



MASSACHUSETTS DEPARTMENT OF
CONSERVATION AND RECREATION

MORRISSEY BOULEVARD REDESIGN FOR RECONSTRUCTION



DCR Public Meeting – Project Introduction

Monday, March 28, 2016

6:30 PM – 8:30 PM

Leahy Holloran Community Center (Murphy School)

One Worrell Street, Dorchester, MA



Commonwealth of Massachusetts

Governor

Charles D. Baker

Lieutenant Governor

Karyn E. Polito

Energy and Environmental Secretary

Matthew A. Beaton

Department of Conservation and Recreation Commissioner

Leo Roy



DCR Mission Statement

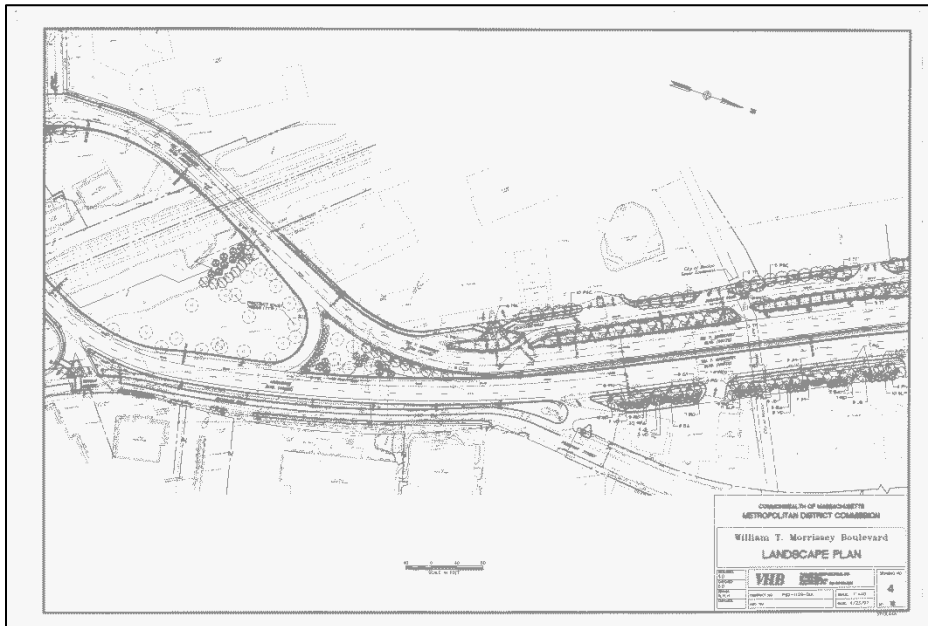
*To protect, promote and enhance our
common wealth of natural, cultural
and recreational resources
for the well-being of all.*

Tonight's Meeting - Purpose

- Introduce the Project
 - Project Goals
 - Design Team
 - Scope and Schedule
 - Initial Observations and Data Collection
- Obtain Public Input on Key Issues and Concerns

Project History

- Environmental work and preliminary design completed in 1990s



Environmental Notification Form

*Morrissey Boulevard
Restoration Project*

Boston,
Massachusetts

Prepared for: Metropolitan District Commission
Boston, Massachusetts

Prepared by: Vanessa Hagen Brustin, Inc.
Watertown, Massachusetts

DCR Projects Completed in Area

- Beades Bridge
- Pattens Cove Culvert
- Mt. Vernon Street Bridge



Primary Project Goals

- ***Stormwater and flooding:*** Provide stormwater improvements and climate resiliency
- ***Transportation:*** Provide safe, convenient, and inviting pedestrian and bicycle accommodations, balanced with appropriate vehicular accommodations
- ***Landscape & Urban Design:*** Enhance parkway character and strengthen connections to recreational facilities, natural resource areas, and neighborhoods



