

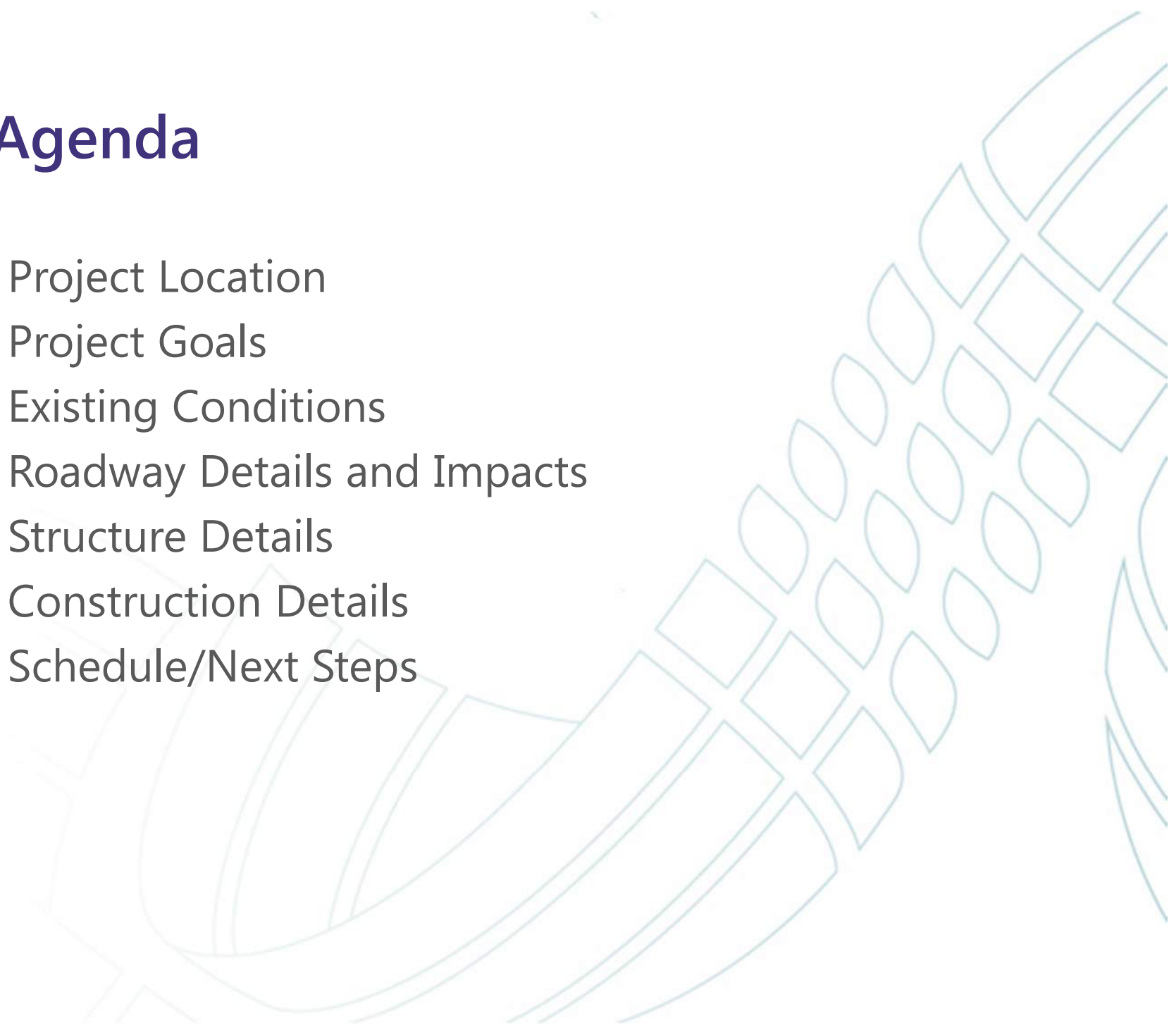


Bridge Replacement Project
MBTA Franklin Line over East Street
Westwood Public Meeting
Westwood, MA

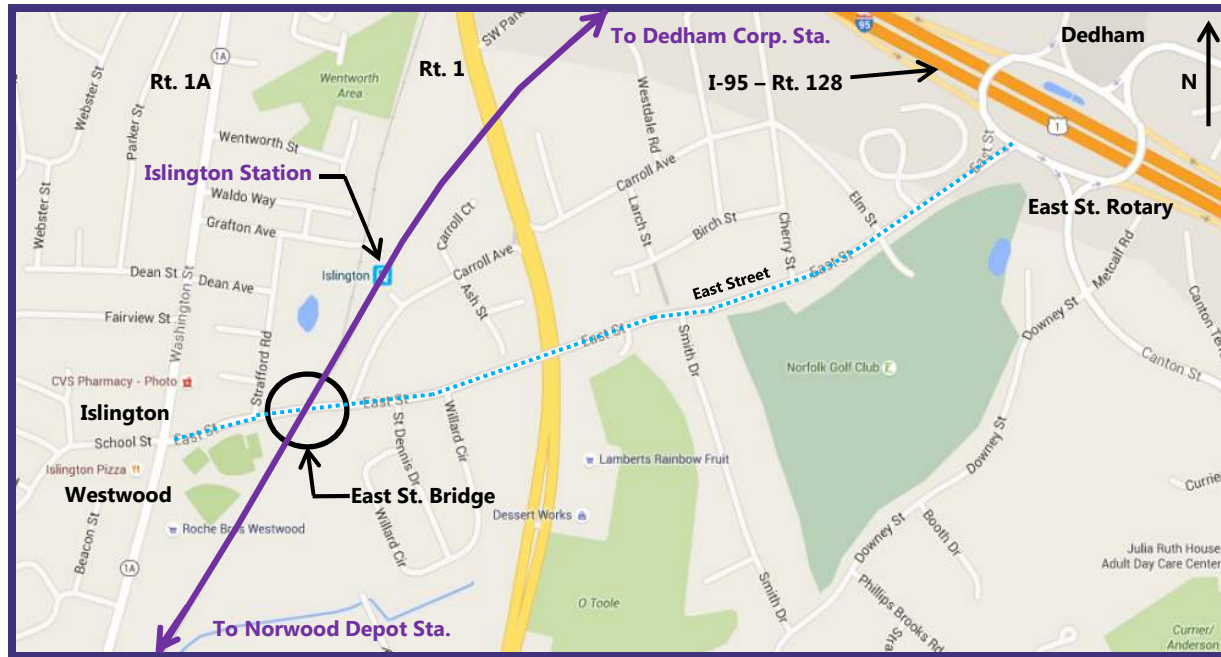
November 30, 2016

Agenda

- Project Location
- Project Goals
- Existing Conditions
- Roadway Details and Impacts
- Structure Details
- Construction Details
- Schedule/Next Steps



