



# PFC Ralph T. Basiliere Bridge Replacement

*Greater Haverhill  
Chamber of Commerce Briefing*

Haverhill | July 18, 2023 |

Project File No. 605304





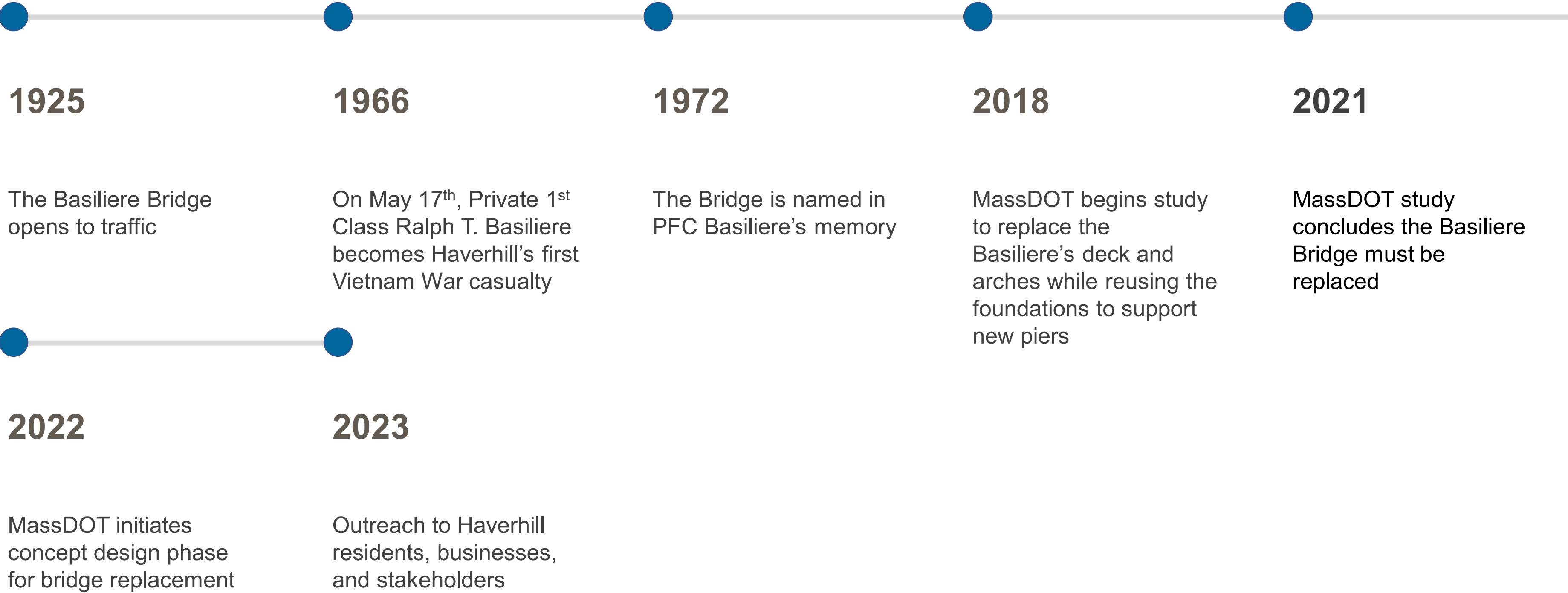
# Agenda

1. Welcome & Overview
2. Project Status
3. Keeping Haverhill Open for Business
4. What is our construction approach?
5. Questions & Discussion