MASSACHUSETTS DEPARTMENT OF
CONSERVATION AND RECREATION

Design Team



Overall Project Management, Direction and Guidance



Civil & Structural Engineering; Drainage & Coastal Design



Horsley Witten Group
Sustainable Environmental Solutions

Stormwater & Flood Control Strategy; Green Infrastructure

CROSBY | SCHLESSINGER | SMALLRIDGE LLC

Landscape Architecture & Urban Design



Transportation Analysis & Design



Environmental Permitting



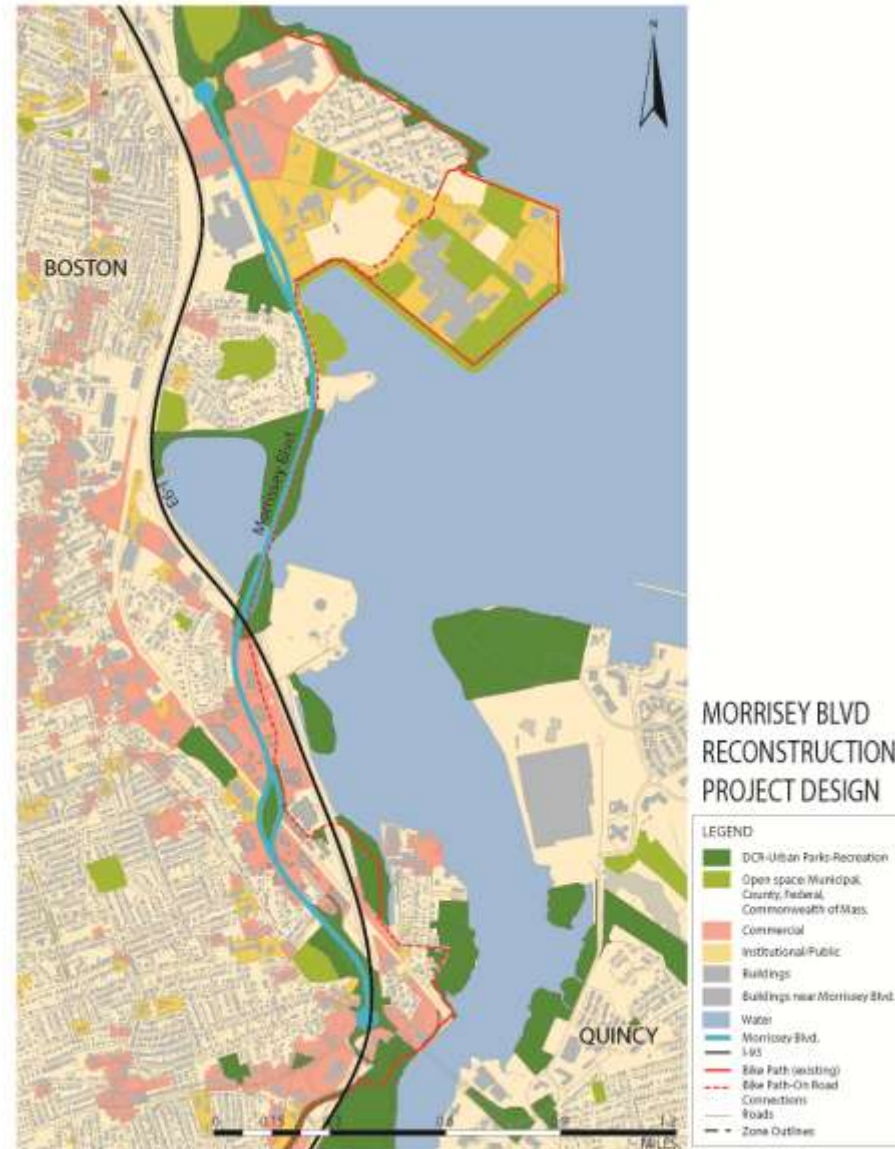
Geotechnical & Geoenvironmental



Survey & Right-of-Way

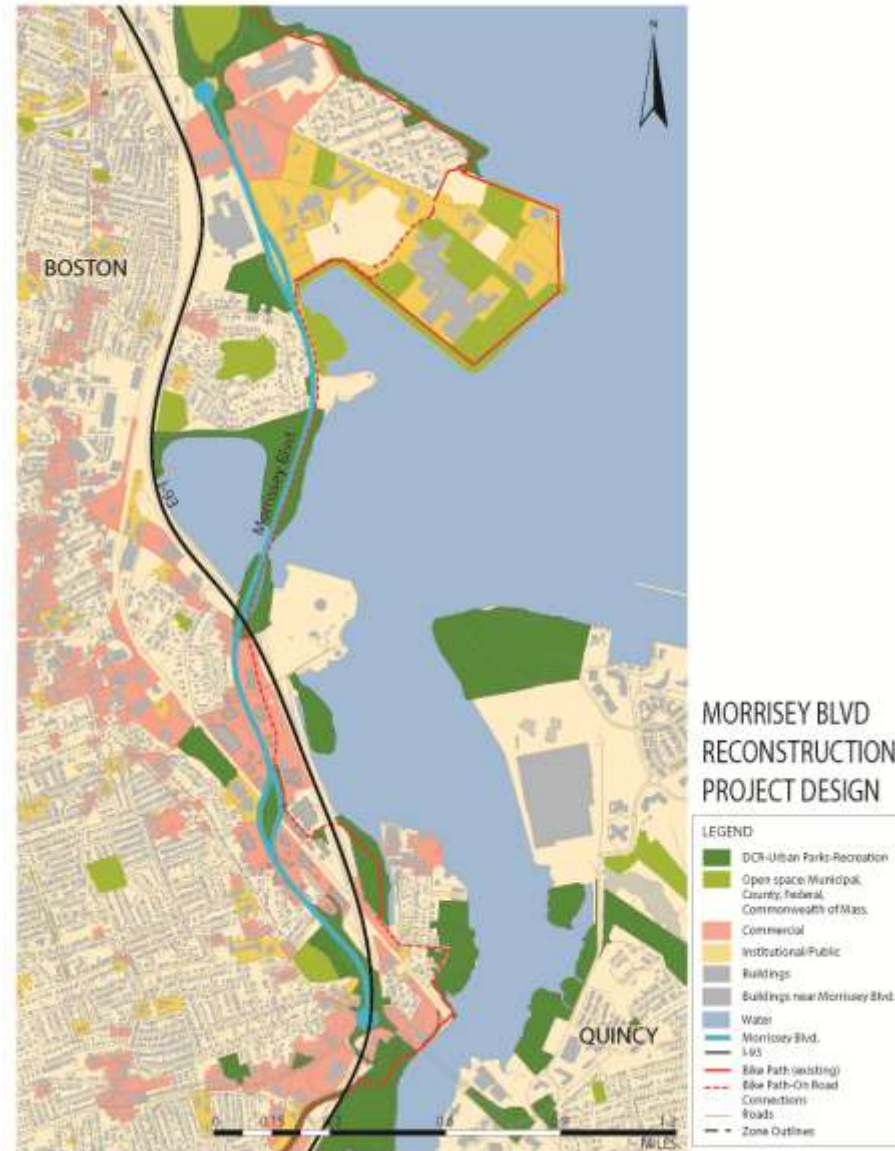
Design Project Scope

- Conceptual through final design and construction
- Public involvement process
- Environmental permits
- Drainage, transportation, and urban design upgrades
- Safety improvements
- New traffic signals and roadway lighting



Major Items Accomplished to Date

- New topographic and right-of-way survey of entire corridor
- Transportation data collection and analysis
- Modeling of existing drainage system
- Coastal and flood-risk modeling and analysis
- Urban design and landscape assessment

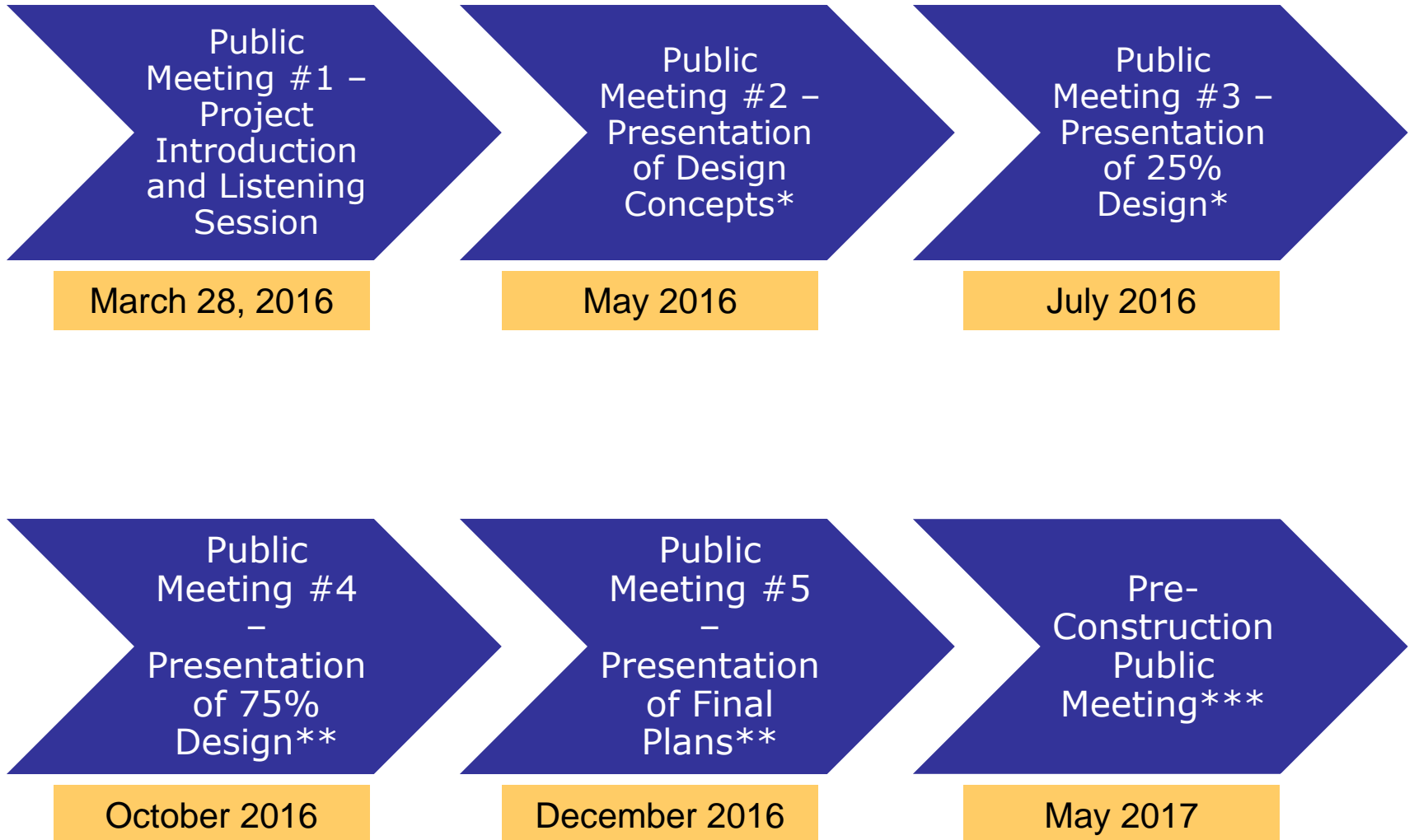


Potential Project Phasing

- Design is fully funded (\$3.2 million)
- “Middle” segment is most vulnerable today and will be prioritized first for construction
- Construction of all segments subject to funding availability



Design Project and Public Process Timeline



* Entire Corridor Length

** Phase 1 (Middle) if phased

*** Pending Funding

Project Goal: Stormwater and Flooding

- *Provide Stormwater Improvements and Climate Resiliency*



Why does Morrissey Boulevard flood?