Project Location



Eastbound



Westbound

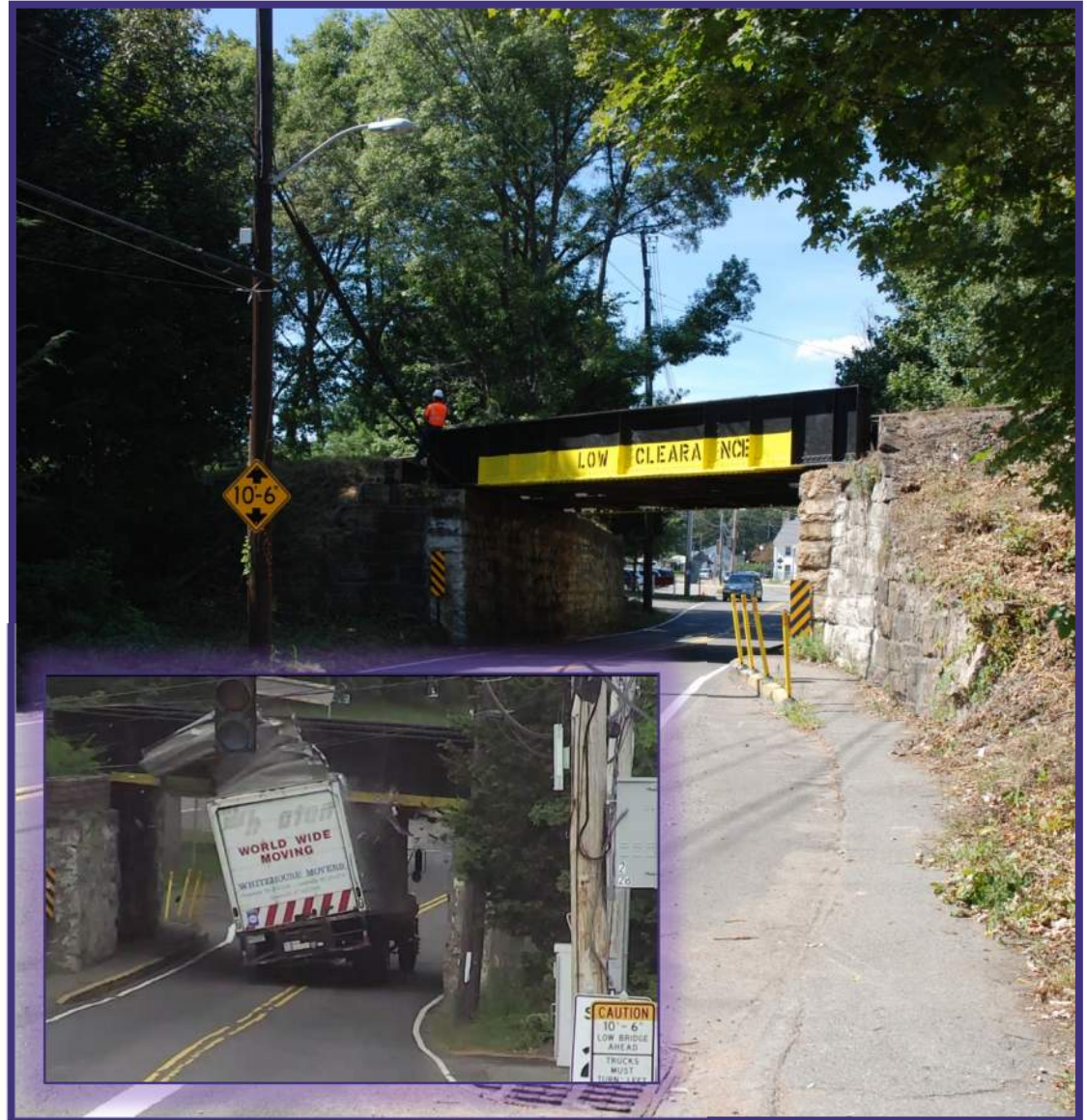
Project Goals

- Improve Safety for All Users
 - Improve Vertical Clearance
 - Minimizing Structure Depth
 - Lowering Roadway
 - Raising Track
 - Improve Roadway Width
 - Eliminate Pinch Point
 - 2 – Travel Lanes with Adequate Shoulders
 - 2 – Sidewalks

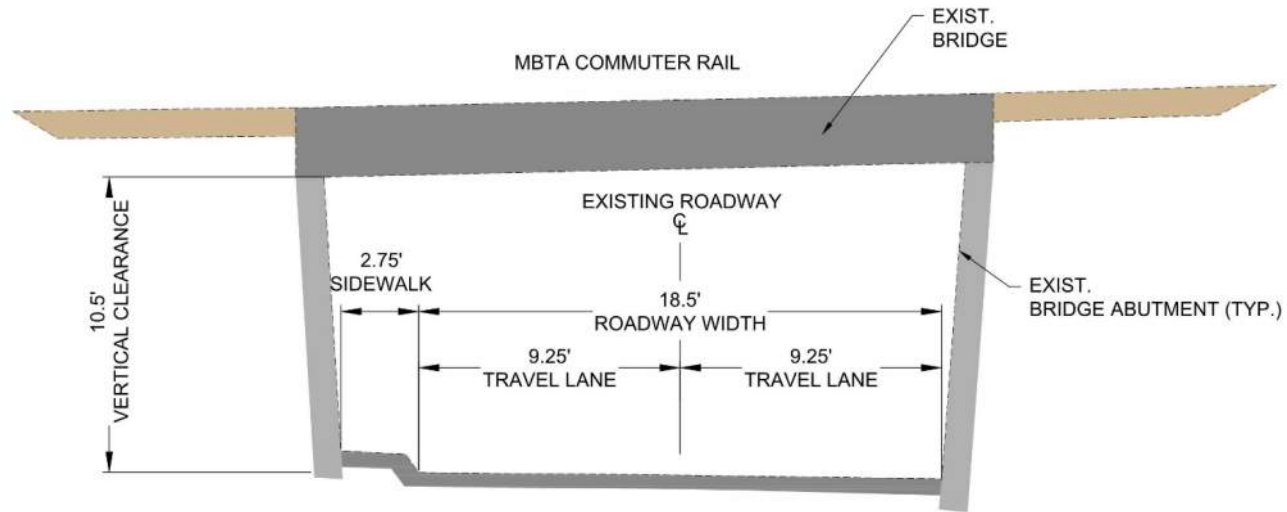


Existing Conditions

- Bridge Built 1911
- Narrow Roadway- 19 feet
- 10.5 feet Vertical Clearance
- **81 Accidents Reported (2009-2015)**



Existing Conditions



Existing Conditions



Addressing the Problem

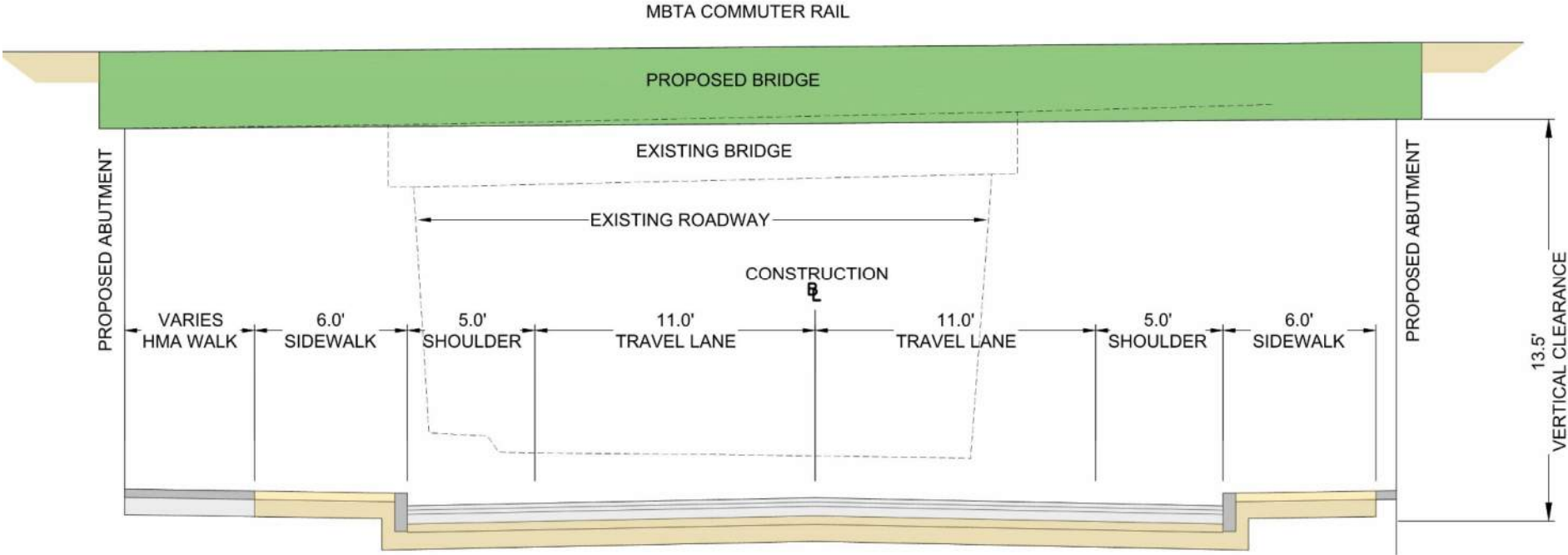
- Overall Goal: Improve Safety for All Users
- Improve Vertical Clearance
- Clearance Requirements
 - Federal Highway: 16 feet
 - Commonwealth of Massachusetts: 16.5 feet
 - Proposed East Street Bridge: 13.5 feet
- Achieve Balanced Design

Addressing the Problem

- MBTA (Railroad Operations) Input
 - Grade (Slope) of Railroad Track
- Allowable Roadway Lowering (Utility Relocation)
- Bridge Size (Depth)
- Typical Vehicle Heights
 - Emergency Vehicles
 - Single Unit Vehicles (Box Trucks)
 - Tractor Trailer Trucks*
- *13.5 feet Achieves Balanced Design*