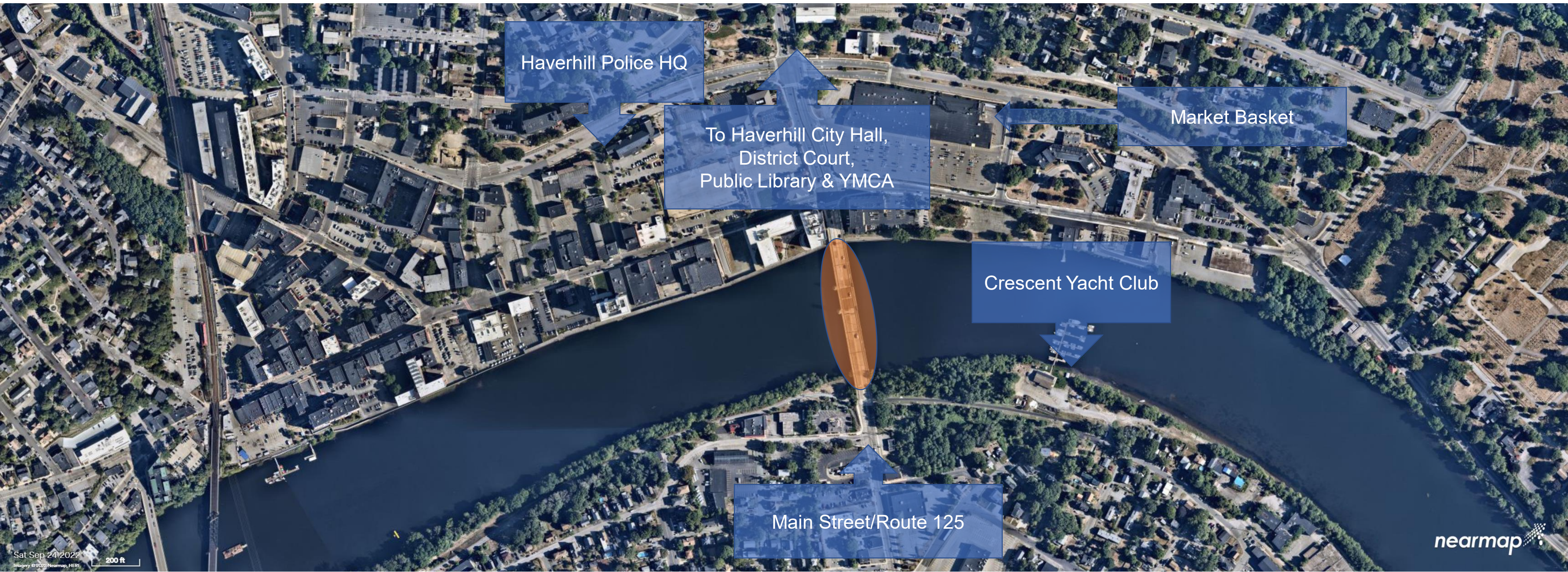


# How did we get here?





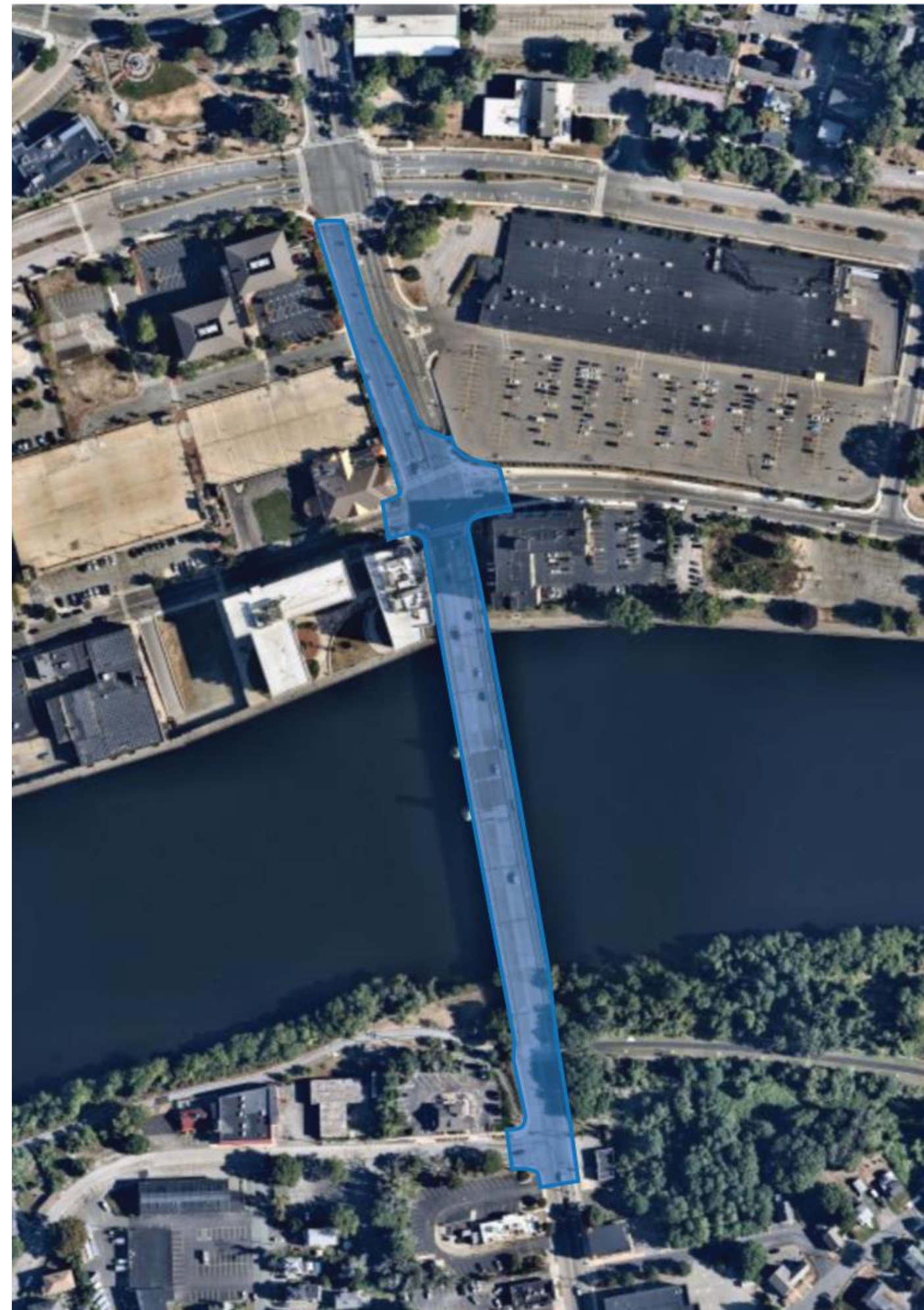
# A Haverhill Landmark & Connector Since 1925





