EXHIBIT 4A

BINDER 1
TECHNICAL PROPOSAL

DESIGN-BUILD SERVICES
FOR BRIDGE GROUP 57T-10

I-195

WASHINGTON BRIDGE NORTH

PHASE 2 | PROVIDENCE AND EAST PROVIDENCE, RI

BID# 7611889
Rhode Island Department of Transportation

Submitted by

BARLETTA ENGINEERING HEAVY DIVISION

AETNA Aetna Bridge Company

In partnership with

vhb

Binder 1 Contents

Section 1 | Executive Summary

Section 2 | Relevant Firm Experience and References

Section 3 | Key Staff and Team Organization

Section 4 | Technical Approach

Proposal Video

The Barletta/Aetna Team has developed a summary video of our Technical Proposal featuring highlights of our relevant experience and technical approach to the project.

The video file is included in our Technical Proposal CD or

Watch online:
https://vimeo.com/vhbnow/i-195-washington-bridge

Binder 1 Contents (continued)

Section 5 | Preliminary Project Schedule

Section 6 | Management Overview

Binder 1 Contents (continued)

Section 7 | Required Forms and Documents

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Bid Bond *(separately sealed envelope)*

RIVIP Bidder Certification Cover Form

Joint Venture Agreement

Proposal/Addenda Acknowledgement Letter

Form A. Proposal Letter

Form B. Industrial Safety Record

Form C. Anti-Collusion Certificate for Contract and Force Account

Form D. Health & Safety Certification

Form E. Certification of Dumping Facilities

Form F. Right-to-Know Act Certification

Form G. Certification of Construction Equipment Standard Compliance

Form H. Guaranty Form

Form I. Buy America Certification

Form J. On-the-Job Training

Form K. DBE Utilization

Form L. DBE Letter of Intent to Perform

Form M. Escrow Agreement Form

Form O. Design Build Stipend Agreement

Form P. Consultant Certifications, Disclosures, and Assurances

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Appendix B | Traffic Management Plan

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**Primavera Electronic File Provided on CD*

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Technical Proposal CD Only

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1 Executive Summary

Executive Summary

Trusted Team *(RFP 6.4.1)*

The Barletta/Aetna Bridge JV, with Lead Designer VHB, is ready to partner with RIDOT again, this time to bring the **I-195 Washington Bridge North Phase 2 Design-Build (DB)** to fruition. Together, we work seamlessly, communicate, and collaborate—always with the end goal in mind: to successfully deliver the design and construction while **minimizing risk**, **minimizing impacts**, and providing **maximum value** to RIDOT.

RIDOT has trusted us as individual firms and collectively as a Team with the state's most complex, challenging, and high-profile bridge projects, including the **Route 6/10 Interchange DB**, **Louisquisset Pike Bridge DB**, and **Wood River Valley DB**. From traffic management, to coordination with utility companies, to complex environmental regulations—we have kept RIDOT's projects **on time** and **on budget**.

What's New

Through the ATC process, we were able to incorporate direct feedback from RIDOT on our previously submitted ideas and enhancements. With this direct feedback, we further refined and enhanced our approach—always looking for ways to maximize value to RIDOT and the project. In particular, our ATCs 4 and 8 have added benefits and further expand our initial enhancements.

- With our revised ATC 4 realignment of Gano Street, the bikeway, and the new Gano Street On-Ramp, we achieve the required goals of the INFRA Grant while adding safety and traffic operations improvements with reduced infrastructure that minimizes RIDOT's long-term maintenance costs.
- Through bridge widening modifications to spans 1–3 in ATC 8, our design lightens the overall loads to the Washington substructure, eliminates all in-water work at pier foundations, and reduces long-term life-cycle infrastructure costs.

Dedicated Project Team that Delivers on Time and on Budget

Our project leadership team and key personnel comprise our most experienced practioners—DB, complex highway and bridge design, and construction. Our Team has the capacity and commits to the same high level of passion and attention to detail you have come to expect from us.

Design-Build Project Manager (BHD): As the primary contact for RIDOT, Paul Coogan will oversee all project design, construction, quality management, and contract administration, and will facilitate effective design and construction collaboration and integration. He will make certain that all necessary resources are available and committed.

- 40+ years of construction experience, including managing multidisciplinary teams on complex DB projects
- As Project Manager for the Henderson Bridge Reconstruction project, Paul brings invaluable insight to collaborating with VHB and RIDOT
- Brings a regional perspective to RIDOT through his experience with NHDOT on the $84M Memorial Bridge Replacement DB, and CTDOT on the $98.5M I-95 NB to Route 34 WB Flyover Bridge DB

Construction Team—*Construction with Confidence*

Construction Manager (BHD): Dennis Ferreira will lead project construction making sure the project is built safely, efficiently, and according to plans and specifications.

- Construction Manager for multiple DB bridge projects totaling over $530M, including two over water—Hines Bridge and Route 79/I-195 Interchange
- Prior experience working with Aetna Bridge and VHB, recently with Joe Wanat and Jeff Klein on the Route 6/10 Interchange DB

Construction Superintendent (AET)—Rick McGinn

Construction Superintendent for Route 79/I-195 Interchange & Braga Bridge DB and Wood River Valley Bridge DB

Scheduler (BHD)—Steve Thurber

Scheduler for Route 6/10 Interchange DB and Route 79/I-195 Interchange & Braga Bridge DB

Safety Manager (AET)—Joan Zapatka

Safety Manager for Route 6/10 Interchange DB, Louisquisset Pike Bridge DB, and Wood River Valley Bridge DB

Design Team—*Delivering Design Excellence*

Design Manager (VHB): Joe Wanat, PE, PTOE, ENV SP, will manage overall design and VHB coordination, confirming the project design is consistent with project objectives and in conformance with the Contract Documents.

- Intimately familiar with project site and surrounding area from his experience on the Washington Bridge, Henderson Bridge, Providence Viaduct, and Route 6/10 Interchange DB

Deputy Design Manager & Structural Lead (VHB): Jeff Klein, PE, ASSOC. DBIA, will lead the day-to-day operations of the design discipline leads and subconsultants.

- Design Manager for the Louisquisset Pike and Wood River Bridge DBs and VHB Structural Design Manager on Route 6/10 Interchange DB

Civil/Highway Lead (VHB)—Rick Rhodes, PE

Highway Design Lead for the Louisquisset Pike Bridge DB and Wood River Valley Bridge DB

Traffic Lead (VHB)—Peter Pavao, PE, PTOE

Traffic Task Manager for Henderson Bridge, Pell Bridge Interchange, and Louisquisset Pike Bridge DB

Environmental Manager (VHB)—Susan Moberg, PWS, CFM

Environmental Manager for the Wood River Valley Bridge DB and Henderson Bridge

Quality Team—*Quality Team Means Quality Results*

QC Administrator (VHB): Kris Kretsch, PE, CQA, QAT, ENV SP, will develop and implement an overall QMP for design and construction teams to follow and will oversee the integration of design and construction reviews.

- Experience on 10+ DB projects throughout the Northeast
- QC Administrator for Louisquisset Pike Bridge DB and Design QC Manager for Wood River Valley Bridge DB

Design QC Manager (VHB)—Jamie Pisano, PE

Project Manager for the Henderson Bridge Reconstruction and DPM on Providence Viaduct Bridge No. 578

Construction QC Manager (BHD)—Bill Kearns, QAT

Construction QC Manager for Route 6/10 Interchange DB and Route 79/I-195 Interchange and Braga Bridge DB

Our Promise

Through our experience on the Washington Bridge and unparalleled knowledge of the project site, we developed a thoughtful technical approach. We know the public, travel patterns, and limitations that enable us to develop implementable solutions. Our approach will deliver increased regional mobility and state of good repair by minimizing risks; minimizing impacts to the environment, stakeholders, and public; while maximizing value of RIDOT capital expenditures.

Minimize Risk

- Eliminate several major utility relocations and streamline construction staging to mitigate third-party schedule delays
- Eliminate new fracture-critical member from Washington Bridge widening
- Vet our proposed design enhancements with utility companies, environmental regulators, and municipal review committees

Minimize Impacts

- Utilize regional traffic simulation model to coordinate with adjacent projects and mitigate traffic friction points
- Keep Taunton Avenue On-Ramp open during construction and eliminate overlapping detour routes with Henderson Bridge
- Minimize impacts to the existing Washington Bridge foundations by eliminating supplemental piles
- Install high-capacity drilled micropiles (DMPs) to minimize impacts to existing foundations and the Seekonk River

Maximize Value

- Add highway capacity during construction
- Reduce long-term infrastructure maintenance costs at Waterfront Drive Bridge and Gano Street On-Ramp (reducing from a three-span curved bridge to a jointless simple span structure)
- Improve traffic operations and pedestrian/bicycle safety with new Gano Street alignment

Design & Technical Approach *(RFP 6.4.2)*

Our Team has examined the Washington Bridge, ramps, and roadways from every angle—balancing design, constructability, quality, safety, and risk management. We developed a technical approach that advances the BTC as provided in the RFP, while also enhancing the design with alternative technical concepts (ATCs) and innovations to deliver added value and benefits to RIDOT. As shown below and detailed in *Section 4–Technical Approach*, these enhancements were developed with a focus on three key goals—to **minimize risk** to RIDOT and the project schedule, **minimize impacts** to the community and traveling public, and **maximize value** by delivering safe, durable, and low-maintenance bridges.

ATC 4 **Reconfigured New Gano Street On-Ramp to I-195 WB**

- Minimize utility relocation in coordination with NBC, National Grid Gas and Electric, and Verizon
- Significantly reduce RIDOT's long-term infrastructure maintenance costs, reducing the three-span curved steel bridge to a simple span precast concrete arch structure
- Eliminate the bikeway crossing of the new Gano On-Ramp for improved safety
- Improve traffic operations on Gano Street by providing the heavier southbound traffic with a right-turn onto the on-ramp

ATC 8 **Modified Spans 1–4 Widening**

- Reconfigure span configuration to eliminate the fracture-critical tie-down, eliminate the need to supplement piles at existing piers, and eliminate in-water work
- Reduce RIDOT's long-term inspection costs with elimination of fracture-critical member
- Minimize noise and vibrations near utilities with use of high-capacity drilled micropiles at new Pier 1A

ATC 9

Washington Bridge Joint Repair

- Simplify phased expansion joint installation with Emseal joints on Washington Bridge and improve durability of all new bridge expansion joints on the project
- Provide link slabs to eliminate surface joints and maximize durability improvement at all fixed joints

ATC 2 **Waterfront Drive Off-Ramp, Ramp DR-2/M, and Waterfront Drive Roadway Profile**

- Avoid Valley Street gas, telephone, sewer, water, and utility pole relocations
- Save RIDOT significant Force Account costs by avoiding utility relocations
- Improve intersection safety by providing a channelized right-turn movement at the new Waterfront Drive intersection

ATC 3 **Waterfront Drive Bridge Modifications**

- Construct new bridge in a single phase with a minimized footprint
- Eliminate a beam line and deck overbuild to reduce RIDOT's long-term maintenance costs
- Use Accelerated Bridge Construction (ABC) MSE-supported stub abutments, decreasing the exposed wall surface area by approximately 50% to reduce long-term maintenance costs

Innovations/ Enhancements *(RFP 6.4.3)*

Our Team has developed and incorporated several innovative ideas and enhancements into the design and planned construction methods for RIDOT's benefit. These concepts are summarized below, and further described in *Section 4–Technical Approach*.

