



**MassDOT Project File No. 612681**  
**BOSTON – I-90 EASTBOUND & WESTBOUND CONNECTOR**  
**TUNNELS – LIGHTING REHABILITATION PROJECT**

**City of Boston**

CPC and MassDOT Board Meeting

SEPTEMBER 2023

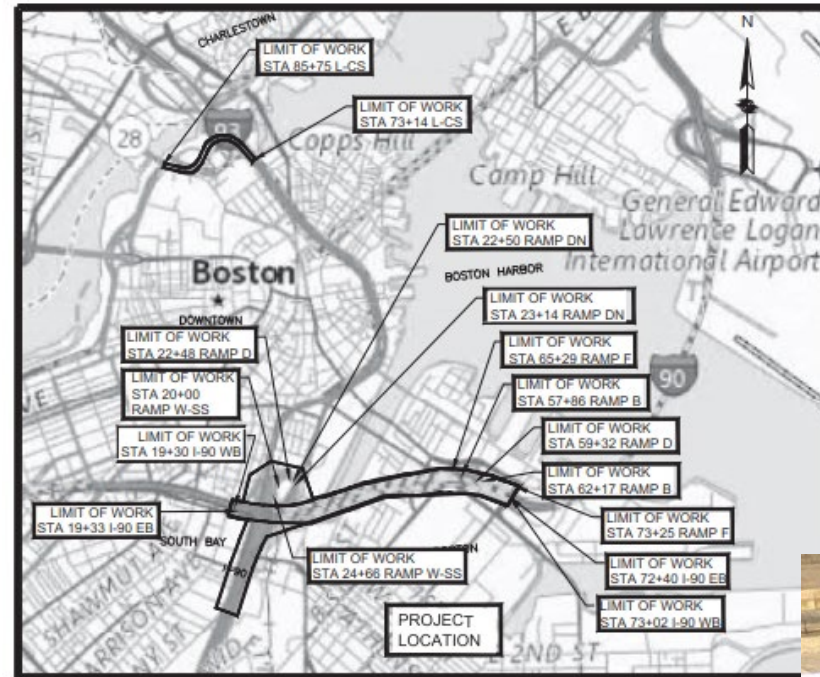
# Project Location & Goals

Work Location as follows:

- I-90 EB Connector Tunnel & Ramps
- I-90 WB Connector Tunnel & Ramps
- Vent Buildings supporting tunnels

Goals:

- Replace existing linear fluorescent tunnel lighting system with energy efficient LED luminaires.
- Replace existing tunnel lighting control system with an adaptive control system.



## Purpose and Need (cont.)

- Current tunnel lighting system is 20+ years old & nearing end of useful life. Replacement needed due to following:
  - Corrosion of housings and wireways
  - Detached connection clips
  - Broken or deformed Lens clips
  - Cracked spring nuts in channel strut/supports
  - Missing channel strut/supports
  - Exposed epoxy anchor sleeves
  - Bent hanger rods



## Purpose and Need (cont.)

- The proposed tunnel lighting luminaire will meet the following requirements:
  - Prevent dust and water infiltration
  - Prevent high-pressure water infiltration
  - Resist corrosion & reaction of dissimilar metals
  - Strength of materials to prevent deforming during installation and maintenance
  - Proper ambient operating temperature testing
  - Withstand normal tunnel vibrations
  - Long life and high efficacy LED's



# Construction Scope

- Demolition
  - Remove existing luminaires along with the following:
    - Wireways
    - Raceways, conduit, junction boxes
    - Mounting unistrut and channel assembly and raceway supports
- Lighting & Controls
  - Provide and install LED luminaires
    - Same system as provided in Ted Williams & Prudential Tunnels
  - Provide and install an Adaptive control System
    - Same system as provided in Ted Williams & Prudential Tunnels
- Electrical
  - Provide and install new electrical raceways and boxes using separate raceways for normal and emergency circuits.
  - Provide new feeders at VB8 for five existing jet fans.
- Structural
  - Provide structural support for luminaires and raceways
  - Repair any fireproofing damaged during construction.



# Construction Impacts

- Most work is performed at night utilizing temporary lane closures in the tunnel system with an anticipated work window of 3 to 4 hours on a four-day workweek (Mon. thru Thurs.)
- When work does not require roadway access, select operations may be completed during daytime hours (7am to 3:30pm)
- All work is coordinated with District 6 through the weekly Access Work Request (AWR) process
- Contractor will be required to Stand-Down on all work requiring I-90 Westbound and Ramp D roadway access during the full closure of the Sumner Tunnel, Summer '24'.

# Procurement

- Project was advertised June 3, 2023
- Engineers Estimate was \$95,086,298.77
- Bid opening was August 22, 2023
- Two (2) bids received:
  - **Dagle Electrical Construction Corp.** **\$88,744,788.00**
  - JF White Contracting Co. \$96,997,022.45

## Overall Project Budget

Line Item	Budget
Bid Amount	\$88,744,788.00
Contingencies	\$13,311,718.20
Construction Engineering	\$4,437,239.40
Other Costs – Traffic Police	\$3,994,000
<b>Total</b>	<b>\$110,487,746</b>

- 100% of the cost for this project is funded through State Funds – TRUST/CARM & NFA/MHS.



## Request of the Board

Staff requests that the MassDOT Board authorize the Secretary of the Massachusetts Department of Transportation, or her designee, to award and execute MassDOT Construction Contract No. 122343: I-90 Eastbound and Westbound Connector Tunnels Lighting Rehabilitation Project – Boston with Dagle Electrical Construction Corp in the amount of \$88,744,788.00.

# Appendix Slides

For additional discussion of project elements