- Physical Characteristics
 - Low elevation
 - Coastal exposure
 - Size, location, and condition of drainage infrastructure (catch basins, pipes, outfalls)
- Flood Sources
 - Precipitation falling directly on the roadway
 - Stormwater from “uphill” areas (in pipes and on surface)
 - Coastal processes (tides/wind/waves/storm surge)



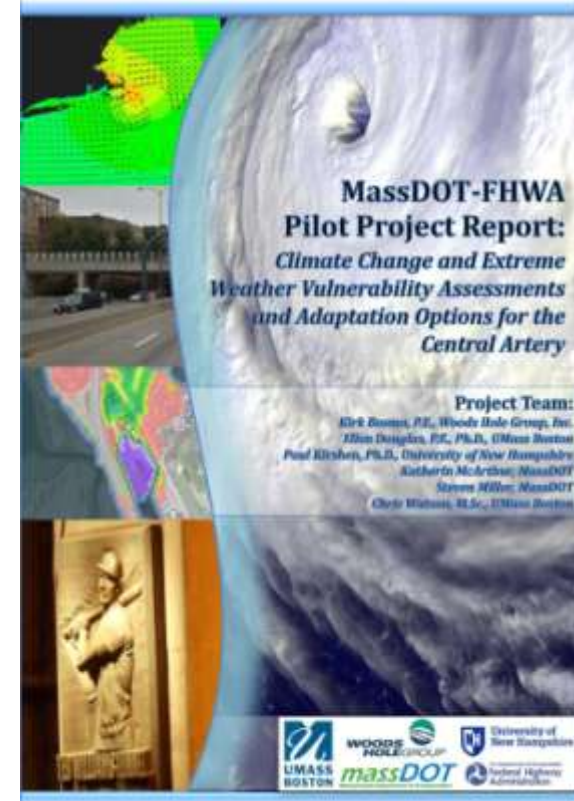
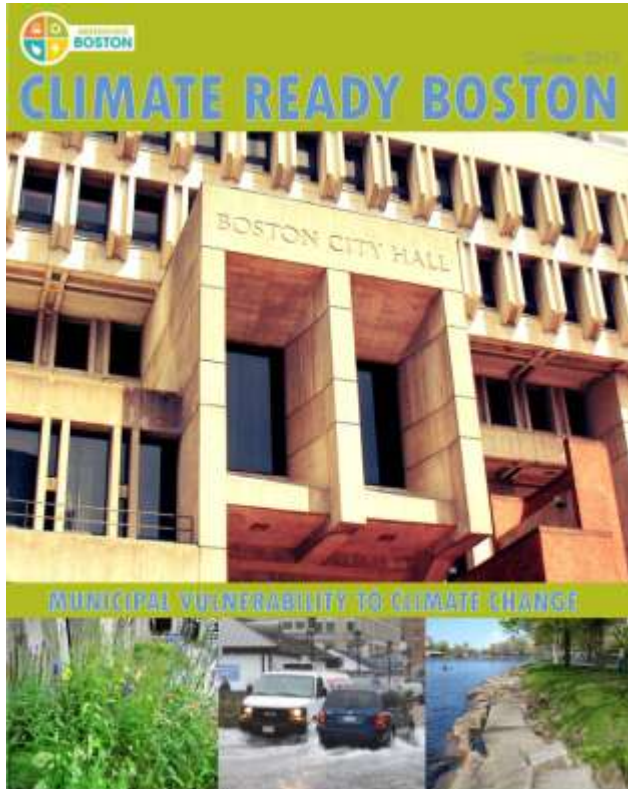
Why will it get worse?

- Sea Level Rise (SLR)
 - “New Normal” of higher tides restricts free flow of stormwater from roadway to Boston Harbor
- More frequent and stronger coastal storms
 - Higher water = further restrictions on flow through drainage system
 - Direct flooding due to wind and waves
- Increased rainfall intensity
 - Can overwhelm the drainage system, even without coastal impacts



How much worse?

- Increasingly sophisticated modeling and studies have been performed for the Boston area



How much worse?

Year 2070 – 10% Probability*



Morrissey Boulevard



*There is a 1 in 10 chance that sometime in year 2070 the flood depths shown on this map will be reached or exceeded

How much worse? Year 2070 – 1% Probability*

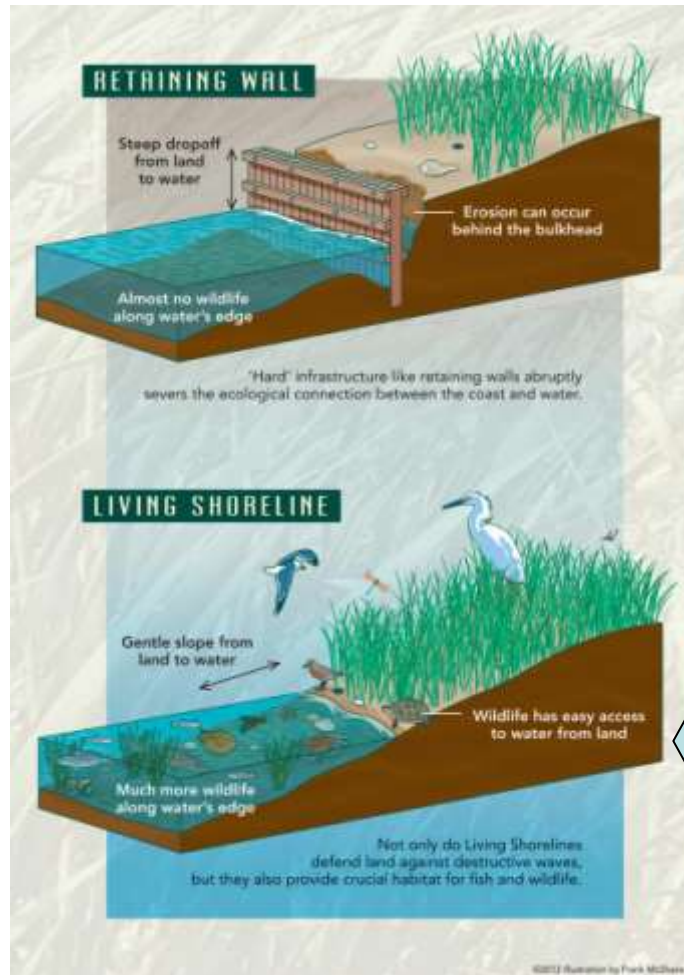


Morrissey Boulevard



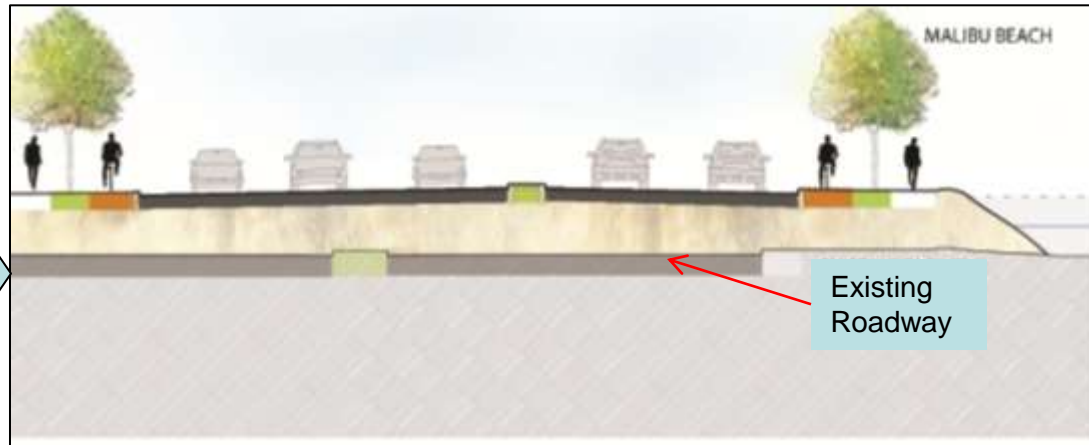
*There is a 1 in 100 chance that sometime in year 2070 the flood depths shown on this map will be reached or exceeded

