

MassDOT Highway Construction

**Contract No. 126251 – Bridge Replacement, H-12-040=M-17-030,
I-495 (NB & SB) / Merrimack River and M-17-031, I-495 (NB & SB)
over Route 110 and H-12-056, Industrial Avenue (EB & WB) / I-495
in Haverhill and Methuen, MA**

February, 26, 2025



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Overview

Beyond Mobility

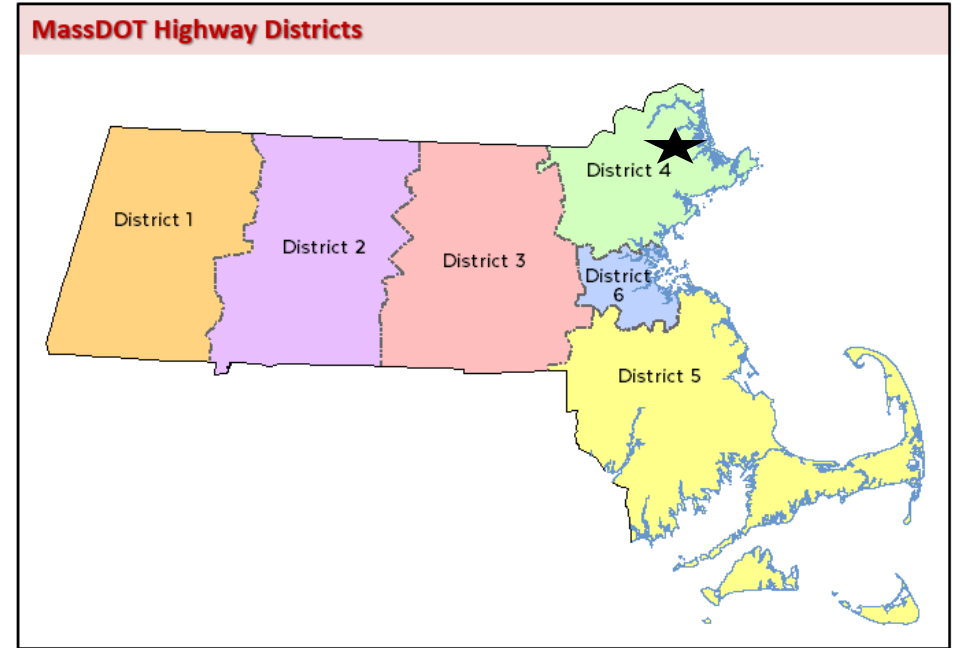
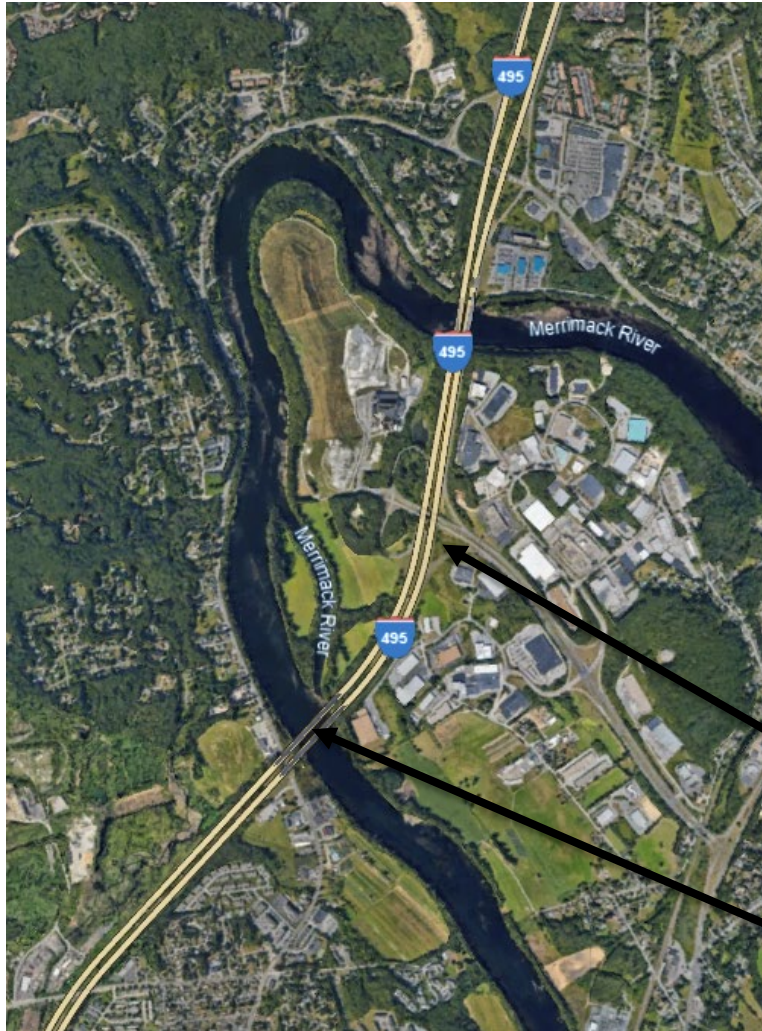
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- This project addresses the structurally deficient bridges carrying I-495 over the Merrimack River and carrying Industrial Avenue over I-495 .
- Project investments in Beyond Mobility priorities for Resiliency, Reliability and Safety.

