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Welcome!

Route 1 Viaduct Rehabilitation Project

Chelsea| Project File No. 605287

Chelsea Kiwanis InterClub Luncheon Briefing

DoubleTree Hotel, 201 Everett Avenue

May 17, 2018 | 12:00 PM

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Agenda

- Project Overview
  - Context
  - Need
  - Goals
  - Schedule
- Anticipated Project Impacts
- Environmental Review and Public Outreach
- Design Changes Based on 25% Design Public Hearing Input
- MBTA and Regional Coordination
- Discussion

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Project Team

MassDOT's Highway Division
Project Proponent

Federal Highway Administration
Responsible for Oversight and NEPA compliance

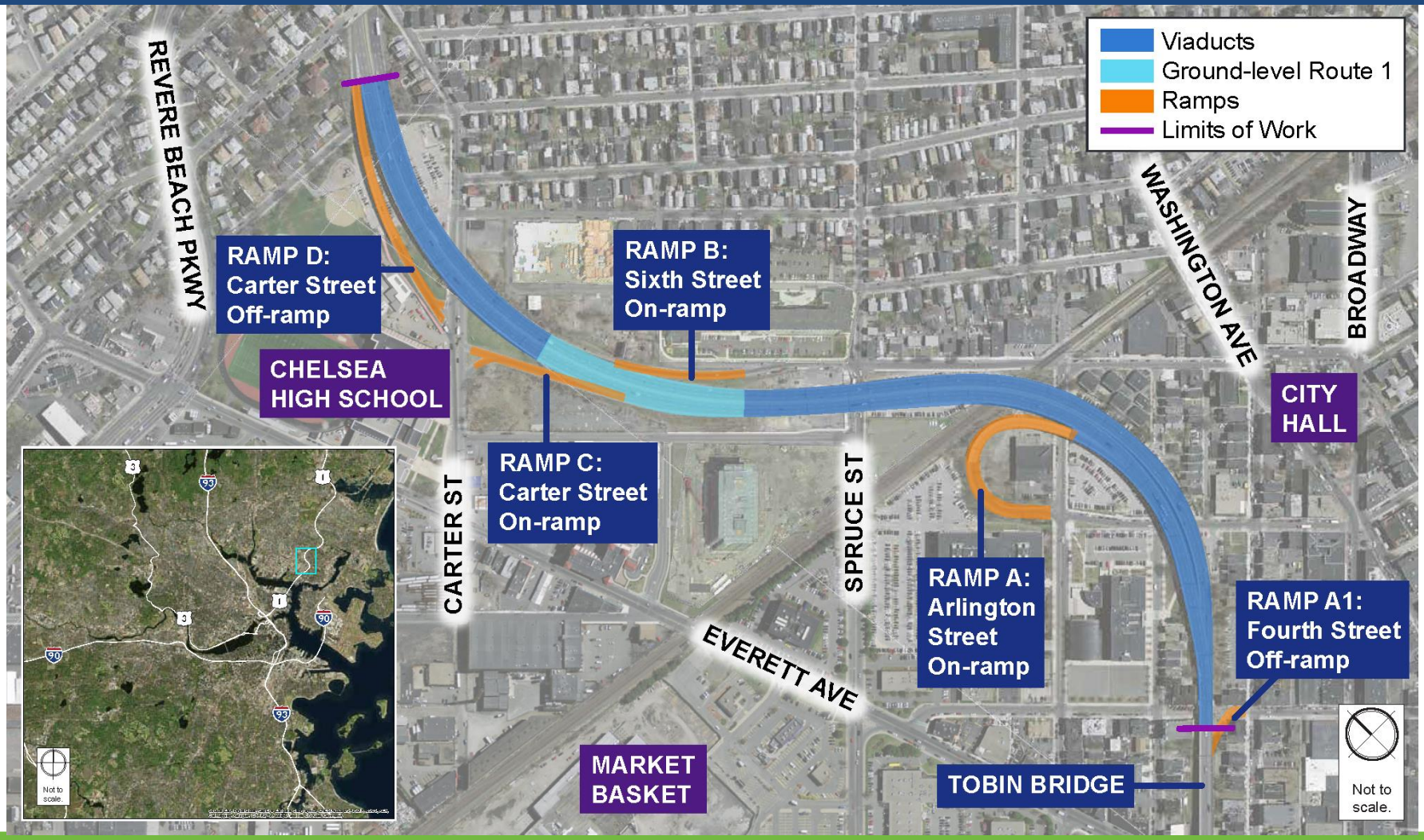
HNTB
Lead Consultant for team including Howard Stein Hudson, CME, VHB, Green International

City of Chelsea, MBTA
Coordination

Chelsea Viaduct Rehabilitation Project

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Project Limits of Work



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Project Limits of Work

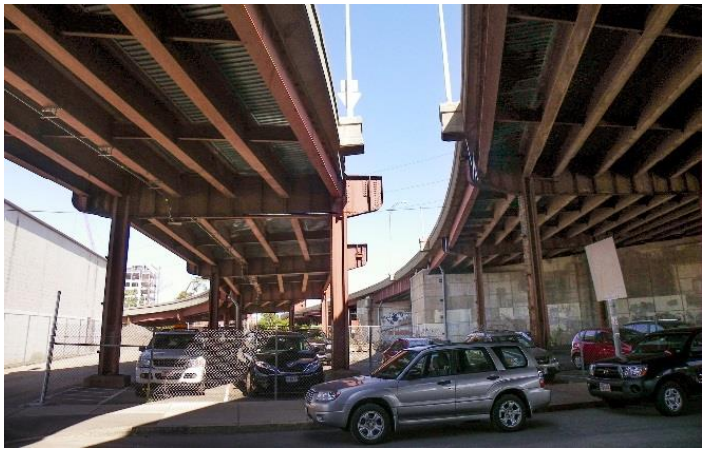


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Chelsea Viaduct

- Carries US Route 1 through Chelsea from the County Road Overpass to the Tobin Bridge
- Designated evacuation route
- Constructed 1956 and 1957
- Southern Viaduct – 2,000 ft long
- Northern Viaduct – 1,000 ft long
- 75 spans
- Carries 63,000 vehicles per day
- Carries MBTA Bus 111 from Chelsea to Haymarket Station via Ramp A, and MBTA 426 and 428 from North Shore