**Truck Exclusion Remains in Place*

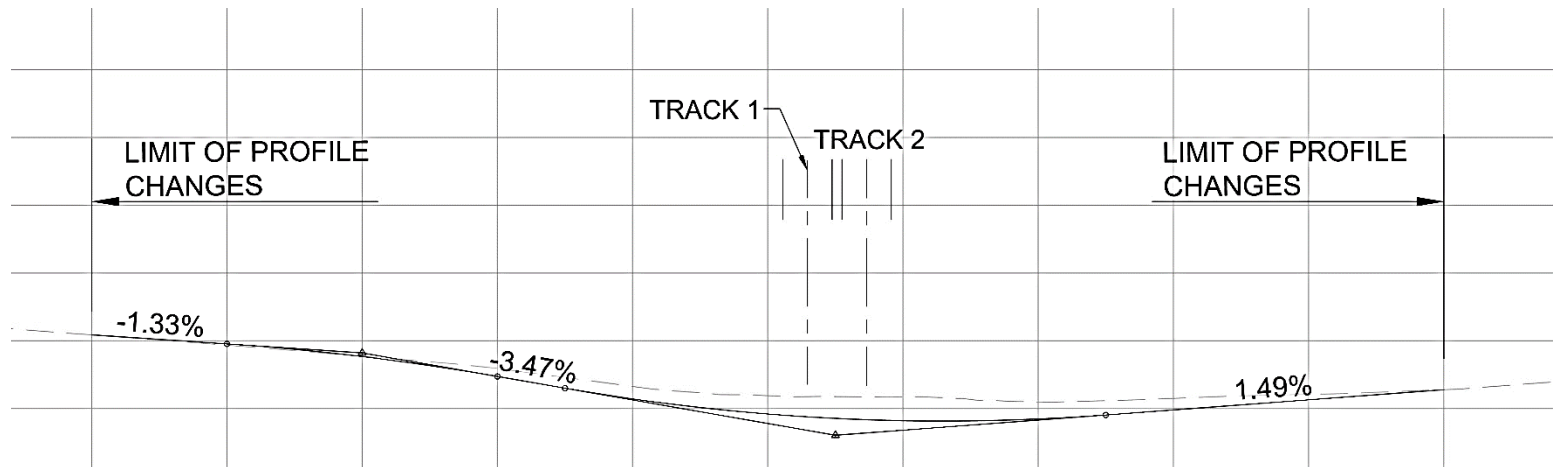
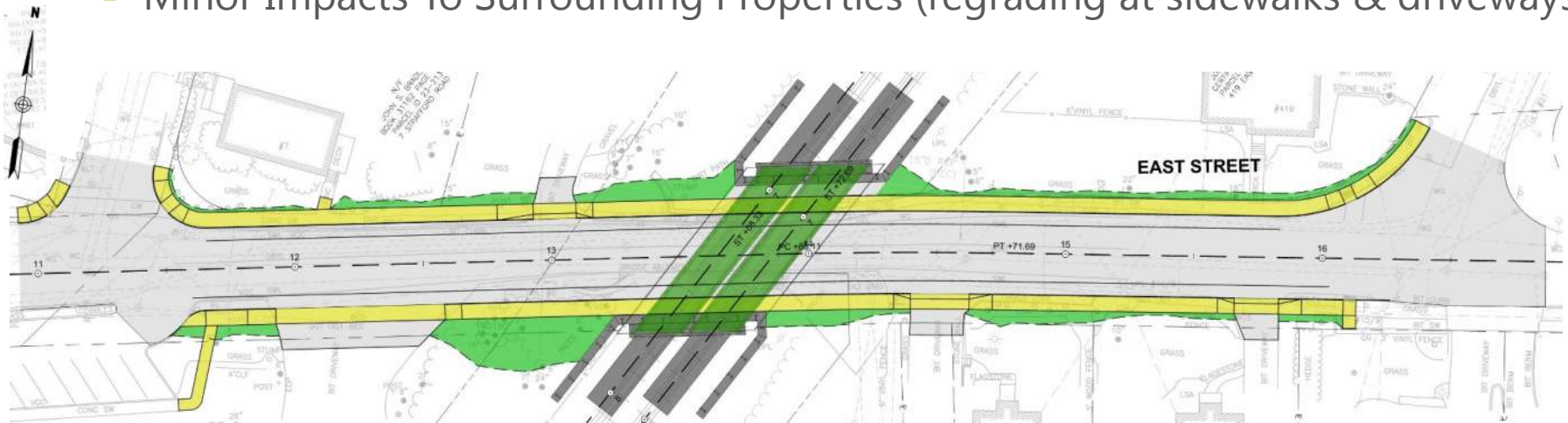
Proposed Roadway Cross-Section



- Proposed bridge layout provides a roadway configuration that meets MassDOT Complete Streets design standards

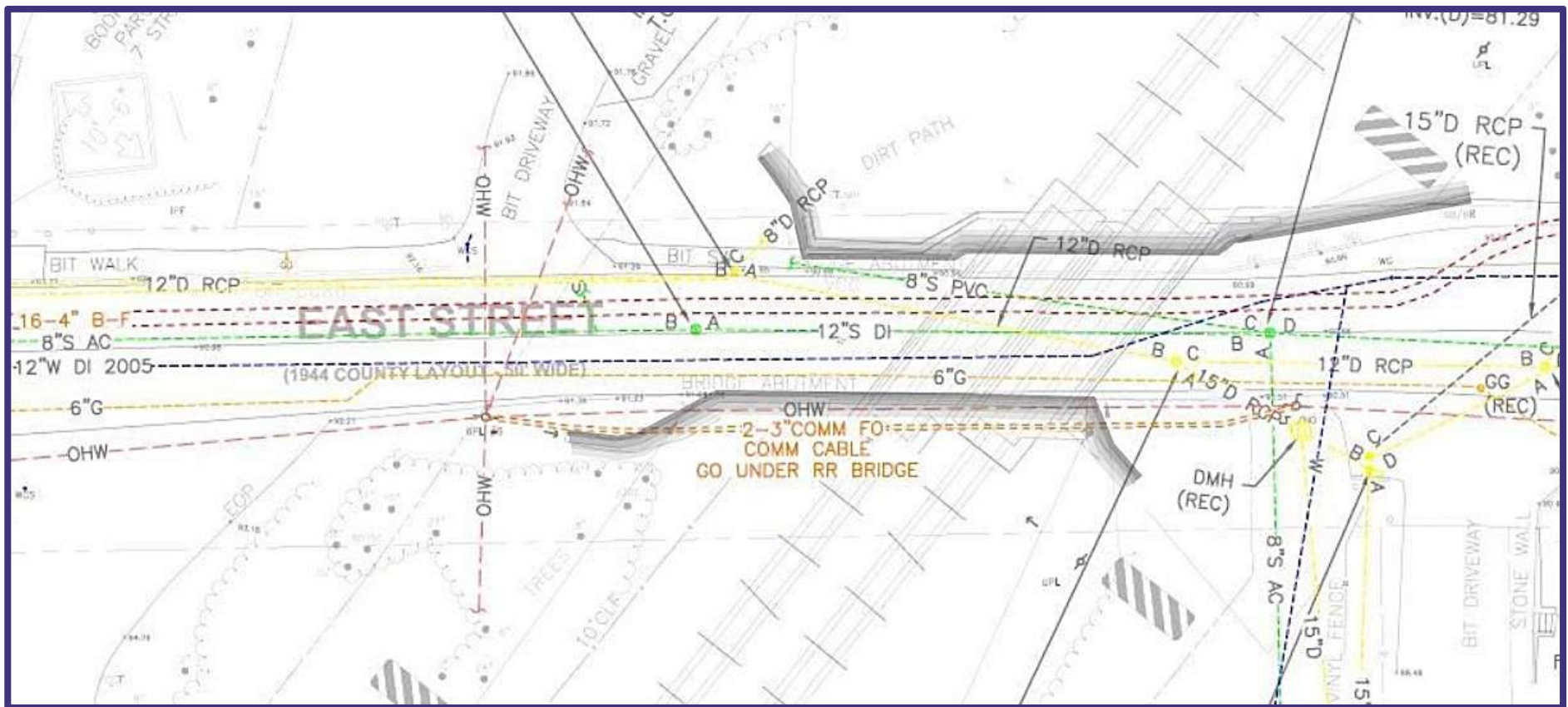
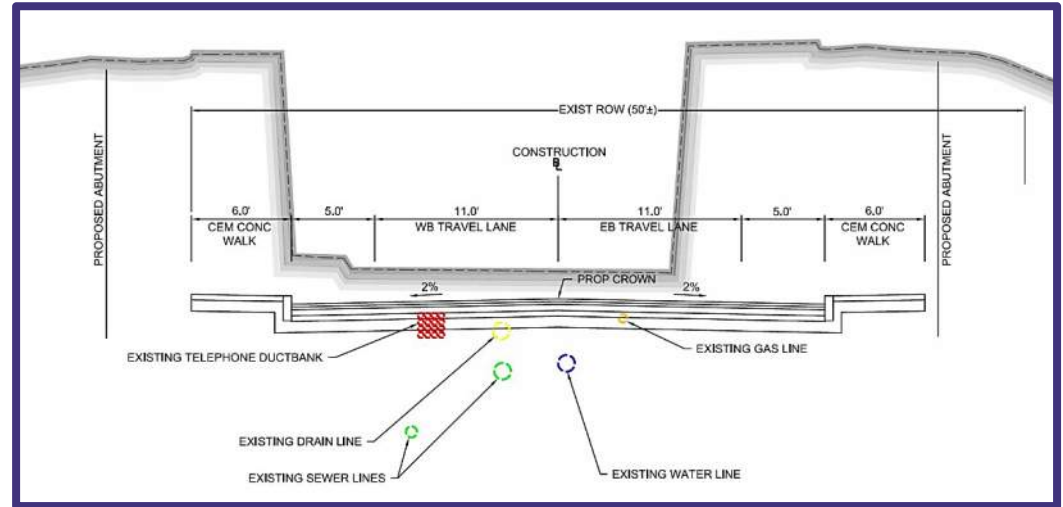
Proposed Roadway Plan & Profile

