Virtual Open House Presentation

Delaware River Joint Toll Bridge Commission

GPI

To Ask Questions
During the Virtual Open House

Panelists will answer project questions through the Q&A Feature at the end of the presentation

Recording of this presentation will be available tomorrow at:

www.drjtbc.org/project/freebridge

Delaware River Joint Toll Bridge Commission

GPI

Project Team

Michael McCandless, PE
Project Manager

John Schroettner, PE
Prime Consultant - Project Manager

Brandon Portelli, PE
Subconsultant – Highway/Sidewalk Lighting and Electrical - Project Manager

---

Phat Quach, IES, LC, LEED
Subconsultant – Architectural Lighting - Team Leader

Carol Beske
Subconsultant – Public Involvement - Project Manager

Bridge Characteristics

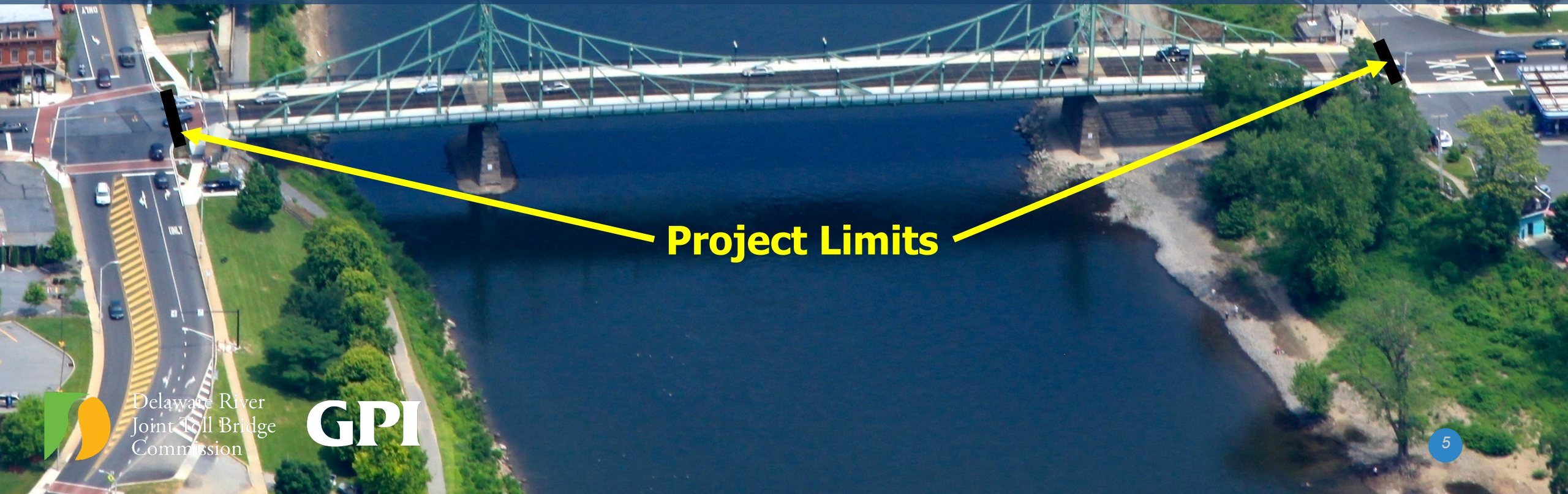
- Double cantilever truss with 50’ suspended span
  - 125’-300’-125’ Spans
- Originally constructed in 1895-1896
- Sole existing through-type cantilever eyebar bridge in the US serving vehicular traffic
- Significant repairs in 1957 to address historic 1955 flood damage
- Prior rehabilitations in 1990 & 2001-2002
- Currently load posted for 3 tons
- 2019 Average daily traffic – 17,000 vehicles (Pre-COVID)
- 2020 Average daily traffic – 15,100 vehicles (COVID)