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Existing Conditions

- Viaduct structurally deficient
- Substructure: poor condition
- Deck at bridge joints: poor to severe condition
- Superstructure/Beams: poor to severe condition
- Does not meet statutory load ratings for all legal vehicles



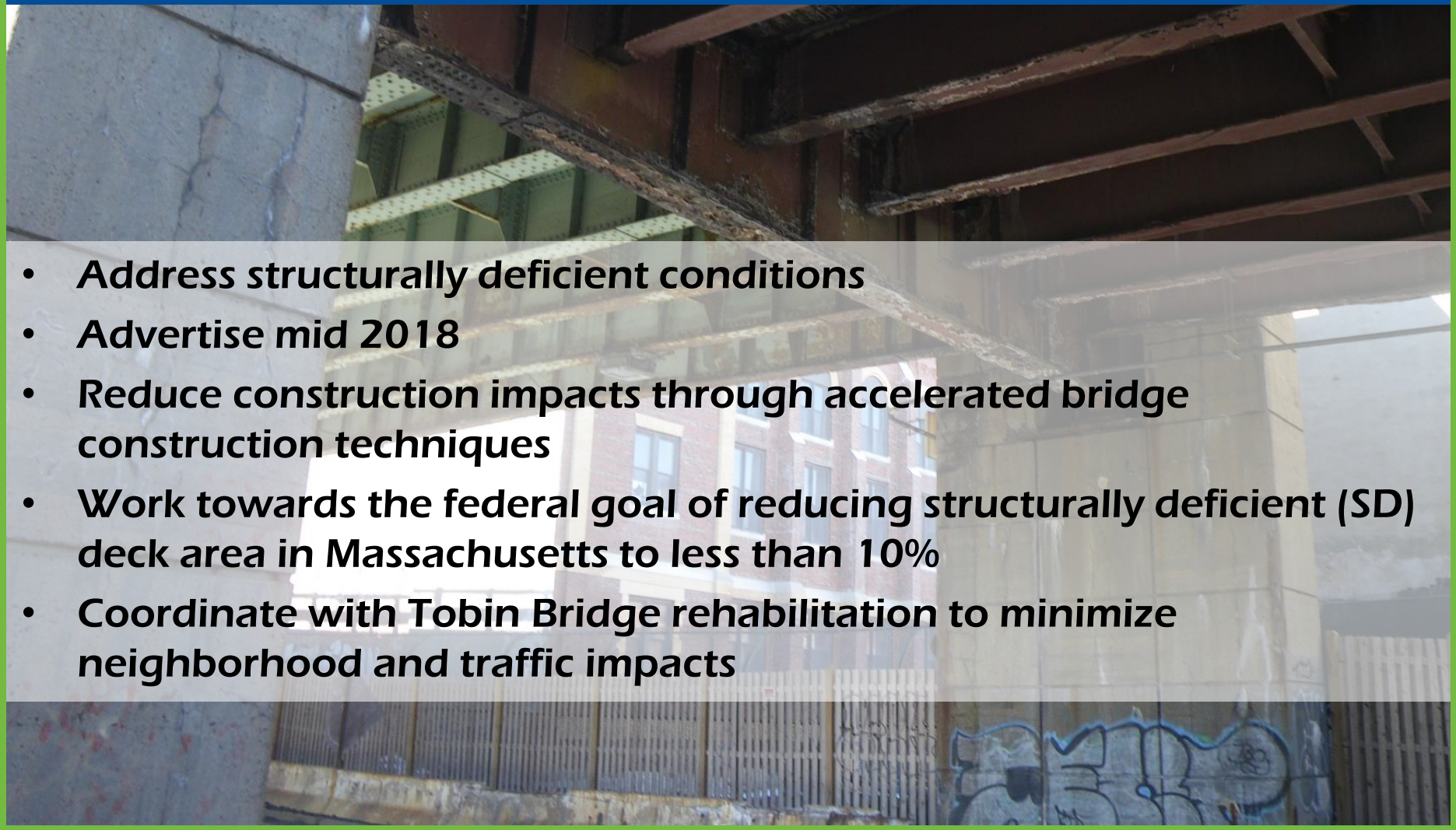






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Project Goals



- Address structurally deficient conditions
- Advertise mid 2018
- Reduce construction impacts through accelerated bridge construction techniques
- Work towards the federal goal of reducing structurally deficient (SD) deck area in Massachusetts to less than 10%
- Coordinate with Tobin Bridge rehabilitation to minimize neighborhood and traffic impacts