- Drop Roadway 1.5 feet
- Minimal Track Profile Increase
- Utility Relocation Required
- Minor Impacts To Surrounding Properties (regrading at sidewalks & driveways)

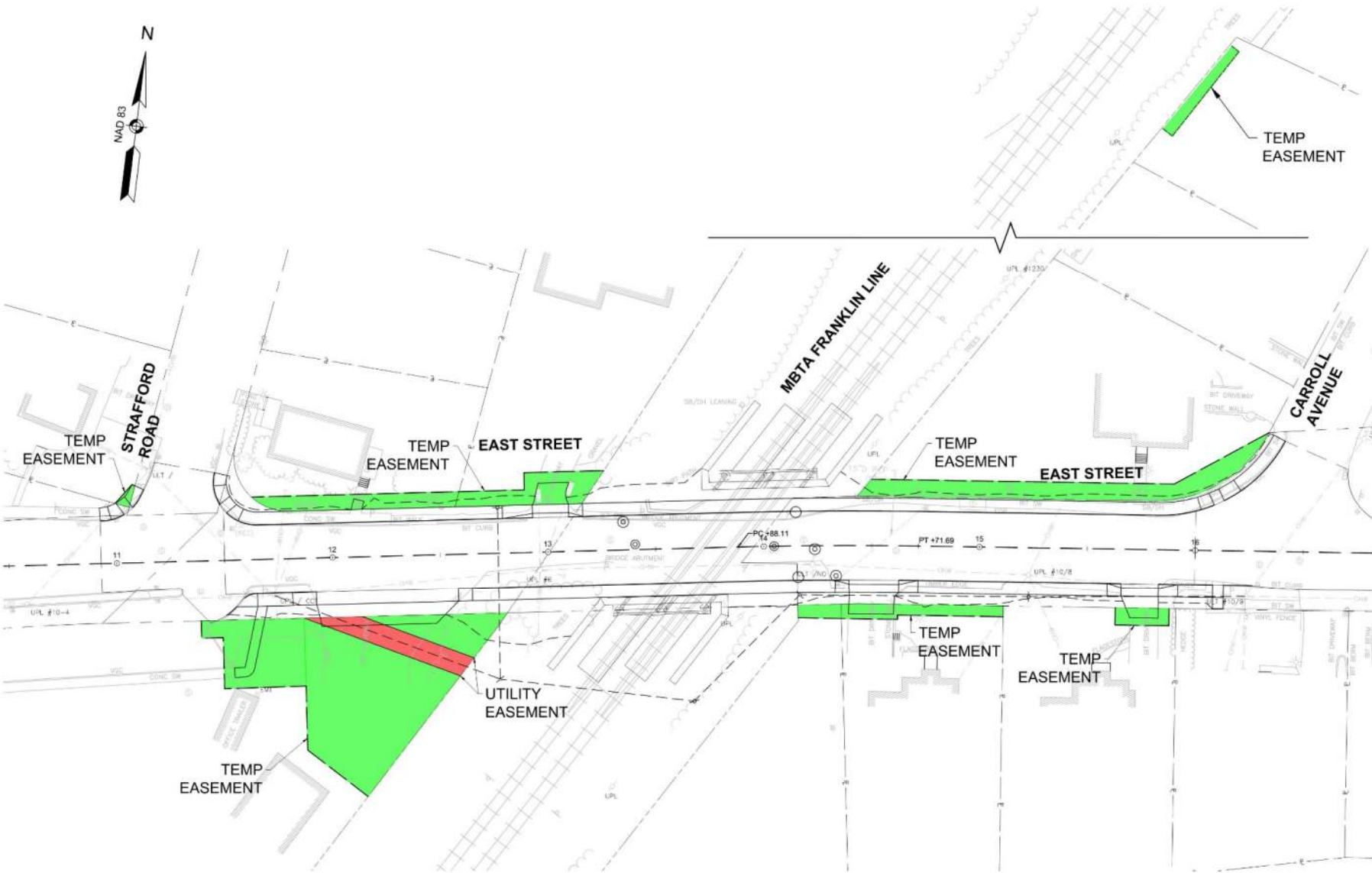


Utility Relocation

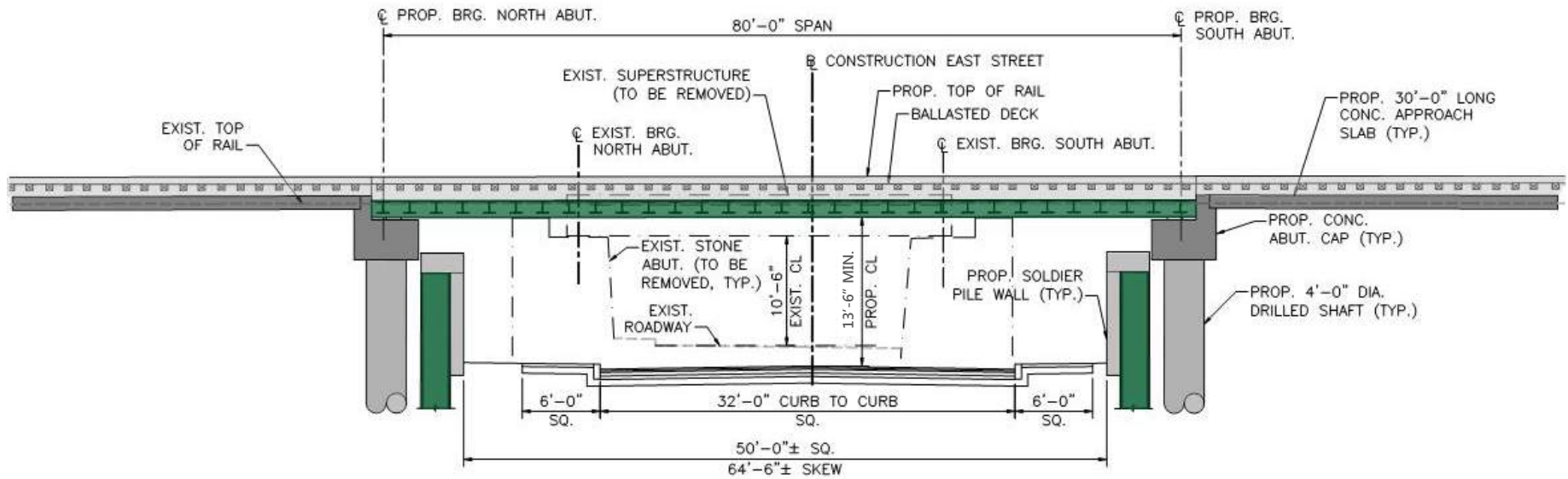
- Overhead Electric
- Water
- Gas
- Telephone Duct Bank
- Drainage