Delaware River Joint Toll Bridge Commission

GPI

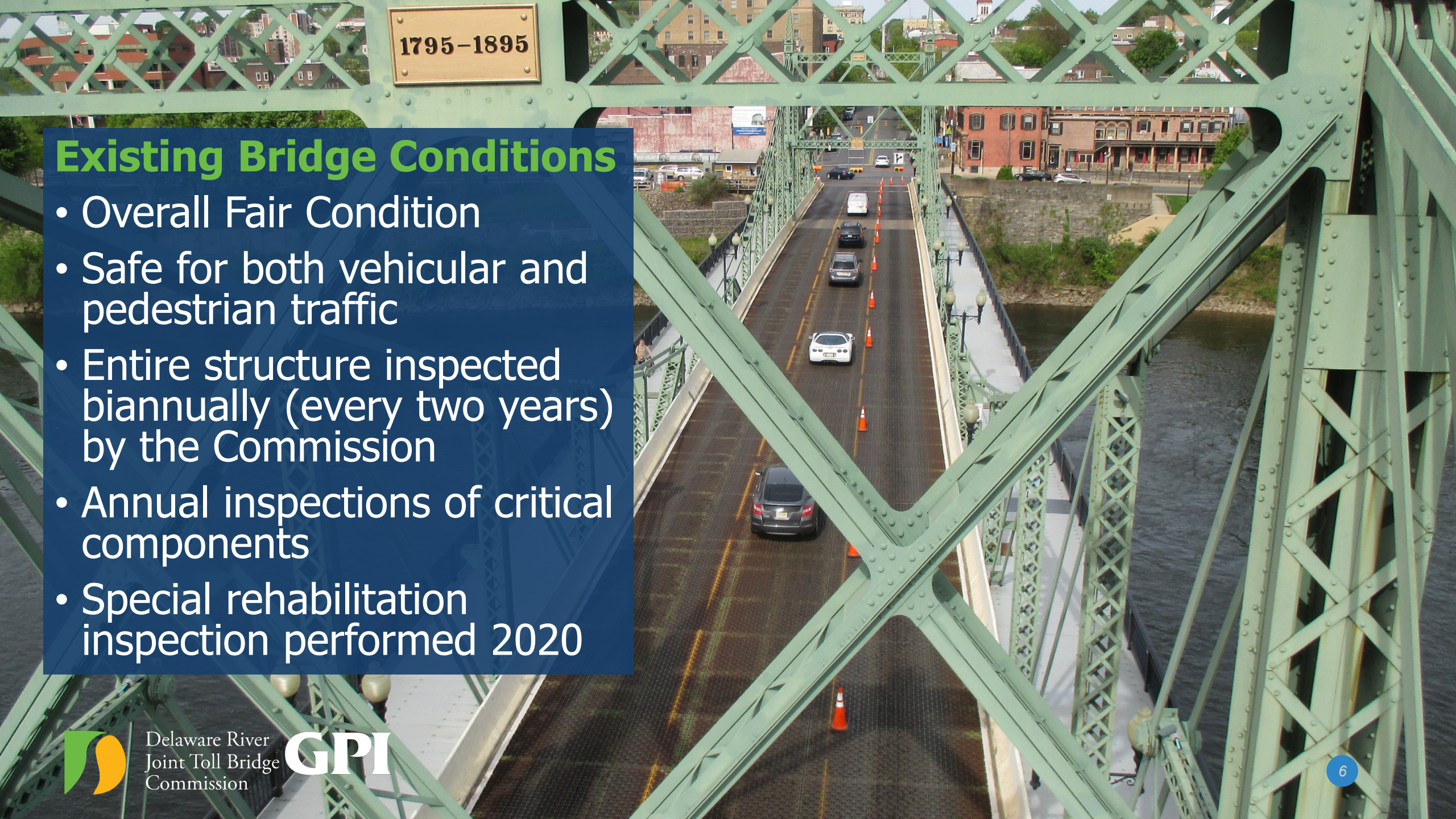
Project Purpose

- Commission's commitment to maintaining its bridges in a state of good repair
- Extend bridge's service life to Easton and Phillipsburg communities
- Conduct work to mitigate possible service disruptions for at least 15 years



Delaware River Joint Toll Bridge Commission

GPI



Existing Bridge Conditions

- Overall Fair Condition
- Safe for both vehicular and pedestrian traffic
- Entire structure inspected biannually (every two years) by the Commission
- Annual inspections of critical components
- Special rehabilitation inspection performed 2020