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Project Status

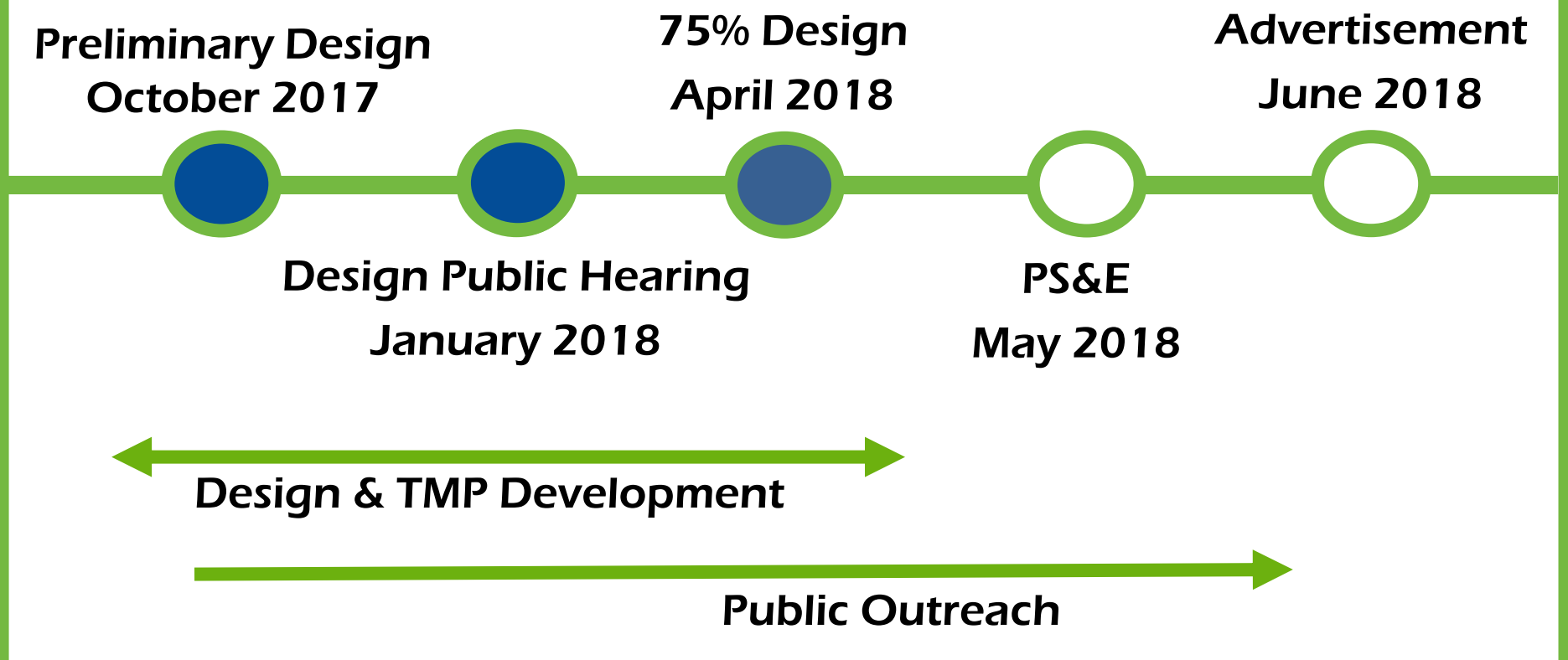
- Preliminary Structures Report completed
- Functional Design Report completed
- Subsurface exploration completed
- Survey complete
- 75% Design complete
- Value Engineering study complete



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Design Schedule



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Public Outreach To Date

- Public Information Meeting- 11/8/17
- Project Open House – 12/5/17
- Chelsea Collaborative – 12/7/17
- GreenRoots Chelsea – 12/14/17
- GreenRoots Chelsea Follow-up – 1/18/18
- All-Spanish Public Information Meeting – 1/22/18
- Pop-ups – November, December, and ongoing
- Door-to-door abutter project notification – 1/16/18-1/21/18
- General, Businesses, and Non-Occupant Owners Notification Letters – November, December, and pre-DPH
- Design Public Hearing – 1/24/18
- Business Community Meetings:
  - Chamber of Commerce - 2/14/18
  - Major viaduct adjacent businesses - 3/19/18
- Appearance before Chelsea City Council – 3/1/18
- Public Information Meeting – 4/5/18
- North Suffolk Mental Health Association Briefing – 4/26/18
- New England Produce Center Site Visit – 5/10/18

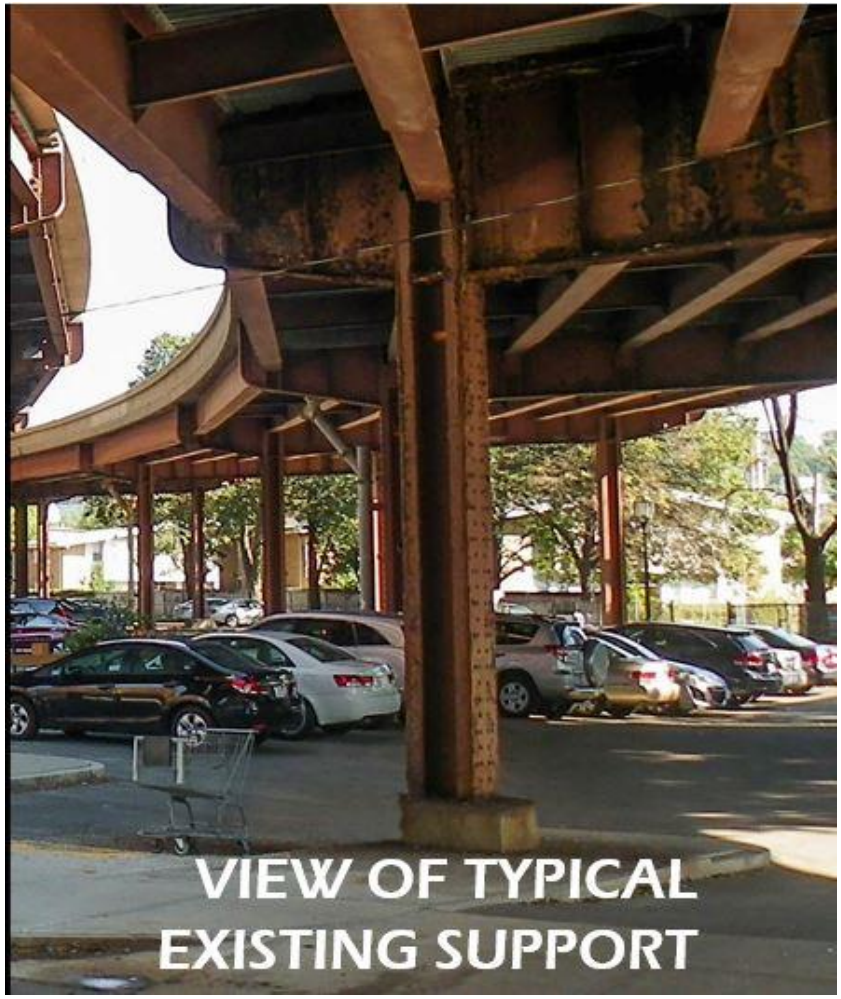
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Scope of Work