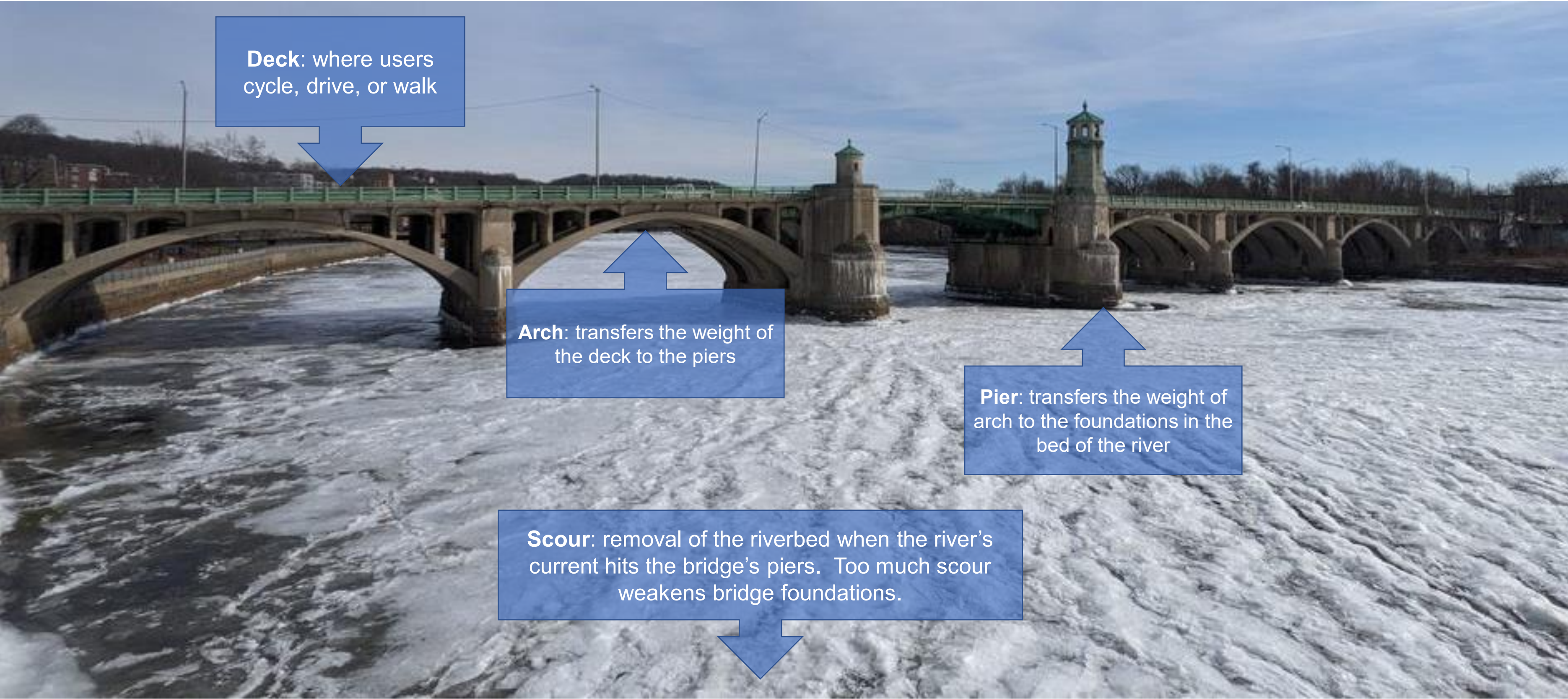
## Current Limits of Work

- In the North:
  - The Main Street/Water Street/Merrimack Street intersection
  - A portion of Main Street as far north as Bailey Boulevard
- In the South:
  - Just past the S. Main Street/Middlesex Street intersection
- Includes short stretches of intersection approaches





# Key Terms



**Deck:** where users cycle, drive, or walk

**Arch:** transfers the weight of the deck to the piers

**Pier:** transfers the weight of arch to the foundations in the bed of the river

**Scour:** removal of the riverbed when the river's current hits the bridge's piers. Too much scour weakens bridge foundations.



