



Massachusetts Bay Transportation Authority

MBTA Construction Contract No. **B45CN03**:

Bridge Replacement of Dorchester Avenue over MBTA Red Line, Cabot Yard Spur, and Old Colony Main Line, Boston, MA

MBTA Board of Directors

October 27, 2021

Karl Eckstrom, Sr. Director – Bridge/Structures Program, Capital Delivery

Overview

- Today's Board action will provide approval for Dorchester Avenue Bridge Replacement over the MBTA Red Line, Cabot Yard Spur, and Old Colony Main Line in and for rehabilitation of the Von Hillern Street Retaining Wall that interphases with the bridge and supports Von Hillern Street along the Red Line West Pocket Track, in Boston, MA.



Request of the Board

VOTED:

To authorize the General Manager, or his designee, to award and execute MBTA Construction Contract No. B45CN03: Dorchester Avenue Bridge Replacement with SPS New England, Inc., in a form approved by the General Counsel, in the amount of \$22,204,806.12.



Appendix

Project Scope Details



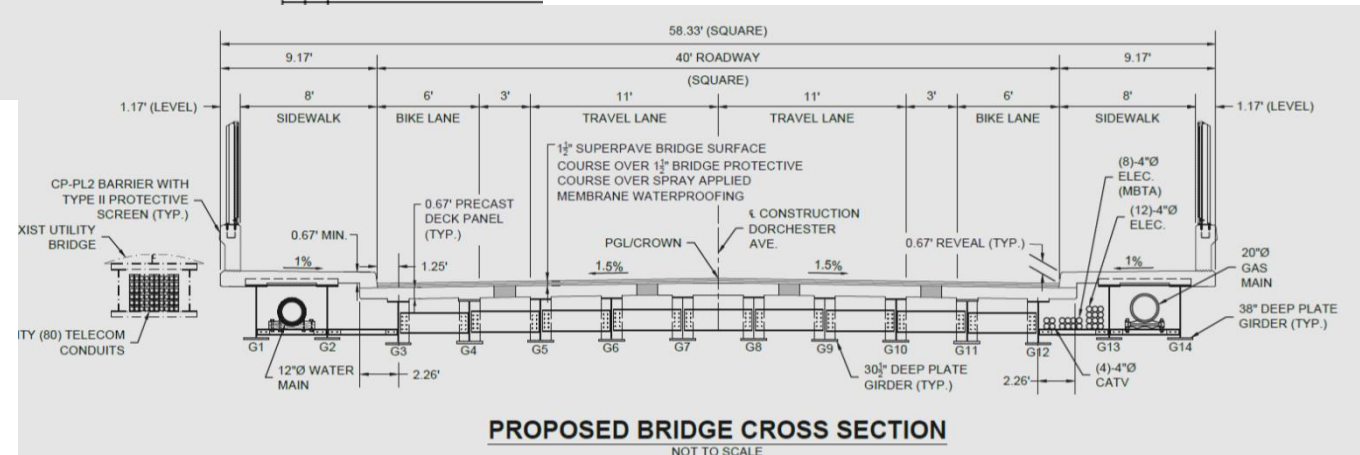
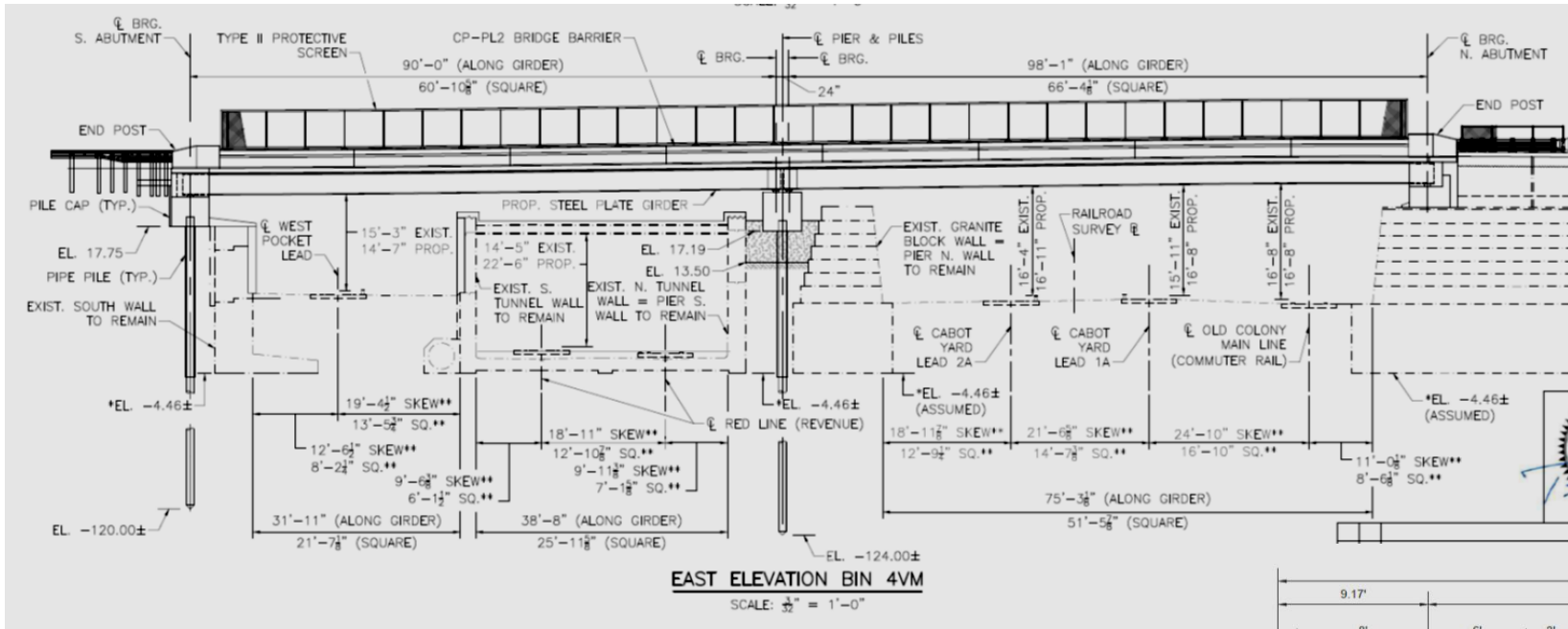
Project Benefits – Dorchester Ave. Bridge Replacement