Potential Adaptation Tools: Shoreline Protection

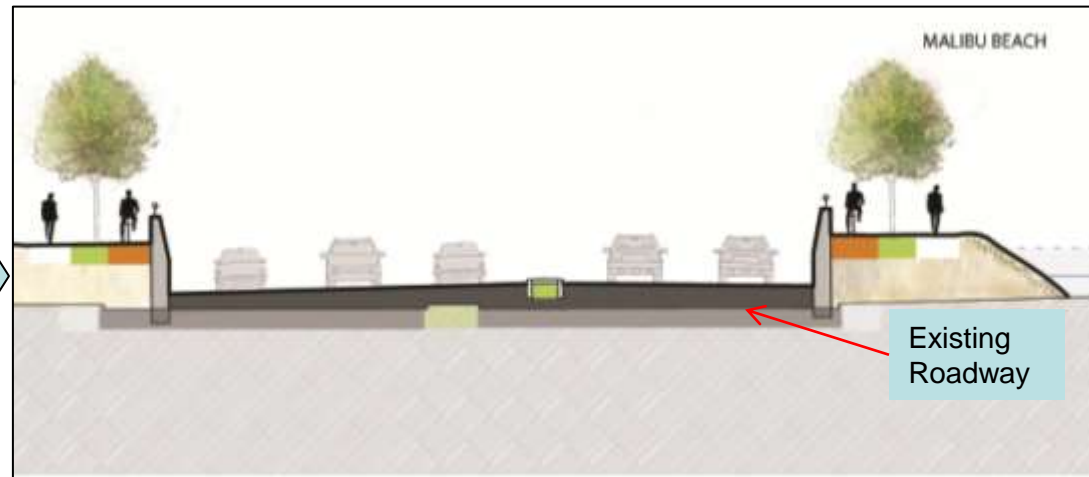


Potential Adaptation Tools: Roadway Elevation and/or Flood Walls

Full
Roadway
Elevation



Partial
Roadway
Elevation



Potential Adaptation Tools: Green Infrastructure (GI)



GI tools such as biofiltration
and pervious surfaces can
both reduce total runoff and
improve water quality.

Potential Adaptation Tools: Capacity and Conveyance



Tide Gate at Drainage Outfall



Backflow Prevention Device at Drainage Outfall



Cutaway View of Temporary Underground
Stormwater Storage

These tools can store water in the system when tides are too high to discharge and can prevent ocean water from backing up onto the roadway

Project Goal: Transportation

- *Provide safe, convenient, and inviting pedestrian and bicycle accommodations, balanced with appropriate vehicular accommodations*



Transportation: Study Area

- Covers entire project limits
- Includes:
 - 8 signalized intersections
 - 6 unsignalized locations
 - 2 pedestrian bridges



General Transportation Context

- Corridor plays both regional and local role
- 3 distinct and diverse Segments
- Heavily influenced by peak hour Expressway congestion
- Not presently conducive to bicycle and pedestrian travel either along or across



North: Kosciuszko Circle to Bianculli Boulevard

- Columbia Point
- Evolving land uses and multimodal users
- Large student population
- Frontage roads and non-standard designs
- 9+ Lanes = Reduction opportunities



Middle: Bianculli Boulevard to Freeport Street

- Savin Hill
- Recreational uses
- Environmentally sensitive
- Consistent 6-lane section
- Limited width at Beades Bridge
- Signals at each end limit capacity



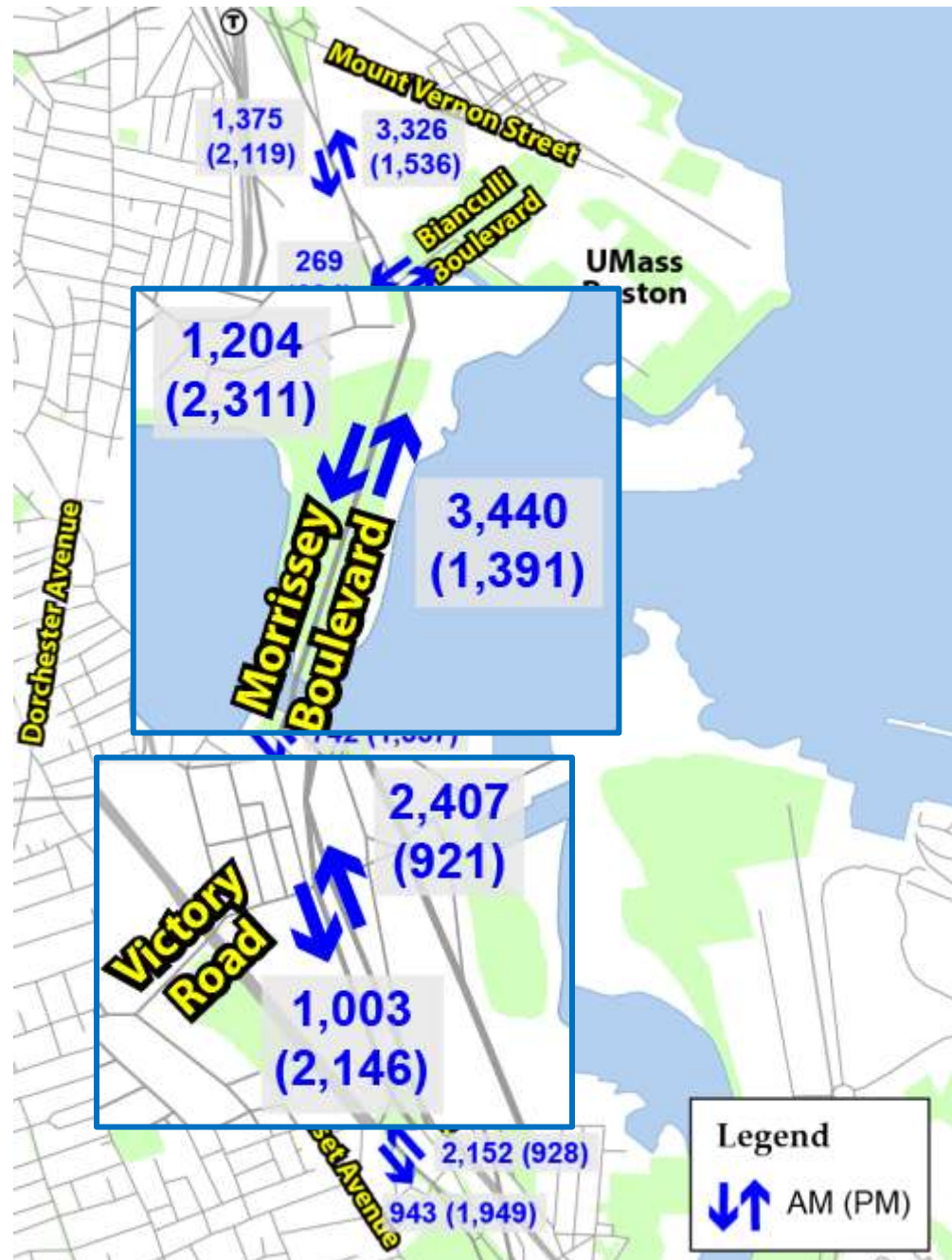
South: Freeport Street to Neponset Circle

- Commercial land uses
- 6-lane section
- Narrow, unattractive median
- Frontage road at northerly end
- Intermittent residential abutters
- Multiple pedestrian crossings