- Repair and Retrofit Substructure to support regulatory weight requirements and the new superstructure
- ABC Methods for Superstructure Rehabilitation:
  - Pre-Fabricated Bridge Units (PBUs) throughout majority of project
  - Use conventional repair methods at 6 isolated spans
- Provide new crash tested bridge barriers
- Provide new solid snow fence where safe
- Replace Roadway Lighting and Bridge Drainage
- Rebuild existing parking lots under viaduct, and add new Carter Street lot

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Scope – Substructure



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Scope – Substructure

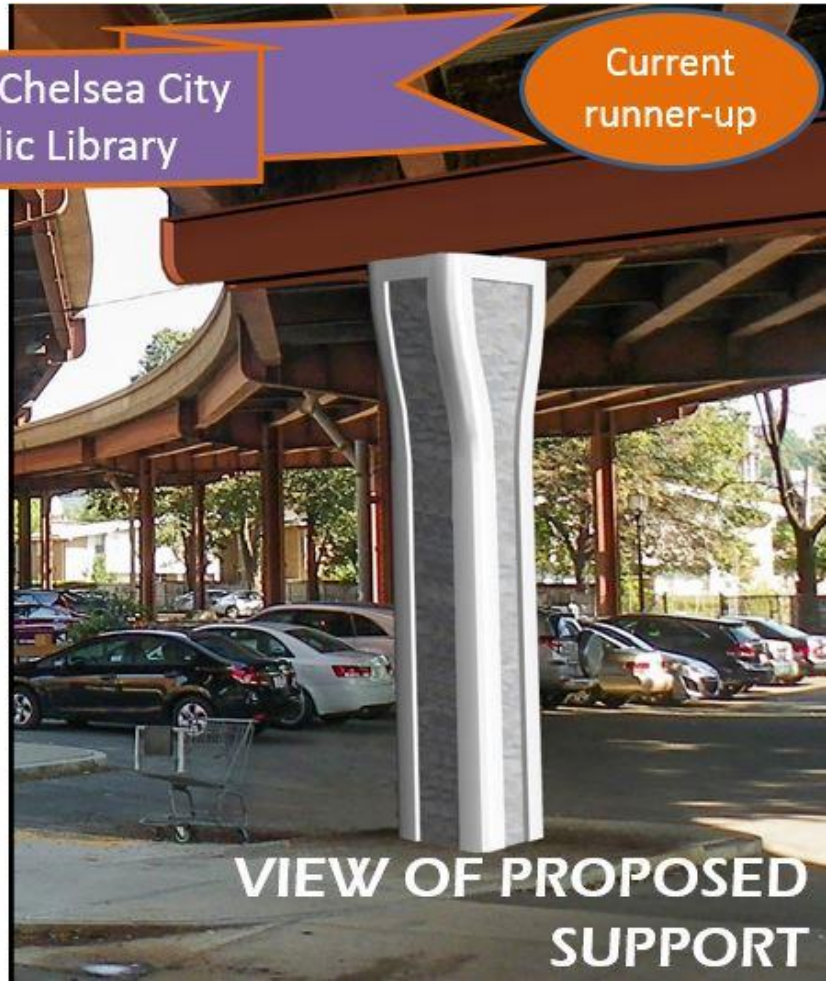




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Scope – Substructure





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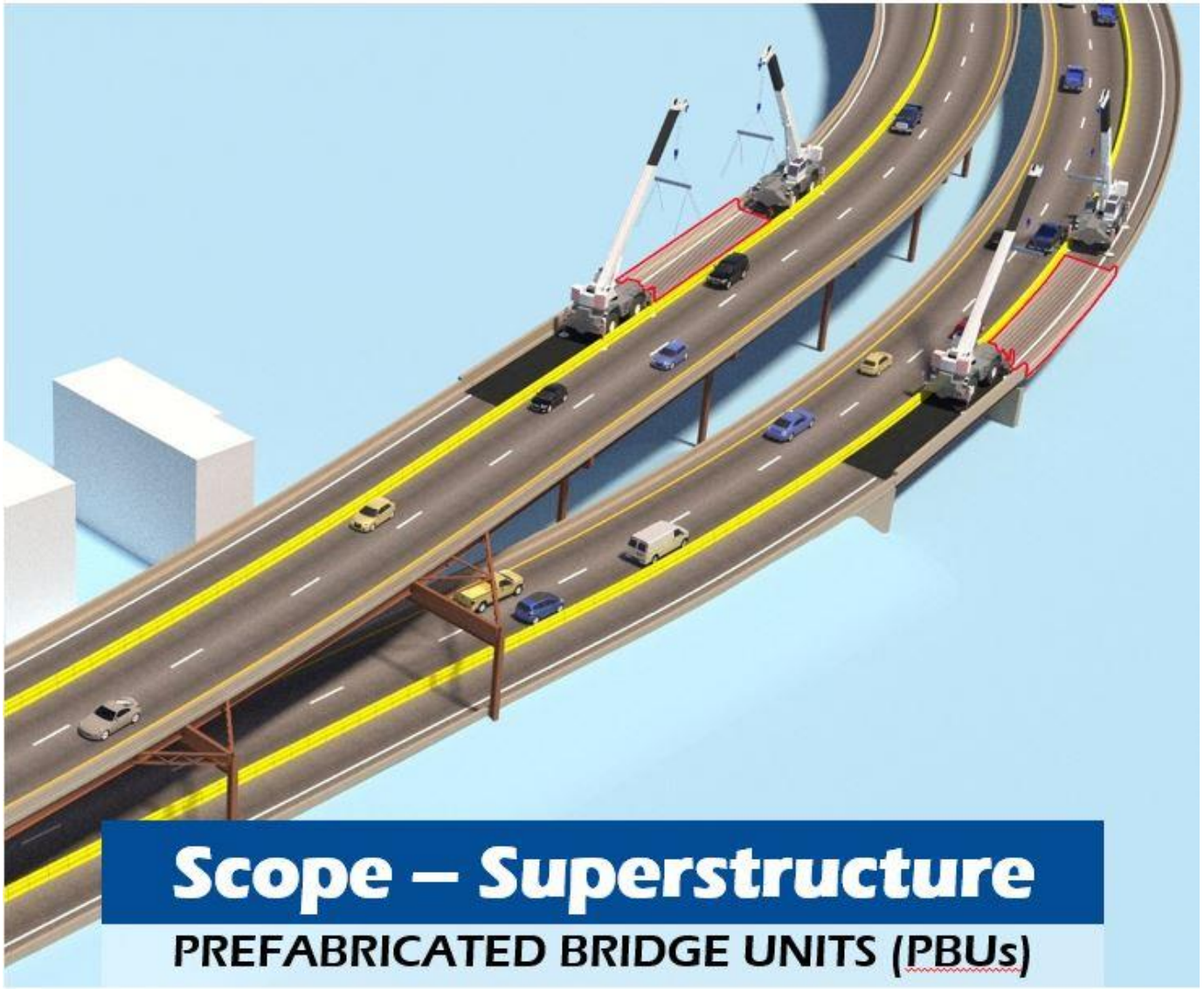


Scope - Superstructure

PREFABRICATED BRIDGE UNITS (PBUs)

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Scope - Superstructure

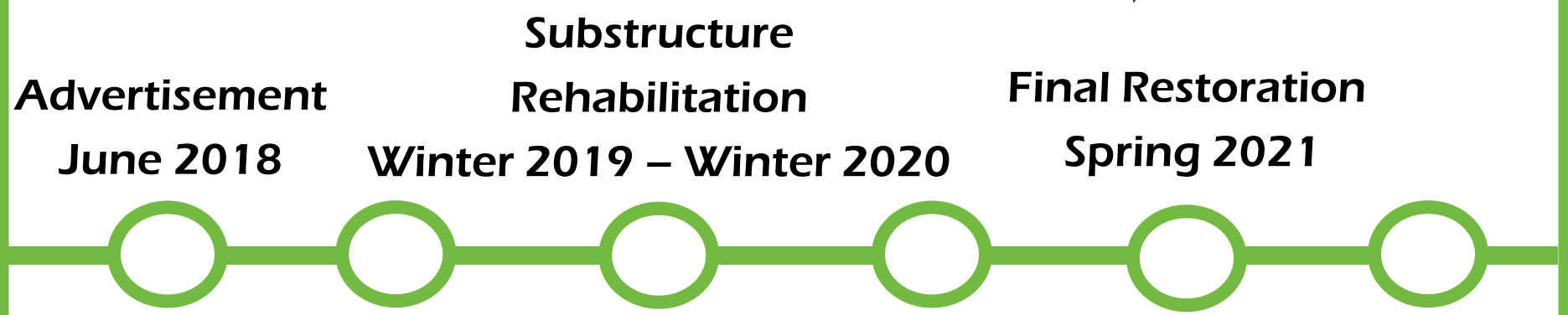
- Isolated Spans will require conventional repair:
  - Rte 1 SB over Rte 1 NB (at Southern limits of work near 4th Street)
  - Span over Railroad
  - Work includes the removal of the existing deck, cleaning, strengthening and painting of the existing steel, and utilizing steel grid deck elements.



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Construction Schedule



Coordination with
Tobin Deck Rehabilitation
2018 - 2020

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Construction Impacts - Traffic

- Winter 2019 - Winter 2020: Substructure rehabilitation - *no traffic impacts on Route 1 during peak travel times*
- Spring to Fall 2020: NB/SB superstructure replacement
  - SB reduced from 3 lanes to 2 lanes
  - NB – Tobin work zone of 2 lanes to be extended within project limits
  - NB/SB reduced to 1 lane overnight for ABC construction
  - Interim ramp closures with local detours
  - Interim parking impacts
- Weekend lane reductions on Route 1 (12 weekends) for conventional construction
- Extensive public outreach to ensure motorists and residents understand traffic impacts

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Weekend Construction

- Route 1 will be reduced to 1 lane NB/SB for 12 weekends in 2020
- Lane reductions Friday 10pm through Monday 5am
- Allows for expedited construction in areas where PBUs cannot be used
- Proposed weekend dates include
  - 6 weekends in Spring (excluding Easter)
  - 6 weekends in Summer (excluding July 4th)
- Efforts will reduce duration of impacts to abutters (from 9 months of night work)
- Extensive public outreach will ensure motorists and residents are aware of weekend work.