Right-of-Way Impacts

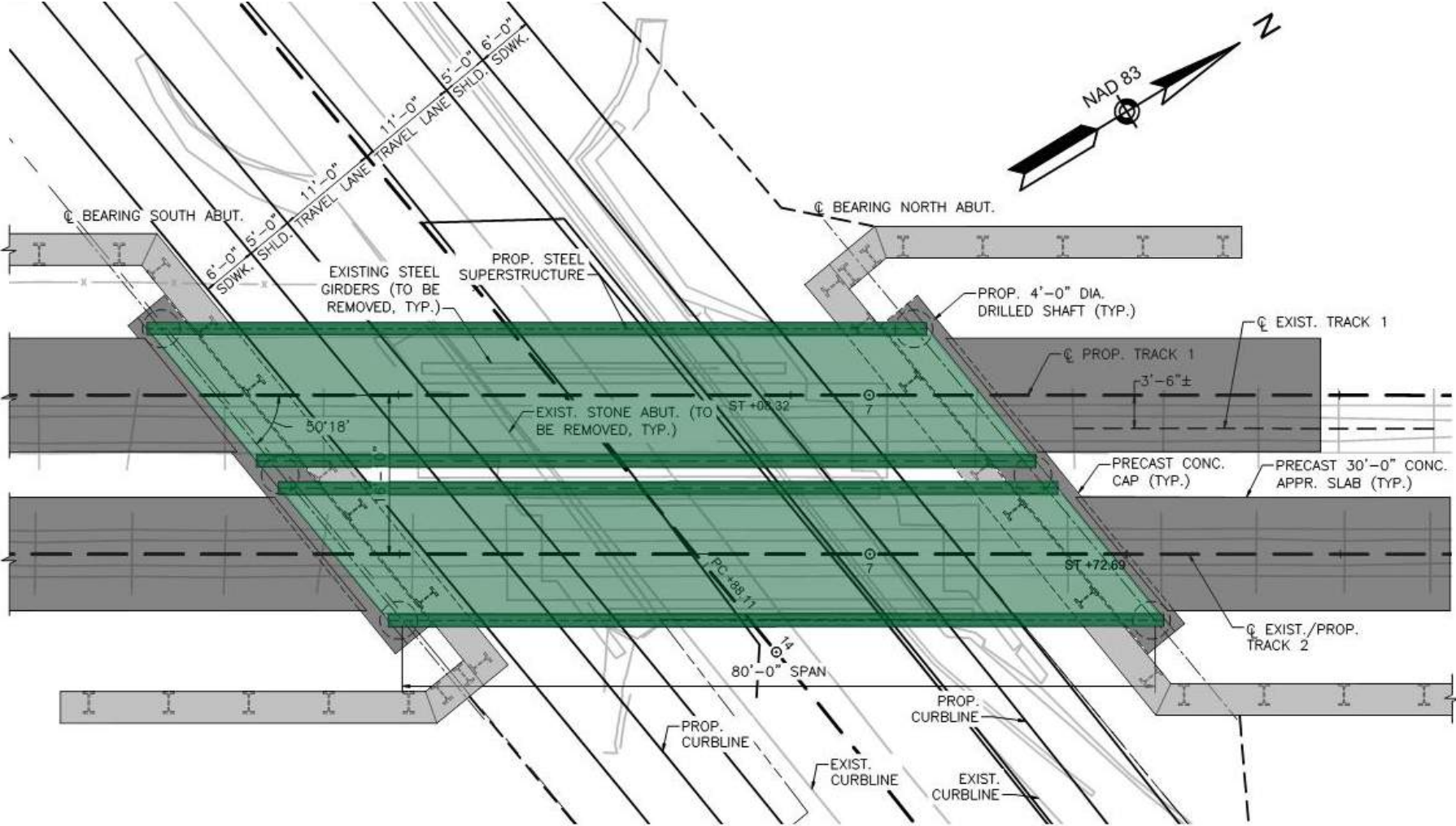


Proposed Structure



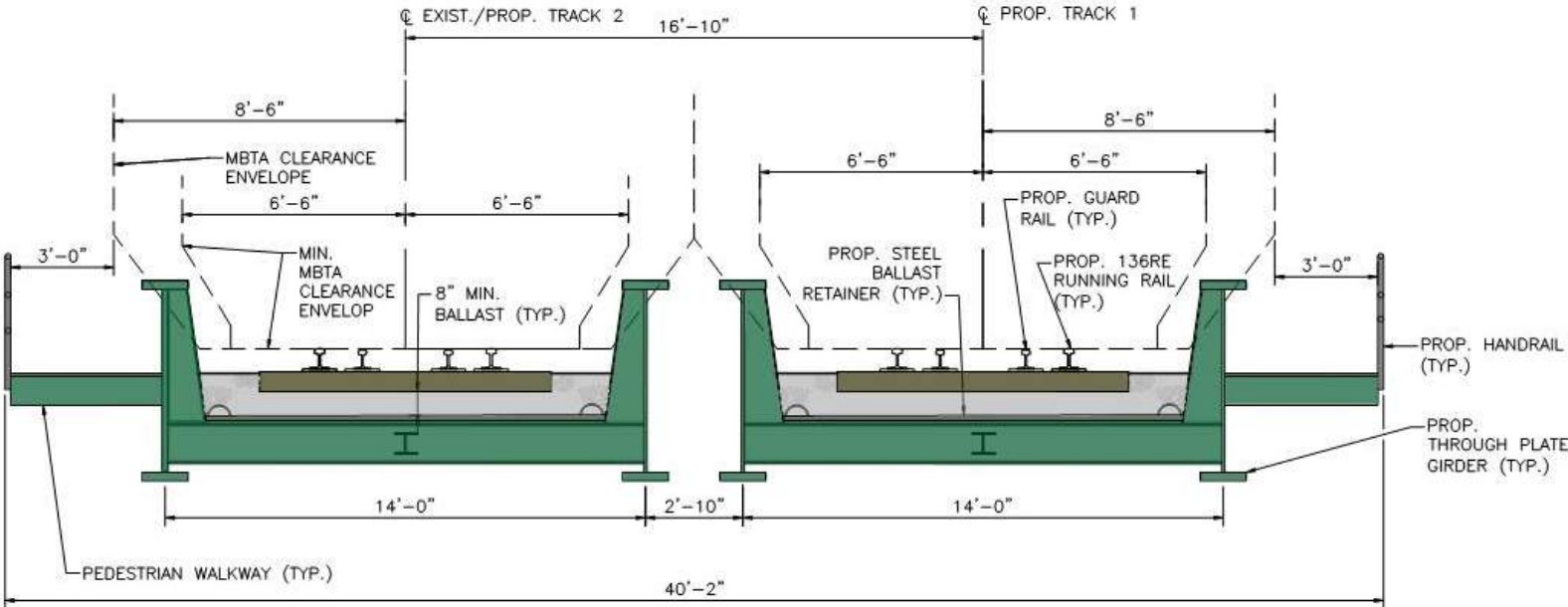
LONGITUDINAL SECTION

Proposed Structure



BRIDGE PLAN

Proposed Structure



TRANSVERSE SECTION

Construction Limits

- Limits of Track Work (Approx.)
 - Islington Northern Limit
 - Everett Street Southern Limit
- All Work Within Railroad Right-of-Way



Construction Laydown

- West Of Tracks
- Islington Station and South to the Bridge



Construction Access



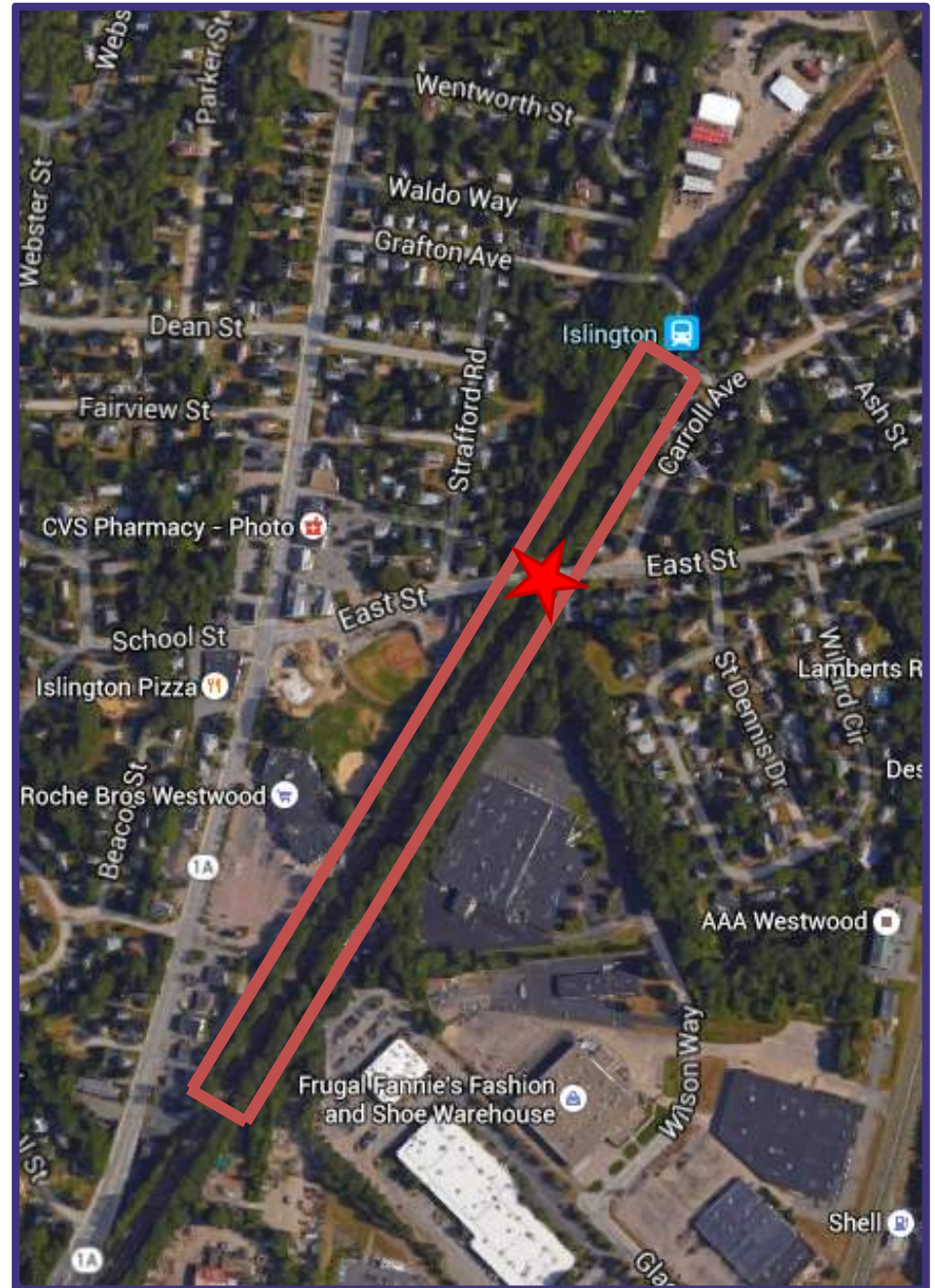
- North Access: @ MassDOT Yard and Grafton Ave
- South Access: Driveway @ Temp. Fire Station



