WELCOME!

CLIMATE READY DOWNTOWN AND NORTH END OPEN HOUSE

IMAGINE BOSTON 2030

As Boston’s first citywide plan in 50 years, Imagine Boston 2030 will create a framework to preserve and enhance Boston while embracing growth as a means to address our challenges and make the city stronger and more inclusive.

CLIMATE READY BOSTON


Boston Flood Resiliency Zoning Overlay District and Resiliency Design Guidelines (in progress) Identifying vulnerable areas of the City and establishing building design and guidelines that promote resilience standards.


Climate Resilient Design Standards & Guidelines (2018) Providing engineers and designers with climate design guidelines that recommend appropriate flood protection and coastal outcomes.

Layers of Climate Resilience

Updated Climate Projections
Prepared and Connected Communities
Protected Shores
Resilient Infrastructure
Adapted Buildings

Climate Ready Boston is Mayor Walsh’s initiative to help the City prosper and grow in the face of long-term climate change. In Downtown, our priority is to develop solutions to protect the neighborhood from coastal flooding caused by sea level rise and storms. These solutions can create equitable development and job creation, improve transit and community service, increase access to open spaces and enhance health and security in the community.

WHERE DO WE FIT IN?

2019

JAN 1  CLIMATE READY BOSTON KICKOFF

MAR 12 ENGAGEMENT TOUCH POINT: OPEN HOUSE #1 Learn about the project and provide feedback on how you experience flooding and waterfront open spaces

2020

JULY CLIMATE READY DOWNTOWN FINAL REPORT

ENGAGEMENT TOUCH POINT: OPEN HOUSE #2 Provide feedback on draft design schemes that improve your waterfront open spaces and create a more resilient downtown

May 20 FOCUS GROUP MEETINGS

May 16 OPEN HOUSE #1 UTILITIES + TRANSPORTATION

July 16 LOVEJOY WHARF OPEN HOUSE

Jul 16 CLIMATE READY DOWNTOWN WORKSHOP

Sep

AUG LOVEJOY WHARF

OCT
developing an integrated plan that outlines the necessary actions to reduce the risks from the predicted effects of climate change.

**DISTRICT OVERVIEW**

**WHAT IS AT RISK OF FLOODING?**

Flood extents shown above have been developed with consideration to climate change, projected sea level rise, and potential increase to storm intensity and frequency. These conditions, in addition to numerous other factors, differentiate these maps with flood maps released by FEMA.

**RECENT FLOOD EVENTS**

*numbers correlate to locations on map*

1. **PUOPOLO PARK**
   - MARCH 2018

2. **SARGENT’S WHARF**
   - MARCH 2018

3. **MARRIOTT LONG WHARF**
   - JANUARY 2018

**KEY FACTS + FIGURES**

- Downtown Boston is currently home to 30,000 residents
- There are 2,900 buildings in Downtown
- $58.9 billion market value
- 200,000 people employed

**2030+ 1% ANNUAL STORM**

- 28% of population exposed
- 13% of buildings exposed
- $\text{YYYYYYYYYYYY}$
- 8% of market value exposed
- + $500$ million economic losses

**2070+ 1% ANNUAL STORM**

- 85% of population exposed
- 42% of buildings exposed
- $\text{YYYYYYYYYYYY}$
- 28% of market value exposed
- + $3$ billion economic losses

*Please note that numbers shown here include Chinatown, not shown on map.*
WHAT WE’VE HEARD THROUGH RECENT COMMUNITY ENGAGEMENT

HOW DO YOU USE WATERFRONT OPEN SPACES TODAY?

#1 WALK 45 VOTES

#2 SIT + RELAX 12 VOTES

#3 TAKE A FERRY/BOAT RIDE 29 VOTES

WHAT ARE YOU CONCERNED ABOUT?

WHAT DO PEOPLE VALUE IN BOSTON’S EXISTING WATERFRONT?

WHAT RESILIENT SOLUTIONS ARE YOUR PRIORITY?