Overview

Project Location



Bridge H-12-056

Bridge H-12-040=M-17-030 & M-17-031

Scope of Services

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- Replace Structurally Deficient bridges carrying I-495 (NB & SB) over Rt. 110/113/Merrimack Street and the Merrimack River
- Replace Structurally Deficient bridges carrying Rt. 125/Industrial Ave. (EB & WB) over I-495
 - ✓ Satisfy current design requirements; reduce maintenance needs; improve vertical clearance.
 - ✓ Work within requirements of all environmental regulatory agencies, including Time-of-Year restrictions for endangered species
- Reconstruct I-495 (NB & SB) to provide 3-12' lanes and widened shoulders
- Construct a noise barrier along I-495 NB
- Reconstruction and undergrounding of utilities along Merrimack St and Industrial Ave including protection of a 24" high pressure gas main, and city sewer



I-495 over Rt. 110/113/Merrimack St & Merrimack River

Construction Management Approach

Public Outreach, Permitting, and Construction Management

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Public Outreach:

- Feb. 1, 2024, Design Public Hearing
- Feb. 28, 2024, Sound Wall Informational Meeting

Project Permits include:

- National Environmental Policy Act (NEPA) — Programmatic
- Categorical Exclusion approved by MassDOT/FHWA July 2 2024
- NPDES Construction General Permit (CGP)
- MassDEP 401 (WQC)
- ACOE 404
- EFH/Section 7

Construction Management Approach:

- Design-Build Project
- 3 travel lanes available NB/SB I-495 during all phases
- MassDOT District 4 Construction
- Anticipated Construction is January 2025 to July 2030



Route 125 (Industrial Avenue) over I-495
Northbound and Southbound

Procurement and Budget

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- Project Advertised (RFP) June 13, 2024
- Engineer's Estimate was \$351,800,000.00
- Bid Opening was October 24, 2024

Best Value Calculation			
609466-126251	Haverhill-Methuen Shortlisted Teams (Design Builders)		STEP
	SPS- D.W. White JV	Middlesex	
Technical Scores	90.54	89.57	1- Pre-Entered by MassDOT
Price Proposal	\$337,584,363	392,185,260	2- Transferred from BidX
Overall Value Rating = Price Proposal / Technical Scores	3,728,565.97	4,378,533.6	3- Calculated by MassDOT (Step2/Step1)

Line Item	Budget
Bid Amount	\$337,584,363.00
Contingencies	\$33,761,331.30
Construction Engineering	\$16,879,218.15
Traffic Police	\$10,000,000.00
Trainees	\$4,000.00
Total	\$398,228,912.45