- Replace the existing Dorchester Ave. Bridge with a **new modern low maintenance bridge structure**. There will be a new steel superstructure on new substructures at the south abutment and pier, the existing north abutment will be reused, and the south abutment repaired and reused for earth retention only.
- Rehabilitate the Von Hillern Street Retaining Wall by constructing a **new soil nail wall with concrete facing**.
- Perform concrete repairs to Red Line tunnel and construct a **new tunnel roof structure** that will allow bridge and tunnel to be separate and independent structures.
- **Increased reliability and safety, reduced maintenance costs.**
- The new bridge structure will have a **75-year design life**.
- Achieve a **state-of-good repair** for the bridge and retaining wall.
 - Existing bridge is being monitored at increased frequency and with structural monitoring instrumentation. Bridge is restricted to truck and bus traffic.
 - Von Hillern Wall has numerous repairs and localized areas of soil loss due to spill through.



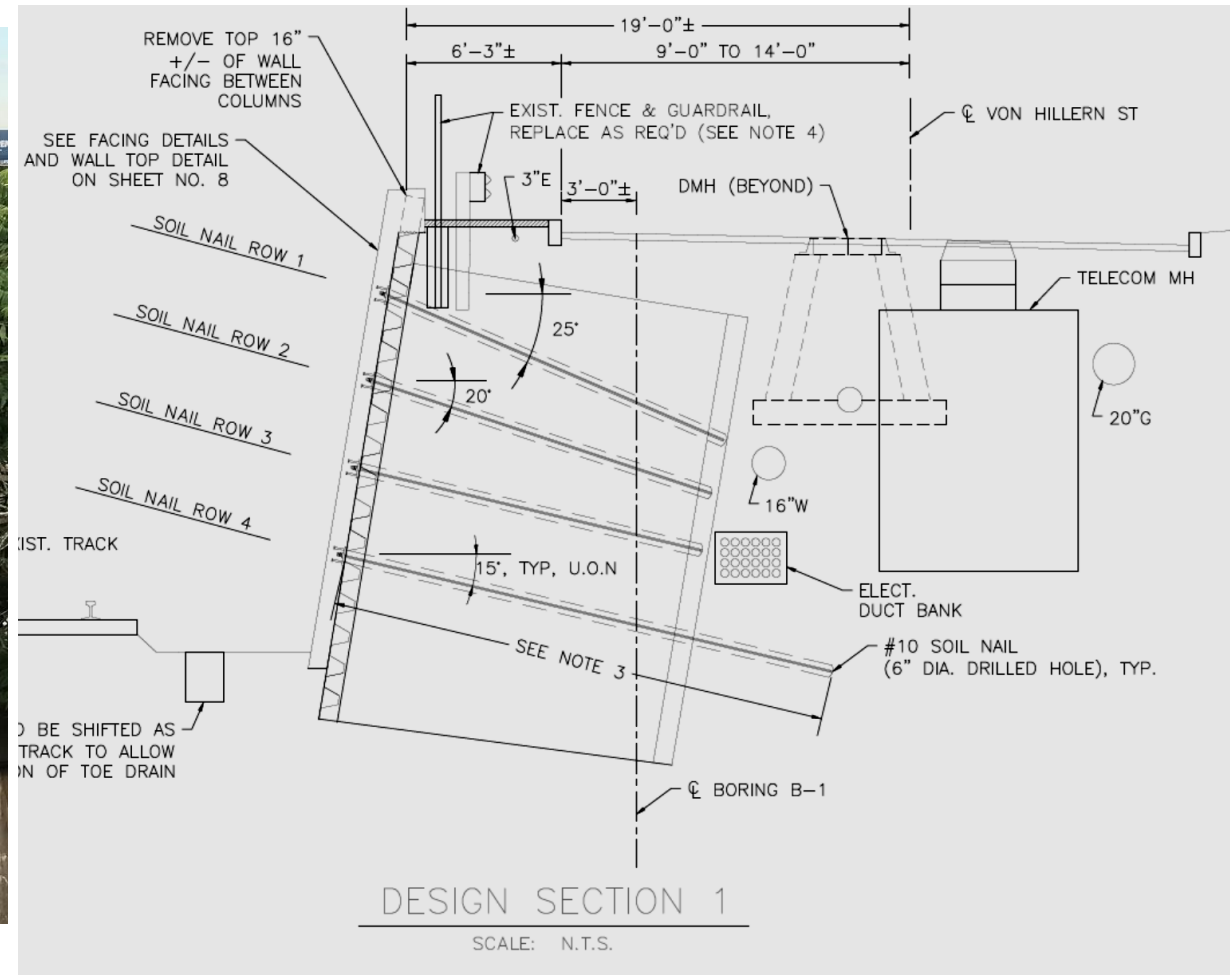
Dorchester Avenue Bridge

- Dorchester Avenue Bridge – proposed cross section and longitudinal section.



Von Hillern Street Retaining Wall

- Existing retaining wall to be rehabilitated with soil nails and a new concrete facing.



Operation Impacts During Construction

- Construction impacts will occur from Spring 2022 through Fall 2022.
- Bridge closed to roadway traffic during Summer of 2022.
- 4 weekend diversions required for bridge replacement.
 - Two diversions require bussing on the Red Line between Broadway and JFK Stations.
 - Two diversions require closure of the Cabot Yard lead tracks and Commuter Rail Old Colony line. Commuter Rail passengers to be diverted between South Station and Broadway via the Red Line.