Vehicular Volumes

- Peak Hours:
 - Higher volumes northbound
 - Higher volumes north of I-93



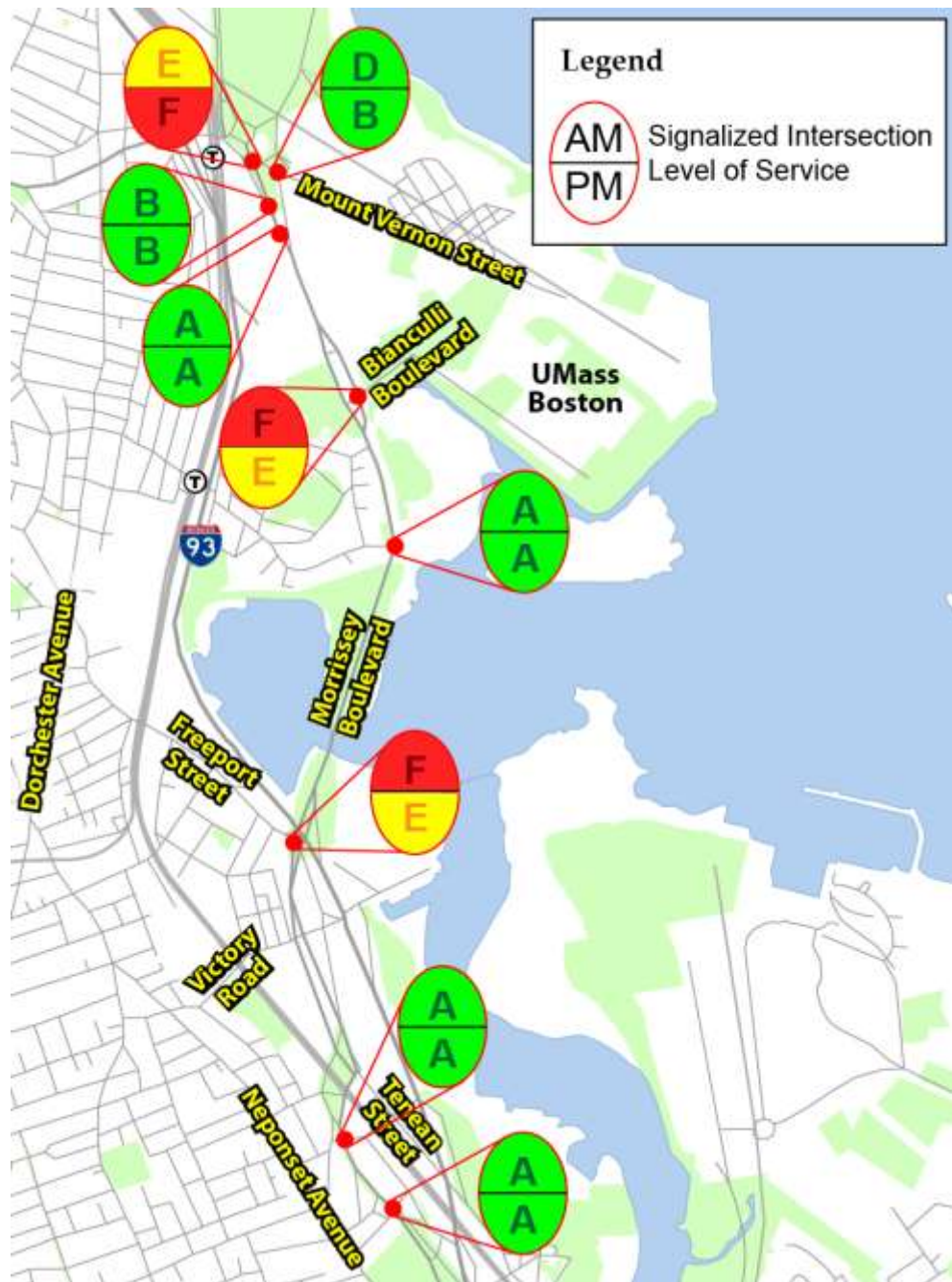
Pedestrian and Bicycle Volumes

- Peak hours (AM/PM)
- Highest volumes at JFK/UMass
- Limited bicycle volume south of Freeport Street
- Low volumes probably not reflective of potential demand



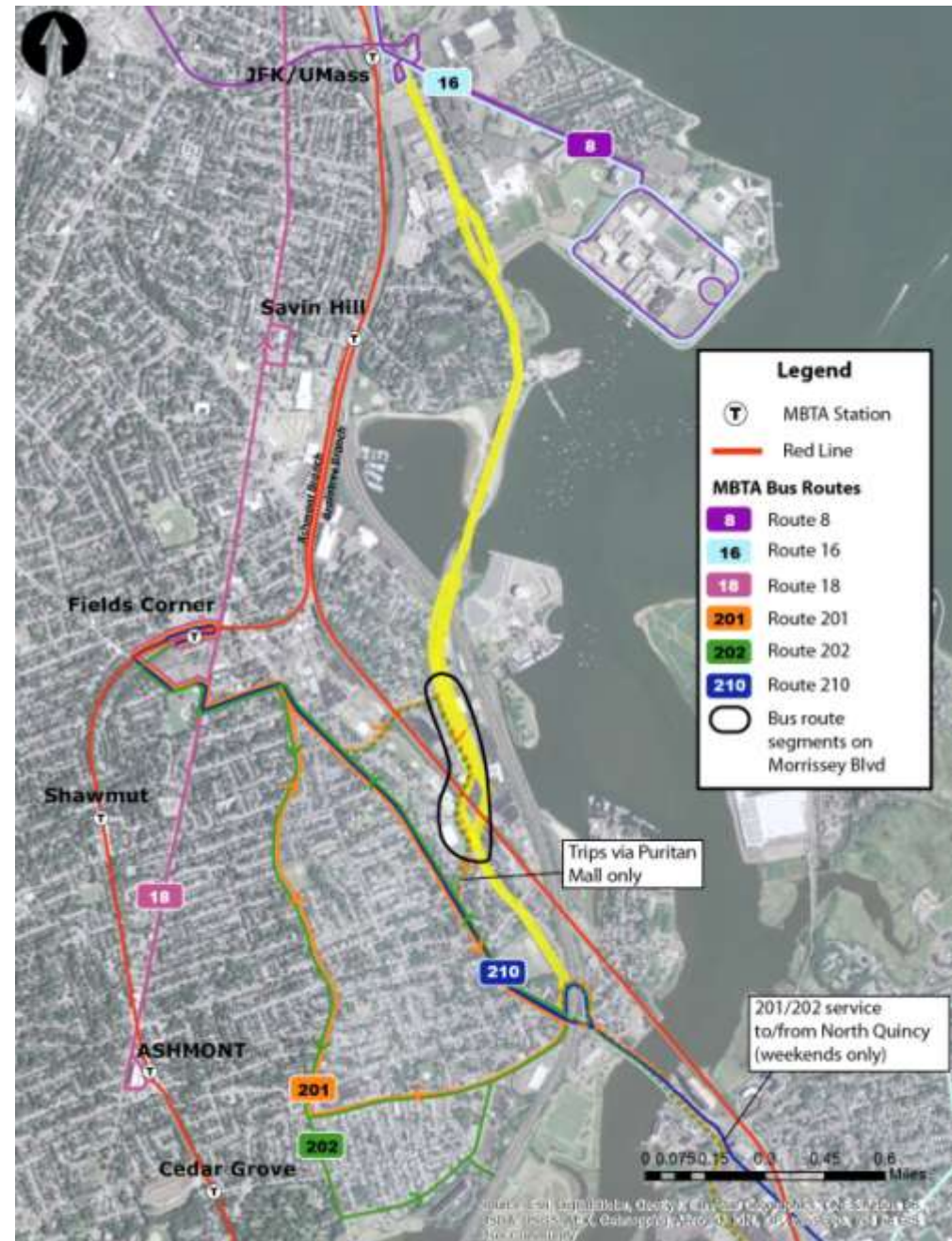
Existing Analysis

- Peak hours
- Vehicle delay:
Level-of-Service
A (best) thru F (worst)
- Heaviest congestion
at Freeport Street;
UMass, and Mt.
Vernon Street
- Little delay at other
intersections