- Federal Aid – Hwy Infrastructure Prgm. (NHPP/BRR & HIP BR) – Bridge
- Programmed Cost in the 2024-29 TIP: \$432.70M

Request of the MassDOT Board of Directors

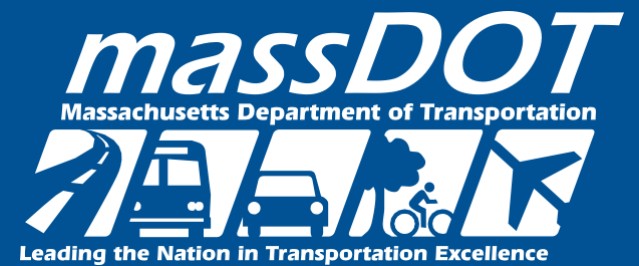
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The Price Proposals were reviewed by engineers in the Construction, Construction Contracts, Design-Build Sections, and Preliminary Design Consultants, was found to be reasonable and recommended to be awarded to the contract apparent Best Value Design-Builder.

Request of the MassDOT Board of Directors

Staff request that the MassDOT Board of Directors authorize the Secretary of the Massachusetts Department of Transportation, or their designee, to award and execute MassDOT Construction Contract 126251: Bridge Replacement, H-12-040=M-17-030, I-495 (NB & SB) over Merrimack River and M-17-031, I-495 (NB & SB) over Route 110 and H-12-056; Industrial Avenue (EB & WB) over I-495 with SPS-D.W.White Joint Venture in the amount of \$337,584,363.00.

Thank You



STAFF SUMMARY

☐ Secretary Approval ☐ MassDOT Board Approval Prepared by: Narayana M. Kolla

Department: Highway Division, Major Projects	Manager: Michael O'Dowd	email: Michael.ODowd@dot.state.ma.us	Telephone: 617-910-8564
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Contract No.126251 – Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Project	Date Prepared: 11/04/2024
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Implications

☐ Capital Budget ☐ Operating Budget ☐ Legal ☐ Other

PURPOSE:

The purpose of this Staff Summary is to request that the Board of Directors authorize and approve the Secretary/CEO, or her designee, to execute MassDOT Contract No.126251 Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Project with The SPS-DW White JV, in the amount of \$337,584,363.00 for a total duration, not to exceed, 2,034 days from Notice to Proceed (NTP).

TOTAL PROGRAM BUDGET:

The Capital Program has a total program budget of \$432,699,691.00, which includes the following:

Bid	\$337,584,363.00
Contingencies	\$33,761,331.30
Construction Engineering	\$16,879,21.15
Traffic Police	\$10,000,000.00
Trainees	\$4,000.00

Total	\$398,228,912.45
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DISCUSSION:

Project Description

The proposed Project is being advanced by the Massachusetts Department of Transportation, Highway Division (MassDOT) to replace four bridges in Methuen and Haverhill, MA: I-495 Northbound and Southbound over the Merrimack River and Routes 110/113 (H-12-040=M-17-030 & M-17-031), and Industrial Avenue (Route 125) EB & WB over I-495 (H-12-056 NB and SB) with new bridges designed for a 75-year design life. The Project limits extend along I-495 from approximately 200 feet north of the Pleasant Valley Street overpass in Methuen to approximately 150 feet north of the Industrial Avenue

(Route 125) overpass in Haverhill. The work includes portions of Industrial Avenue and the Interchange ramps, and a portion of Merrimack Street (Route 110/113) under I-495 in Methuen. The project also addresses substandard shoulders, acceleration and deceleration lanes, the ability to provide additional capacity on I-495.

The project also proposes modifications to I-495 in the area of the Industrial Avenue (Route 125) interchange to improve safety and operational efficiency.

The major elements of work are further described below:

Bridge

The proposed project includes the design and construction of four full bridge replacements. The bridge design will ensure current clearances under, over Routes 110/113 (Merrimack Street) and Industrial Avenue (Route 125) over I-495, will be maintained. The I-495 bridges will be widened to accommodate a future fourth lane. The project also entails the design and construction of retaining walls. Phased construction will be utilized to maintain traffic.