Delaware River Joint Toll Bridge Commission GPI

Existing Bridge Conditions - Substructure

Abutment

Pier

Masonry Wingwall

Stone Wingwall

End Pylon

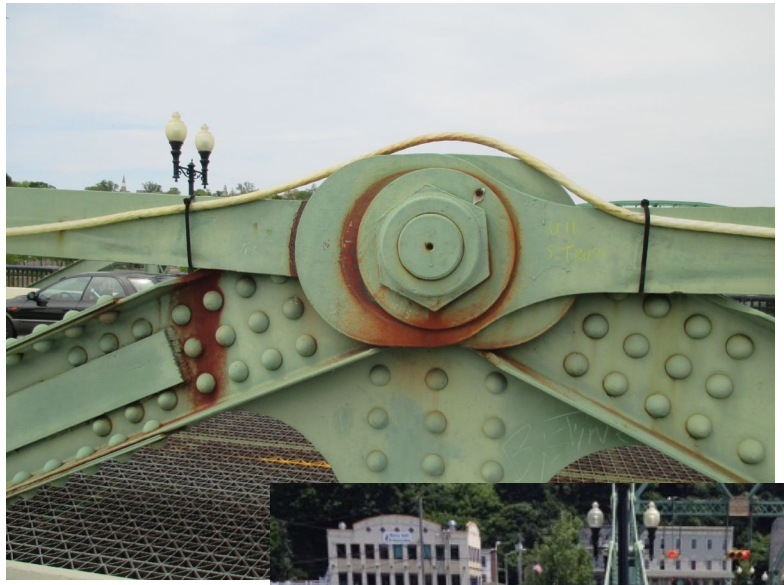
Retaining Wall

Existing Bridge Conditions - Superstructure

Paint System Deterioration

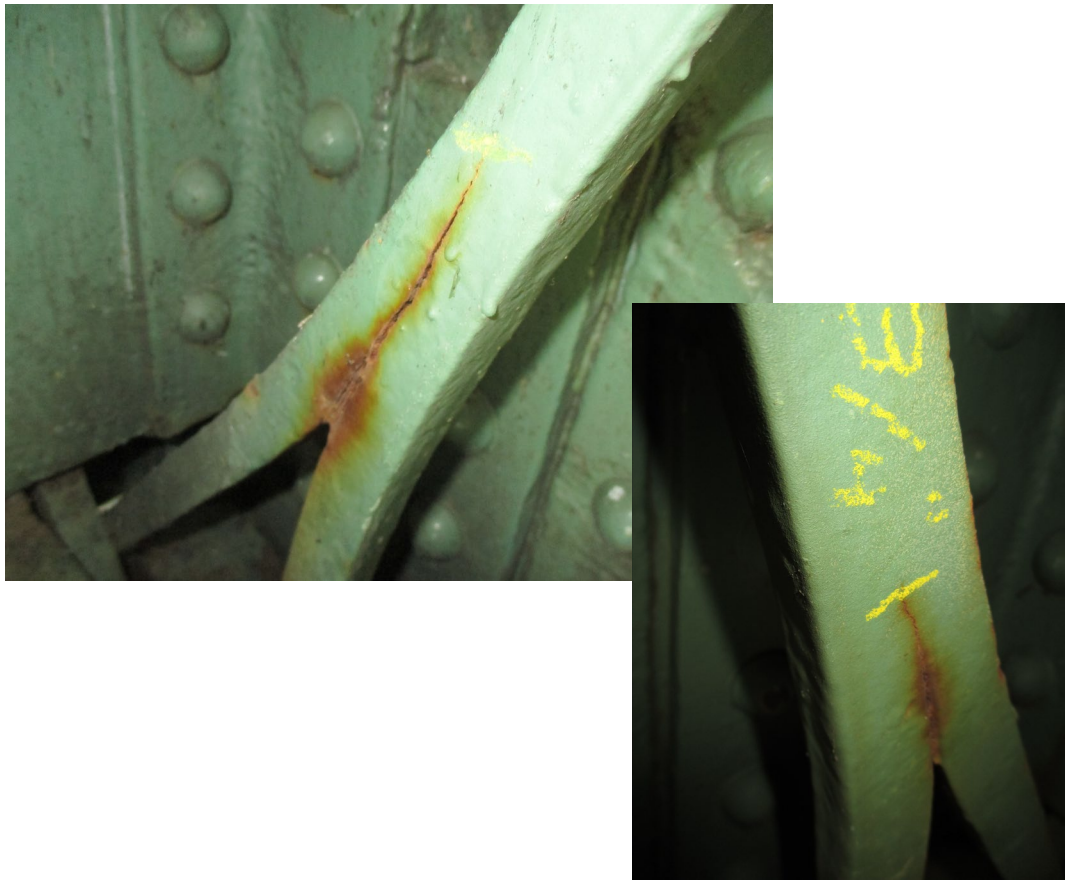
Corrosion and Section Losses

Existing Bridge Conditions - Superstructure



Misaligned Components

Existing Bridge Conditions - Superstructure

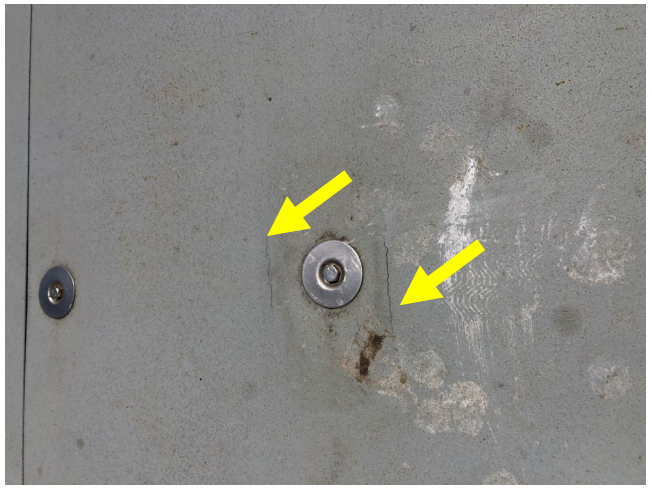


Cracked Bracing Elements

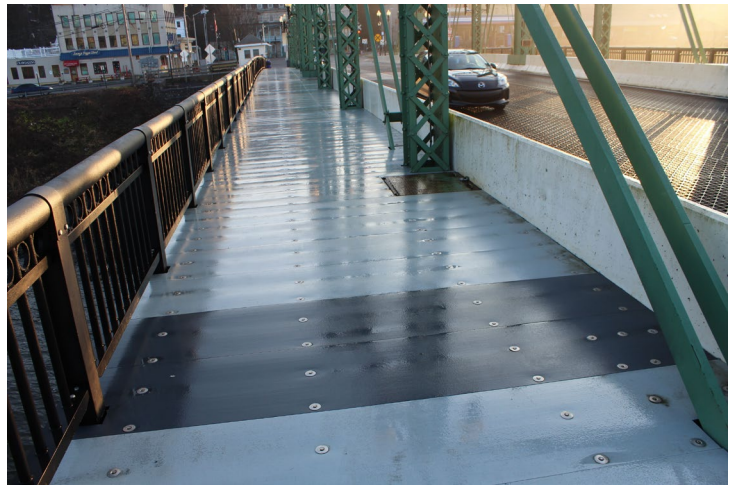
Failed Anchor Bolts