ATC 1 **Traffic Improvements During Construction**

ATC 1A: Modified Temporary On-Ramp to Avoid Detouring Taunton Avenue Traffic

- Eliminate long-term closure of the Taunton Avenue On-Ramp
- Build the new Waterfront Drive Bridge offline to eliminate the longitudinal phase joint and streamline project phasing

ATC 1B: Streamlined Staging

- Sequence design/permitting and construction in a manner that provides adequate CRMC permit review time to minimize risk of third-party delays impacting the overall project schedule
- Return shifted lanes to existing locations in advance of the new toll gantry in our final four stages, minimizing third-party delays and RIDOT costs to the tolling vendor
- Provide the new Waterfront Drive Exit earlier in the project to provide continuous access to the East Side of Providence via Henderson Bridge when the Gano Street Ramp needs to be closed

ATC 1C: Revised Detours to Better Coincide With Henderson Bridge Staging

- Proactively conduct capacity analysis to determine if potential capacity issues exist and see if there are opportunities for coordination to improve operations over existing conditions
- Utilize our inventoried signalized intersections along the key detour corridors to further improve coordination between the two projects
- Capitalize on seamless coordination with Barletta and Aetna Bridge teamed already on the adjacent Henderson Bridge rehabilitation

Regional Traffic Simulation Model

- Mitigate traffic friction points with VHB-developed regional model
- Quantify delays and queues to make real-time adjustments to better respond to impacts from adjacent construction projects and ongoing traffic volume fluctuations
- Synchronize traffic flow and detours for the Washington Bridge project with the other "Big Three" projects in the area—Route 6/10, Providence Viaduct, and Henderson Bridge

Team Structure *(RFP 6.4.4)*

The Barletta/Aetna I-195 Washington Bridge North Phase 2 JV will serve as the legal DB entity contracting with RIDOT. The relationships of the JV are focused around an Executive Committee comprised of members of both JV firms—who also have Joint and Several Liability for the Project—and a representative from VHB, the lead design firm. Below we have summarized the major components of the project and which firm will be responsible for each.

Barletta/Aetna Bridge JV	
Barletta Heavy Division, Inc. ***(Corporation, privately-owned) (JV Lead, 65% Equity)*** Project management, construction management, construction QC, safety, schedule adherence, project controls, civil/utility/site, roadway, subgrade and grading	Aetna Bridge Company *(Corporation, privately-owned)* ***(JV Member, 35% Equity)*** Construction QC, safety, schedule adherence, project controls, civil/utility/site, precast concrete and structural steel, concrete repair
VHB	
Design management, quality, structures, civil/highway, traffic, environmental, landscape architecture	
Commonwealth Engineers	**Creative Environment**
Structural/bridge design	Lighting
RVA (DBE)	**GZA**
Public outreach	Geotechnical
Bryant (DBE) & Welch (DBE)	**Applied Bio-Systems (DBE)**
Survey, utilities	SWPPP monitoring, soil evaluations, wetland delineation

Our Team knows that accountability is one of RIDOT's core values. Accountability means that projects are delivered on time and on budget. It is why our approach is underpinned by three goals—minimize risk, minimize impacts, and maximize value. We commit to serving as extensions of your staff in everything we do: how we think, how we approach the project, how we mitigate risk. Our Team is ready to get started, and we appreciate the opportunity to continue to serve as your trusted advisor.

ATC Summaries

The Barletta/Aetna Team has incorporated the following approved ATCs into our design. Please see the following pages for an overview of each ATC and benefits to the Washington Bridge Project.

Barletta-Aetna Team ATCs

Approved ATC		Benefit to Washington Bridge Project
ATC 1	Traffic Improvements During Construction	Traffic improvements, including a temporary Taunton Avenue On-Ramp, streamlined staging, and revised detours to better coincide with Henderson Bridge staging.
ATC 2	Waterfront Drive Modifications to Avoid Utilities	Waterfront Drive reconfiguration, including a new Waterfront Drive off-ramp with an adjusted horizontal and vertical alignment.
ATC 3	Waterfront Drive Ramp Bridge Modifications	Waterfront Drive Bridge Modifications allowing construction in a single phase with a minimized footprint.
ATC 4	Gano Street On-Ramp to I-195 Option 1	Reconfigured Gano Street On-Ramp to I-195 WB, including minimal utility relocations, reduced structure, and improved traffic operations and safety.
ATC 8	Washington Bridge Spans 1–4 Modifications	Modified Washington Bridge Spans 1–4 Widening, eliminating fracture-critical tie-down and minimizing in-water impacts.
ATC 9	Washington Bridge Joint Repair	Washington Bridge Joint Repair, including use of link slabs Emseal Bridge Expansion Joint System (BEJS).

ATCs that have been removed, include:

- ATC 5: Gano Street On-Ramp to I-195 Option 2 (Withdrawn after Initial ATC Feedback)
- ATC 6: Gano Street On-Ramp to I-195 Option 3 (Withdrawn after Initial ATC Feedback)
- ATC 7: Washington Bridge Pier Structural Improvements (Withdrawn for ATC 8)
- ATC 10: Gano Street On-Ramp to I-195 Option 4 (Withdrawn for ATC 4)

The State letter granting final approval is provided at the end of this section on page ATC-10.

ATC 1 Traffic Improvements During Construction

ATC 1 includes the following temporary traffic improvements during construction:

1A: Temporary Taunton Avenue On-Ramp

While the BTC proposed to close the Taunton Avenue on-ramp for an extended several-month duration, this ATC proposes to keep it open with the construction of a temporary Taunton Avenue On-Ramp/Veterans Memorial Parkway On-Ramp, using just a brief closure to adjust and connect grading. This ATC also allows for the new Ramp Bridge over Waterfront Drive to be constructed in a single-phase using U-back return walls.

Benefits

- ✓ **Mitigates the Taunton Avenue closure, eliminating the anticipated backups directly in front of City Hall and local businesses along the Route 44 corridor. By eliminating the need for a long-term closure, it is estimated that approximately $500k in user delay costs will be saved over the duration based on the BTC schedule.**
- ✓ **The Taunton Avenue closure is reduced from 359 to 59 Calendar days—a reduction of 300 Calendar days. Further, it removes the construction of the new bridge over the Waterfront Drive Off-Ramp from the critical path, providing added overall schedule flexibility.**

1B: Revised Construction Staging

The staging in the BTC calls to close the Gano Street Off-Ramp in the early stages while working on the bridge form north to south. This ATC revises the staging from the BTC to work from south to north of the bridge to keep Gano Street open at the beginning of the project. Construction of the new Waterfront Drive in advance of closing the Gano Street Off-Ramp will provide continued access to the East Side of Providence via Henderson Bridge.

Benefits

- ✓ **Keeps Gano Street open until the construction of the new Waterfront Drive is complete, providing continued access to the East Side of Providence via Henderson Bridge.**
- ✓ **Removes the closure of the Gano Street Off-Ramp from the critical path, providing added overall schedule flexibility.**

1C: Revised Detours

Detour routes are revised to provide more efficient operations in coordination with Henderson Bridge detours.

Benefits

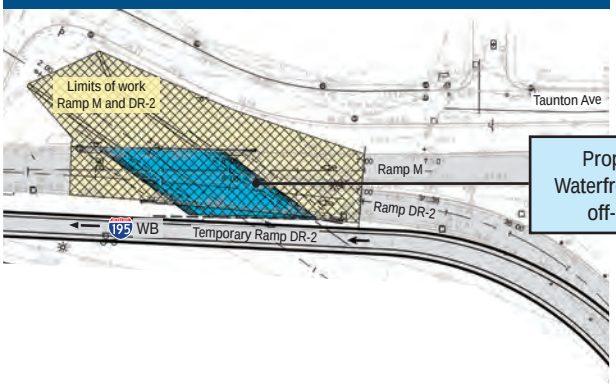
- ✓ **Provides better sequencing and avoids overlapping detours between the Washington Bridge and Henderson Bridge projects.**

Response to Comments

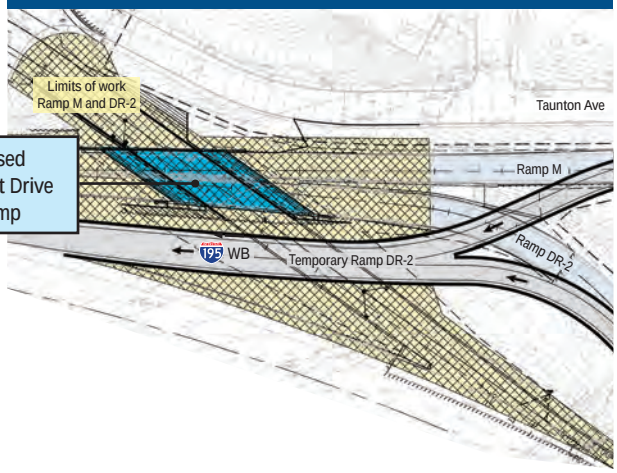
Final ATC 1 Feedback	Response to Feedback
VISSIM models provided with this ATC were reviewed and found to be able to process approximately 5,900 vehicles per hour (vph) over the Washington Bridge during construction, with long queues observed on Taunton Avenue and Veterans Memorial Parkway on-ramps compared with approximately 6,900 vph under BTC construction stages. The reduced vehicle volume crossing the Washington Bridge may be due to vehicles not being able to enter the system as a result of congestion on the Taunton Avenue and Veterans Memorial Partway ramps, as well as vehicles on the I 195 WB mainline diffusing when they cannot complete lane changes. The ATC is being conditionally approved provided revised traffic models and staging plans are submitted with the Final Proposal, showing operations equivalent to or better than BTC conditions. The Final Proposal shall include a summary of traffic volumes and queues entering I-195 westbound via the Pawtucket Avenue, Broadway, and Taunton Avenue/Veterans Memorial Parkway/Warren Avenue on-ramps as well as traffic volumes able to be processed across the Washington Bridge under each construction phase.	We have run traffic analysis for all stages in the BTC and ATC and provided a comparison of traffic volumes processed by stage. We used the existing conditions VISSIM model provided by RIDOT as a baseline for both the BTC and ATC construction stages. The traffic volumes processed in the ATC stages are comparable to the respective BTC stages (i.e., BTC Stage 1 is the same as ATC Stage 5). We also have provided a summary of traffic volumes and queues entering I-195 westbound via the Pawtucket Avenue, Broadway, and Taunton Avenue/Veterans Memorial Parkway/ Warren Avenue on-ramps.
Additionally, it appears that the temporary barrier locations for the revised construction staging may not provide access to all girder lines for jacking and repair operations. The DB Team is encouraged to verify that all work required by this RFP is viable under the proposed construction staging. Any revisions needed to staging and associated additional costs will be the responsibility of the DB Team.	We have slightly modified the overall construction staging to accelerate Gano Street Off-Ramp rehabilitation and realigned the attenuator at this ramp in Phase 1A to assist in providing the work zones needed for jacking and repair modifications. This overall staging modification still maintains the overall goal of this ATC to open Waterfront Drive early to provide earlier access to East Providence and Providence's East Side.

Waterfront Drive Bridge will be constructed in a single phase, while keeping all ramp traffic open.

BTC



ATC



ATC 2 Waterfront Drive Modifications to Avoid Utilities

ATC 2 reconfigures Waterfront Drive and the new Waterfront Drive off-ramp with an adjusted horizontal and vertical alignment, minimizing risk to RIDOT and schedule while saving RIDOT significant Force Account costs of Valley Street utility relocations beneath the new off-ramp. Additionally, the modified ramp geometry improves intersection safety by providing a channelized right turn movement at the proposed intersection.

We have adjusted the width of the ramp from our Final ATC to provide 28 feet as requested to allow for future expansion to two lanes.

Benefits

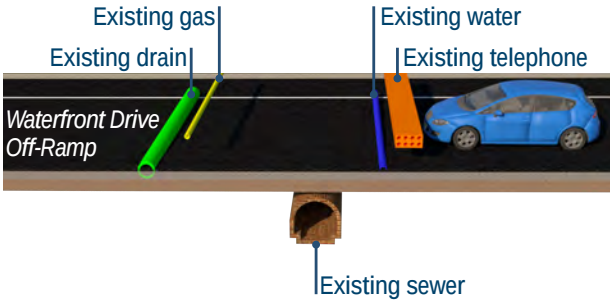
- ✓ **Improves intersection safety by providing a channelized right turn movement at the proposed intersection.**
- ✓ **Eliminates the need for buried utility relocation work, reducing the overall utility work from an estimated 168 workdays to 130 workdays for the remaining work.**
- ✓ **Saves significant Force Account costs. Utilities avoided include drainage, gas, sewer, water, and telephone.**

Response to Comments

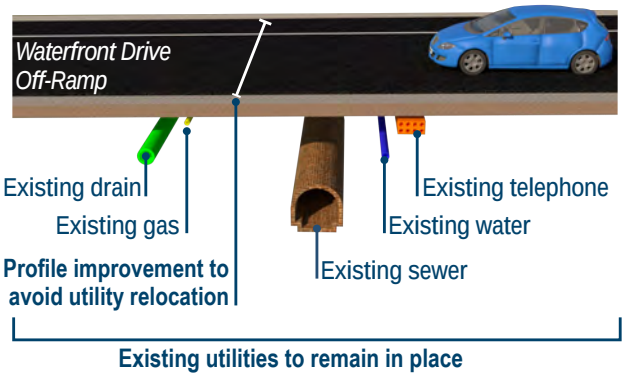
Final ATC 2 Feedback	Response to Feedback
The BTC provides a ramp width from 28 feet to allow for the potential future widening to provide 2 travel lanes if needed without requiring a new bridge structure. This ATC is being conditionally approved provided the final ramp width is a minimum of 26 feet.	We have provided 28 feet between barriers in our proposed plans.