Roadway

The Project includes the reconstruction and resurfacing of I-495 including portions of the ramps to and from Industrial Avenue (Route 125) Eastbound and Westbound. Also included is widening of the I-495 inside and outside shoulders and the construction lengthening the acceleration/deceleration lane on I-495 Northbound and Southbound at the Industrial Avenue (Route 125) interchange. Roadway work includes sections of full depth pavement construction, pavement milling, and variable depth overlay and/or leveling course as required for development of proposed cross slopes. Temporary roadway “crossovers” on I-495 will be constructed to maintain traffic during construction. Also included are construction of ADA compliant pedestrian ramps, median barrier, guardrail, associated barrier end treatments, fences, granite curb, side slopes, and updates to the highway lighting system.

Stormwater Design and Construction

The Project includes comprehensive updates to the highway drainage system for temporary and permanent conditions. Included is the design and construction of a new stormwater sewer system and multiple stormwater BMPs in accordance with Massachusetts Stormwater Management Standards.

Project Impacts

Utilities

The Project involves the coordination with utility companies and required site preparation to facilitate access for the relocation of overhead and underground utility facilities including the relocation of overhead transmission lines along Routes 110/113 into an underground duct bank. The coordination the electric utility also involved protections from high voltage transmission lines, located over I-495.

Traffic

The project requires the maintenance of three travel lanes in each direction on I-495 and one lane in each direction on Industrial Avenue (Route 125) and Merrimack Street (Routes 110/113), as well as maintenance of access to and from all I-495 ramps. Additionally, the Design-Builder shall maintain pedestrian and bicycle accommodations including, sidewalks, ADA compliant ramps, and driveways throughout construction. Off-peak lane closures are allowed in accordance with Temporary Traffic Control Requirements and shall be mitigated through continuous public outreach.

Stakeholder Engagement

Significant public engagement undertaken during the preliminary design phase and will continue throughout construction. A Design Public Hearing was conducted on February 1, 2024.

This contract requires the Design Builder to deploy construction phase air, noise, water, and dust controls to limit the impacts of construction on abutters.

BEST VALUE PROCUREMENT:

This project will be delivered utilizing the Design-Build methodology, as stipulated in MGL c 149A § 14 et seq and as implemented in accordance with MassDOT's Design-Build Guidelines approved by the Inspector General's office. This selection is Phase 2 of the two-Phase selection process and is an evaluation of the Technical and Price Proposals from the two (2) Proposers listed under the Contract Solicitation section. The apparent Best Value Design-Build was determined by dividing the Price amount submitted with the Proposal by the Technical Score provided by the Selection Committee. The lowest Overall Value Rating of the two (2) Proposers is the apparent Best Value Design-Build. Phase 1 of the two-Phase process was the Request for Qualifications and Phase 2 is the Request for Proposals. Following is the process for review of the Requests for Proposals (RFPs):

- Develop Proposal Evaluation Form
- Confidential Draft Request for Proposals Meeting one on one with the proposers to get feedback on the project risks.
- Confidential Meetings with Proposers to evaluate Alternate Technical Concepts (ATCs)
- Accept/Reject ATCs
- Receive Proposals from two (2) short-listed Proposers and verify complete/ review Pass/Fail requirements
- Review Technical Proposal and prepare preliminary evaluations
- Meet to discuss preliminary evaluations/prepare questions for Oral Presentations
- Oral Presentations by Proposers
- Finalize Technical Scores prior to Price Proposal opening
- Open Price Proposals, divide by Technical Score for lowest Overall Value Rating
- Provide recommendation of Best Value Design-Build

A Draft RFP was issued on May 8, 2024, followed by the Final RFP on June 13, 2024. Ten (10) addenda were issued and distributed to the Proposers. The addenda responded to Proposer questions submitted by a specified date and time, and provided data not contained in the RFP. All parties receiving these addenda were required to acknowledge receipt.

