



I-90 ALLSTON INTERCHANGE A MULTIMODAL TRANSPORTATION PROJECT

Task Force Meeting
June 3, 2021

Today's Agenda



- **Welcome & Introductions**
- **Viaduct Phase 1 Maintenance Project**
 - Current Condition of Viaduct per February 2021 Inspection Findings
 - Immediate Need Expected Repairs
 - Next Steps
- **I-90 Multimodal Project Update**
 - Continuing refinements of the Modified At-Grade Option
 - Notice of Project Change (NPC)
 - South Side Maintenance & Layover Facility (SSMF)
- **Questions**

Path Forward



- **Hands-On Inspection: Completed in February 2021**
 - Current Condition
 - Implications of Further Deterioration
- **Phase 1 – Maintain the Structure:**
 - 10-15 Year Bridge Preservation
- **Advance the Allston Multi-Modal Project:**
 - Permitting
 - Mitigation

February 2021 Bridge Inspection - Methods



- NBIS February 2021 Inspection – Visual and hands-on inspection of the entire structure
- NBIS Inspections used to locate, evaluate and document deficiencies on a structure



Progression of Structural Deterioration

2013 Photo – Cross Girder 7W



2021 Photo – Cross Girder 7W

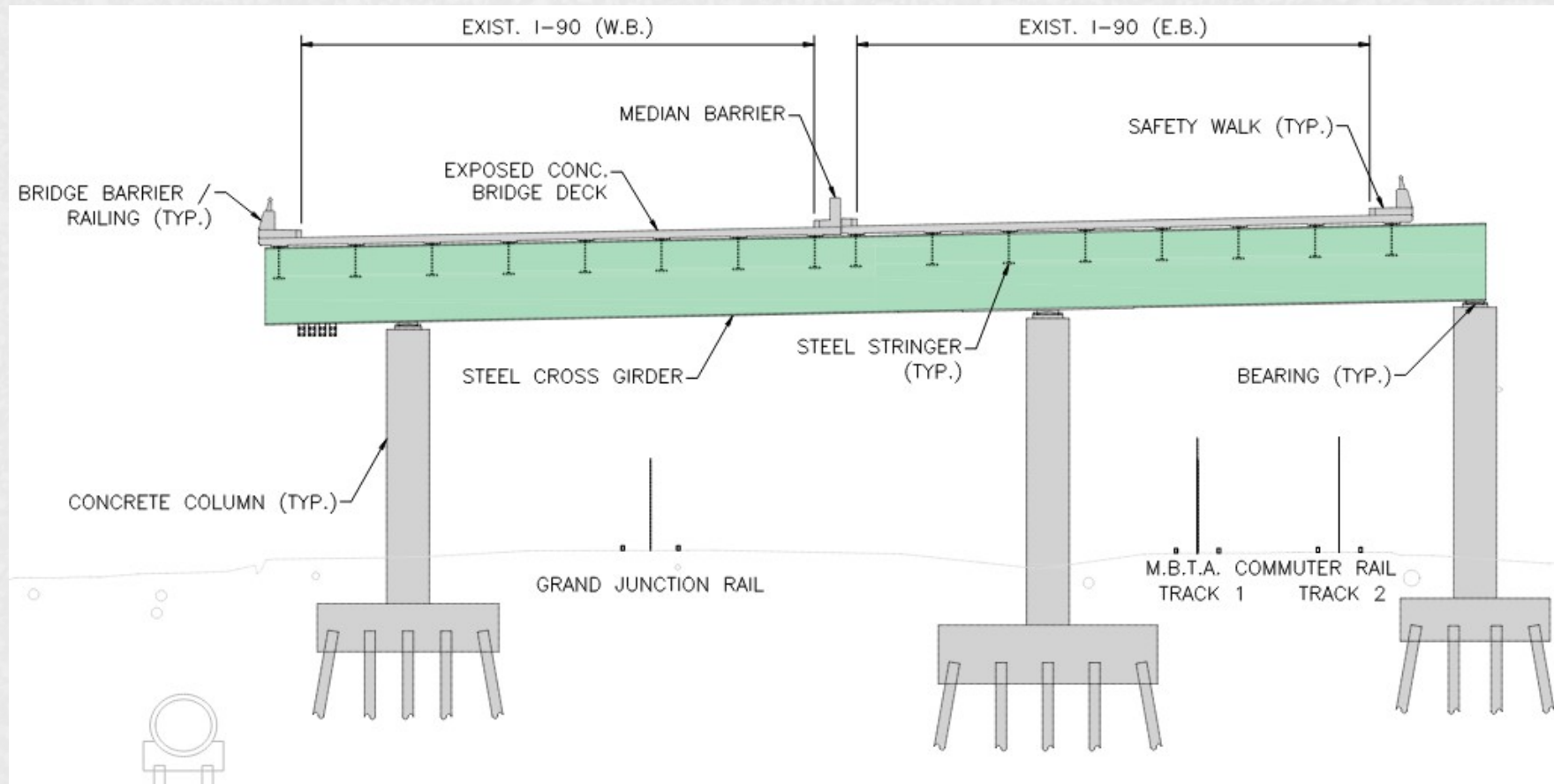


Note the change in section loss on the steel at this same location over the past 8 years in these 2 photos