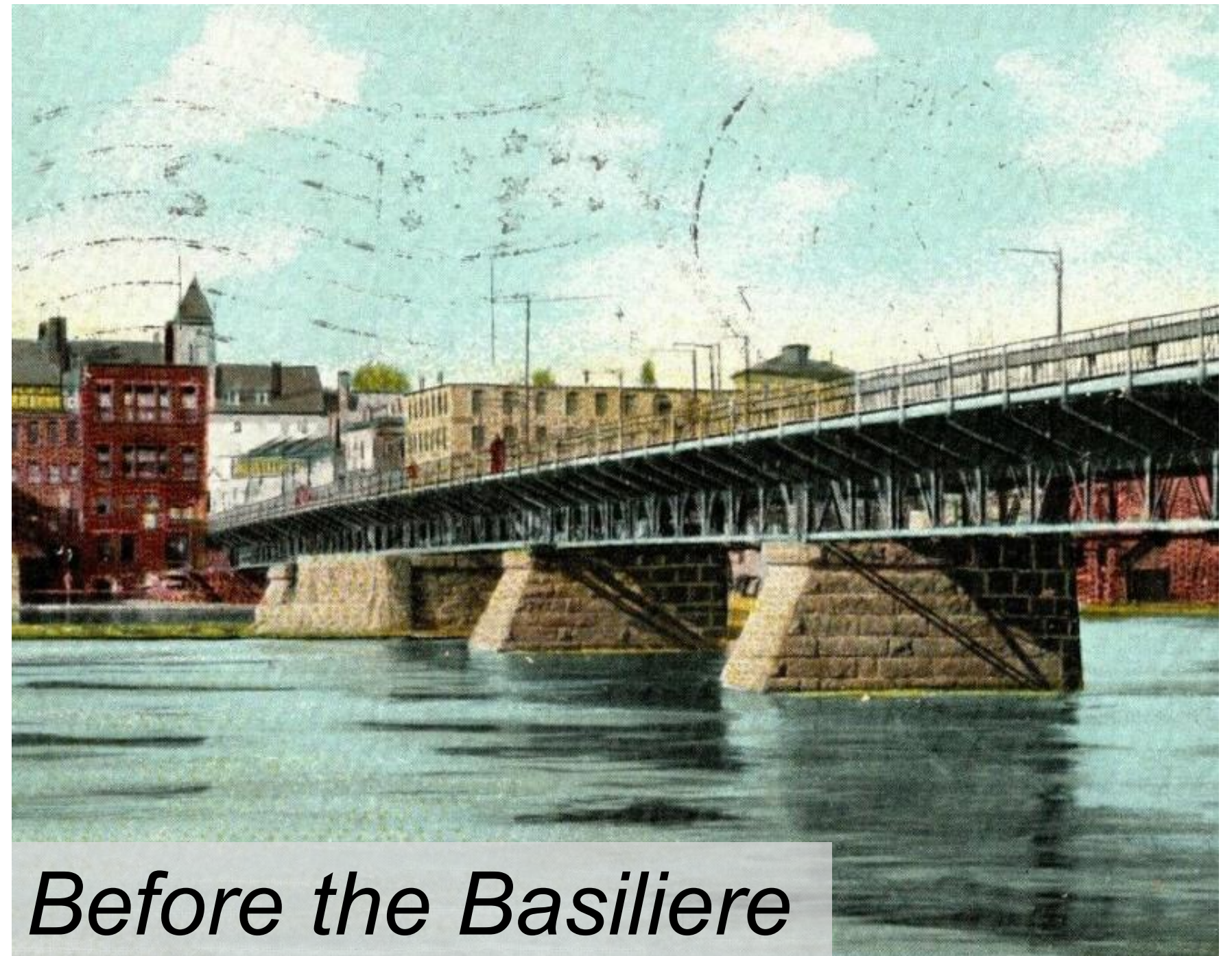


**Why was this  
project  
initiated?**



## PFC Ralph T. Basiliere Bridge: Key Facts

- The existing bridge opened 1925 and replaced an older crossing.
- The Basiliere is technically two bridges with elements of the pre-1925 structure mixed into today's bridge
- Total length – roughly 800 feet
- Bridge width – roughly 68 feet
- Carries 20,000+ vehicles per day
  - 4% heavy vehicles including MVRTA buses
- At the end of its useful lifespan
- ***Remains safe for all users***



*Before the Basiliere*



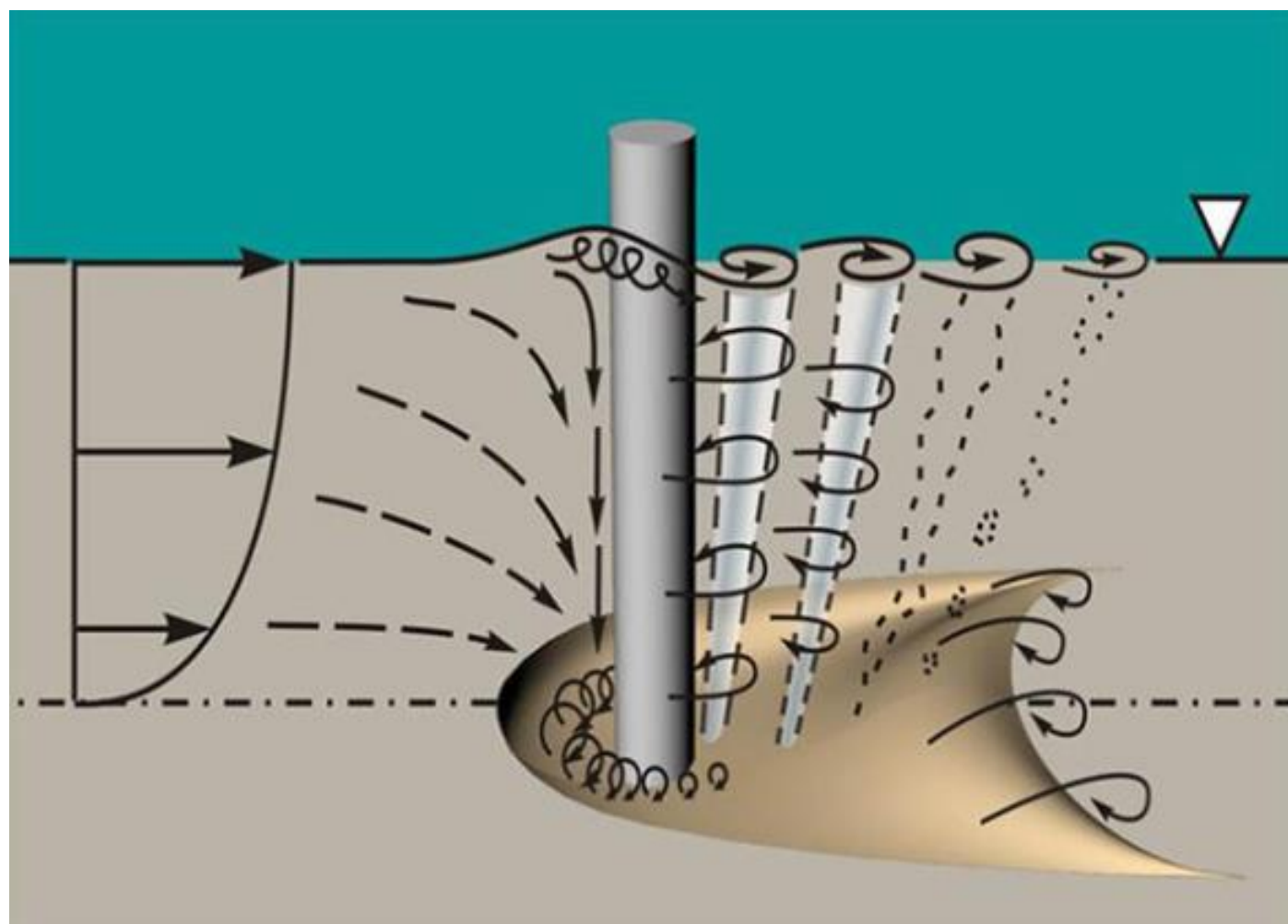
# Generally Deteriorated Conditions





# Scour

- Scour is the removal of soil which supports bridge abutments and piers, caused by fast-flowing water.
- The fast-flowing water creates scour holes, which can lead to instability of the bridge's foundation.
- Drives the need for a full replacement of the Basiliere Bridge