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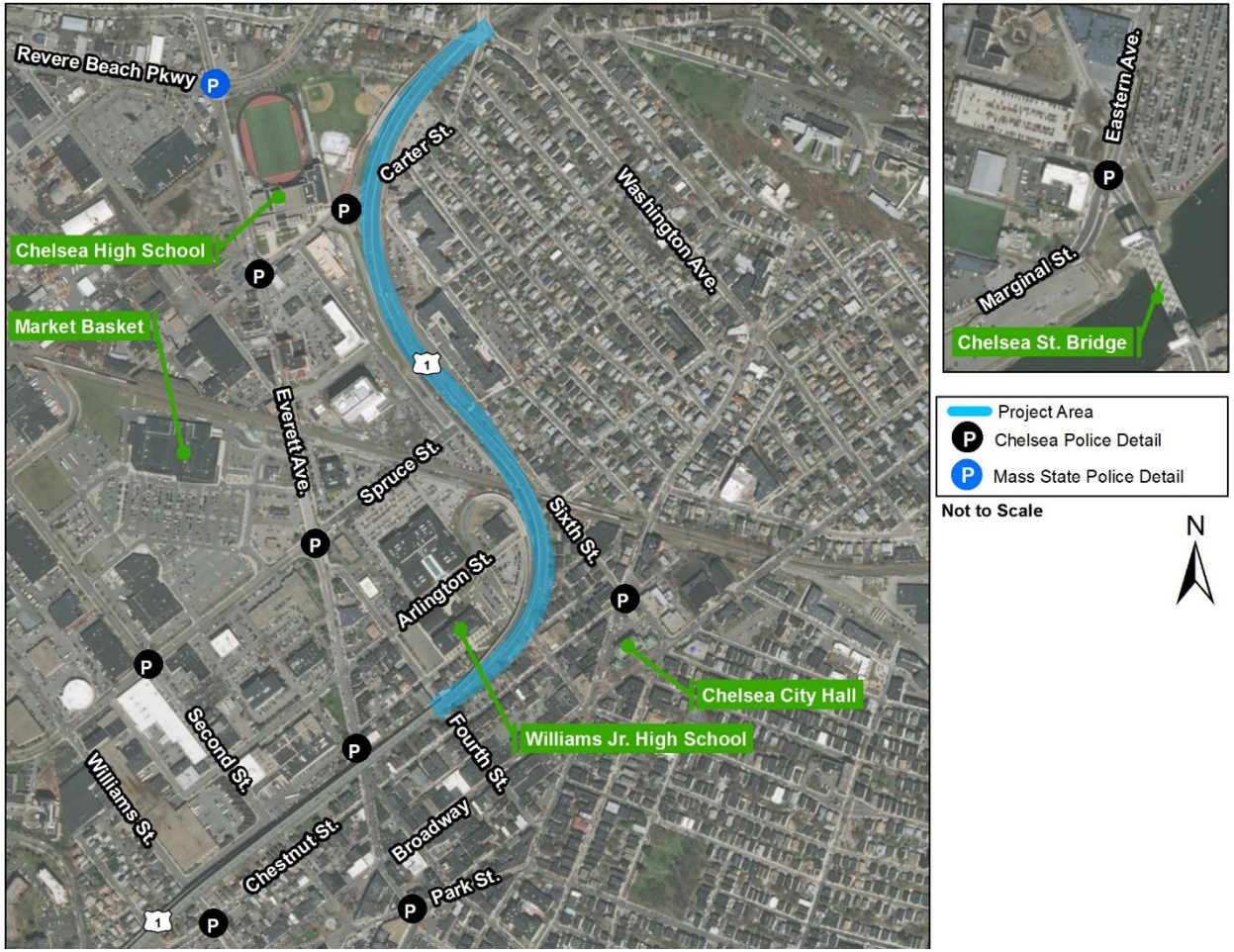
Regional Traffic Mitigation

- Robust Public Outreach Program
- Comprehensive Police Detail Program
- Field Monitoring and Adjustment – starting day 1
- Real Time Traffic Management (RTTM) System
- Advance Warning Signage
- Local Detour Plans
- Signal & Corridor Optimization
- Incident Response Operation (IRO)
- Coordination with adjacent projects

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Police Detail Deployment



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Local Traffic Detours

- Local nighttime road closures intermittently throughout each construction stage (7pm-6am)
- Weekend closures for Carter Street Off-ramp
- Arlington Street On-ramp and Fourth Street Off-ramp closed during all construction stages
- Nightly closures for Carter Street On-ramp and Sixth Street On-ramp during the first construction stage

Construction Impacts - Abutters

- Noise Control
- Dust and pollutant containment system will be used for mitigation
- Lead Paint Abatement Plan for Hazardous Materials Mitigation
- Reallocation of temporary loss of parking
- Public outreach will help keep abutters and users informed of construction impacts



Construction Impacts - Noise

- Baseline noise monitoring under normal, everyday conditions completed
- Contractor will be required to have an approved Noise Control Plan
- Certain activities and hours of operations will be limited
- Different noise limits for different times of day
- Noise mitigation will be required if allowable noise levels are exceeded
  - Shielding
  - Limit machinery types and use
- Installation of PBUs



Construction Impacts - Parking

- Winter 2019 - Winter 2020: Parking Lots Impacted during Substructure Rehabilitation
- Spring 2020 – Fall 2020: Parking Lots Impacted During Demolition and Erection of Bridge Superstructure
- Potential Loss of Parking Spaces due to Retrofit of Existing support foundations and proposed drainage structures
- Introduction of new Carter Street lot for temporary relocation



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Dust and Lead Paint Control

Dust:

- During demolition activities, water will be used to minimize dust emissions per MassDOT and OSHA regulations.
- Dust monitoring will be conducted during ALL concrete demolition activities.
- Contractor Health and Safety Plan will address dust control on-site

Lead Paint:

- All Federal, State, Local and OSHA regulations will be followed
- Contractor to contain all areas where paint is removed
- Removed steel is recycled off-site

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Environmental Review

- Project requires NEPA review and approval by FHWA
  - Anticipated Categorical Exclusion (CE)
- Community engagement is integral to the NEPA Process – your input in this design process will be documented
- FHWA is a participant in project development and will determine adequacy of the public process
- Other environmental approvals:
  - Section 106 of the Historic Preservation Act
  - Section 4(f) of the DOT Act