Contract No./Subject:

Contract No.126251 – Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Project

Prepared by: Narayana M. Kolla

Date: 11/04/2024

Significant Dates

The table below details the significant dates of the RFP selection process.

Draft RFP Issued to Short-Listed Proposers	5/8/2024	
Confidential one-on-one Draft RFP Meetings	5/20/2024	
Final RFP Released	6/13/2024	
Mandatory Pre-Proposal Meeting	6/21/2024	10:00 AM
Confidential ATC Meeting-1	6/27/2024	
Confidential ATC Meeting-2	7/18/2024	
Last Day to Submit Final ATC Submission for Approval	7/31/2024	
RFP Close Date for Questions	9/4/2024	5:00 PM
Technical & Price Proposals Due	9/25/2024	2:00 PM
Oral Presentations	10/9/2024	
Public Price Proposal Opening Date/BVDB	10/24/2024	2:00 PM

Technical Proposal Evaluation Criteria (100% of Technical Proposal)

The qualitative evaluation of the technical aspects of the Proposal will count for 100% of the total technical score. It will be focused on the following criteria:

DB Project Management and Coordination (28% of Technical Criteria)

The Committee will evaluate the following elements:

Project Management and Personnel Experience (5%)

Quality Control System (5%)

Design Management (5%)

Construction Management (5%)

Schedule and Cost Control (8%)

DB Technical Approach (72% of Technical Criteria)

The Committee will evaluate the following criteria:

Civil / Traffic (15%)

Environmental (10%)

Utilities (10%)

Structures (20%)

Construction Staging (17%)

CONTRACT SOLICITATION:

On January 13, 2024, the MassDOT Highway Division posted to CommBUYS a public solicitation (a Request for Letters of Interest) for : HAVERHILL-METHUEN: Bridge Replacement, H-12-040=M-17-030, I-495 (NB & SB) over Merrimack River, M-17-031, I-495 (NB & SB) over Route 110 and H-12-056, Industrial Avenue (EB & WB) over I-495 Design-Build by February 27, 2024, MassDOT Highway Division received letters of interest from Nine (9) construction and design firms. On February 28, 2024, A Request for Qualifications (RFQ) was sent to those interested firms. By March 29, 2024, the due date, Statement of Qualifications (SOQs) from Two (2) Prospective Proposers were received.

A Selection Committee of Seven (7) individuals representing diverse disciplines was assembled and approved by the Chief Engineer.

The Statement of Qualifications were evaluated and ranked by the Selection Committee according to the criteria set forth in the RFQ. On April 29, 2024, the Selection Committee determined that two (2) Proposers would be included on the short list of teams asked to submit Technical and Price Proposals. The Proposers were:

- The Middlesex Corporation and WSP USA, Inc.
- SPS New England/DW White JV and HNTB Corporation

The short-listed Proposers were notified in writing on May 1, 2024, that they were selected to receive a Request for Proposal (RFP) for the Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Project. A Draft RFP was issued to the two (2) Design-Builders on May 8, 2024. A Final RFP was issued to the two (2) Design-Builders on June 13, 2024.

The Proposers were advised the deadline for submittal of the Proposals. Before the Proposals were received, the Selection Committee developed a spreadsheet, outlining the evaluation criteria and weight factors identified in the RFP to be used in the Selection Process. The Proposers were advised in the RFP of the format the Proposals were to follow and the content for which they would be scored.

Technical and Price Proposals were received on September 25, 2024, from the two (2) Proposers. The electronically submitted Price Proposals were locked while the Selection Committee reviewed the Technical Proposals. The two (2) Proposers gave Oral Presentations on October 9, 2024, each Proposer was given up to one (1) hour to present their Technical Proposal and followed by half an hour of clarifying questions from selection committee.

The determination of the Technical Score for each of the short-listed Proposer was calculated in accordance with the Design-Build Procurement Guide.