# Project Status

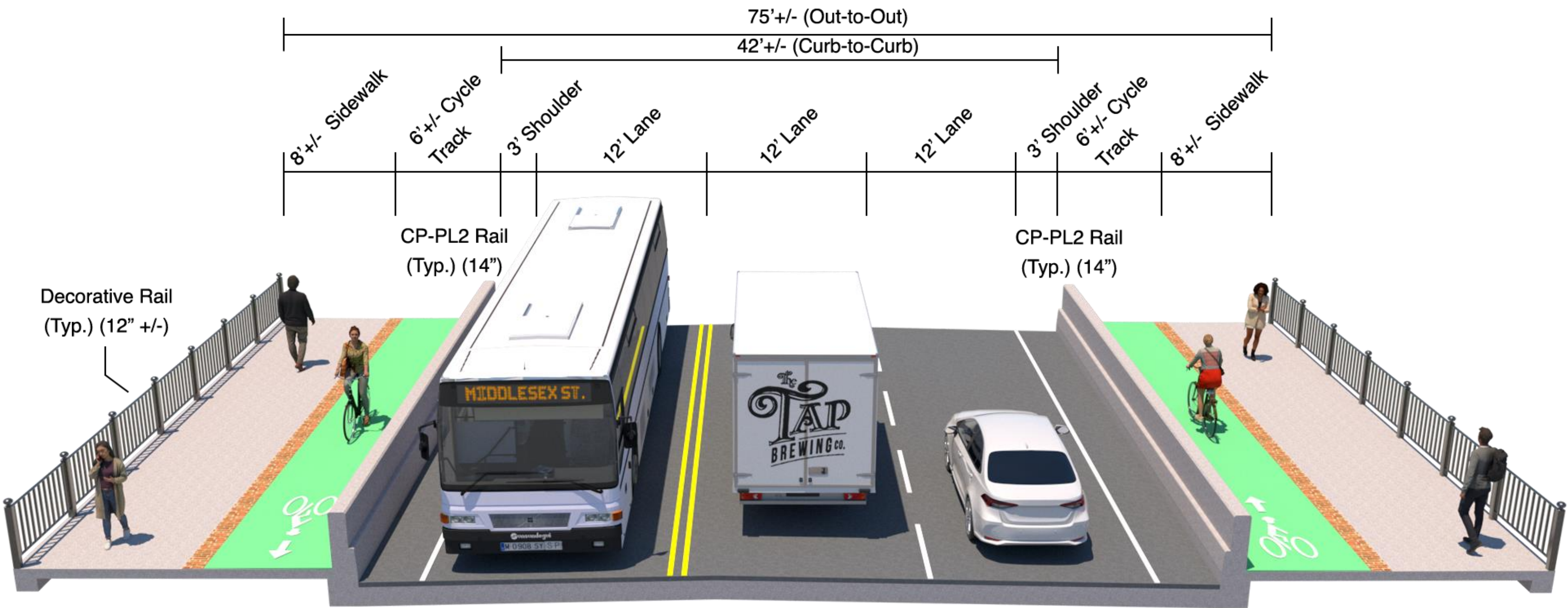


## Status of Design Work

- Currently in concept design working to determine:
  - Bridge type
  - Cross-section – cycling facilities, lane arrangement, sidewalk dimensions
  - General bridge appearance
- Upcoming milestones:
  - Summer 2023:
    - MassDOT pre-25% design “over the shoulder” briefing
    - Bridge type study
  - Fall 2023 – Launch 25% design

