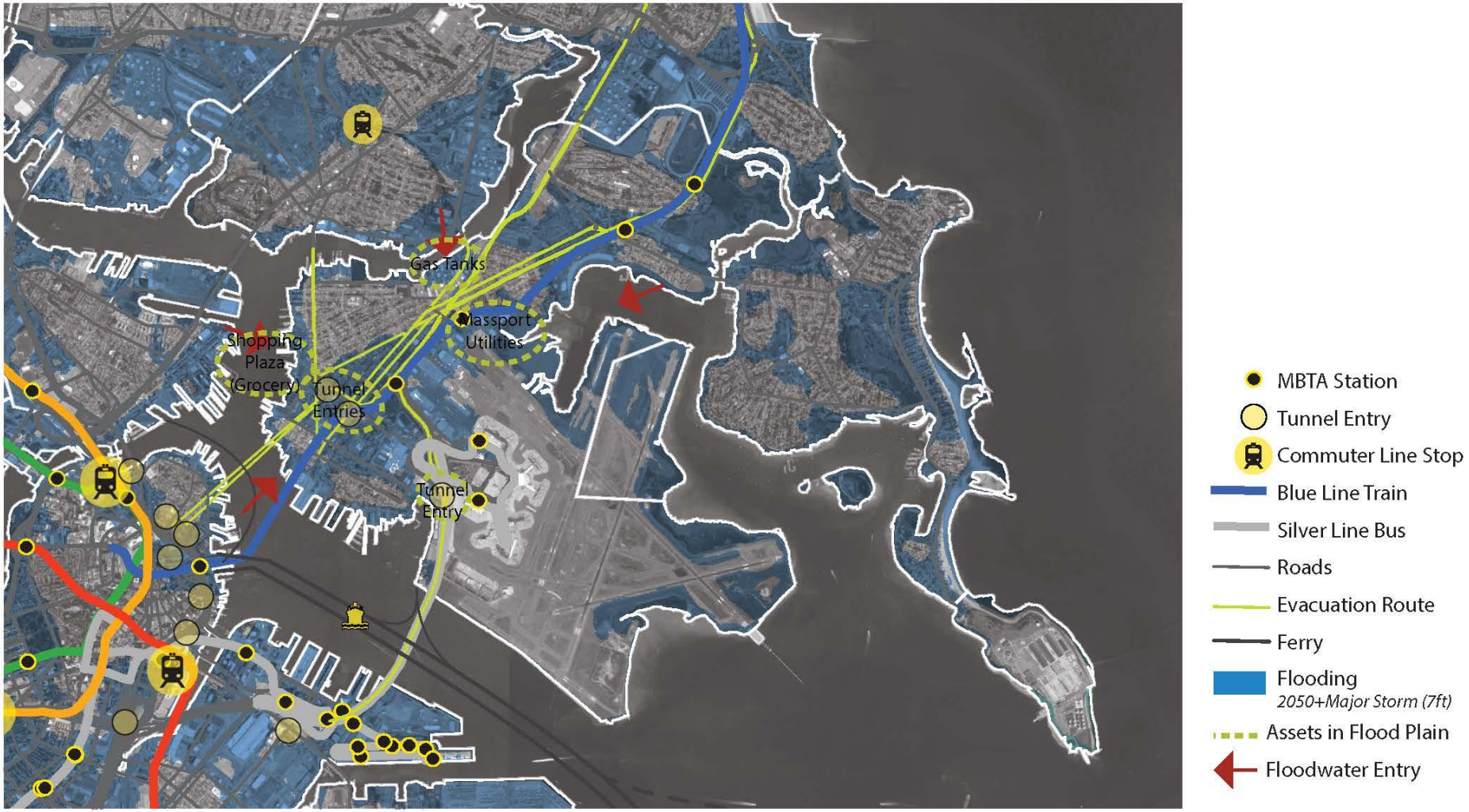
2050 + Major Storm Flooding (7 ft.)