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Public Participation/Outreach Plan



- Project website
- Digital blast notification to North Shore E-Z pass holders
- Informational materials to be distributed
  - In community facilities – libraries, City Hall
  - On MBTA buses – Rtes. 111, 112, 114, 116, 117
- Door-to-door flyer distribution on immediately adjacent streets
- Pop-ups at community gathering places – libraries, supermarkets, community centers, etc.
- Briefings upon request to local community organizations – Chelsea Green Roots, Chamber of Commerce, etc.
- Coordination with MassPort at Logan Airport satellite parking facilities in Chelsea

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Mitigation Commitments: From the 25% Design Public Hearing

- Allowance for additional crossing guards during construction
- Architectural improvements to columns
  - Opportunity for local artist displays
- Weekend construction to reduce duration of impacts to abutters
- Improved lighting under structures
- Parking lot paving and restriping
- Incentives & disincentives to ensure project delivery

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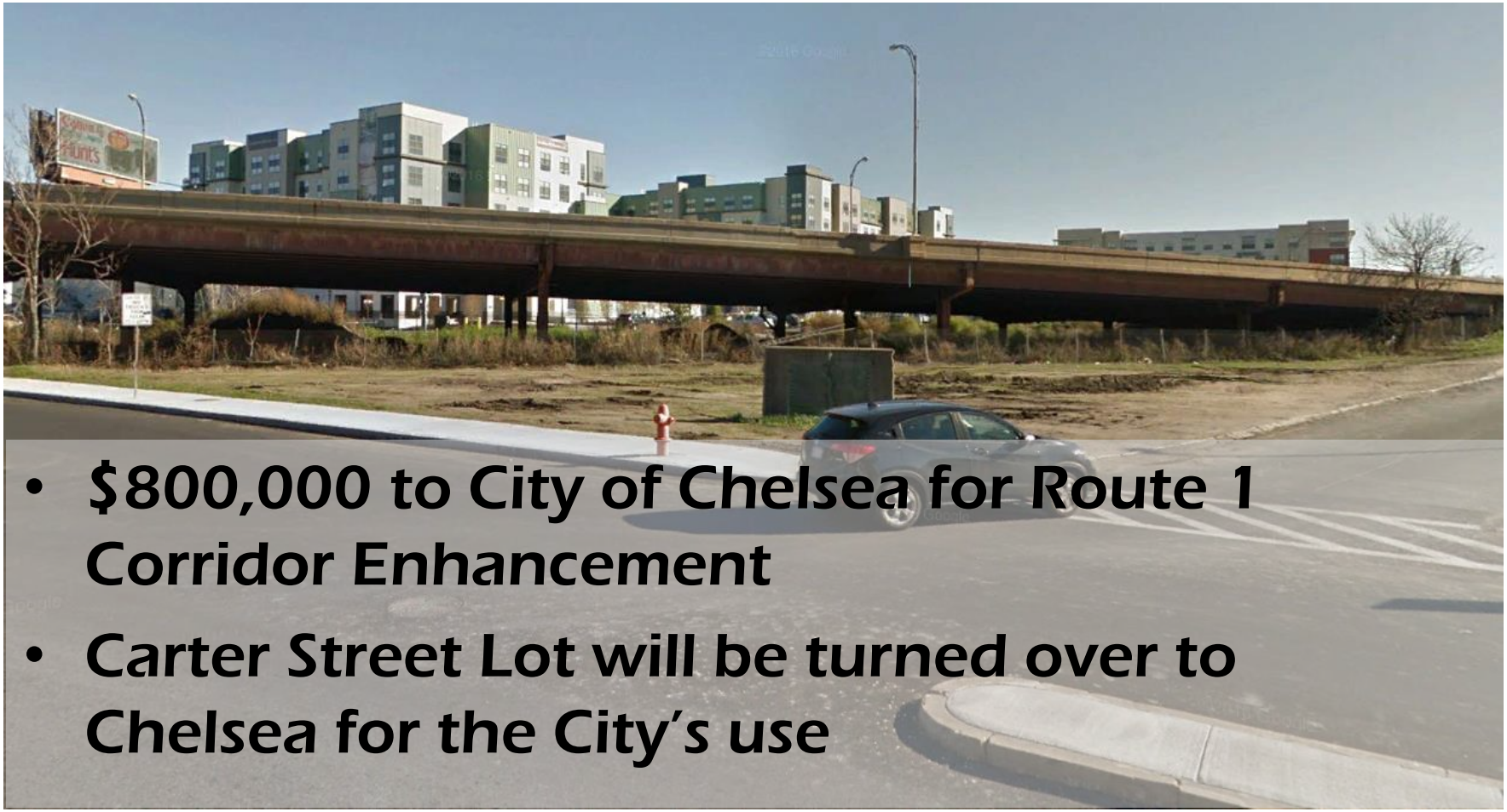
Additional Mitigation Commitments: Based on Community Input

- Ramp A to be rebuilt and reopened at job's end
- Solid snow barrier will be installed on the viaduct:
  - Contains snow/debris
  - Acts as sound barrier



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Additional Mitigation Commitments: Based on Community Input



- $800,000 to City of Chelsea for Route 1 Corridor Enhancement
- Carter Street Lot will be turned over to Chelsea for the City's use

Additional Mitigation Commitments: Based on Community Input

- Ongoing efforts with MBTA:
  - Work to mitigate Rte. 111 impacts
  - Coordinate transit impacts of Chelsea Viaduct, N. Washington, and Tobin Bridge



MBTA Route 111

Background & Context

- Primary link between Chelsea, Boston
- 3rd largest MBTA bus route
- Serves 11,800 passengers per weekday—that's as large as Alewife Red Line Station, the 14th busiest subway station
- Route meets standards for span, frequency, and cost efficiency, but needs improvement on reliability and comfort standards; these will be evaluated through upcoming Better Bus Project