ATC 2 includes roadway profile enhancements to the Waterfront Drive Off-Ramp, eliminating the need to relocate these utilities.

BTC



ATC Revised Profile



ATC 3 Waterfront Drive Ramp Bridge Modifications

ATC 3 proposes MSE Walls to support a new stub abutment supported span over the new Waterfront Drive off-ramp. By temporarily realigning the existing Taunton Avenue and Veterans Memorial Parkway on-ramps in this area as described by ATC 1, we will be able to open a work zone using SOE to allow for installation of permanent MSE retaining walls and the new simple span bridge in a single phase, eliminating the need for longitudinal construction joints and simplifies the superstructure framing.

Benefits

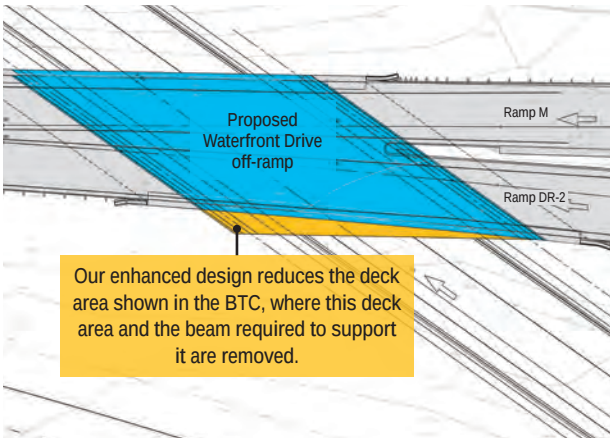
- ✓ **In conjunction with ATC 1, the new bridge will be constructed in a single phase, off the project's critical path, reducing construction duration from 486 to 184 Calendar days. This allows this new ramp to be opened prior to the restriction/closure of the Gano Street Off-Ramp.**
- ✓ **Reduced structural footprint of the new bridge superstructure, eliminating a beam line and deck.**

Response to Comments

Final ATC 3 Feedback	Response to Feedback
Approved—no feedback	

ATC 3 allows the new Waterfront Drive bridge and approach walls to be constructed in a single phase as well as reduces the new bridge superstructure footprint.

New Waterfront Drive bridge and approach walls



ATC 4 Gano Street On-Ramp to I-195 Option 1

ATC 4 realigns Gano Street, the bikeway, and the new Gano Street On-Ramp to reduce initial construction and long-term maintenance costs to RIDOT, while still maintaining the sufficient acceleration and gap acceptance length and providing an increased design speed of 40 mph, achieving the required goals of the INFRA Grant. Gano Street will be relocated to pass under Washington Bridge Span 3 to tie into existing India Street to the south, while the bikeway is realigned to follow along the river. Utility relocation is minimal and utility access is maintained under the new Gano Street On-Ramp Bridge to I-195.

This ATC significantly improves traffic conditions on Gano Street. The existing Gano Street off-ramp signal is maintained and retrofitted to add bike/pedestrian accommodations. This ATC improves the access from the heavier volume Gano Street Southbound to I-195 via a right turn rather than the BTC's left turn to improve safety and provide easier access to the higher volume of users. The 900+ passenger cars will make a right turn onto the relocated on-ramp like they do today. The level of service at the ramps will go from a projected LOS E/F to a LOS A/B while offering fewer conflicts between pedestrians and vehicles and reducing the risk for broadside crashes.

The relocated Gano Street on-ramp also provides the opportunity to straighten the alignment of the on-ramp to provide an increase in design speed from 25 MPH to 40 MPH. The improved geometry allows for the removal of the S-curve on the BTC on-ramp and the substandard lane shift on I-195 Westbound while maintaining sufficient acceleration length and gap acceptance length for the merge of the on-ramp and I-195 Westbound.

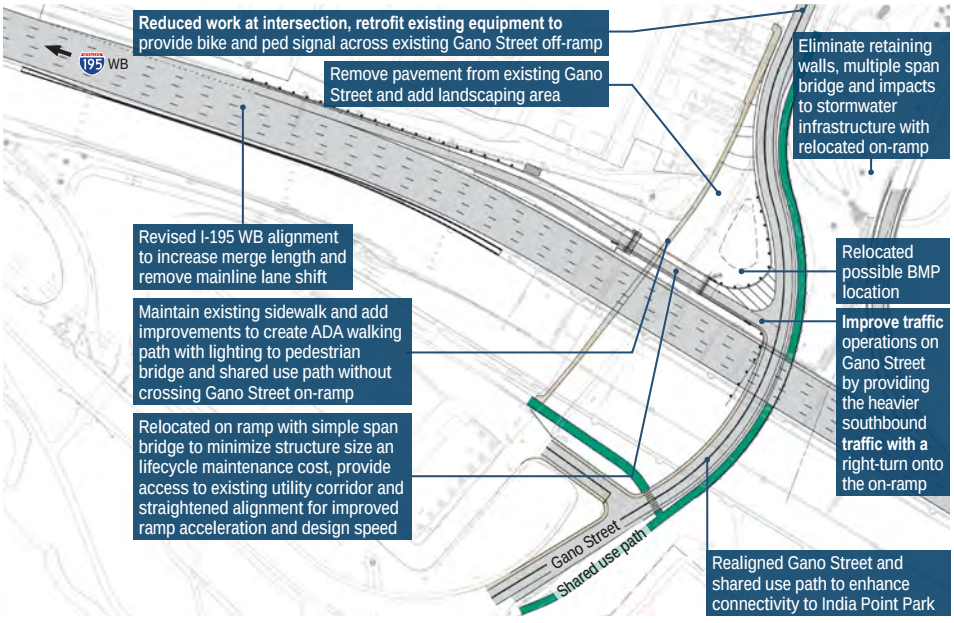
Benefits

- ✓ **Improve traffic operations at Gano Street by providing the heavier southbound traffic with a right turn on the new on-ramp.**
- ✓ **Reduces initial costs and long-term maintenance costs for the new on-ramp, while still meeting the traffic safety improvements of the INFRA Grant.**
- ✓ **Simple span precast concrete arch units are simpler to erect than the BTC's three-span curved girder framing.**
- ✓ **Avoids relocation of the existing utility pole between the existing off-ramp and new on-ramp, eliminating the potential for third party impact at this location.**
- ✓ **Fewer vehicles queued up at the traffic light at Gano Street results in reduced greenhouse gas emissions, an environmental improvement from the BTC.**
- ✓ **Keeping the bikeway along the river rather than beneath an overhead bridge provides a more rider-friendly experience with a more natural view-scape and reduced noise level than the final condition in the BTC.**
- ✓ **The relocation of the on-ramp away from the existing off-ramp maintains today's bikeway crossing, improving bicycle and pedestrian safety by decreasing the BTC's crossing length.**
- ✓ **Avoids construction of a bridge pier over the NBC Tunnel Overflow and potential conflict with pile driving activities.**

Response to Comments

Final ATC 4 Feedback	Response to Feedback
Consideration should be given to minimizing the span length of the proposed bridge to the maximum extent practicable, while maintaining pedestrian access and minimizing required utility relocations.	The proposed span length and bridge type has been modified to an approximately 42' precast concrete arch span to further reduce RIDOT's initial and long-term infrastructure maintenance costs. Pedestrian access is maintained.
A profile for the relocated shared use path was not provided. Gano Street has a proposed maximum grade of 5.76%. The maximum profile grade for the shared-use path should be 5% or less. If possible, the shared use path should have a different profile along the new Gano Street section.	The maximum grade of the shared-use path is 5% or less and the shared-use path profile differs from the Gano Street profile (slightly lower where under Washington Bridge).
Strongly suggest to include truck aprons to reduce operating speeds and to reduce the possibility of the intersection becoming a 2-lane entry from Gano St.	Truck aprons have been added.
Cross walk should be considered at Wickenden St. similar to ATC 10.	Connectivity to the bikepath is provided via signalized crosswalks at the Gano Street and Trenton Street intersection, in which sidewalk connectivity along the west side of Gano Street is maintained to India Point Park. Introducing a mid-block crosswalk is not desirable at this location due to the close proximity to the traffic signal.
Upgrades to ped/bike signals at Trenton Street (APS, LPI, NTOR) shall still be provided through coordination with RIDOT and the City of Providence.	Pedestrian accommodations will be added as a retrofit to the existing signal equipment.
Overall, this ATC is considered preferable to ATC 10.	Thank you for your feedback. ATC 10 has been withdrawn.

ATC 4 realigns Gano Street, the bikeway, and the new Gano Street On-Ramp to reduce initial construction and long-term maintenance costs to RIDOT



ATC 8 Washington Bridge Spans 1–4 Modifications

ATC 8 modifies the Washington Bridge widening, using a new steel beam-supported deck in spans 1–3 and extending the existing deck overhang in span 4 to provide the minimum 68 feet required between barriers. The existing beam in span 4 will be load rated to ensure HL-93 capacity is provided. Additionally, the new beam line in spans 1–3 will be oriented with shiplap joints at the existing expansion joints. At link slab retrofitted fixed joints, the beam will be continuous. A new column will be provided in span 1 to support this new widened framing and existing piers 1–3 will be retrofitted to support this new beam line. Due to the removal of the existing arch loading to the substructure, this configuration will lighten the overall loads to the substructure and eliminates the need for supplementing piles at existing supports. This ATC avoids in-water work, making this project more easily permittable. Also, there is a slight reduction in impervious area from this ATC's reduced widening that will slightly decrease the amount of associated stormwater treatment required.

This ATC eliminates the fracture-critical tie-down in the BTC's span 4 and reduces the overall deck, superstructure, and substructure initial and life-cycle future infrastructure costs for the Washington Bridge.

This ATC uses high-capacity drilled micropiles for the new column 1A to mitigate noise and vibration impacts.

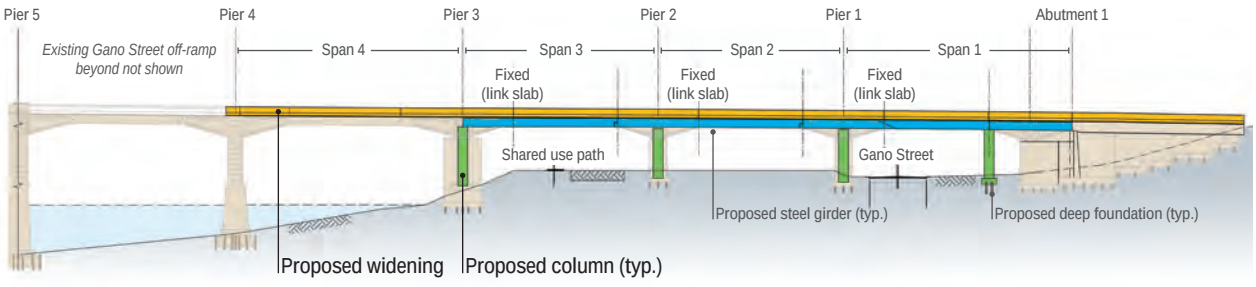
Benefits

- ✓ **Avoids in-water work, minimizing impacts to the Seekonk River.**
- ✓ **Eliminates supplementing existing piles at existing piers.**
- ✓ **Eliminates the BTC's fracture-critical tie-down, providing a more durable support.**

Response to Comments

Final ATC 8 Feedback	Response to Feedback
Approved—no feedback	

ATC 8 includes a new steel beam-supported deck in spans 1-3 and extending the existing deck overhang in span 4 to provide the minimum 68 feet required between barriers.



ATC 9 Washington Bridge Joint Repair

ATC 9 proposes link slabs at existing fixed joints on Washington Bridge. Link slabs at fixed joints will improve the structure's long-term durability while not complicating the existing stresses in the prestressed and post-tensioned beams.

Additionally, at expansion joints for all bridges, we propose Emseal Bridge Expansion Joint System (BEJS) with Emcrete elastomeric concrete header for plow-resistance. This system has been approved on multiple recent RIDOT projects and is easy to install in phases, which this project requires.