Contract No./Subject:

Contract No.126251 – Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Project

Prepared by: Narayana M. Kolla

Date: 11/04/2024



Request For Proposal (RFP) - Design/Build Score Sheet

Project No. 609466 - Methuen-Haverhill I-495/Industrial Avenue

	Shortlisted DB Teams	
	SPS-DWW/ HNTB	Middlesex/ WSP
DB Project Management and Coordination (28%)		
Project Management and Personnel Experience - 5%	4.71	4.71
Quality Control System - 5%	4.54	4.51
Design Management - 5%	4.55	4.59
Construction Management - 5%	4.50	4.42
Schedule and Cost Control - 8%	7.28	7.11
DB Technical Approach (72%)		
Civil/Traffic - 15%	13.76	13.80
Environmental - 10%	8.17	8.74
Utilities - 10%	8.97	8.94
Structures - 20%	18.31	17.91
Construction Staging - 17%	15.74	14.84
Total Score	90.54	89.57

A public Price Proposal opening was held on October 24, 2024, at 2:00 pm via Microsoft Teams virtual meeting. The total Technical Scores were displayed on the screen within the spreadsheet template. Prices were downloaded from BidX. The prices are as follows:

- **SPS New England/DW White JV and HNTB Corporation** **\$337,584,363.00**
- The Middlesex Corporation and WSP USA Inc. **\$392,185,260.00**

The Overall Value Rating was determined by dividing the Price by the Technical Score. The scores and calculations are provided below:

SPS New England/DW White JV and HNTB Corporation **$\$337,584,363.00 / 90.54 = 3,728,565.971$**
The Middlesex Corporation and WSP USA Inc. **$\$392,185,260.00 / 89.57 = 4,378,533.661$**

Contract No./Subject:

Contract No.126251 – Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Project

Prepared by: Narayana M. Kolla

Date: 11/04/2024

The SPS New England/DW White JV and HNTB Corporation was determined to be the apparent Best Value Proposer with a low Overall Value Rating of 3,728,565.971. The Price Proposal packages were reviewed, and it has been determined that SPS New England/DW White JV and HNTB Corporation Team is the Best Value Proposer.

The Price Proposals were reviewed by engineers in the Construction, Construction Contracts and Design-Build Sections. A Price Proposal Review was conducted by the Preliminary Design Consultant, Vanasse Hangen Brustlin, Inc. (VHB) for the Design Build documents for the project. The Highway Division has accepted the Price Proposal submitted by The SPS New England/DW White JV and HNTB Corporation Team at \$337,584,363.00 which is 4% less than that of the Office Estimate of \$351,800,000.00.

MILESTONES:

The project has the following two (2) Milestones:

- Milestone No. 2: Full Beneficial Use and Substantial Completion
- Milestone No. 1: Contractor Field Completion

These Milestones are defined and restricted as identified below:

Milestone No. 2 – Full Beneficial Use and Substantial Completion

The Design-Builder shall achieve Milestone No. 2 within 1,982 Calendar Days from NTP

Milestone No. 1 – Contract Completion

The Design-Builder shall achieve Milestone No. 1 within 2,034 Calendar Days from NTP

Contract No./Subject:

Contract No.126251 – Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Project

Prepared by: Narayana M. Kolla

Date: 11/04/2024

DISADVANTAGE BUSINESS ENTERPRISE PARTICIPATION:

Disadvantaged Business Enterprise (“DBE”) participation is required. The DBE requirement for this Project is 14% of the design component and 14% of the construction component for this Contract. MassDOT’s Office for Diversity and Civil Rights has reviewed the DBE information included in the Proposal of the chosen bidder and recommends award of the DB Contract to this team.

To achieve this goal the Design-Builder, SPS-DWW/HNTB, has identified Four (4) design firms and Ten (10) construction firms.