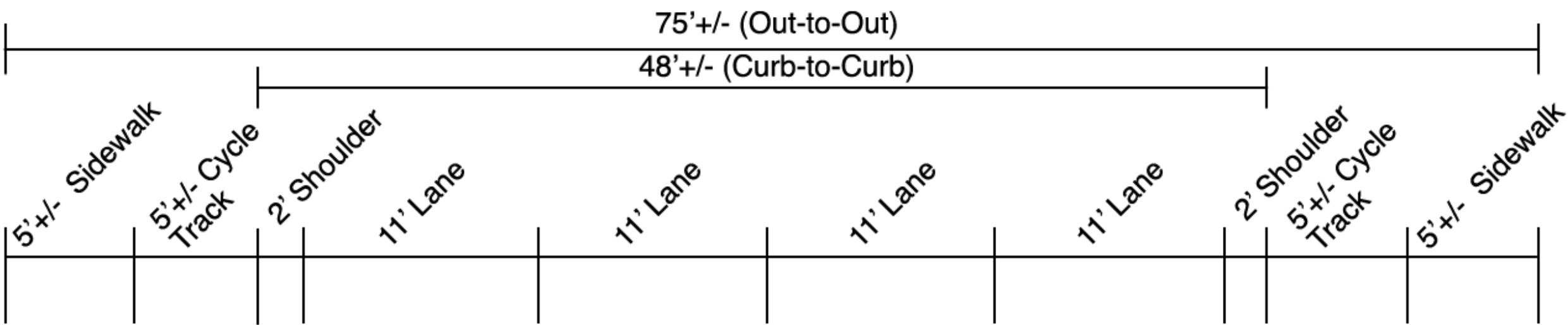


# Three Lane Cross-Section – Directional Cycling Facilities





# Four Lane Cross Section – Directional Cycling Facilities



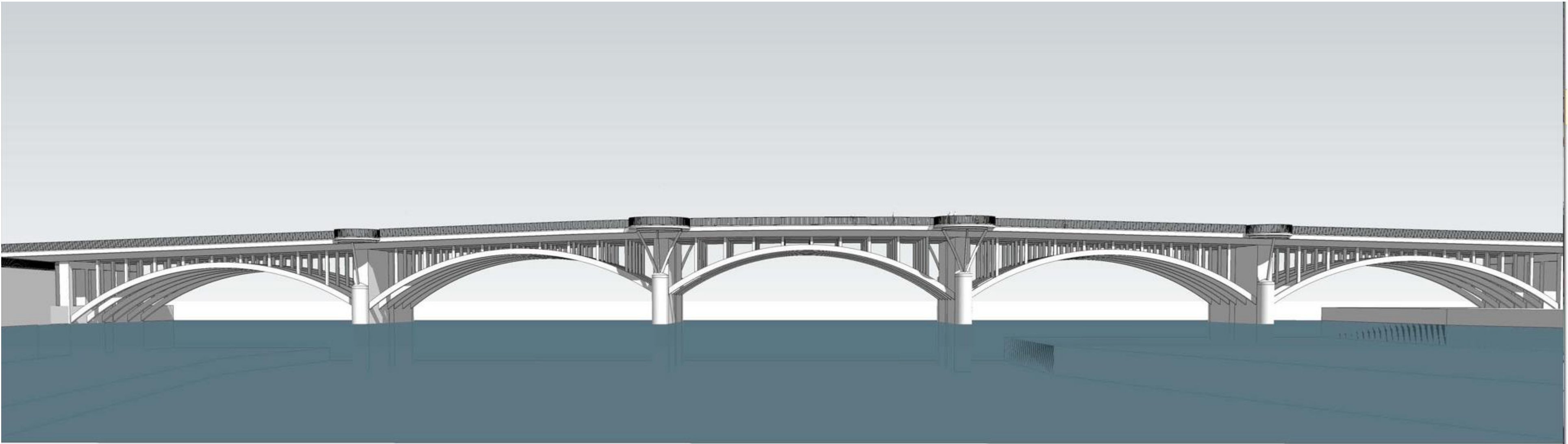


## Roadway Cross-Section Design Update

- Cross-section study submitted to MassDOT and under review:
  - Clear recommendation for directional/symmetric cycling/walking facilities:
    - Familiar conditions for users of all modes
  - Four lane cross-section preferred in part on local preference:
    - Additional space for emergency response during congested conditions
    - Reserve capacity for anticipated future traffic volumes
- Three lane cross-sections remain under review by MassDOT
- Project team still seeking public input