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Police Stations and Utility Substations

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Police & Utility Substations in Flood Plain

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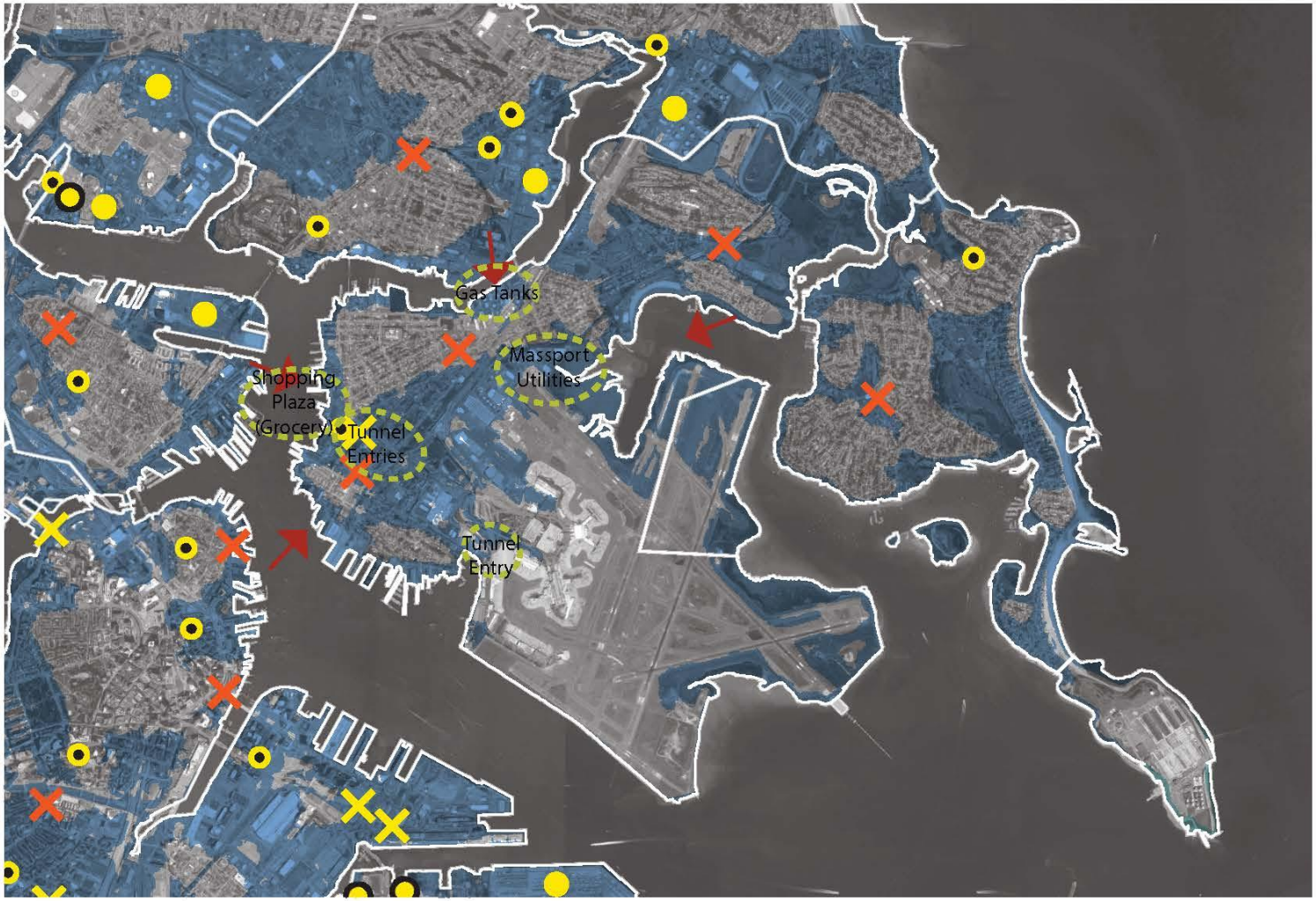
2050 + Major Storm Flooding (7 ft.)



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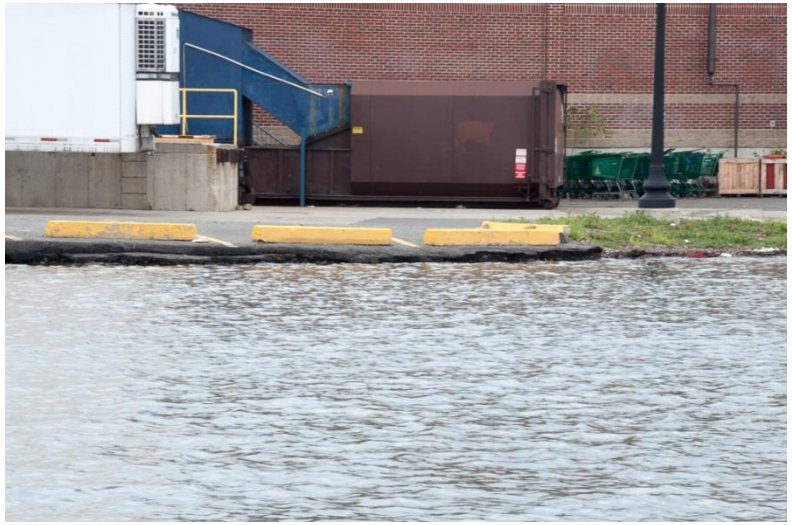
Existing Conditions