Construction Staging

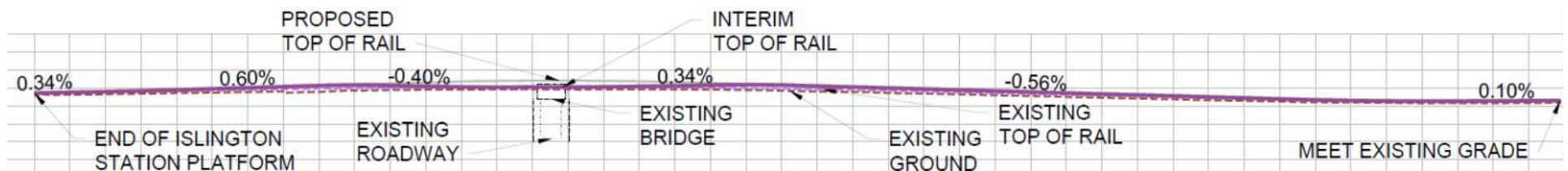
Accelerated Bridge Construction Techniques with Weekend Shutdowns

1. Raise the track on either side of the bridge
2. Slide in new bridge and complete track work
3. Additional weekend shutdowns of the roadway to remove abutments



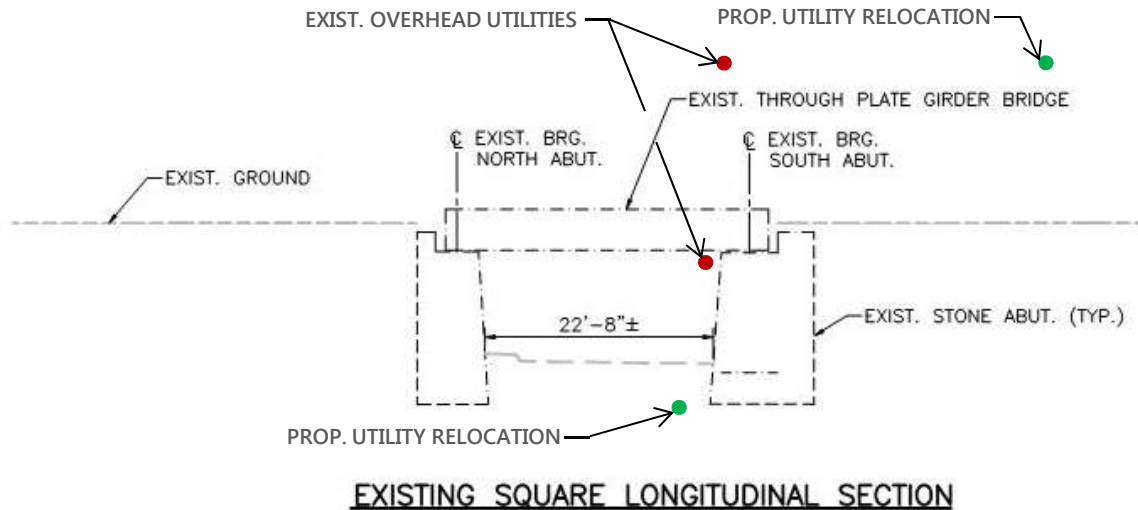
Construction Staging

- Accelerated Bridge Construction Techniques with Weekend Shutdowns
 - Raise the track on either side of the bridge over a series of weekend shutdowns (track only), 4-7 weekends. Track speed restrictions in place
 - Slide in new bridges and complete track profile lift in final long weekend shutdown (track and roadway)