Existing Conditions – Bridge/Approach Sidewalk

Settled Approach Sidewalks



Cracked Sidewalk Panels



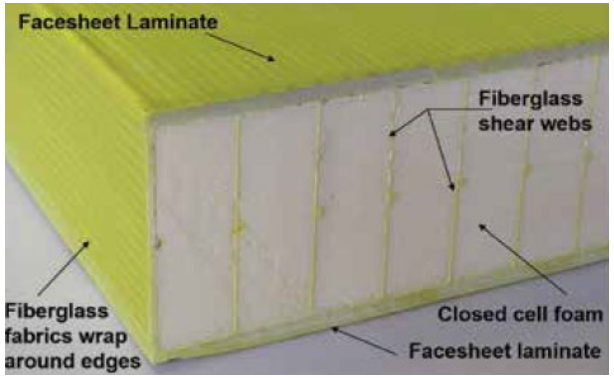
Worn Walkway Surface

Proposed Rehabilitation Items

- Clean and paint entire superstructure
- Replace joint mortar on abutments/piers/walls
- Reconstruct end pylons/walls
- Repair various structural steel truss elements
- Replace sidewalk decking
- Replace concrete approach sidewalks
- Replace existing electrical services and back-up generator
- Replace existing Highway/Sidewalk Lighting
- Replace existing Architectural Lighting