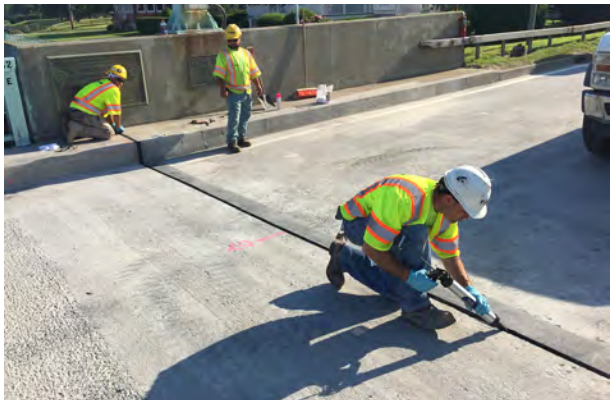
Benefits

- ✓ **Simplifies expansion joint installation on Washington Bridge and provides alternative expansion joints on all bridges on this project.**
- ✓ **Provides link slabs to eliminate all fixed joints on Washington Bridge to improve durability and reduce initial and life-cycle future infrastructure costs.**

Response to Comments

Final ATC 9 Feedback	Response to Feedback
Emseal joints are preferred over asphaltic plug joints	Emseal joints are provided at all new bridge expansion joints

Aetna Bridge successfully installed link slabs in phases and Emseal BEJS on the Newport Pell Bridge.



Department of Transportation
Two Capitol Hill
Providence, RI 02903

Office 401-222-2450
Fax 401-222-3905

June 1, 2021

Mr. Michael M. Foley
Barletta-Aetna I-195 Washington Bridge North Phase 2 JV
40 Shawmut Rd, Suite 200
Canton, MA 02021

Re: Project No. 7611889 - (CONFIDENTIAL) Final Alternative Technical Concept Submission Determination

Dear Mr. Foley,

The State of Rhode Island Department of Transportation (RIDOT) has reviewed your Final Alternative Technical Concept (ATC) Submissions for the subject project and has offered the comments attached, based on the four (4) possible determinations as stated in Part 1, Section 3.10 of the RFP documents.

Written approval of an ATC and subsequent acceptance by the DB team will constitute a change in the specific requirements of the Contract, if the Proposer chooses to implement the ATC and if the Proposer should be awarded the Contract. During design development, should the Contractor be unable to obtain required approvals from third parties (such as an environmental agency) for any ATC incorporated into the Contract, or if implementation of the ATC otherwise proves to be infeasible, the Contractor will be required to conform to the original BTC requirements, and the State will not grant the Contractor any additional Contract time in which to complete the Project, nor will the State increase the Contract compensation, regardless of when the ATC's implementation proved to be infeasible. RIDOT will also not grant the Contractor any additional Contract time in which to complete the Project, nor will the State increase the Contract compensation for any changes that become necessary to other elements of the project as a result of the implementation of an ATC.

RIDOT's stated comments and/or requests for specified information on the submitted ATCs are for informational purposes only and are not intended in any way as engineering advice or services and are not intended as an express or implied warranty of any kind. RIDOT's comments provided shall not be construed as relieving the Bidder from compliance with the terms and conditions of RFP and/or the contract and the Bidder remains responsible for the design and construction of the Project in accordance with the terms and conditions of the contract including any final approved ATCs. RIDOT reserves all its rights and does not waive the same.

Sincerely,

Anthony M. Pompei, PE, PMP
Project Manager II
Division of Project Management
Rhode Island Department of Transportation

Attachment
cc: DOT: Sammartino, Vadenais; DOA: Hill

Final ATC Review

DB Team: Barletta - Aetna
Designer(s): VHB

ATC No.	Description	*InitialATC Evaluation	Final ATC Evaluation	Final ATC Feedback (Required only for "3" or "4")
ATC 1	Traffic Improvements During Construction	4	3	VISSIM models provided with this ATC were reviewed and found to be able to process approximately 5,900 vehicles per hour (vph) over the Washington Bridge during construction, with long queues observed on Taunton Avenue and Veterans Memorial Parkway on-ramps compared with approximately 6,900 vph under BTC construction stages. The reduced vehicle volume crossing the Washington Bridge may be due to vehicles not being able to enter the system as a result of congestion on the Taunton Avenue and Veterans Memorial Parkway ramps, as well as vehicles on the I-195 WB mainline diffusing when they cannot complete lane changes. The ATC is being conditionally approved provided revised traffic models and staging plans are submitted with the Final Proposal, showing operations equivalent to or better than BTC conditions. The Final Proposal shall include a summary of traffic volumes and queues entering I-195 westbound via the Pawtucket Avenue, Broadway, and Taunton Avenue/Veterans Memorial Parkway/Warren Avenue on-ramps as well as traffic volumes able to be processed across the Washington Bridge under each construction phase. Additionally, it appears that the temporary barrier locations for the revised constrution staging may not provide access to all girder lines for jacking and repair operations. The DB Team is encouraged to verify that all work required by this RFP is viable under the proposed construction staging. Any revisions needed to staging and associated additional costs will be the responsibility of the DB Team.
ATC 2	Waterfront Drive Modifications to Avoid Utilities	4	3	The BTC provides a ramp width from 28 feet to allow for the potential future widening to provide 2 travel lanes if needed without requiring a new bridge structure. This ATC is being conditionally approved provided the final ramp width is a minimum of 26 feet.
ATC 3	Waterfront Drive Ramp Bridge Modifications	1	2	
ATC 4	Gano Street On-Ramp to I-195 Option 1	4	3	Consideration should be given to minimizing the span length of the proposed bridge to the maximum extent practicable, while maintaining pedestrian access and minimizing required utility relocations. A profile for the relocated shared use path was not provided. Gano Street has a proposed maximum grade of 5.76%. The maximum profile grade for the shared-use path should be 5% or less. If possible, the shared use path should have a different profile along the new Gano Street section. Strongly suggest to include truck aprons to reduce operating speeds and to reduce the possibility of the intersection becoming a 2-lane entry from Gano St. Cross walk should be considered at Wickenden St. similar to ATC 10. Upgrades to ped/bike signals at Trenton Street (APS, LPI, NTOR) shall still be provided through coordination with RIDOT and the City of Providence. Overall, this ATC is considered preferable to ATC 10.
ATC 5	Gano Street On-Ramp to I-195 Option 2	4	N/A	ATC Withdrawn
ATC 6	Gano Street On-Ramp to I-195 Option 3	4	N/A	ATC Withdrawn
ATC 7	Washington Bridge Pier Structural Improvements	1	2	
ATC 8	Washington Bridge Span 1-4 Modifications	4	2	
ATC 9	Washington Bridge Joint Repair	4	3	Emseal joints are preferred over asphaltic plug joints
ATC 10	Gano Street On-Ramp to I-195 Option 4	NA	3	RIDOT will have to account for the added risk of the unknown costs associated with the potentially required utility relocations during its review of the final proposal. Overall reduced pedestrian access on the west side of Gano Street is not preferable. A profile for the relocated shared use path was not provided. Gano Street has a proposed maximum grade of 5.76%. The maximum profile grade for the shared-use path should be 5% or less. If possible, the shared use path should have a different profile along the new Gano Street section. Strongly suggest to include truck aprons to reduce operating speeds and to reduce the possibility of the intersection becoming a 2-lane entry from Gano St. Upgrades to ped/bike signals at Trenton Street (APS, LPI, NTOR) shall still be provided through coordination with RIDOT and the City of Providence. Additional pedestrian safety features such as RRFBs, high visibility crosswalk markings, adequate nighttime lighting levels, in-street pedestrian signage, and advanced warning signage are required.

*Initial ATC Evaluation Options

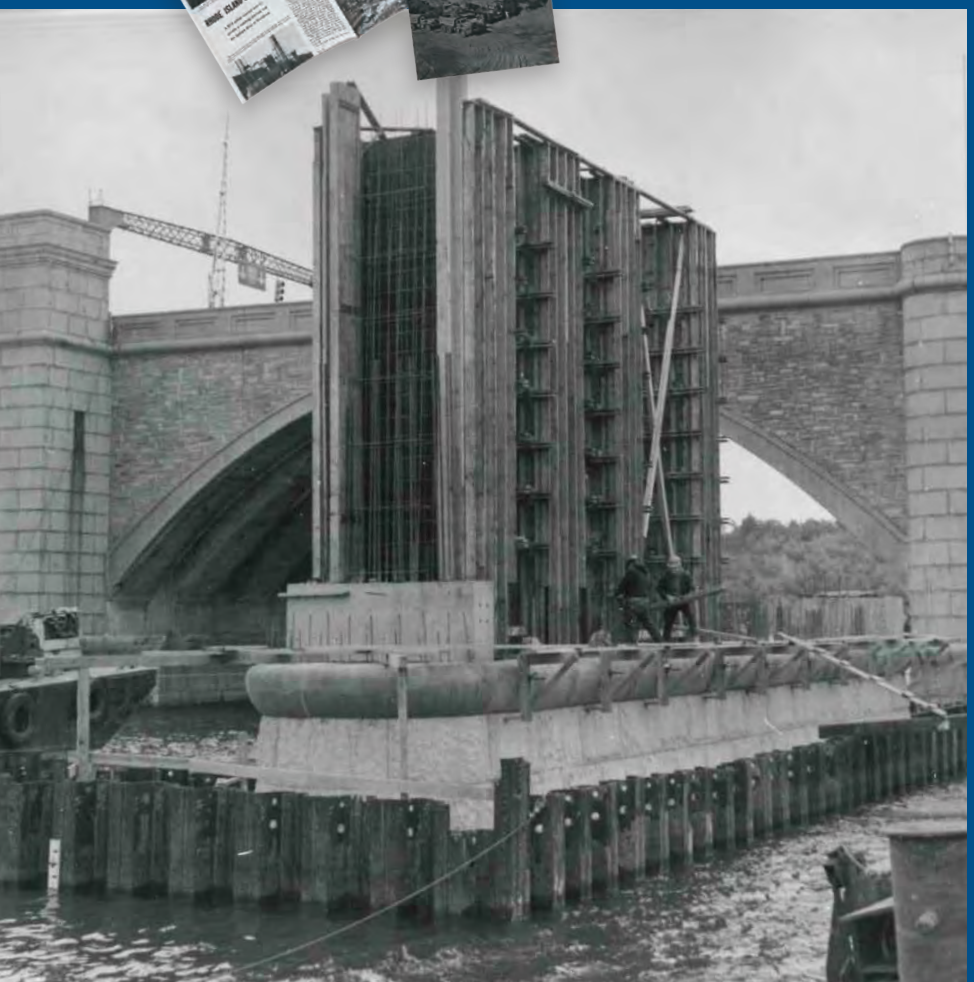
1 The ATC is approved on a provisional basis, subject to the Proposer's further refinement of the ATC in accordance with stated comments from the Group, and subject to the Proposer's submission of supporting calculations regarding the ATC and any refinements of it.
2 The ATC is rejected (an explanation of the rejection will be provided with such notice).
3 The Group requires additional discussion of the ATC at an additional meeting.
4 The State reserves its judgment, pending its receipt from the Proposer of certain specified information that must be included in the Proposer's final submission to the State regarding the subject ATC.

Final ATC Evaluation Options

1 The change proposed is already included in the BTC
2 The ATC is approved
3 The ATC is approved with conditions
4 The ATC is rejected, in which case a summary explanation of its rejection will be provided with notice of the same

2 Relevant Firm Experience and References

In 1968, Aetna Bridge Company led the original $7.9M contract for the construction of Rhode Island's Washington Bridge No. 700. Their work was featured in the March 1968 edition of New England Construction Magazine.



2 Relevant Firm Experience and References

The Barletta/Aetna Bridge Team combines successful bridge design and construction experience, an understanding of the DB process, established local presence, and a proven track record of delivering complex projects on time and on budget. We will leverage our team's collective experience and successes to **minimize risks**, **minimize impacts**, and **maximize value**.