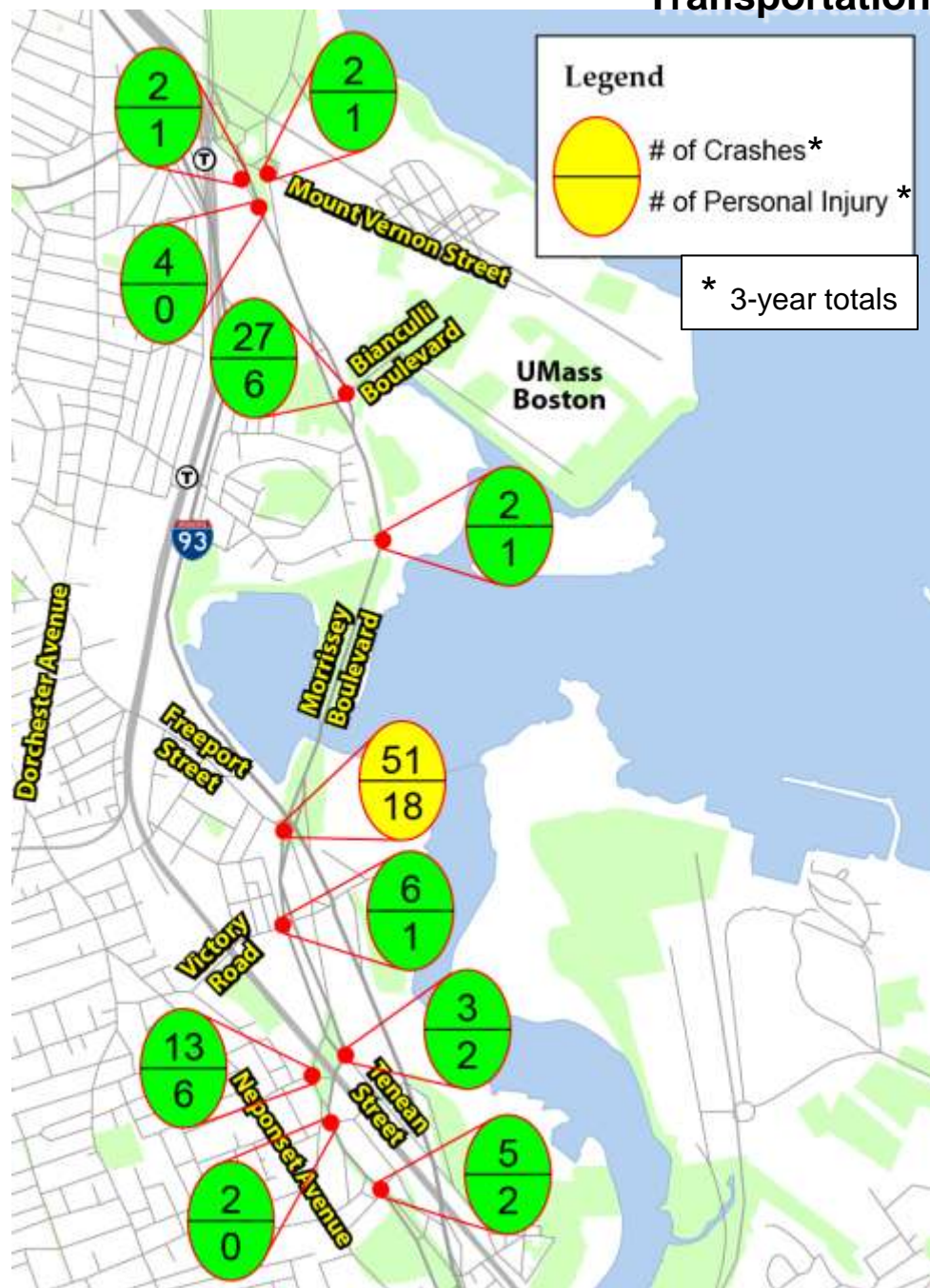
Transit

- Limited bus service on Morrissey – Route 201 & 202 variations only
- Important connection to JFK/UMass Station



Crash Analysis

- All intersections below state average crash rate, except Freeport Street
- Freeport Street slightly worse than state average
- Design will look to incorporate safety improvements



Bicycle and Pedestrian Goals

- Provide facilities along entire corridor
- Minimize conflicts between bicycles and pedestrians and between bicycles, pedestrians, and vehicles
- Integrate with surrounding bicycle/pedestrian network



Bicycle and Pedestrian Challenges

- Existing roadway is space-inefficient in places and presents more conflicts than necessary
- Constrained areas including bridge and underpass “pinch points”



Transportation Analysis

- Next Steps:
 - Develop projections of future volumes for all modes
 - Develop conceptual designs and assess them against project goals
 - Refine the alternatives
 - Perform more detailed design analysis

Project Goals: Landscape and Urban Design

- *Enhance parkway character and strengthen connections to recreational facilities and natural resource areas*



Landscape and Urban Design

- Other Projects Influencing Morrissey Boulevard
 - Columbia Point Master Plan
 - Mt. Vernon Street
 - Neponset River Greenway

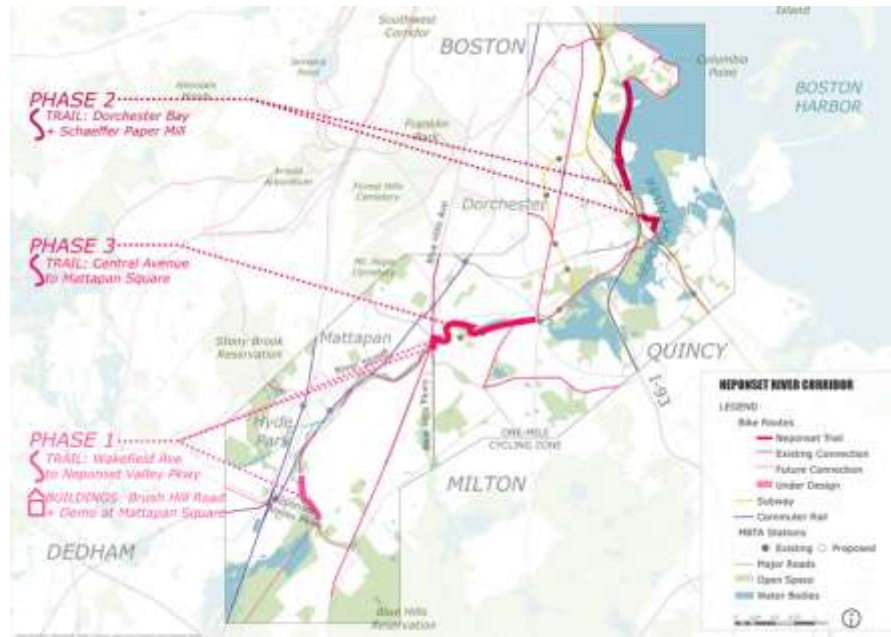


Columbia Point Master Plan



Proposed Mt. Vernon Street Design

Neponset River Greenway



Neponset River Greenway

- Bicycle and pedestrian connections between Tenean Beach and the proposed trail at National Grid may be along Morrissey Boulevard
- Connections north of the proposed trail at National Grid are along Morrissey Boulevard