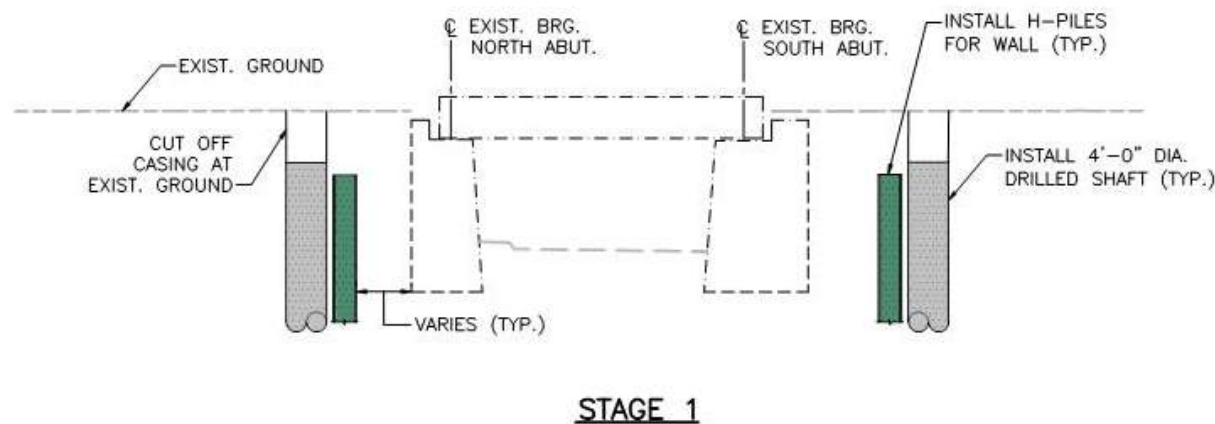


Construction Staging

Track In Service
Roadway Open

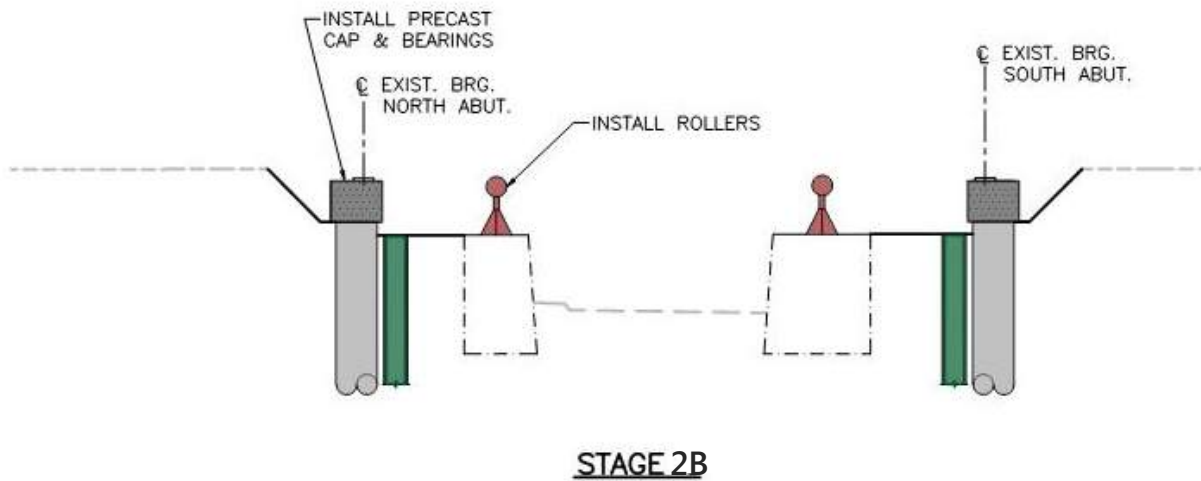
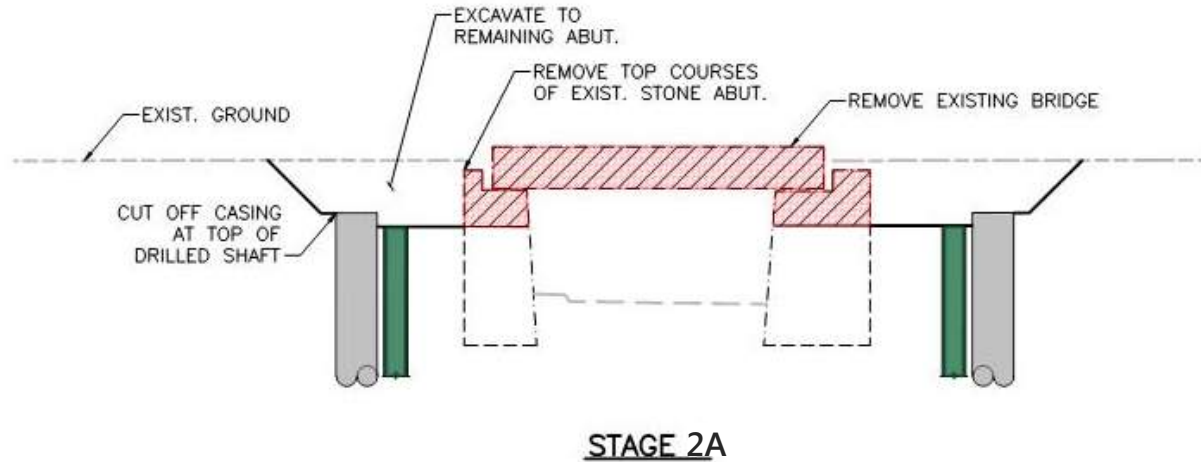


- Overhead utilities will be relocated prior to the start of construction
- New bridge foundation installed behind existing abutments around train schedule with no roadway impacts



Construction Staging

Track Out Of Service
Roadway Closed

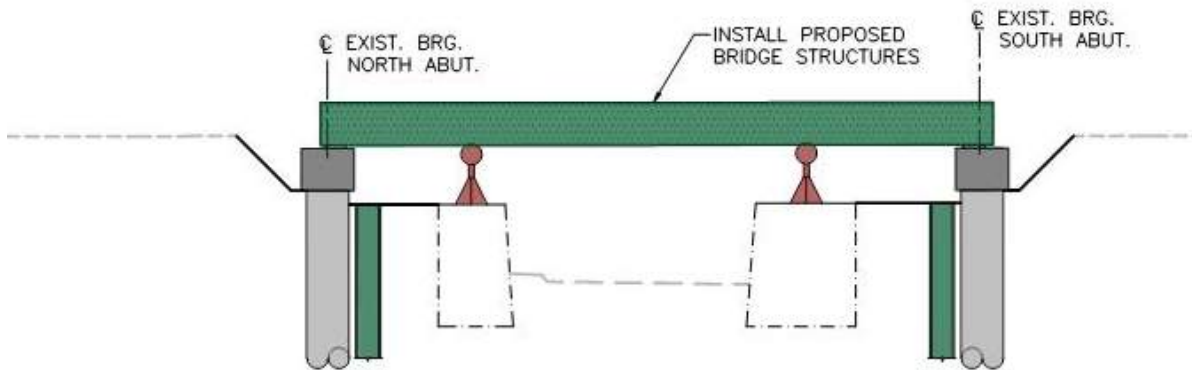


Long Weekend Shutdown

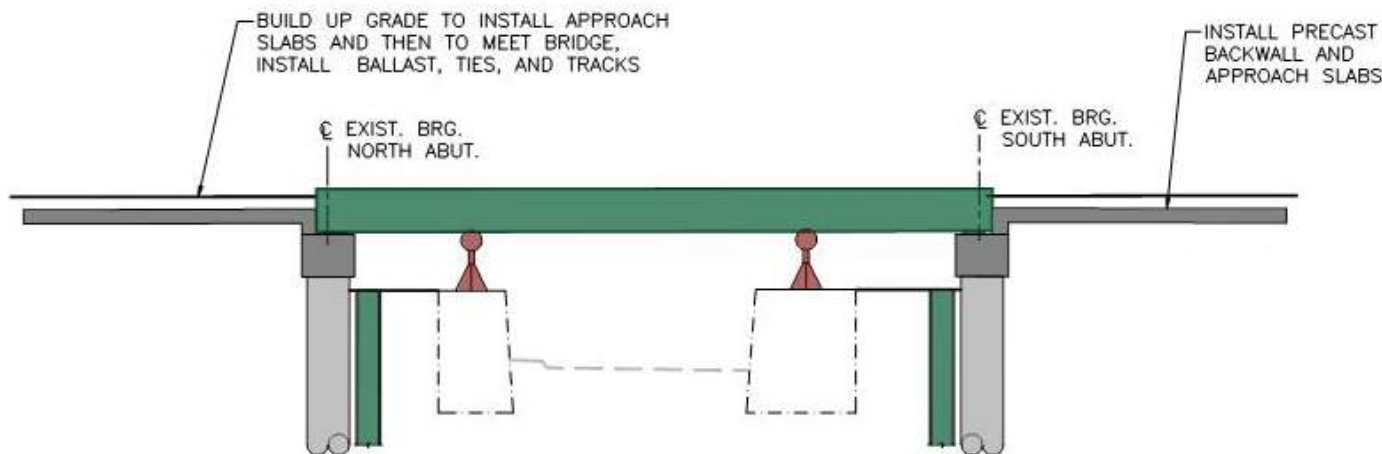
- Bridge and top of abutments will be demolished
- Continued work on new bridge foundations
- Rollers will be installed on remaining existing abutments to assist with bridge installation

Construction Staging

Track Out Of Service
Roadway Closed



STAGE 2C



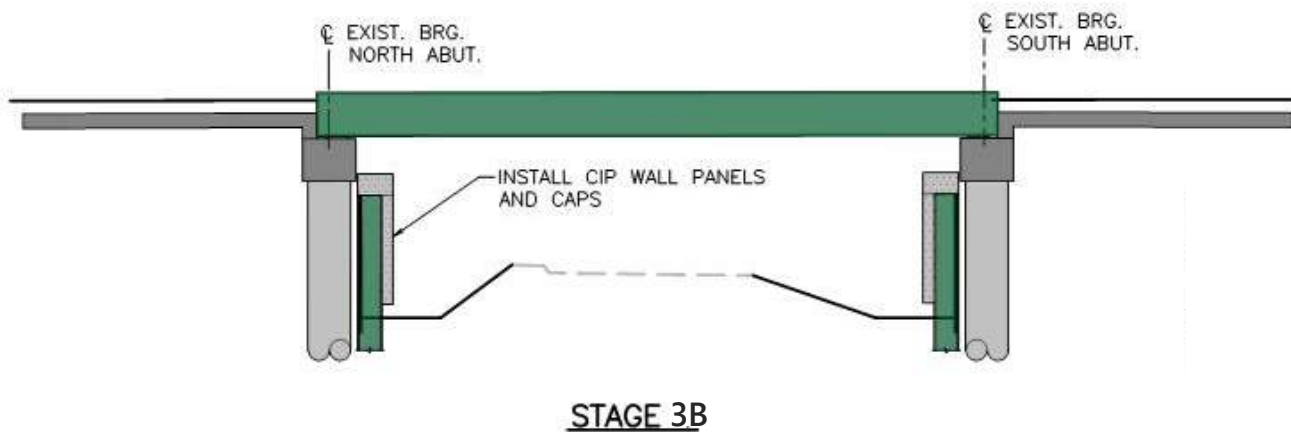
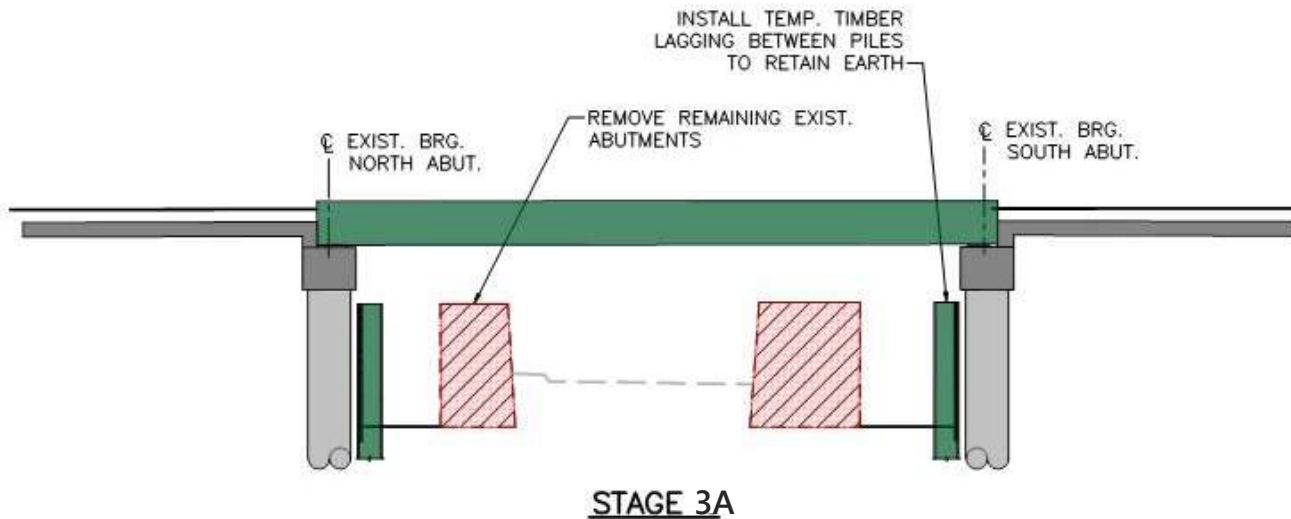
STAGE 2D