Maximize Value: Bringing Lessons Learned from Proven Experience

- Proven history of delivering complex DB projects on time and on budget—Barletta, Aetna Bridge, and VHB, in various combinations, have delivered nine DB projects together over the last 14 years worth more than $950M
- Experience with design and construction for the Washington Bridge and surrounding project site from every angle—we know the public, travel patterns, and limitations that enable us to develop implementable solutions
- Collectively involved in all of RIDOT's major surrounding infrastructure improvement projects—Henderson Bridge, 6/10 Reconstruction, Viaduct NB, and RhodeWorks Tolling—we can carefully coordinate construction schedules and **synchronize traffic patterns with adjacent** projects
- Successful track record of designing and constructing with accelerated bridge construction (ABC) techniques and materials to minimize schedule and amount of lane/asset closures whenever possible

The Barletta/ Aetna Bridge Team

Barletta Heavy Division (Barletta) specializes in heavy highway and complex bridge construction. Headquartered in Canton, Barletta offers the resources of more than 125 professional staff and hundreds of trades people. Barletta is proud of its successful track record completing some of the most complex and technically challenging DB projects throughout Rhode Island and Massachusetts.

- Lead construction firm for eight DB projects, worth over $950M, including RIDOT's Route 6/10 Interchange and Pawtucket Station DBs and award-winning MassDOT Route 79/I-195 Interchange and Braga Bridge DB Mega Project
- Leading construction of RIDOT's Henderson Bridge Project, designed by VHB
- 14 projects using ABC techniques
- Prequalified by MassDOT, NHDOT, and MBTA in Marine Construction
- 15 years of experience for RIDOT dating back to the Sakonnet Bridge Repair project

Aetna Bridge Company (Aetna Bridge) has successfully completed more than 1,200 bridge and highway projects, becoming one of the most relied-upon and accomplished bridge construction companies in the region.

- In the last 10 years alone, successfully completed over 40 important RIDOT bridge projects worth over $125M
- Contractor for the original Washington Bridge No. 700 construction in 1968
- DB projects for RIDOT include the Route 6/10 Interchange, Wood River Valley Bridge Rehabilitation, Louisquissett Pike Bridge Reconstruction, and Replacement of I-295 Bridges in Johnston
- RhodeWorks Toll Facilities DB team member, providing a direct connection to coordinate between projects
- ABC experience for RIDOT includes Frenchtown Brook Bridge and Warren Ramp Bridge—both used prefabricated bridge components and were completed ahead of schedule and on budget

VHB has been a trusted advisor, consultant, and partner to RIDOT for over 30 years, delivering under repeat on-call contracts for structural, highway, traffic, and environmental services as well as some of RIDOT's most high-profile infrastructure improvement projects.

- 35+ DB projects across the east coast as designer or owner's representative
- For RIDOT, Lead Designer for the Wood River Valley Bridge Rehabilitation and Louisquissett Pike Bridge Reconstruction Projects and owner's representative for the $210M Viaduct NB Reconstruction project

Minimize Impacts: Unparalleled Knowledge of Rhode Island Traffic

VHB has developed detailed simulation models for the east-west traffic along I-195 and the Henderson Bridge/Expressway as well as local arterial traffic in Providence and East Providence. Using these proven models, VHB will develop the design and traffic control plans to minimize traffic disruption.

Figure 2-1: Working Together to Deliver DB

Maximize Value: Barletta/Aetna Bridge/VHB DB Experience

Our Team has been working together, in various combinations, to successfully deliver DBs since 2007, resulting in an effective DB approach built on collaboration and seamless design and construction integration.

2007–2010
MWRA, Blue Hills Covered Storage DB ($37M), Quincy, MA
Barletta and VHB

2010–2012
MassDOT, Hines Bridge Replacement DB ($34M), Amesbury, MA
Barletta and VHB

2011–2014
MassDOT-funded, Bill Delahunt Parkway DB ($34M), Weymouth, MA
Barletta and VHB

2013–2016
MassDOT, Route 79/I-195 Interchange and Braga Bridge DB ($228M), Fall River, MA
Barletta, Aetna Bridge, and VHB

9 DB projects | 14 years | >$950M

Figure 2-2: Design Subconsultants. VHB is supported with a team of design subconsultants specifically chosen for their relevant experience as shown below.

Firm	Role	Qualifications Summary
Applied Bio-Systems, Inc. (WBE/DBE)	SWPPP monitoring, soil evaluations, wetland delineation	» Providing environmental services for the RIDOT Route 37 Bridge Replacement and Rehabilitation project » 35+ years of experience providing environmental consulting and permitting services
Bryant Associates, Inc. (MBE/DBE)	Survey, utilities	» Completed 70+ RIDOT projects over 20 years » Worked with Aetna Bridge and VHB to provide survey services for the RIDOT Wood River Valley Bridge DB
Commonwealth Engineers & Consultants, Inc.	Structural/bridge design	» 30+ years working with RIDOT on bridge preservations, rehabilitations, repairs, replacements » Part of the RIDOT Route 6/10 Interchange DB Team
Creative Environment Corp.	Lighting	» 45 years of delivering MEP/FP engineering and design services » Provided services for the Replacement of Pine Street Bridge No. 548 in Pawtucket
GZA GeoEnvironmental, Inc.	Geotechnical	» Provided geotechnical consulting/design for the RIDOT Washington Bridge No. 200 Reconstruction » 50-year track record of underground engineering excellence, providing services for bridges & highways
Regina Villa Associates, Inc. (WBE/DBE)	Public outreach	» Developed/implemented 200+ public involvement and public relations strategies for clients including RIDOT » Assisting with public outreach support for the Route 6/10 Interchange Reconstruction project
Welch Associates Land Surveyors, Inc. (WBE/DBE)	Survey, utilities	» Completed existing conditions surveys for bridge replacement/ rehabilitation projects, many of which for RIDOT » Performed an existing conditions survey of the Dean Street Bridge No. 776 in Providence

2017–2020
RIDOT, Rehabilitation of the Wood River Valley Bridge DB ($12M), Hopkinton, RI
Aetna Bridge and VHB

2017–Ongoing
RIDOT, Reconstruction of the Route 6/10 Interchange DB ($270M), Providence, RI
Barletta, Aetna Bridge, and VHB

2018–Ongoing
MBTA, Red Line/Orange Line Signals System Upgrades DB ($221M), Boston, MA
Barletta and VHB

2019–Ongoing
RIDOT, Louisquisset Pike Bridge DB ($15M), Lincoln, RI
Aetna Bridge and VHB

MBTA, Rail Bridge Replacements DB ($100M), Various, MA
Barletta and VHB

Figure 2-3: Bringing Over 50 Years of Valuable Knowledge of the Site

1. Washington Bridge No. 700 Original Construction, 1968 (Aetna Bridge)
2. Washington Bridge No. 700 Rehabilitation, Joint Replacement and Repairs, 1995 (VHB) | 1996-1999 (Aetna Bridge)
3. Washington Bridge No. 700 Rehabilitation, Bridge Joint Repairs and Column/Diaphragm Replacement, 2001–2002 (Aetna Bridge)
4. Washington Bridge No. 200 Reconstruction, 2003–2009 (VHB and GZA)
5. Taunton Avenue Ramp Bridge Replacement, 2003–2005 (VHB)
6. East Providence Waterfront Development Plan, 2005 (VHB)
7. George Redman Linear Park & Pedestrian Bridge, 2012–2015 (VHB)
8. Warren Avenue Ramp Bridge Replacement, 2012–2015 (VHB, Part of Pedestrian Bridge Project)
9. Blackstone River Bikeway Segment 1A, 2013-2017 (VHB)
10. Warren Avenue Ramp Bridge 465 Replacement Project, 2014 (Aetna Bridge)
11. East Bay Bike Path Extension to Washington Bridge Linear Park, 2015 (VHB)
12. Bikeway At-Grade Crossings Enhancements, 2018–2019 (VHB)
13. Waterfront Drive Corridor Land Use Build-Out and **Traffic Generation Forecast**, 2019 (VHB)
14. **RhodeWorks Toll Facilities: Design, Build, Operate** & Maintain (Toll Zone 10), Ongoing (Aetna Bridge)

***Maximize Value*: 50+ Years of Site Experience**

An added benefit of our team is the understanding we have gained through various projects on the bridge itself and throughout the project site—dating back to the original bridge construction performed by Aetna Bridge. We will use our knowledge of the structure, ramps, roadways, traffic patterns, and riverfront, to develop a project design that minimizes impacts to traffic and environmental resources. Our deep institutional knowledge of the area will benefit RIDOT by streamlining schedule and minimizing risk or delays, delivering the project on time and on budget.

Figure 2-4: Relevant Project Experience Summary

The table below features a selection of directly relevant team projects, **highlighting project elements as required in the RFP.** Project descriptions for the 10 feature projects are provided on the following pages.

		Client, Project *Location* | Schedule	Value	PROJECT TEAM: Barletta	PROJECT TEAM: Aetna Bridge	PROJECT TEAM: VHB	RFP REQUIREMENTS: Design-Build Bridge & Highway	RFP REQUIREMENTS: RIDOT Bridge & Highway	RFP REQUIREMENTS: Accelerated Bridge Construction	RFP REQUIREMENTS: Prefabricated Bridge Components	RFP REQUIREMENTS: Complex Traffic Control/Phasing	ADDITIONAL RELEVANT PROJECT ELEMENTS: Traffic Operations & ITS	ADDITIONAL RELEVANT PROJECT ELEMENTS: Interchange Modifications	ADDITIONAL RELEVANT PROJECT ELEMENTS: Environmental Controls & Approvals	ADDITIONAL RELEVANT PROJECT ELEMENTS: Bridge over Water	ADDITIONAL RELEVANT PROJECT ELEMENTS: Utility Coordination & Relocation	Major Third Party/ Agency Coordination *(Providence, East Providence, Coast Guard, ACOE, CRMC, RIDEM, MassDEP, FHWA, FTA, and/or Amtrak)*
10 FEATURE PROJECTS	1	**MassDOT, Route 79/I-195 Interchange and Braga Bridge DB** *Fall River and Somerset, MA* | 2013–2016	$228M	●	●	●	✓		✓	✓	✓	✓	✓		✓	✓	Coast Guard, ACOE, MassDEP, FHWA
	2	**MassDOT, Anderson Bridge Rehabilitation** *Boston to Cambridge, MA* | 2015–2017	$25M	●					✓	✓	✓			✓	✓	✓	FHWA, MassDEP
	3	**MassDOT, Derek S. Hines Memorial Bridge DB Replacement** *Amesbury, Newburyport, and Salisbury, MA* | 2010–2012	$34M	●		●	✓			✓	✓			✓	✓	✓	Coast Guard, ACOE, MassDEP, FHWA
	4	**MassDOT-Funded, Bill Delahunt Parkway DB** *Weymouth, Rockland, and Hingham, MA* | 2011–2014	$35M	●		●	✓		✓	✓	✓	✓		✓	✓	✓	Coast Guard, MassDEP, FHWA
	5	**MassDOT, Add-A-Lane Contract V, Interstate 95 (Route 128)** *Needham to Wellesley, MA* | 2014–2019	$186M	●		●			✓	✓	✓		✓			✓	MassDEP, FHWA
	6	**RIDOT, I-295 Bridges 736, 737, and 757 Reconstruction DB** *Johnston, RI* | 2018–2020	$35M		●	●	✓	✓			✓	✓	✓	✓		✓	FHWA, RIDEM
	7	**RIDOT, Henderson Bridge Reconstruction** *Providence and East Providence, RI* | 2020 (Design)	$66M	●	●	●		✓			✓	✓	✓	✓	✓	✓	Providence, East Providence, Coast Guard, CRMC, FHWA
	8	**RIDOT, Replacement of Providence Viaduct Bridge No. 578 (Southbound)** *Providence, RI* | 2008–2012	$67M			●		✓			✓	✓	✓	✓	✓	✓	Providence, Coast Guard, CRMC, FHWA, Amtrak
	9	**RIDOT, Washington Bridge 200 South and Pedestrian Bridge** *Providence, RI* | 2003 (No. 200); 2012 (Ped Bridge)	$66M (Combined)			●		✓		✓	✓	✓	✓	✓	✓	✓	Providence, East Providence, Coast Guard, CRMC, FHWA
	10	**RIDOT, Pell Bridge Interchange Reconstruction** *Newport, RI* | 2020 (Design)	$60M			●		✓			✓	✓	✓	✓		✓	RIDEM, FHWA
ADDITIONAL RELEVANT EXPERIENCE	11	**RIDOT, Reconstruction of the Route 6/10 Interchange DB** *Providence, RI* | 2018–Ongoing	$270M	●	●	●	✓	✓	✓	✓	✓	✓	✓	✓		✓	Providence, RIDEM, FHWA, Amtrak
	12	**MBTA, Rail Bridge Replacements DB** *Various Locations, MA* | 2019–Ongoing	$100M	●		●	✓		✓	✓	✓			✓		✓	MassDEP
	13	**MassDOT, Anderson Bridge Rehabilitation Project** *Boston and Cambridge, MA* | 2012–2016	$25M	●					✓	✓	✓	✓		✓	✓	✓	Coast Guard, ACOE, MassDEP, FHWA
	14	**RIDOT, Louisquissett Pike Bridge DB** *Lincoln, RI* | 2019-Ongoing	$15M		●	●	✓	✓	✓	✓	✓	✓	✓	✓		✓	RIDEM, FHWA
	15	**RIDOT, Rehabilitation of the Wood River Valley Bridge DB** *Hopkinton, RI* | 2017–2020	$12M		●	●	✓	✓			✓	✓		✓	✓	✓	RIDEM, FHWA
	16	**RIDOT, Warren Ave Ramp Bridge Reconstruction** *Providence, RI* | 2014–2015	$2.9M		●			✓	✓	✓	✓			✓		✓	Providence, East Providence, FHWA
	17	**RIDOT, Replacement of Warren Bridge #124** *Warren, RI* | 2002–2006	$15M		●			✓	✓	✓	✓			✓	✓	✓	FHWA, RIDEM
	18	**U.S. Navy, Repairs to Gate One Bridge DB** *Newport, RI* | 2015–2015	$500k		●		✓				✓			✓	✓	✓	Coast Guard, FHWA
	19	**RIDOT, Rehabilitation of Washington Bridge No. 700** *Providence and East Providence, RI* | 1995–1997	$13M		●	●		✓			✓	✓	✓	✓	✓	✓	Providence, East Providence, Coast Guard, CRMC, FHWA, RIDEM
	20	**RIDOT, Replacement of Union Avenue Bridge** *Cranston and Providence, RI* | 2009–2011	$8M		●			✓			✓	✓	✓	✓		✓	Providence, FHWA, RIDEM