February 2021 Bridge Inspection - Terminology



- **Typical Viaduct Configuration:**
 - **Concrete Deck & Railings supported by Steel Stringers supported by Steel Cross Girders supported by Concrete Columns and Foundations**



February 2021 Bridge Inspection - Summary



- The structure continues to deteriorate with additional defect locations identified and with previously noted defects expanding in size and severity
- The bridge deck joints have completely failed which is allowing stormwater and deicing chemicals to fall down onto the cross girders, stringer ends, bearings and concrete foundations resulting in the continued deterioration of those elements
- Emergency repairs have been performed since the 2020 inspection with a temporary support column installed and supplemental support stringers added at two locations
- Continued patching and repairs of the bridge deck

Preliminary List of Anticipated Repairs

- **A number of elements need to be addressed to allow the structure to stay in service to carry statutory loading until the structure is removed or replaced by the full Allston Multimodal Project**
- **At this time, the preliminary list of anticipated immediate need repairs includes:**
 - **Replace Bridge Deck Joints**
 - **Repair Spalled Bridge Deck, Railings, Median and Safety Walks**
 - **Perform Structural Steel Repairs on Selected Stringers and Cross Girders to address steel losses and improve structural capacity**
 - **Paint the Cross Girders and Stringer Ends**
 - **Repair/Patch Concrete Piers, Abutments and Pier Columns**
 - **Repair/Selectively Replace Existing Bearings**