Long Weekend Shutdown

- Pre-assembled bridge will be slid into place on the new abutments with a crane assist
- Remaining foundation elements installed
- Final track work completed
- Re-open bridge to trains and roadway to traffic

Construction Staging

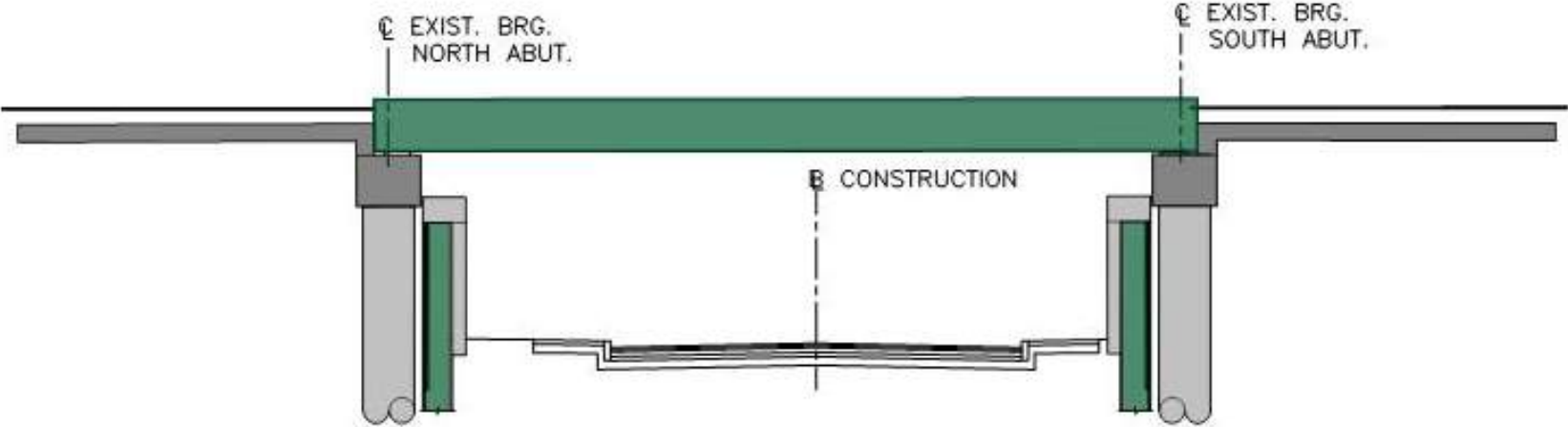
Track In Service
Roadway Closed



Additional Roadway Weekend Shutdowns

- Remaining existing abutments will be demolished
- Underground utility relocation completed
- Roadway lowered to final condition

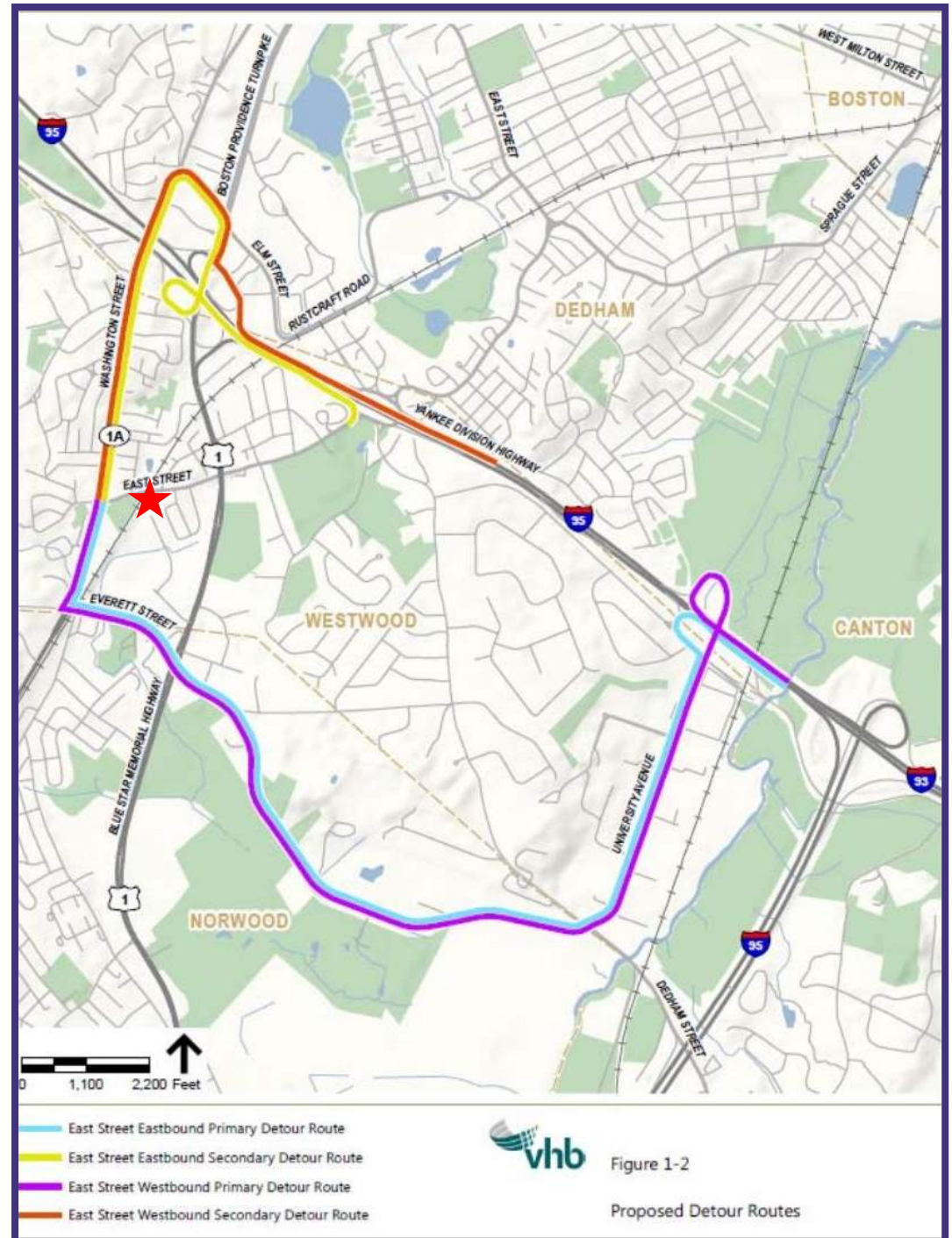
Construction Staging



PROPOSED SQUARE LONGITUDINAL SECTION

ROADWAY DETOUR ROUTES

- Weekend Closures
 - Full Closure of Roadway
- Utility Relocation
 - East Street Remains Open
 - Alternating one-way traffic will be utilized as needed, 2 way traffic maintained when feasible



Next Steps

- Design Phase Through March 2017
- Construction Procurement April 2017
- Notice to Proceed August 2017
- Bridge Installation Summer 2018
- Construction Complete Late 2018
- Estimated Construction Cost: \$17.2M

Questions?