Case Number: PC-2024-04526
Filed in Providence/Bristol County Superior Court
Submitted: 10/31/2024 9:36 AM
Envelope: 4861648
Reviewer: Victoria H

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1. Route 79/I-195 Interchange and Braga Bridge DB

Fall River and Somerset, Massachusetts

Client
MassDOT

Team Member(s)
Barletta, Aetna Bridge VHB, RVA

Reference
Amy Getchell, *Project Manager*
MassDOT, District 5
10 Park Plaza
Boston, MA 02116
857.368.9627
amy.getchell@state.ma.us

Year Complete
Design 2015
Construction 2016

Construction Value
$228M

Awards

- ACEC-MA Grand Conceptor Award, 2017 Engineering Excellence
- ENR New England Regional 2017 Best Project, Highway/ Bridges Category
- DBIA New England Silver Award for Best Project 2017
- APWA 2017 National Public Works Project of the Year (>$75M)
- 2016 National AGC Safety Excellence Award—Bridge Division (Braga Bridge)

The scope of this MassDOT DB mega-project consisted of the design and reconfiguration of the Route 79/I-195 Interchange and construction of structural repairs to the Braga Bridge, which carries I-195 over the Taunton River and Route 79. Work on the Interchange portion of the project included replacement of 11 structurally deficient bridges, including elimination of a complex bi-level viaduct separating the City's downtown community from the waterfront.

The rehabilitation of the 1.1-mile Braga Bridge (I-195 over the Taunton River connecting Fall River and Somerset) was led by Aetna Bridge, who performed $30M of work as a subcontractor to the Barletta Team.

Despite working through one of the most severe winters on record, the project reached Full Beneficial Use **77 days early** and Substantial Completion **211 days early**.

Prefabricated Bridge Components

- ABC methods included precast concrete elements on critical path bridges and structures as well as prefabricated wall and barrier systems instead of CIP walls throughout the project.
- The most complex operation on this project was the heavy lift of the prefabricated bridge catcher beams at the five "pin and hanger" connections in the girder spans. To expedite construction, the catcher beams—each approximately 135,000 lbs—were prefabricated off site.

Maintenance and Protection of Traffic

- Designed interim and final traffic-related elements and traffic management during construction through the development of temporary traffic control plans.
- Designed and implemented Real Time Traffic Management System (RTTM); seven origin/destination signs with real time traffic route data were designed and installed. The data for the travel times was obtained by 28 readers placed throughout the corridor. The RTTM data was available for viewing and monitoring online.

Lessons Learned—*Minimize Risk*

Our Team's DB experience allowed us to effectively sequence design packages and construction activities to mitigate schedule risk and minimize construction duration. The use of early release design and fabrication packages advanced critical path activities as the final design evolved. Above all else, successful partnering and structured communications with the owner and local stakeholders allowed the team to rapidly respond and adapt to unforeseen project changes, resulting in project completion ahead of schedule and under budget.

2. Anderson Bridge Rehabilitation

Boston to Cambridge, Massachusetts

Client
MassDOT

Team Member(s)
Barletta

Reference
John McInerney, PE, *District 6 Highway Director*
MassDOT, District 5
10 Park Plaza
Boston, MA 02116
617.593.5554
john.mcinerney@state.ma.us

Year Complete
Design 2015
Construction 2017

Construction Value
$25M

This project consisted of structural repairs and rehabilitation of the historic Larz Anderson Bridge, which carries North Harvard Street over the Charles River; a critical transportation link connecting Cambridge and Boston. The bridge carries three lanes of traffic, a bicycle lane, two sidewalks, and utilities, including a water main. Intersections at both approaches to the bridge were modified to accommodate the roadway changes.

Work included the complete removal and replacement of the side spandrel walls, masonry sidewalk parapets and cap stones, sidewalk, access stairway, approach walls, roadway surface and gravel fill. Concrete repairs to the existing main arches were performed to preserve, reuse and place them back in service as main load-carrying structural elements. Lighting and utility upgrades on the bridge superstructure, and landscape improvements adjacent to the bridge were performed.

Construction operations required working from barges in the Charles River to perform the demolition of the existing structure and the installation of cofferdams, concrete and stone masonry abutments and piers, and the repair/rehabilitation of existing stone masonry abutments.

ABC Construction—Installation of a precast section of the arch

Prefabricated Bridge Components

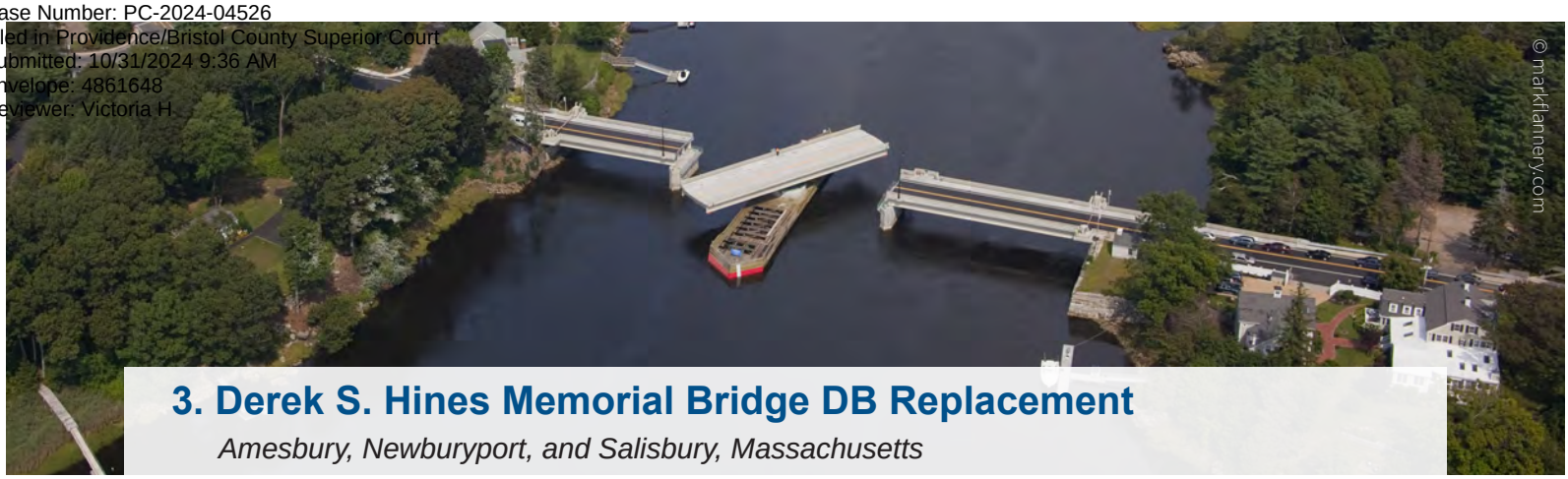
» Precast elements were heavily utilized, including architectural precast facades.

Maintenance and Protection of Traffic

» Construction staging, maintenance of traffic, and traffic detours were used to perform construction while allowing continued use of the bridge.

Lessons Learned—*Minimize Risk*

MassDOT issued two major changes for additional work, extending the contract 24 months; Barletta performed acceleration and finished two months earlier than the Milestone Completion Date. Barletta also resequenced certain aspects of the work to provide increased traffic flow prior to the Milestone Completion.



3. Derek S. Hines Memorial Bridge DB Replacement

Amesbury, Newburyport, and Salisbury, Massachusetts

Client
MassDOT

Team Member(s)
Barletta, VHB

Reference
Scott Kelloway, PE, *Assistant Construction Engineer*
MassDOT ABC Program
519 Appleton Street
Arlington, MA 02476
781.641.8496
scott.d.kelloway@state.ma.us

Year Complete
Design 2011
Construction 2012

Construction Value
$34M

This DB project encompassed the complete replacement of the Hines Memorial Bridge, a moveable swing span bridge that carries a major roadway over the Merrimack River. Work at this location on the Merrimack is challenging due to the combination of tidal influence (nine-foot tide change) and river flows of up to eight knots. Scour countermeasures were required to protect the bridge abutments and piers. Working within the navigable channel was required to demolish the existing bridge and foundations and install cofferdams, deep foundations, concrete and stone masonry abutments and piers, and repair/rehabilitate existing stone masonry abutments.

The bridge design and reconstruction included replacement of the swing span and both approach spans, replacement of the south abutment and intermediate piers, seismic retrofit of the north abutment, replacement of mechanical and electrical systems, rehabilitation of the existing tender house, and associated roadway approach work.

During construction of the foundations, Barletta encountered differing subsurface site conditions. **The Barletta/VHB Team was able to make design changes, resequence the work, recover schedule, and still complete the bridge seven months ahead of the original contract schedule.**

Marine Work—Barletta equipment excavating from a barge

Prefabricated Bridge Components

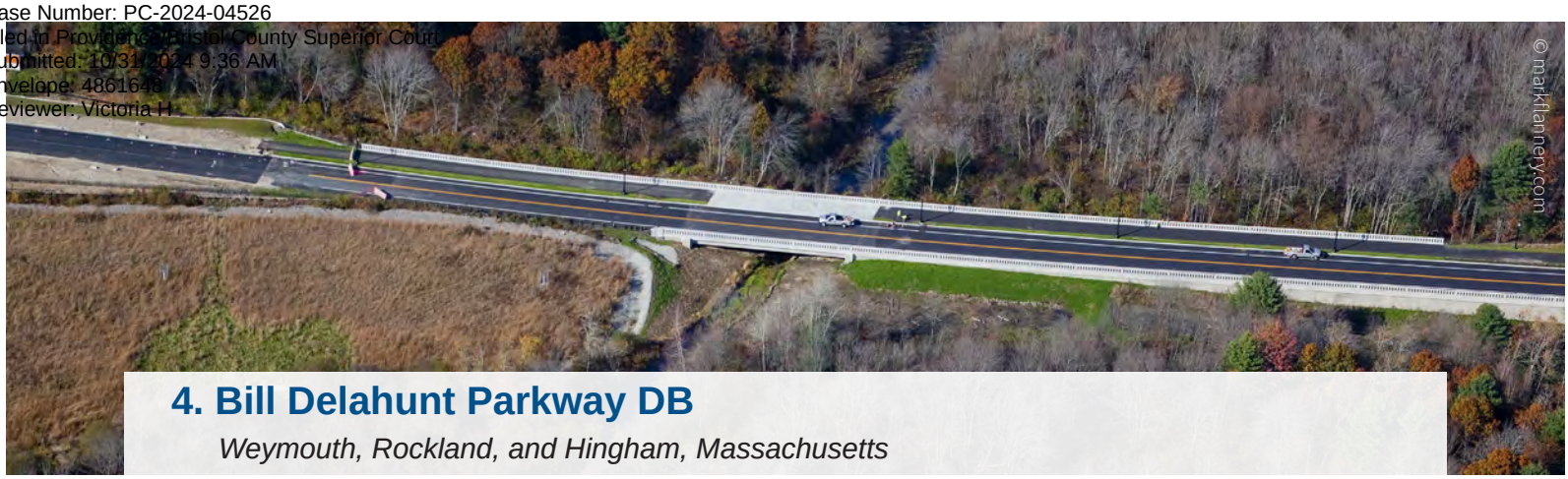
» Sections of the new bridge spans were pre-assembled for accelerated erection at the jobsite

Maintenance and Protection of Traffic

» Maintained comprehensive traffic management plans and detours throughout the project, while Main Street over the Merrimack River was closed during construction

Lessons Learned—*Minimize Impacts*

The project schedule and sequence of work operations were arranged and completed considering weather, tides, permits, and in-water time of year environmental restrictions.