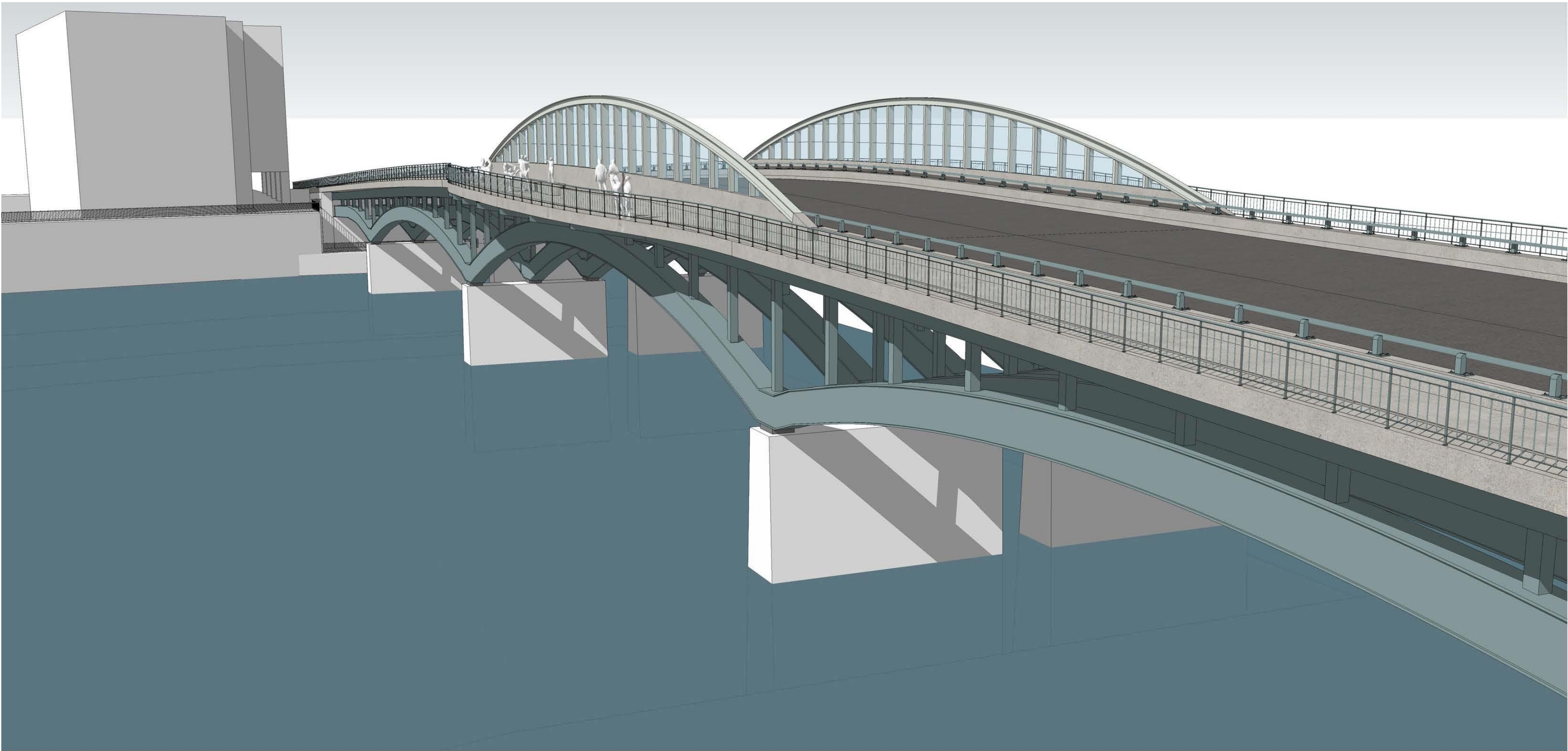


# Evoking Today's Basiliere – From the River



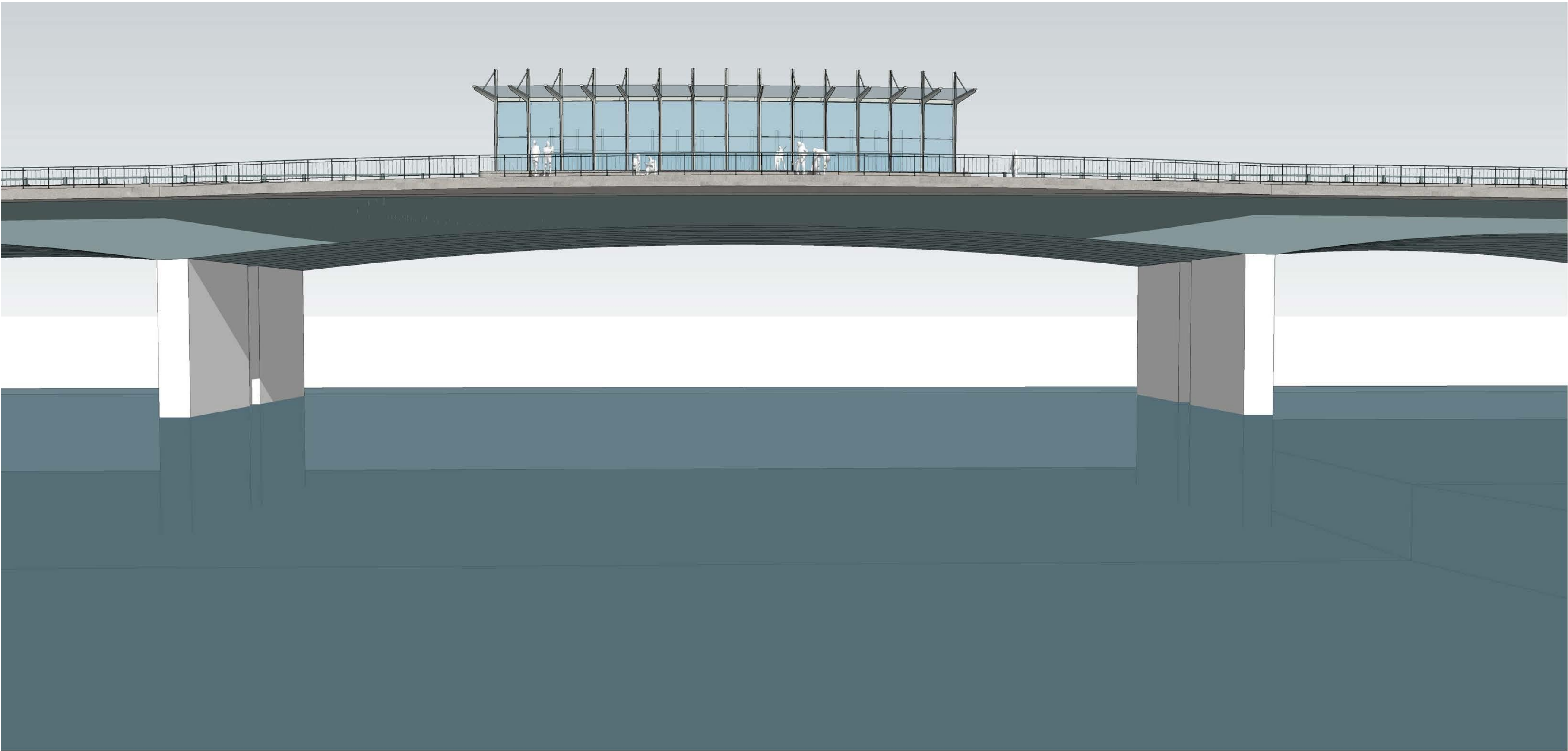


# Steel Arch Girders – Side View





# Haunched Girders – Side View



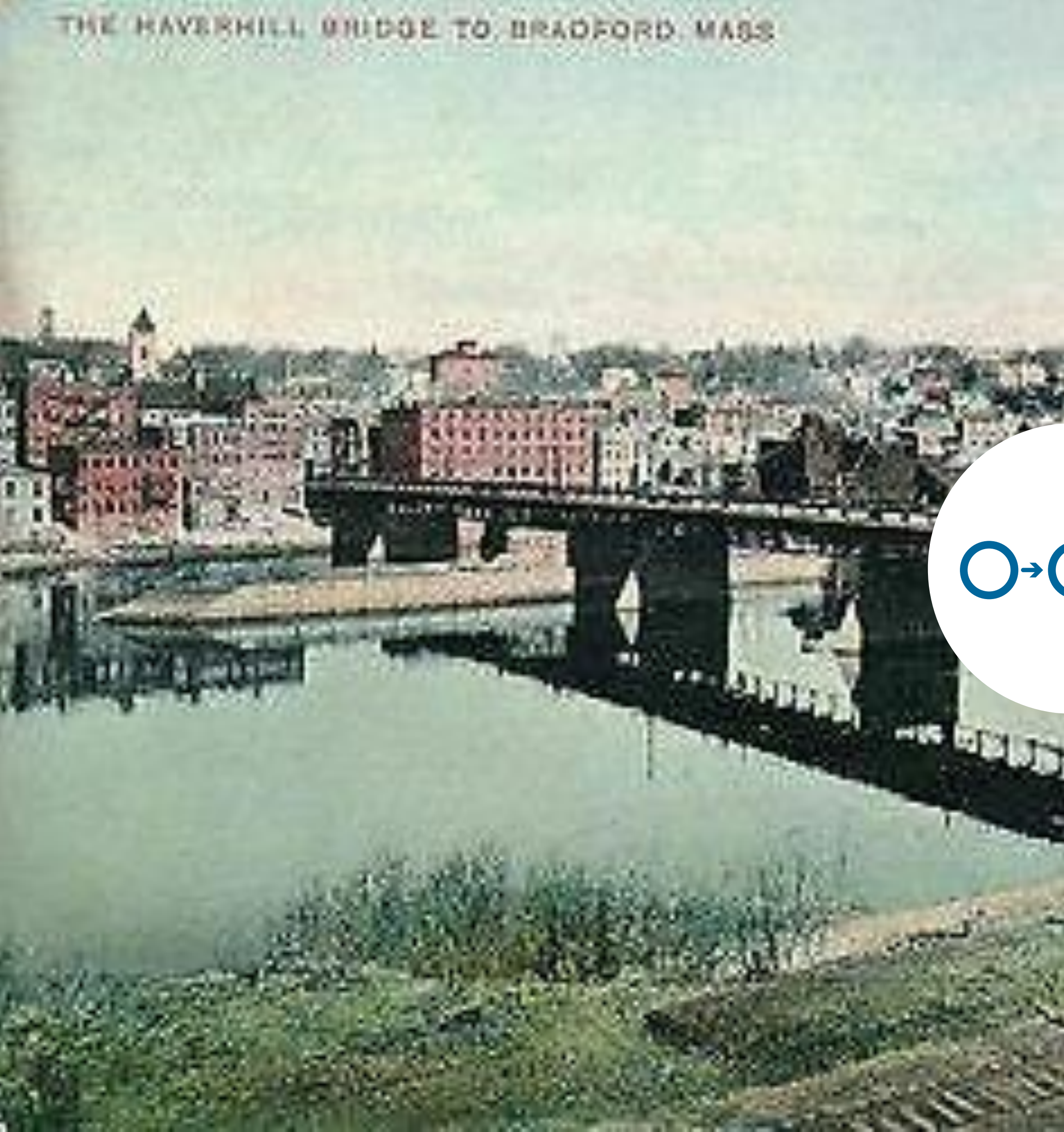


## Promising Directions – A Blend of Old and New

- Allows for a modern structure that evokes today's bridge with arches
- Provides a central overlook to enjoy the river
- Offers opportunities to:
  - Open water views from the riverbank
  - Improve bridge-to-Bradford Rail Train connection
  - Include gateway features, lighting, vertical elements
- Does not preclude future Dempsey Boardwalk-to-Wall Street Path connection
- More to follow on bridge appearance soon
- Project team remains open to public input



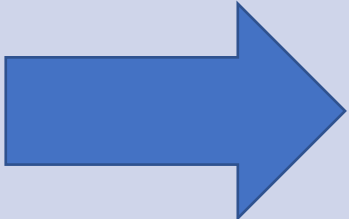
THE HAVERHILL BRIDGE TO BRADFORD MASS



**Keeping  
Haverhill  
Open for  
Business**



# Assumed Business Concerns & Our Approach

Concern		Approach
Employees getting to and from work		<ul style="list-style-type: none"><li>• Keep one lane in each direction at all times</li><li>• Maintain one sidewalk at all times</li><li>• Potential turn restrictions</li></ul>
Vendors getting to my business		<ul style="list-style-type: none"><li>• Keep one lane in each direction at all times</li><li>• Potential turn restrictions</li></ul>
Customers getting to my business		<ul style="list-style-type: none"><li>• Keep one lane in each direction at all times</li><li>• Maintain one sidewalk at all times</li><li>• Potential turn restrictions</li></ul>
Overlap with Renaissance Development (parking deck redevelopment)		<ul style="list-style-type: none"><li>• Renaissance phase one will be complete in 2025 prior to work really commencing</li><li>• Continue coordination with City of Haverhill</li></ul>