Key Design Considerations

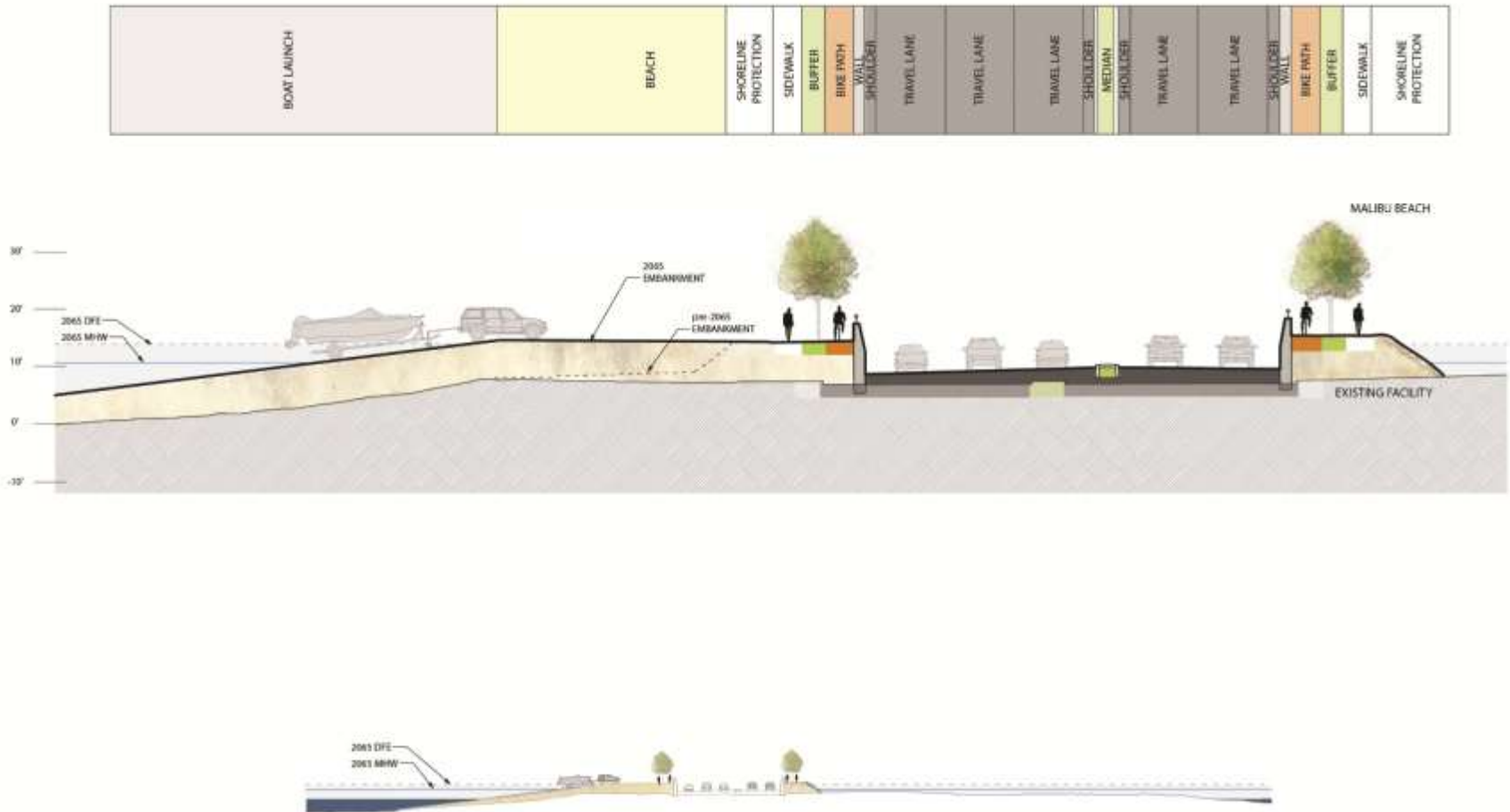
- Parkway Character
- Coastal Parkway Typology
- Green Space / Bicycle / Pedestrian Connections
- Neighborhood Connections and Character
- Neighborhood and Open Space Connections

Parkway Character

- Reduce curb cuts
- Improve trees, lights, and edges
- Enhance views

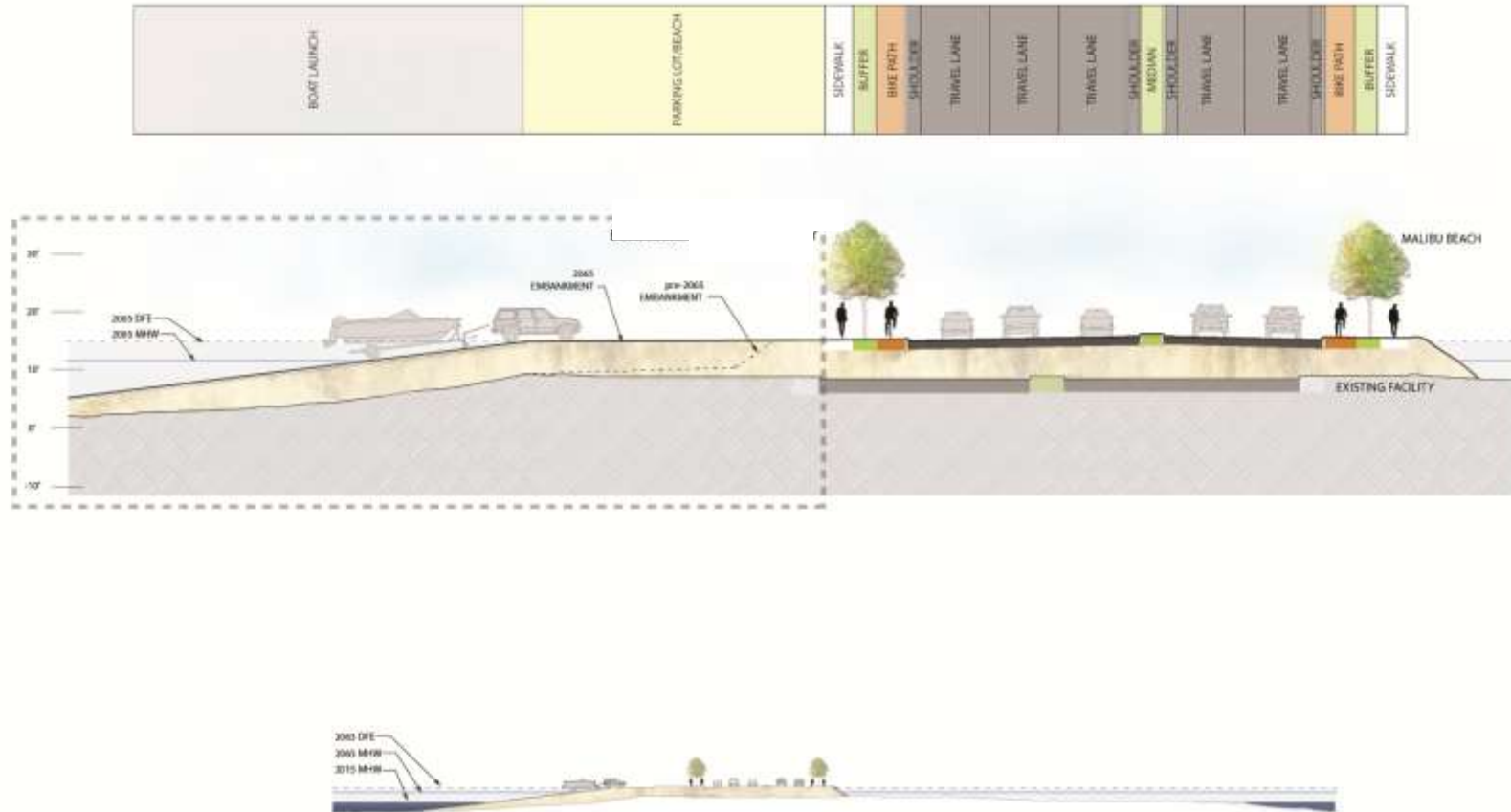


Parkway Character



- One section of Morrissey Boulevard – Option to raise edges, but not roadway. Blocks views from the Boulevard