WHO ARE BOSTON’S LOCAL WATERFRONT USERS...

WHAT ARE YOU CONCERNED ABOUT?

CLIMATE CHANGE CONCERN?

COASTAL FLOODING CONCERNS?

WHAT PEOPLE WANT...

PEOPLE LIKE...

PEOPLE WANT...
ALIGNMENT TOOLKIT

Climate Ready Boston is investigating options in Downtown to locate resiliency elements. The toolkit below illustrates three general strategies including linear elements, such as harborwalks, open spaces, such as parks, and opportunities for outboard elements, such as living breakwaters.

TOOLKIT TYPOLOGIES (as shown in Resilient Boston Harbor)

Depending on site conditions, the alignment toolkit shown above can manifest itself in many different ways. Below are typical examples, taken from Resilient Boston Harbor, of how the toolkit can be applied. Understanding the value and appropriate location of each typology is an important part of the process.

RESILIENT METHODS EVALUATION CRITERIA

These criteria are used to evaluate performance of flood protection elements in the plan. This process helps us to prioritize options and determine the best fit for each site.

DESIGN LIFE AND ADAPTABILITY
- Design Life
- Performance Horizon
- Adaptability/Flexibility
- Phase-ability and Time to Implementation
- Maintenance Requirements

SOCIAL IMPACT
- Recreational
- Cultural
- Aesthetic

FEASIBILITY
- Stakeholder acceptance
- Constructibility
- Permitting Requirements and Regulatory Considerations
- Affordability Cost of Construction + Cost of Maintenance
- Replicability
- Funding Strategy

EFFECTIVENESS
- Maximum level of protection (% probability / SLR scenario)
- Reduction in flood extent
- Avoided damage and loss
- Residents protected
- Critical assets protected

ENVIRONMENTAL IMPACT
- Water and air quality
- Habitat value
- Human health benefits

EQUITY
- New and equitable access to water
- Educational opportunities
- Community partnerships
- Preservation /addition of affordable housing

VALUE CREATION
- New Value Created on Sites or Adjacent Sites
- Capacity to Catalyze Future Funding and Investment
- The extent to which the project will increase quality of life and the desire to be in the area for living, work or play purposes.
Climate Ready Boston is investigating options in Downtown to locate resiliency elements. The toolkit below illustrates strategies such as harborwalks, open spaces, such as parks, and opportunities for outboard elements, such as living breakwaters.

**ROADWAY OPTION**

Provides flood protection within the city's right-of-way by raising the road.

**WATERFRONT OPTION**

Flood protection along the water's edge that incorporates existing plans for waterfront uses. Existing waterfront and new fill for flood protection while also creating new open spaces.

**EVALUATION CRITERIA PERFORMANCE**

**ROADWAY OPTION**

- Effectiveness
- Environmental benefit
- Design life and adaptability
- Feasibility
- Equity
- Social benefit
- Value creation

**WATERFRONT OPTION**

- Effectiveness
- Environmental benefit
- Design life and adaptability
- Feasibility
- Equity
- Social benefit
- Value creation

**KEY CONSIDERATIONS**

<table>
<thead>
<tr>
<th>ESTIMATED PROJECT COST</th>
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<th>ESTIMATED IMPLEMENTATION TIMEFRAME</th>
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- Raising the road creates conflict with neighboring buildings ground floors.
- Setting flood protection back from shoreline exposes waterfront areas.

- Involves creation of new land through fill adjacent to Lovejoy and the Charles River Dam abutment.
- Partnerships between private and public land owners is necessary.
- Will require coordination and reorganization of marinas. Conversations are currently underway.
These criteria are used to evaluate performance of flood protection elements in the plan. This process helps us to prioritize options and determine the best fit for each site.

**RESILIENT METHODS EVALUATION CRITERIA**

Depending on site conditions, the alignment toolkit shown above can manifest itself in many different ways. Below are examples of how the different typologies of the toolkit can be applied. Understanding the value and appropriate location of each typology is an important part of the process.