4. Bill Delahunt Parkway DB

Weymouth, Rockland, and Hingham, Massachusetts

Client
South Shore Tri-Town Development Corporation, with MassDOT oversight

Team Member(s)
Barletta, VHB

Reference
Jim Young, *Project Manager*
223 Shea Memorial Drive
South Weymouth, MA 02190
781.682.2187
young@southfieldra.com

Year Complete
Design 2012
Construction 2013

Construction Value
$35M

Awards

- ACEC, Engineering Excellence 2015
- CMAA, Infrastructure Project of the Year 2013

This Public/Private DB project involved the design and construction of a new cross-base parkway with utilities, associated with the redevelopment of the former South Weymouth Naval Air Station.

The parkway included three pre-stressed/precast concrete box girder bridges, two prefabricated pedestrian bridges, a bicycle lane, and MSE retaining walls. Two pedestrian bridges crossed existing wetland areas. VHB designed these bridges to allow the foundations to remain outside of the fragile natural areas. The two-piece pedestrian bridge was spliced together on-site and installed with the use of a tandem crane pick.

The project also included a stormwater management system that incorporated constructed wetlands designed to provide natural water quality treatment in a sensitive environmental area.

Complex utility relocations and extensive environmental permitting coordination with multiple municipal conservation commissions, the U.S. Environmental Protection Agency, U.S. Navy, Natural Heritage and Endangered Species Program, and MassDOT were required.

ABC Construction—Tandem cranes preparing to place a section of a prefabricated bridge

Prefabricated Bridge Components

- Three prestressed/precast concrete box girder bridges, and two prefabricated pedestrian bridges

Maintenance and Protection of Traffic

- Maintained traffic management during construction on Trotter Road in Weymouth, Weymouth and Hingham Streets in Rockland, and the ramps from Hingham Street to Route 3

Lessons Learned—*Minimize Risk*

During the demolition of an existing building, structural differences were discovered, requiring an immediate solution to keep the project on schedule. Barletta and VHB revised the demolition sequence with no negative impact to the progress of the work or loss of time.

5. Add-A-Lane Contract V, Interstate 95 (Route 128)

Needham to Wellesley, Massachusetts

Client
MassDOT

Team Member(s)
Barletta, VHB

Reference
John McInerney, PE,
MassDOT, *District 6 Highway Director*
10 Park Plaza
Boston, MA 02116
617.593.5554
john.mcinerney@state.ma.us

Year Complete
Design 2014
Construction 2019

Construction Value
$186M

Awards

» ACEC, 2018 Engineering Excellence Award

Barletta applied innovative traffic management and staging to enable project completion 136 days early.

This complex four-mile widening project to add one travel lane and NB and SB shoulders included construction of new interchange ramps and a signalized intersection, two new collector-distributor roadways, modifications of existing interchange ramps, and modification of an existing interchange including installation of two signalized intersections.

Bridge work involved demolishing one MBTA bridge structure, installing one new bridge structure, removing and reconstructing three bridge structures, and widening an historic arched bridge structure. Additional work included relocations of water mains, sewer lines, and relocating existing and installing new ITS equipment. Barletta installed more than nine miles of drainage pipe and 870 associated drainage structures.

In a single, continuous operation over a weekend, Barletta completed demolition of the existing Highland Avenue Bridge over I-95. VHB developed the traffic management plan, detouring traffic off of Highland Avenue around the existing bridge while I-95 under the bridge was closed to ensure public safety during demolition. The bridge demolition operations were completed **29 hours ahead of schedule.** The Project attained Substantial Completion **136 days early.**

Prefabricated Bridge Components

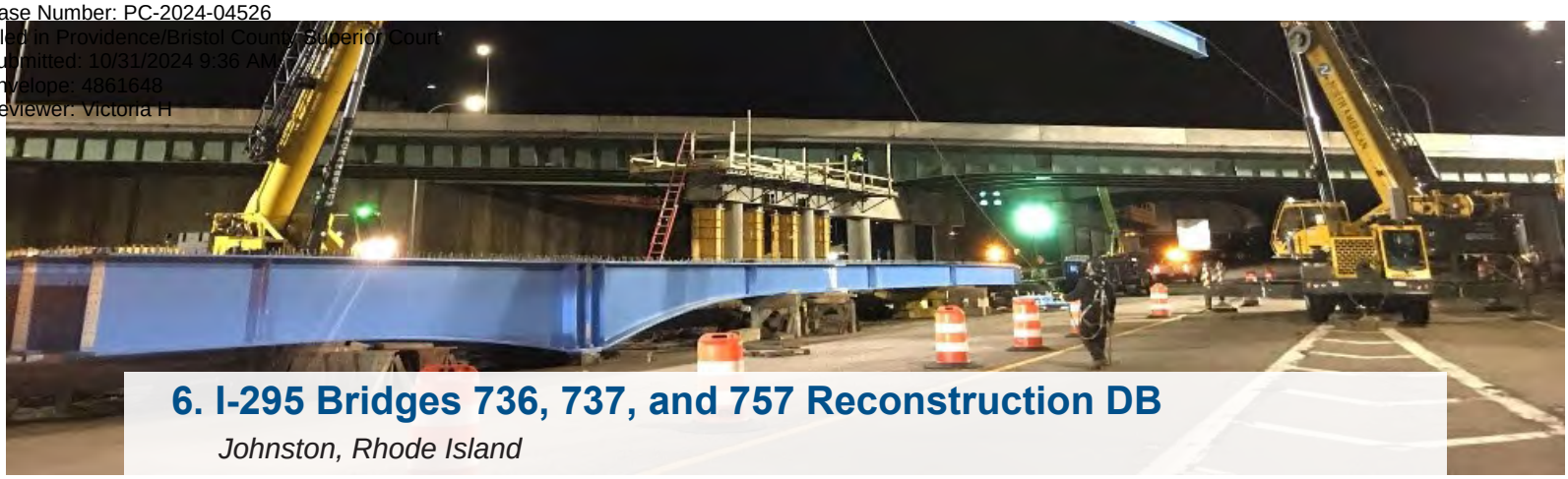
» Precast bridge abutments on the Route 9 Bridge

Maintenance and Protection of Traffic

» Implemented construction staging, maintenance of traffic, and traffic detours to perform full-depth construction along portions of the mainline and existing ramps during 20 weekend diversions and nightly lane closures, while allowing continued highway use
» Diverted the entirety of Route 95/128 around the Highland Avenue Bridge over two days to perform demolition of the existing structure

Lessons Learned—*Minimize Risk*

Proactive, early site review and identification of discrepancies enabled the implementation of schedule-saving design modifications. The 24-inch gas main was not as shown on the contract drawings. Barletta had the proposed drilled shaft foundation for the Route 9 Bridge redesigned and developed a mini-pile supported foundation to mitigate a one-year utility delay.



6. I-295 Bridges 736, 737, and 757 Reconstruction DB

Johnston, Rhode Island

Client
RIDOT

Team Member(s)
Aetna Bridge and VHB

Reference
Robert Rocchio, *Chief Engineer*
of Infrastructure
Two Capitol Hill
Providence, RI 02903
401.563.4000
robert.rocchio@dot.ri.gov

Year Complete
Design 2018
Construction 2020

Construction Value
$35M

Awards

» CREST Award 2020 (Contractors Recognizing Excellence in Safety Training)

The I-295 Bridge DB Contract 2 included complete design drawings issued for construction, regulatory permits, utility coordination, demolition of both 736 bridges and replacement with backfill and full-depth pavement, superstructure demolition and replacement of 737 and 757 bridges, roadway improvements, and substructure repairs.

Bridges 73701 and 73721, each a two-span bridge approximately 240 feet long, were demolished in two phases, limiting the impact to local traffic. New steel girders were erected to support a new eight-inch reinforced concrete deck with medians and parapets. To increase the load capacity of the concrete piers, 19 three-foot diameter reinforced concrete columns were added. All concrete end-post, approach slabs, and backwalls were also reconstructed

Bridges 75701 and 75721 are each a two-span bridge approximately 150 and 170 feet long, respectively. These bridges were demolished and reconstructed in the same manner as the 737 bridges, receiving a new deck, medians, parapets, end-posts approach slabs and backwalls. To increase the load capacity of the concrete piers, 14 three-foot diameter reinforced concrete columns were added, in addition to a reinforced concrete knee-wall. **This project was completed on time and on budget.**

As a subconsultant, VHB provided soil erosion and sediment control (SESC) monitoring and compliance reporting during the construction phase of this project.

Maintenance and Protection of Traffic

» Extensive support to subcontractors through traffic control on the divided highway and ramp system and coordination with public entities to maintain motorist safety and ensure the steady flow of vehicles

Lessons Learned—*Minimize Impacts*

Managed the design, permitting, and construction in cooperation with RIDOT, RIDEM, and other agencies to meet the contractual completion date. Implemented several Value Engineering proposals (e.g., alternate median reconstruction, alternate bridge waterproofing, revised phasing for Bridge 737, revised TMP for 295 SB, etc.), which streamlined the project schedule, minimized traffic impacts, and provided costs savings to the State.

7. Henderson Bridge Reconstruction

Providence and East Providence, Rhode Island

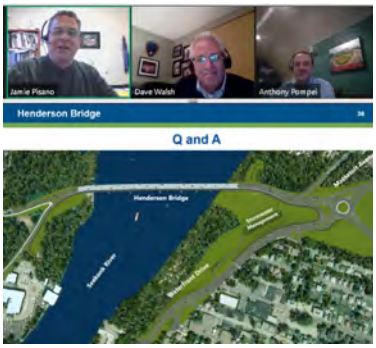
Client
RIDOT

Team Member(s)
VHB, Barletta, Aetna, GZA, Welch, CEC

Reference
Anthony Pompei, *Project Manager*
Two Capitol Hill
Providence, RI 02903
401.265.4500
anthony.pompei@dot.state.ri.us

Year Complete
Design 2020
Construction Ongoing

Construction Value
$66M



VHB recently assisted with a virtual public meeting for Henderson Bridge with more than 300 attendees and 200 comments asked and answered

Henderson Bridge is a critical connection between Providence and East Providence. The six-lane bridge serves less traffic than it was originally designed to accommodate while also representing 12% of RIDOT's Structurally Deficient bridge inventory by deck area.

RIDOT turned to VHB to fast-track this replacement on an aggressive design schedule with an improved connection alternative that meets the goals of both municipalities, while providing RIDOT with a right-sized, lower-maintenance structure. The new superstructure will be constructed using weathering steel to minimize future maintenance costs and the new approaches use engineered lightweight fill to reduce substructure ground improvements.

The new bridge will feature a separated multiuse path that will connect on-street bicycle networks and roadway and traffic calming improvements. The project will also open up approximately 33 acres of land along the river for potential economic and recreational development.

VHB led environmental services, including permitting, wetland delineation, hydraulic analysis, stormwater improvements, and a hazardous materials assessment and investigation.