Sidewalk Deck Replacement

- Closed Cell Foam Fiber Reinforced Polymer (FRP) Panels
- Improved Connections to Allow Thermal Movement
- Enhanced Skid Resistance



Highway/Sidewalk Lighting

- Current metal-halide lights are nearing the end of their rated service life
- Replace with LED lights
  - Similar aesthetics to existing
  - Energy efficient
  - Extended rated life
- Replace existing mounting brackets and poles with similar equipment
- Maintain the historic aesthetic and compatibility with surrounding roadway lighting from Easton and Phillipsburg

Architectural Lighting

- Replace current inoperative profile lighting with programmable LED system
- Advanced lighting control
  - Allow for dimming to conserve energy
  - Extend rated life of the lighting equipment
- Lighting Articulation
  - Warm white default lighting to highlight existing bridge
  - Programmable color displays for special events and occasions
- Profile lighting would highlight bridge's unique structural design

Architectural Lighting

- Organizations can request temporary color displays for major civic events and historic federal, state, and local anniversaries
  - Online page for requests will be created on Commission's website
- Lower Trenton Toll-Supported Bridge sign lighting opportunities example
  - http://www.drjtbc.org/bridge-info/trenton-makes-the-world-takes-sign
- Pre-programmed annual lighting display schedule will be created