- Roadway traffic limited to one way alternating traffic in during Spring 2022 and during Fall 2022.
- Night-Orders will be requested for construction activities throughout the project duration.
- Day Orders and flagging will be requested for pile driving activities.
- Keolis flagging support will be needed throughout for work in and around the Old Colony Line.



Project Schedule

	Fall 2021	Winter 2021 - 2022	Spring 2022	Summer 2022	Fall 2022	Winter 2022-2023	Spring 2023	Summer 2023	Fall 2023
Dorchester Ave. Bridge Replacement		[Blue bar spanning Winter 2021 - 2022, Spring 2022, Summer 2022, and Fall 2022]							
Stages 1-2: Utility Relocation/Pile Installation/ Begin Bridge Substructure		[Orange bar spanning Winter 2021 - 2022 and Spring 2022]							
Stage 3: Bridge Closure. Demo of existing structure. Construction of new bridge structure				[Purple bar spanning Summer 2022 and Fall 2022]					
Stage 4, 5 and 6: Finish Bridge Construction & Utility Relocation (Bridge partially reopen)					[Yellow bar spanning Fall 2022 and Winter 2022-2023]				
Stage 6: Demobilization and Closeout								[Green bar spanning Summer 2023 and Fall 2023]	
Von Hillern Street Retaining Wall Rehab.						[Dark blue bar spanning Winter 2022-2023, Spring 2023, and Summer 2023]			

Construction Procurement

- Project advertised on August 11, 2021
- Engineer's Estimate was \$30,496, 148
- Bid opening on September 30, 2021
- 5 Bids were received

\$ 22,204,806.12	SPS New England, Inc. (Low Bidder)
\$ 25,375,806.12	MAS Building and Bridge, Inc.
\$ 25,705,806.12	A.A. Will Corporation
\$ 26,844,806.12	J.F. White Contracting Co.
\$ 29,663,306.12	Mig Corporation, Inc.

A bid analysis has been completed and ***SPS New England, Inc.*** is the recommended low responsible bidder.