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Project Impacts to Bus Operations

Project	Anticipated MBTA transit Impacts
Chelsea Viaduct Rehabilitation	
• Substructure Work	
– 11/2018 thru 3/2020	No service impacts; barriers/fencing near CR, bus 112/114
• Superstructure Work	
– 4/2020 thru 11/2020	Minor Impacts to due to traffic diversions, night work
• Ramp A Temporary Closure	
– 4/2020 thru 11/2020	No Impacts – Bus 111 permanently diverted to Everett Avenue Ramp
Tobin Bridge Deck Rehabilitation	
• NB Lane Reduction	No Impacts
• Beacon Street Ramp Closure	
– 4-6 weeks (May – August 2018)	Minor Impacts – detour to 4th Street Off-ramp
• Everett Avenue Ramp Closure	
– 4 weeks (August – Sept 2018)	No Impacts – Remain on Ramp A on-ramp as existing
• 4th Street Ramp Closure	
– 4-6 weeks (August – Oct 2018)	Minor Impacts – resume use of Beacon Street Off-ramp
North Washington Street Bridge Replacement	
• 2 lanes inbound/ 1 lane outbound	
– Jan 2019– Dec 2024	Bus 111 minor impacts: Expected delays
• 1 lane inbound/ 1 lane outbound	
– Jul 2019– Aug 2019	Bus 111 moderate impacts: Expected delays

Next Steps

- MBTA will continue to meet with MassDOT, City Council members and the community, throughout the duration of construction, to identify, implement and monitor a plan.
- The plan will focus on diverting customers to other routes and modes of transportation.
- As with other plans, as the MBTA monitors and collaborates with partners, changes can be made during the construction period.
- Communication of the plan will be posted on buses, at bus stops and within the network to notify customers in advance of potential impacts.

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Project Benefits

Project

Chelsea Viaduct Rehabilitation

- Project will result in a reliable structure with a 75 year design life, new lighting, drainage, snow fence and parking lot improvements.

Tobin Bridge Deck Rehabilitation

- Project will result in a reliable deck surface resulting in reduced maintenance costs and improved riding surface.

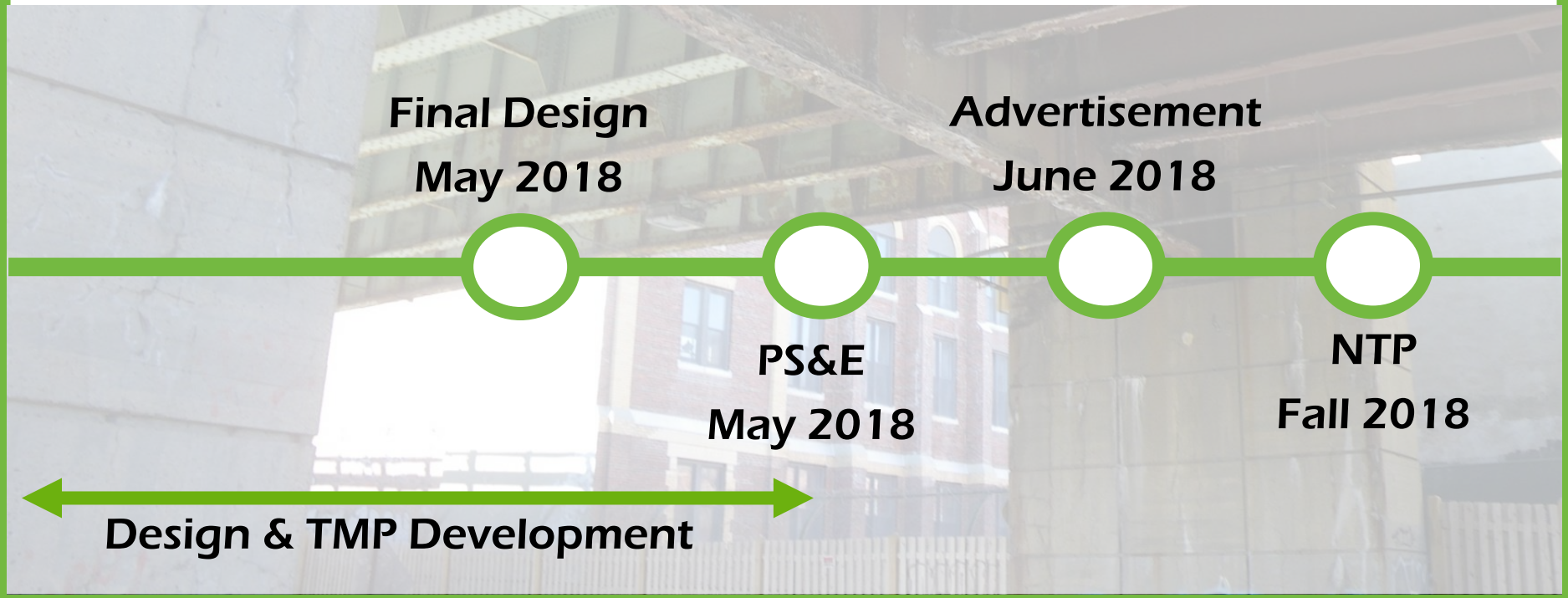
North Washington Street Replacement

- Project will result in a new bridge with a 75 year design life, architectural treatments, new lighting, and dedicated pedestrian and bicycle accommodations.
- Project will result in a dedicated bus lane that will provide improved service to Bus 92, 93,111, 426 and 428.

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Next Steps

- Finalize design based on public feedback
- Continued outreach - look for us in your neighborhood!



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Discussion



www.massdot.state.ma.us/highway/HighlightedProjects/ChelseaRoute1ViaductRehabilitationProject.aspx

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Fact sheets and mail-in comment sheets available

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Thank You

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