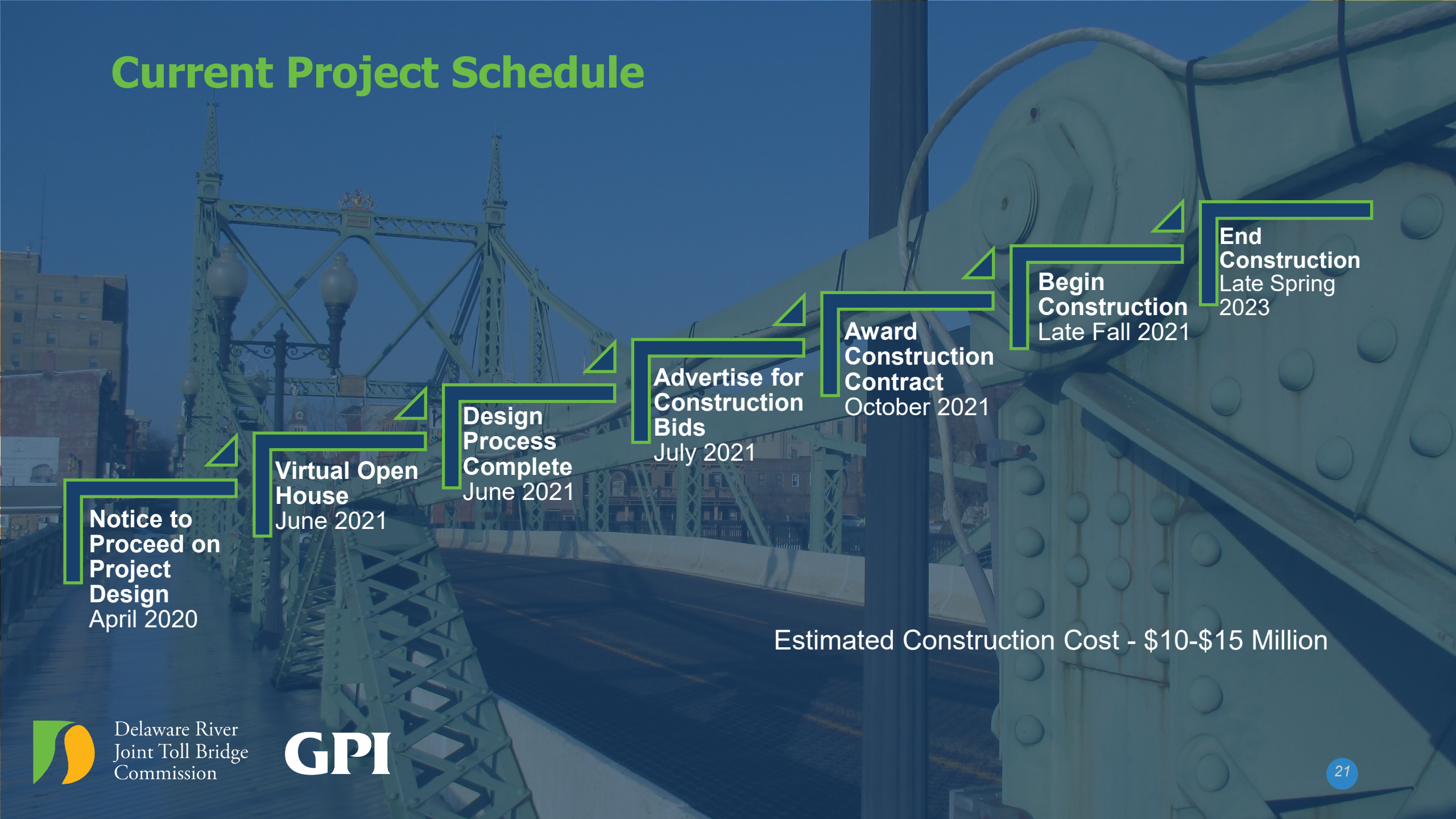
Architectural Lighting

Architectural Lighting

Architectural Lighting

Architectural Lighting

Current Project Schedule



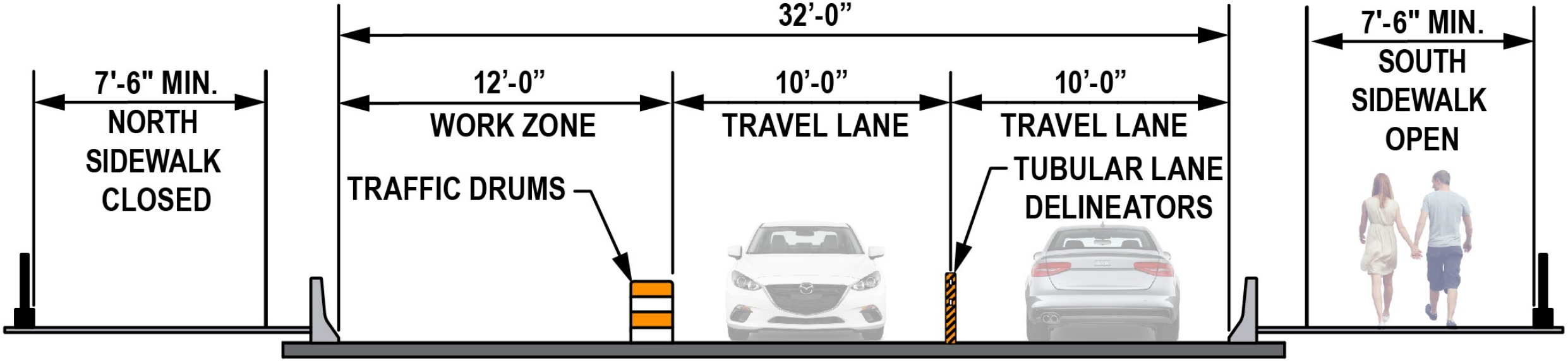
Estimated Construction Cost - $10-$15 Million

Delaware River Joint Toll Bridge Commission

GPI

Staging – Maintenance and Protection of Traffic – Stage 1

Long Term Lane Restrictions Permitted March 15 – November 18, 2022
and March 15 – April 19, 2023