**ALIGNMENT TOOLKIT**

1% STORM + 40" SLR

**ELEVATED HARBORWALK**

**PROVIDES FLOOD PROTECTION WITHIN THE CITY’S RIGHT-OF-WAY BY RAISING THE ROAD**

MHW + 40 SLR

**PROVIDES FLOOD PROTECTION WITHIN THE CITY’S RIGHT-OF-WAY BY RAISING THE ROAD**

RAISED ROAD

HARBORWALK

FLOOD PROTECTION ELEVATION +15'

**FEASIBILITY EVALUATION CRITERIA PERFORMANCE**

<table>
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- RAISING THE ROAD CREATES CONFLICT WITH NEIGHBORING BUILDINGS GROUND FLOORS
- SETTING FLOOD PROTECTION BACK FROM SHORELINE EXPOSES WATERFRONT AREAS
- WILL CONFLICT WITH UTILITIES RUNNING PERPENDICULAR TO ROAD

- INVOLVES CREATION OF NEW LAND IN CERTAIN AREAS WILL REQUIRE COORDINATION AND REORGANIZATION OF MARINAS. CONVERSATIONS ARE CURRENTLY UNDERWAY.
- PARTNERSHIPS BETWEEN PRIVATE AND PUBLIC LAND OWNERS IS NECESSARY

**EQUITY**

- New and equitable access to water
- Educational opportunities
- Community partnerships
- Preservation /addition of affordable housing

**SOCIAL IMPACT**

- Design Life
- Performance Horizon
- Adaptability/Flexibility
- Phase-ability and Time to Implementation
- Maintenance Requirements

**VALUE CREATION**

- New Value Created on Sites or Adjacent Sites
- Capacity to Catalyze Future Funding and Investment
- The extent to which the project will increase quality of life and the desire to be in the area for living, work or play purposes.

- Stakeholder acceptance
- Constructibility
- Permitting Requirements and Regulatory Considerations
- Affordability: Cost of Construction + Cost of Maintenance
- Replicability
- Funding Strategy

**TIMEFRAME**

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PROVIDES FLOOD PROTECTION WITHIN THE CITY’S RIGHT-OF-WAY BY RAISING THE ROAD

USES EXISTING WATERFRONT AND NEW FILL FOR FLOOD PROTECTION WHILE ALSO CREATING NEW OPEN SPACES

- Will require coordination and reorganization of marinas; conversations are currently underway.
- Partnerships between private and public land owners is necessary.

- Involves creation of new land in certain areas will require coordination and reorganization of marinas. Constructions are currently underway.
- Partnerships between private and public land owners is necessary.

- New and equitable access to water
- Educational opportunities
- Community partnerships
- Preservation /addition of affordable housing

- Design Life
- Performance Horizon
- Adaptability/Flexibility
- Phase-ability and Time to Implementation
- Maintenance Requirements

- New Value Created on Sites or Adjacent Sites
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- Recreational
- Cultural
- Aesthetic

- Water and air quality
- Habitat value
- Human health benefits

Maximum level of protection (% probability / SLR scenario)

- Reduction in flood extent
- Avoided damage and loss
- Residents protected
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These criteria are used to evaluate performance of flood protection elements in the plan. This process helps us to prioritize options and determine the best fit for each site.

RESILIENT METHODS EVALUATION CRITERIA

Climate Ready Boston is investigating options in Downtown to locate resiliency elements. The toolkit below illustrates methods such as harborwalks, open spaces, such as parks, and opportunities for outboard elements, such as living breakwaters.

**1% STORM + 40” SLR**

**STEPED HARBORWALK**

- MHW + 40 SLR
  - Provides flood protection within the city's right-of-way by raising the road

- **RAISED ROAD**
  - **RAISED LAND**
  - **HARBORWALK**

**IMPACT**

- Setting flood protection back from shoreline exposes waterfront areas
- Raising the road creates conflict with neighboring buildings ground floors
- Feasibility issues due to tunnel under Atlantic Ave.