Lunar High Tide behind Shaw's (Site is Marine Use)

View of Downtown from Pier's Park

Marsh north of Logan Airport

Underutilized waterfront at East Boston Shipyard

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Strategy – Identifying East Boston's Assets

Panelists identified East Boston's assets from the following categories:

1. Natural Resources/Coastal Zone
2. Built environment & infrastructure
3. Health & Human welfare
4. Local Government & Economy

Assets were the categorized into three categories:

1. Assets that need to function during an event
2. Assets that need to function within 72 hours
3. Assets that require more investment so that they can withstand sea level rise over time

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Strategy – During Event

Priority			
	Low	High	
	Major Roads	Fire Station & Ambulance access to residents sheltering in place, Stormwater Drainage, Potable water	High
Cost of protecting	Functioning Sewer system	Phone Service, Program for potable water resources when direct water access is compromised, Basement waterproofing measures in place or basement allowed to flood with minimized damage	Low

Potential Strategies:

Flood walls protecting specific access roads to community shelters and vulnerable residents
Identifying areas for flood water to go to divert from homes and access roads
Work with MBTA, MassDOT, Massport to protect tunnel and road access to neighborhood
Flood walls such as Aqua Fence
Underground phone lines
Backflow preventers

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Strategy – within 72 hours

Priority			
Low	High		
Access to Jobs, MBTA, evacuation routes, Heating/Air Conditioning	Massport runways, Main access roads, Pump Stations, Utilities (Electrical and Natural Gas), Tunnel Access, Access to local hospitals or clinics	High	Cost of protecting
	Access to food (grocery stores or other), Access to community centers/shelters	Low	

Potential Strategies:

Identified community centers for food delivery if grocery stores are not accessible

MBTA protection of tunnels

Phase out basement units, revise zoning to allow for additional story as trade off

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Strategy – protected as Sea Level Rises 2050

Priority			
	Low	High	
High	Piers	Massport, MBTA, Tunnel Access, Evacuation Routes, Utilities, Pump Stations, Fuel Tanks, Homes	Cost of protecting
Low		Belle Isle Marsh, Condor Urban Wild, Community Gardens, Bike Routes, Water Transit, (New or revised) Harbor Access routes for recreation and transportation	

Potential Strategies:

Raised parks

Flexible shoreline for transit and recreation access to Harbor

Recreation areas along the waterfront which are designed to flood during daily tides

Developer partnerships to work together and protect larger areas of East Boston

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Recommendations & Next Steps

Immediate preparation at individual scale

- Resident preparedness
- NOAH's work with community

Short-term – lower cost

Permanent strategies – long-term planning climate change planning, require addition investment and partnership with government, public & private agencies

Kresge Implementation Grant

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Immediate Individual Property Solutions

- Simple flood-proofing programs and education
  - Flood kit
  - Water sealant
  - More vents
  - Trade out materials (tile, mold proof)
- Engage local contractors to understand best practices for utility maintenance and upgrades
- Move hazards out of flood plain
- Understand individual vulnerabilities and develop implementable strategies
- Continued community engagement**
- Check-ins/follow up with implementation
- “Check the Neighbor” program
- Basement Cleaning Program

****Next community meeting – Wednesday, June 10th**

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Short-term or Temporary Strategies 2015

- Regrade to create water storage in low-lying areas that don't impact transportation tunnels where they daylight
- Temporary floodwalls - AquaFence
- Minor re-grading in land owned by agencies or private parcels
- Develop mitigation plan
- Developer purchased flood control, community managed

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Long-Term Planning & Solutions 2020 +

- Develop and implement contiguous waterfront plan
- Flood walls
- Rethink building typologies in flood plain
- Revise zoning and height restrictions
- Promote higher, denser residential buildings
- Tie future developments to infrastructure improvements
- Plan continuous harborwalk improvements
- Encourage use of local contractors for development
- Conduct progress check-ins
- Consider business improvement district to fund capital improvements to resiliency
- Remove above ground utilities in favor of electricity & phone/cable lines underground

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Financing

There are a number of available programs and instruments that can be applied to climate resiliency, adaptation, and infrastructure improvements.

- District Improvement Financing (DIF)
- Infrastructure Investment Incentive (I-Cubed)
- Chapter 23L
- State Financing Organization
- User Fees
- Matching Funds
- Army Corps of Engineers
- Natural Hazard Mitigation Plans
- PACE Now
- Green Bonds

Q&A