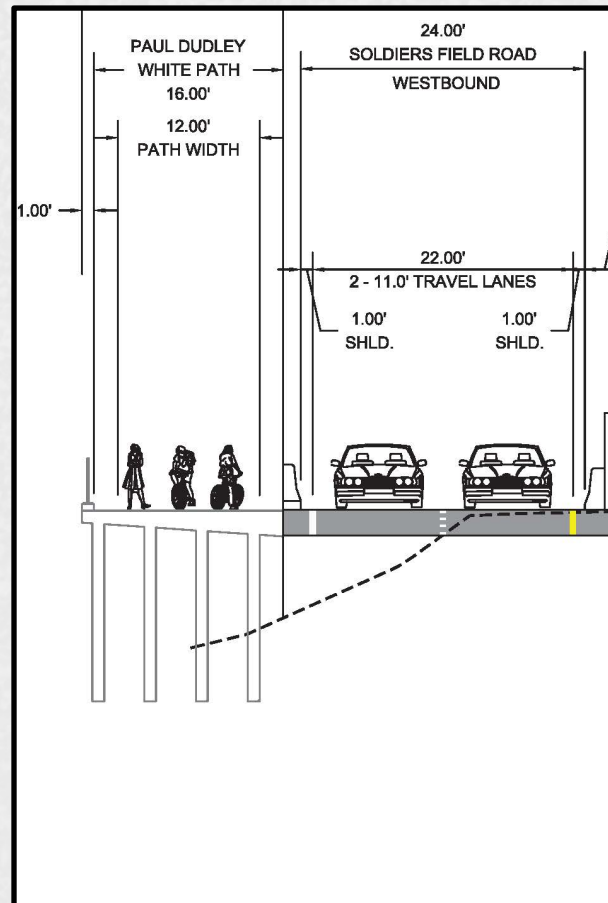
Next Steps on Phase 1



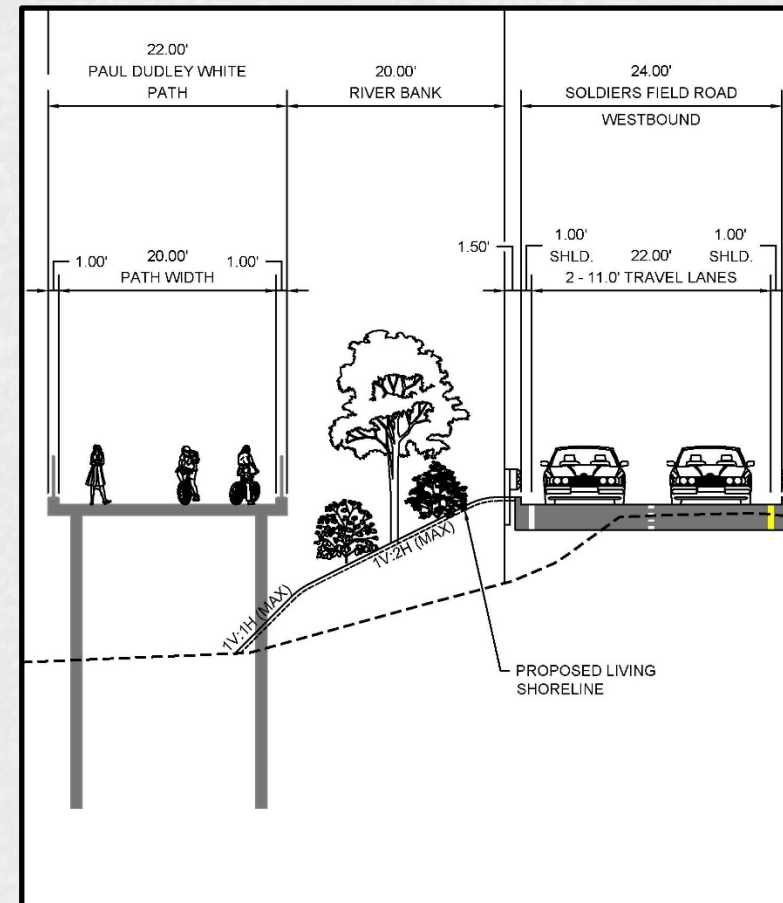
- **MassDOT will develop a repair contract that can be advertised by the Spring of 2022**
- **Contractor would be in place and mobilize by the end of 2022**
- **The steel repairs and concrete repairs to the abutments and piers will primarily be performed from below the structure**
- **Deck joint replacement, deck and barrier repairs will have impacts to I-90 traffic for up to 2 years. Work will typically be done during off peak hours (nights and weekends) to the extent possible**
- **The estimated cost for the work is approximately \$75M**

Continuing refinements of the Modified At-Grade Option

- Modified At-Grade Option includes refinements resulting from additional stakeholder engagement since publication of the Scoping Summary



Scoping Summary Report



Current

Design Issues of the Modified At-Grade Option



- **Federal floodplain elevation requirements**
 - Seeking FHWA clarification on mitigation strategy
- **Roadway edge out of the Charles River**
 - Need approximately 4'
- **Fixed parameters**
 - Further narrowing of I-90 lane and shoulder widths and removal of travel lanes not feasible
 - Existing lane and shoulder widths of DCR's Soldier Field Road



Notice of Project Change (NPC) Overview

- NPC planned to be filed later this year
- Description of the Project as Most Recently Reviewed in 2017 Draft Environmental Impact Report (DEIR)
- Description of Material Changes to the Project as Previously Reviewed in 2017 DEIR
 - Updates to the Project Purpose and Need
 - Updated Project Alternatives
 - Environmental Impacts of Throat Area Variations
- Response to Secretary's Certificate and agency and public comments on the DEIR

NPC – Major Issues Include

- **Updated Project Alternatives**
- **Natural resources Impacts**
- **Traffic and Rail Analysis**
- **Update the Project's MEPA purpose and need to align with the refined purpose and need presented in the NEPA Scoping Report & Scoping Summary Report**
- **Vulnerability assessment based on updated Massachusetts Coastal Flood Risk Model (MC-FRM), recent Resilient MA Action Team (RMAT) guidelines and FHWA Guidance**
- **Construction phasing and cost**
- **Utility and construction impacts**

South Side Maintenance & Layover Facility (SSMF)

- **FMCB Approved Preliminary Design Contract on May 24th.**
 - Phase 1 includes planning, environmental review, preliminary design and public outreach.
 - Anticipated to be located in the area of the current MBTA Readville Maintenance Facility.
 - 12 month duration
- **Future Phases:**
 - Final Design and Construction, which are dependent on future funding.
- **Purpose: Improve operational efficiency and meet current and future demand**
- **System Benefits:**
 - Improve operations and maintenance efficiency,
 - Reduces operations and maintenance costs,
 - Provides additional mechanical and layover capacity aligned with Rail Transformation goals
 - Improves overall safety, resiliency, and customer experience.

Questions?



- **Upcoming Meetings**
 - July 15
 - September 9
 - October 21
- **Meeting materials expected to be released at least one week in advance**