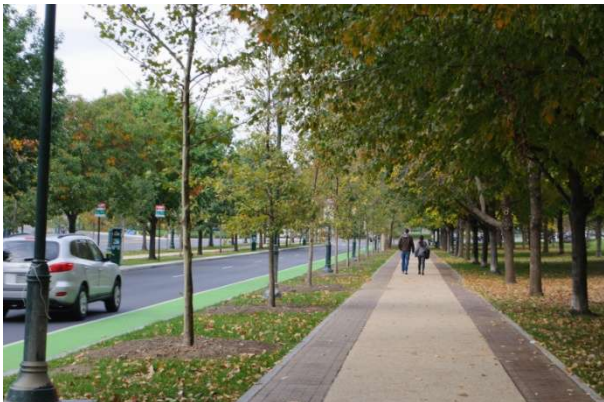
Parkway Character



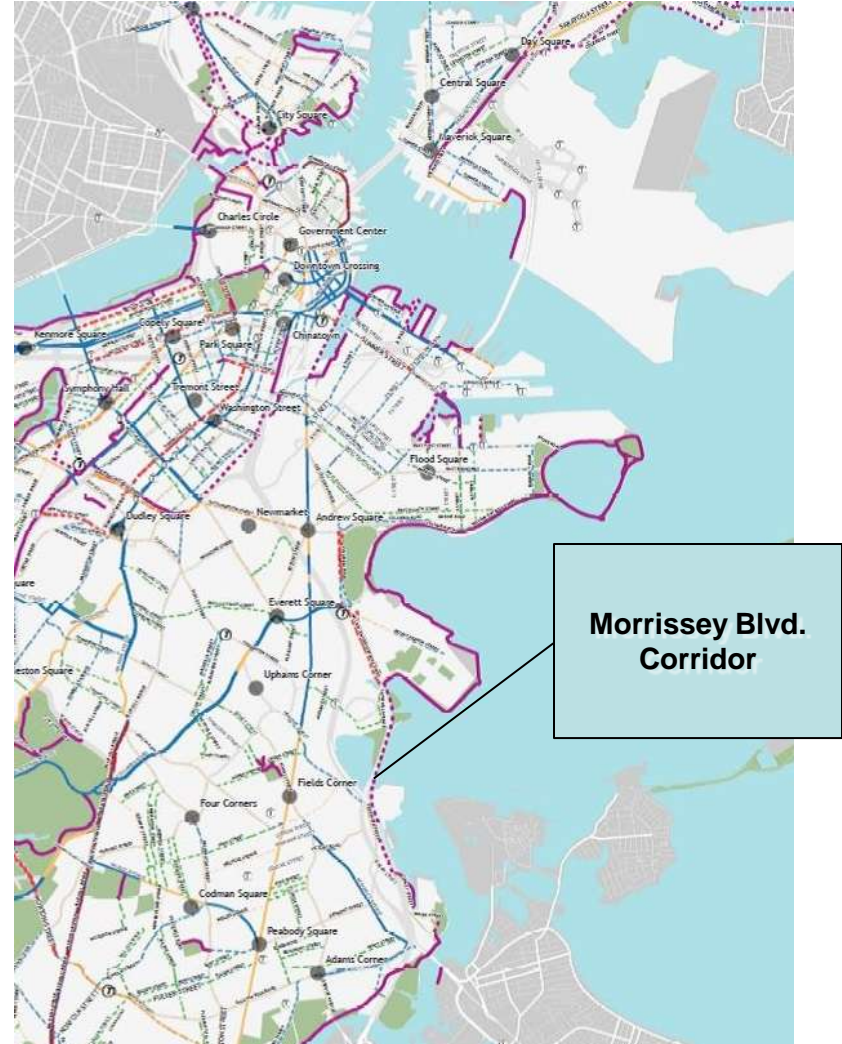
- One section of Morrissey Boulevard – Option to raise roadway and edges. Allows views from the Boulevard and road edge plantings.

Coastal Parkway Typology

- Design will conform to DCR Coastal Parkway Guidelines



Green Space/Bicycle/Pedestrian Connections



City of Boston "Bike Network Plan"

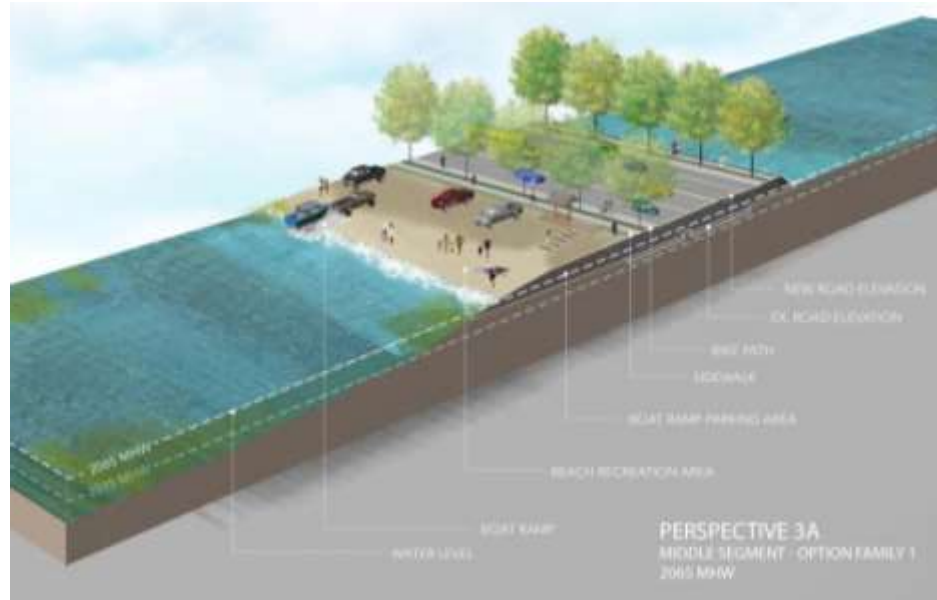
Neighborhood Connections and Character



- Design will respond to adjacent conditions and look for opportunities to connect neighborhoods on both sides of the Boulevard



Neighborhood / Open Space Connections



- Important open space connections, such as those at Malibu Beach, will respond to future as well as current conditions.

Parkway Character and Medians



- Observation: Many of the mature trees along Morrissey Boulevard are in the median.
- Goal: Preserve and strengthen mature tree plantings where possible



Parkway Character and Edges



- Observation: Parkway edge plantings (trees) are sparse in many locations.



- Goal: Strengthen parkway edges with plantings where possible.

Parkway Character and Trees

- Observation: Many existing parkway plantings struggled during the winter of 2014/2015.
- Goal: Select tree type and locate to avoid damage from salting and other maintenance practices.



Enough from us...let's hear from you!

How to provide feedback tonight:

- General Questions & Answers (15 minutes)
- Table Discussions (40 minutes)
 - Transportation / Bicycles / Flooding / Engineering
 - Landscape / Urban Design / Pedestrians
- Report back and wrap-up (20 minutes)

Enough from us...let's hear from you!

How to provide feedback after tonight:

- Complete our online survey at [DCR User Experience Survey - Morrissey Boulevard](#)
- Provide general comments online at <http://www.mass.gov/eea/agencies/dcr/public-outreach/submit-public-comments/>
- Complete our hard-copy survey or general comments sheet, available at sign-in table, and mail to:
Department of Conservation and Recreation
Office of Public Outreach
251 Causeway Street, Suite 600
Boston, MA 02114

Enough from us...let's hear from you!

How to provide feedback after tonight:

- Please note:
 - Comments will be accepted through Monday, April 18, 2016
 - Public comments submitted to DCR may be posted on the DCR website in their entirety.

General Questions?

Table Discussions

- Tables are organized by two major topics:
 - Transportation/Flooding/Engineering (blue signs)
 - Landscape/Urban Design (yellow signs)
- Pick a table to start, spend 20 minutes there, and then switch to the other for another 20 minutes
- We will then reconvene as a group and hear key points from each table (20 minutes)
- All comments, whether or not verbally reported back, will be recorded in writing and considered.

Additional Information

For more information:

- **See materials relative to this meeting posted under “Materials From Past Public Meetings 2016” at <http://www.mass.gov/eea/agencies/dcr/public-outreach/public-meetings/>**

If you have questions or concerns or wish to subscribe to a DCR general information or project-related listserv: contact DCR’s Office of Community Relations at 617-626-4973 or Mass.Parks@state.ma.us.