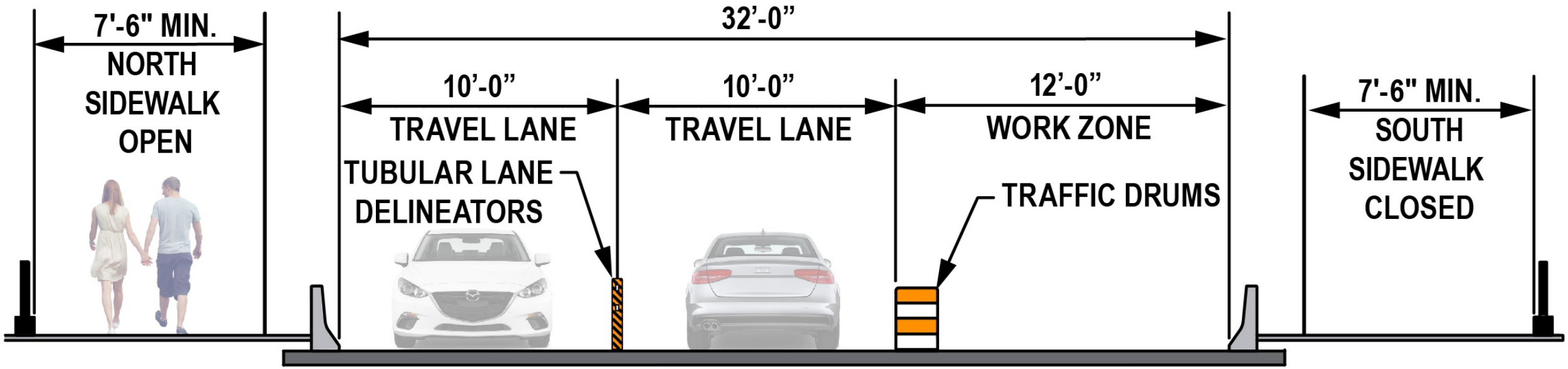
TYPICAL SECTION STAGE 1

One Sidewalk will always remain open

Example of Work Zone from Previous Rehabilitation

Staging – Maintenance and Protection of Traffic – Stage 2

Long Term Lane Restrictions Permitted March 15 – November 18, 2022
and March 15 – April 19, 2023

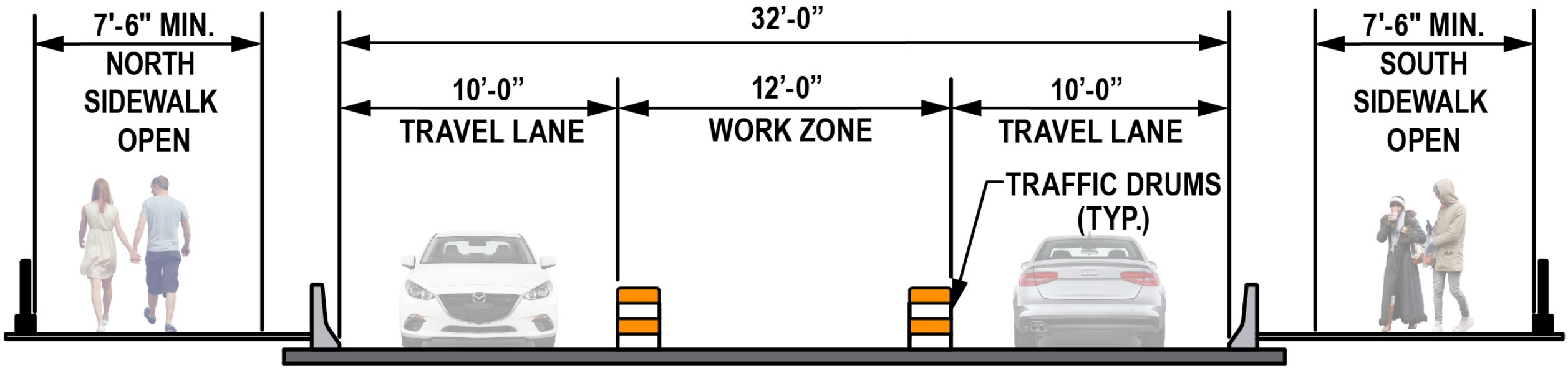


TYPICAL SECTION STAGE 2

One Sidewalk will always remain open

Staging – Maintenance and Protection of Traffic – Stage 3

Long Term Lane Restrictions Permitted March 15 – November 18, 2022
and March 15 – April 19, 2023



TYPICAL SECTION STAGE 3

NORTHAMPTON STREET BRIDGE
REHABILITATION PROJECT
EASTON - PHILLIPSBURG

Thank you!

To Ask Questions During the Virtual Open House

Panelists will answer project questions through the Q&A Feature

Email Questions To:
CommunityAffairs@drjtbc.org
Emailed Questions must be received by Friday, June 25th

Recording of this presentation will be available tomorrow at:
www.drjtbc.org/project/freebridge

Delaware River Joint Toll Bridge Commission

GPI