**DESIGN LIFE AND ADAPTABILITY**

- Maximum level of protection (% probability / SLR scenario)
- Reduction in flood extent
- Avoided damage and loss
- Residents protected
- Critical assets protected

**ENVIRONMENTAL IMPACT**

- Water and air quality
- Habitat value
- Human health benefits

**SOCIAL BENEFIT**

- Health, wellness and recreation
- New and equitable access to water
- Educational opportunities
- Community partnerships
- Preservation /addition of affordable housing

**VALUE CREATION**

- New Value Created on Sites or Adjacent Sites
- Capacity to Catalyze Future Funding and Investment
- The extent to which the project will increase quality of life and the desire to be in the area for living, work or play purposes.

**FEASIBILITY**

- Stakeholder acceptance
- Constructibility
- Permitting Requirements and Regulatory Considerations
- Affordability: Cost of Construction + Cost of Maintenance
- Replicability

**BENEFIT**

- Economic benefits
- Environmental benefits
- Social benefits

**TIMEFRAME**

- Design life
- Performance horizon
- Adaptability/flexibility
- Phase-ability and time to implementation
- Maintenance requirements

**IMPLEMENTATION**

- Estimated project cost
- Property ownership
- Estimated implementation timeframe

- Raising the road creates conflict with neighboring buildings ground floors
- Setting flood protection back from shoreline exposes waterfront areas
- Feasibility issues due to tunnel under Atlantic Ave.

**EVALUATION CRITERIA PERFORMANCE**

- Key considerations
- Estimated project cost
- Property ownership
- Estimated implementation timeframe

- Involves creation of new land in certain areas. Will require coordination and redorganization of marinas. Conversations are currently underway.
- Partnerships between private and public land owners is necessary.
NICE TO MEET YOU!
PLEASE HELP US BY FILLING IN THE INFORMATION BELOW. *required

WHERE I LIVE (ZIP CODE)*

WHERE I WORK (ZIP CODE)*

I AM A...
☐ RESIDENT ☐ WORKER ☐ VISITOR

AGE
☐ 0-19 ☐ 20-29 ☐ 30-39 ☐ 40-59 ☐ 60-79 ☐ 80+

NAME:

OVERALL COMMENTS?


DOWNTOWN WHARF DISTRICT
PLEASE SHARE YOUR THOUGHTS ON THE OPTIONS SHOW ON THE BOARD

ROADWAY OPTION

RATE THIS OPTION!

NEEDS WORK

LOVE IT!

1 2 3 4 5

WHAT DO YOU LIKE ABOUT THIS OPTION, WHY?


WHAT CONCERNS YOU ABOUT THIS OPTION, WHY?


WATERFRONT OPTION

RATE THIS OPTION!

NEEDS WORK

LOVE IT!

1 2 3 4 5

WHAT DO YOU LIKE ABOUT THIS OPTION, WHY?


WHAT CONCERNS YOU ABOUT THIS OPTION, WHY?


WEST END - NORTH END
PLEASE SHARE YOUR THOUGHTS ON THE OPTIONS SHOW ON THE BOARD

ROADWAY OPTION

RATE THIS OPTION!

NEEDS WORK

1 2 3 4 5

LOVE IT!

WHAT DO YOU LIKE ABOUT THIS OPTION, WHY?

______________________________________________

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WHAT CONCernS YOU ABOUT THIS OPTION, WHY?

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WATERFRONT OPTION

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LOVE IT!

WHAT DO YOU LIKE ABOUT THIS OPTION, WHY?

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WHAT CONCernS YOU ABOUT THIS OPTION, WHY?

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NORTH END WATERFRONT
PLEASE SHARE YOUR THOUGHTS ON THE OPTIONS SHOW ON THE BOARD

ROADWAY OPTION

RATE THIS OPTION!

NEEDS WORK

1 2 3 4 5

LOVE IT!

WHAT DO YOU LIKE ABOUT THIS OPTION, WHY?

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WHAT CONCernS YOU ABOUT THIS OPTION, WHY?

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WATERFRONT OPTION

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