The following is a summary of the identified design and construction firms, scope of work and value for this project:

DBE - Design Firms Identified:

<u>Firm</u>	<u>Scope of Work</u>	<u>Amount Eligible</u>
Shadley Associates	Landscape Design	\$263,210.00
VN Engineers, Inc	Design -Industrial Ave, Civil Support	\$2,129,710.00
Steere Engineering	Design Industrial Ave, Structures	\$1,293,321.00
HMMH	Design Noise Analysis-Reporting	\$74,531.00
	Total Amount	\$3,760,772.00

The total “DBE” design bid value is \$3,760,772.00 netting a 14.02% value which meets the goal of 14% as established for the design component of this project.

DBE - Construction Firms identified:

<u>Firm</u>	<u>Scope of Work</u>	<u>Amount Eligible</u>
SK26 Construction	F&I Structural Steel- Industrial Ave	\$4,839,841.00
Delucca Fence Co, Inc.	Guardrail, Fence, Snow fence	\$1,557,955.50
Strategic Env. Services	Environmental Services	\$4,027,763.30
Jimenez & Sons Construction	Build inverts, Adjust Drainage Str.	\$184,950.00
United Stone & Site Inc.	Install Granite pier Façade	\$1,717,800.00
Tabbi Equipment Company	Hired Trucking	\$2,230,000.00
Island Pavement Cutting CO.	Waterproofing, Labor Escalation & Mob.	\$1,394,316.65
F.C. Construction Company	Curbing	\$92,487.00
Medeiros Hydroseed & Landscape	Landscaping & Erosion Control	\$1,211,122.22
Regis Steel Corporation	F&I Rebar	\$7,720,578.40
	Total Amount	\$24,976,814.07

The total “DBE” Construction bid value is \$24,976,814.07 netting an 8.04 % value which does not meet the goal of 14% as established for the construction component of this project. SPS has submitted a summary of Good Faith Effort indicating they have exhausted every reasonable effort to maximize utilization of certified DBEs for the work. As the design progresses and the scope is more clearly defined, SPS-DWW will look to increase the DBE participation wherever it is practical.

Contract No./Subject:

Contract No.126251 – Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Project

Prepared by: Narayana M. Kolla

Date: 11/04/2024

FINANCIAL IMPACT/BUDGET SOURCE:

This action is funded through various sources:

FA - National Highway Performance Program (NHPP/BRR)

FA – Highway Infrastructure Program (HIP/BR)

NFA - Site Specific (State)

FUTURE ANTICIPATED AUTHORIZATIONS:

None

RECOMMENDATIONS:

It is recommended that the Board of Directors authorize the Secretary, or her designee, to award and execute MassDOT Contract No.126251 titled Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 – Design-Build Project, with SPS New England/DW White JV and HNTB Corporation, in a form approved by the General Counsel, in the amount of \$337,584,363.00.

COORDINATION WITH:

Office of Diversity and Civil Rights

Engineering and Maintenance

Environmental

Capital Programs

Budget and Finance

Legal Department

SIGNATURE PAGE:

See Page #10

ATTACHMENTS:

Tab A – Vote [to be completed by Legal]

RESOURCE/REFERENCE DOCUMENTS:

None

STAFF SUMMARY SIGNATURE PAGE

☐ Secretary Approval

☐ MassDOT Board Approval

Prepared by: Narayana M. Kolla

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Major Projects

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Contract No./Subject: 126251 – Bridge Replacement, I-495 (NB & SB) over Merrimack River and I-495 (NB & SB) over Route 110 and Industrial Avenue (EB & WB) over I-495 Design-Build Contract

Date Prepared:
11/04/2024

Implications

☐ Capital Budget

☐ Operating Budget

☐ Legal

☐ Other

RECOMMEND APPROVAL:

Michael O'Dowd
Director of Major Projects

RECOMMEND APPROVAL:

John J. Bechard, P.E.
Deputy Chief Engineer

RECOMMEND APPROVAL:

David Pottier
Chief Financial Officer

RECOMMEND APPROVAL:

Douglas McGarrah
General Counsel

RECOMMEND APPROVAL:

Monica Tibbits-Nutt
Secretary/CEO