Emergency response times		<ul style="list-style-type: none"><li>• Keep one lane in each direction at all times</li><li>• Potential turn restrictions</li><li>• Continue coordination with emergency services</li></ul>
Overall project completion time		<ul style="list-style-type: none"><li>• Schedule not fully developed yet</li><li>• Trending towards 3+ years</li><li>• D/B approach to speed construction</li></ul>





**What is the  
construction  
approach?**



## Proposed construction approach: Design-Build

- Tonight's team will develop a 25% design and base technical concept (BTC) for bid by Design-Build (DB) entities
- DB Best Value procurement
  - Short-List Best Qualified Teams
  - Shorten project duration
  - Promote innovation by teaming the engineer and the general contractor
  - Allow for accelerated bridge construction (ABC) techniques if applicable
- MassDOT's contract with the Design Builder will stipulate requirements for traffic management while also providing the DB flexibility to develop their own approach to staging.
- Incentives / Disincentives may be used to ensure compliance with contract timelines
- Public outreach will continue once construction begins





**Questions and  
discussion**



## Discussion Questions

- Have we captured your concerns correctly?
- Are there things we have missed regarding the business community?
- Are there special events we need to consider?
  - Longest Table
  - River Ruckus
  - Others
- Do you have thoughts regarding the bridge's cross-section or appearance?



## How to reach us?

- Submit written comments to:  
Carrie Lavallee, P.E., Chief Engineer  
MassDOT  
10 Park Plaza  
Boston, MA 02116  
Attention: BRIDGE SECTION, PROJECT FILE NO. 605304
- Submit email comments to:  
[haverhillbasilierebridge@dot.state.ma.us](mailto:haverhillbasilierebridge@dot.state.ma.us)
- Visit the project website at:  
[www.mass.gov/basiliere-bridge-project-haverhill](http://www.mass.gov/basiliere-bridge-project-haverhill)