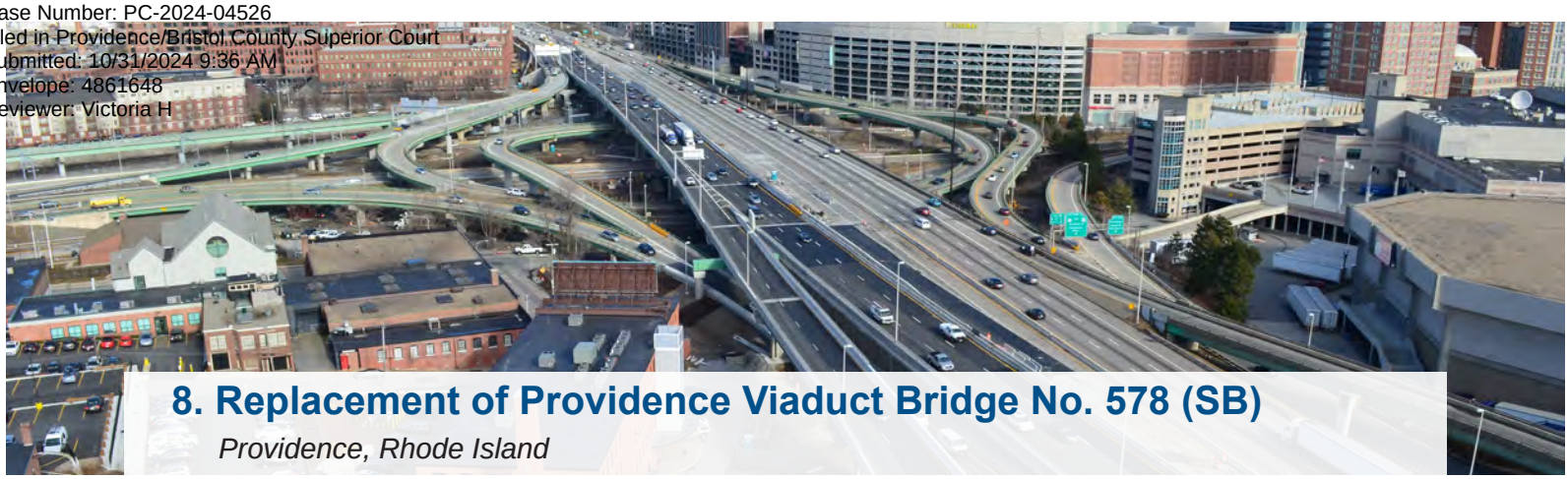
Barletta is performing the construction of this project; the initial major traffic shift has been completed and Phase 2 of the bridge deck demolition is underway.

Maintenance and protection of traffic

» Performed comprehensive traffic analysis for each construction phase and implemented new traffic patterns (new southbound North Broadway access to the Henderson Bridge) to **minimize disruption to traffic during construction**

Evidence of Good Performance—*Minimize Impacts*

Advertised project within one year, maintaining RIDOT's aggressive design schedule. Developed a streamlined permitting strategy and project scope definition with CRMC. VHB is developing a stormwater management program to address water quality to the maximum extent practicable to minimize design time.



8. Replacement of Providence Viaduct Bridge No. 578 (SB)

Providence, Rhode Island

Client
RIDOT

Team Member(s)
VHB, GZA, CEC

Reference
Robert Pavia,
Senior Civil Engineer
Two Capitol Hill
Providence, RI 02903
401.563.4079
robert.pavia@dot.state.ri.us

Year Complete
Design 2012
Construction 2019
(NB Phase: Ongoing)

Construction Value
$67M

Awards

» 2017–Engineering Excellence Gold Anchor Award, ACEC—RI

VHB provided inspections, evaluations, and design services for the replacement of the Providence Viaduct, which carries busy I-95 over the Woonasquatucket River, Amtrak Northeast Corridor, and local city streets through the heart of downtown Providence. The bridge's deck and girders are aging, requiring replacement to accommodate the approximately 166,000 vehicles per day on I-95.

VHB developed rehabilitation options for the bridge superstructure and substructure and developed geometric improvement recommendations for the approaches and adjoining ramps. The SB phase was constructed in 2017. VHB facilitated construction of the new, wider SB bridge alongside the existing interstate without traffic interruptions. Associated ramps were temporarily relocated and permanently replaced as part of this complex design. Anticipated settlement was mitigated by including wick drains designed to accelerate retaining wall construction and minimize substructure costs.

RIDOT chose a design-build procurement for the NB replacement. VHB prepared preliminary designs, including detailed construction staging and traffic maintenance plans and cost estimate. We also assisted RIDOT throughout the procurement phase and will continue through NB construction.

Prefabricated Bridge Components

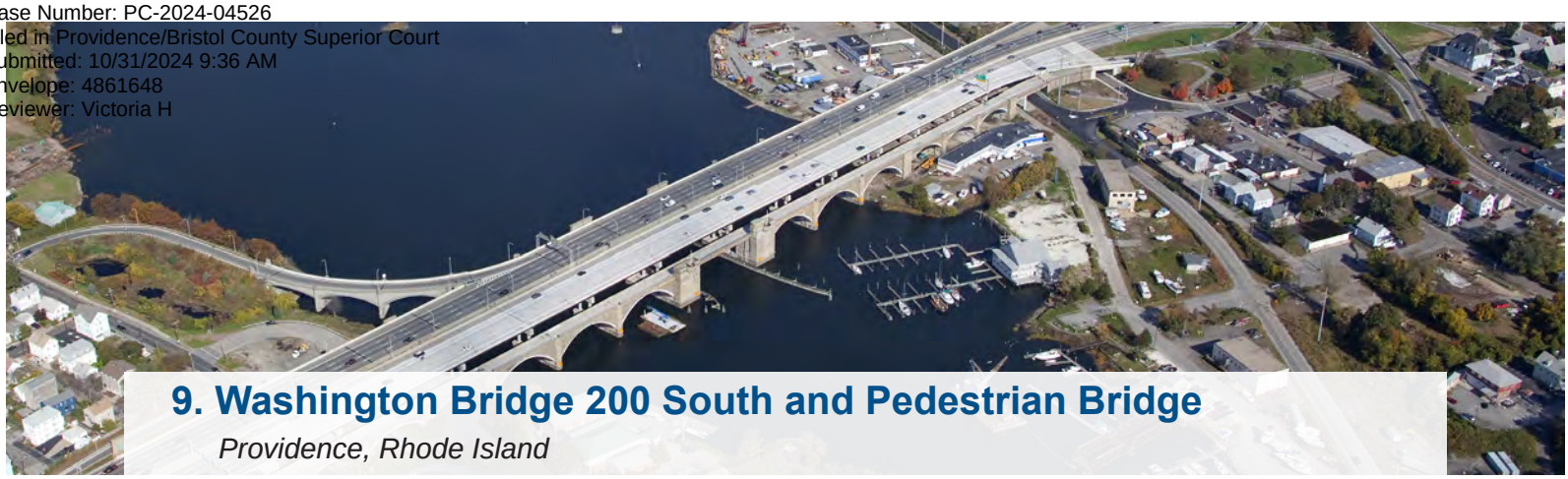
» ABC design elements included precast moment slabs, MSE walls, and precast pier and abutment elements.

Maintenance and protection of traffic

» Developed traffic control plans to maintain existing traffic flow and minimize delays during construction
» Developed a traffic congestion solution to improve operation of the Civic Center Interchange ramp system as well as safety and geometric improvement recommendations for the approaches and adjoining ramps.

Evidence of Good Performance—*Minimize Risk*

Despite the complexity of the project and the fact that the interchange handles 200,000 vehicles daily, as RIDOT's desiger, VHB kept to the project construction schedule by rapidly approving shop drawings and answering contractor RFIs in an expedited and prioritized manner.



9. Washington Bridge 200 South and Pedestrian Bridge

Providence, Rhode Island

Client
RIDOT

Team Member(s)
VHB, GZA

Reference
Robert Pavia, *Senior Civil Engineer*
Two Capitol Hill
Providence, RI 02903
401.563.4079
robert.pavia@dot.state.ri.us

Year Complete
Design 2003 & 2012
Construction 2009 & 2015

Construction Value
$43M & $22M

Awards

- 2016–Project of the Year, Historical Restoration, American Public Works Association
- 2016–The Rhody Award, for Historic Preservation, Preserve Rhode Island and the RI Historical Preservation & Heritage Commission

Constructed in 1930, the heavily traveled historic Washington Bridge 200 was rapidly deteriorating. RIDOT called on VHB to conduct a detailed inspection and evaluation to determine the condition and repairability of the existing arches, prepare rehabilitation plans, and provide construction support. After extensive analyses, it was determined the concrete strength in the arches did not satisfy current criteria. RIDOT amended VHB's contract to replace the bridge.

VHB's bridge replacement removed four concrete arches, was founded on drilled shafts, and incorporated portions of the existing substructure to keep the project within budget. VHB developed an internal column supported superstructure to replace the pedestrian/bicycle portion of the bridge and fiber wrapped the concrete arches to maintain appearance. The project required a NEPA Categorical Exclusion and permits from the Army Corps of Engineers, US Coast Guard, RIDEM, CRMC, and the Historic Preservation and Heritage Commission.

The project was separated into two parts, Washington Bridge No. 200 and the Pedestrian Bridge. RIDOT advanced the Bridge No. 200 reconstruction in 2003. Subsequently, when funding was available, RIDOT directed VHB to prepare the Pedestrian Bridge project—converting of a portion of the bridge to a multiuse path and linear park. VHB's design eliminated deck joints to improve the long-term durability and restored the bridge to highlight significant architectural elements.

Prefabricated bridge components

- The Pedestrian Bridge included precast/prestressed concrete AASHTO I-beams in two spans at the widened plaza spans at center of the bridge. The new I-beams match adjacent existing beams to create the widened span.

Maintenance and protection of traffic

- VHB realigned Washington Bridge using the vacant area between Bridges 200 and 700 which allowed for phased construction of a completely new structure and maintained the existing number of lanes throughout construction.

Lessons Learned—*Minimize Risk*

VHB strategically met with RIDOT and SHPO to develop an approach to historic preservation that created an exterior bridge facade that was identical to the original and saved RIDOT cost by applying this historic facade replication to the visible, exterior ped/bike structure and not the entire inner bridge structure.

10. Pell Bridge Interchange Reconstruction

Newport, Rhode Island

Client
RIDOT

Team Member(s)
VHB

Reference
Jody Richards, *Project Manager*
Two Capitol Hill
Providence, RI 02903
401.265.4000
jody.richards@dot.state.ri.us

Year Complete
Design 2020
Construction 2024 (anticipated)

Construction Value
$60M

VHB worked with RIDOT to complete the reconstruction of the Pell Bridge Interchange, which involves the reconfiguration of the bridge ramps on the Newport side of Pell Bridge and construction of a new roadway network including intersection improvements and multimodal alternatives to improve traffic circulation and connections while providing land area for redevelopment.

The proposed improvements will require less roadway and bridge infrastructure than the existing system, and the City envisions combining the former infrastructure space with City property and excess Navy base property to redevelop the area with an innovation hub mix of office, commercial, and residential uses. Enhancements to the area also include bridge rehabilitation, constructing a bike path along the existing rail corridor, creating a park and ride on JT Connell Highway, reconstructing the at-grade rail crossing, and wetland/ stormwater improvements.

RIDOT and VHB completed the Environmental Assessment and final design. VHB will provide construction phase services, including coordination with various stakeholders, abutters, and public interest groups.

Maintenance and Protection of Traffic

- Designed interim and final traffic-related elements (signing, pavement markings, traffic signals) and traffic management during construction through the development of temporary traffic control plans
- A new adaptive traffic signal system will be installed to coordinate traffic flow through the new ramps system. This innovative design will be the first of its type in the state. Traffic will be monitored and fed information real time through the RIDOT TMC with the proposed ITS included in this project.

Evidence of Good Performance—*Minimize Impacts*

RIDOT and VHB worked closely with FHWA and the City of Newport to obtain a Finding of No Significant Impact (FONSI). This allowed the project to move forward with final design to meet the project funding schedule, including use of a $25M USDOT BUILD grant.

3 Key Staff and Team Organization

(L-R) Tom Jackmin and Dennis Ferreira discuss the progress of the Route 79/I-195 Interchange Project.

(R) Rick McGinn installing catcher beams at Braga Bridge.

(L-R) Pete Pavao, Jamie Pisano, and Joe Wanat collaborate regularly.

3 Key Staff and Team Organization

The Barletta/Aetna Bridge Team was thoughtfully developed to provide RIDOT dedicated leadership with proven capabilities to successfully deliver the I-195 Washington Bridge North Phase 2 DB Project, while achieving your most critical goals and objectives. Our Team promises to **minimize risks** by leveraging lessons learned from prior relevant experience, and **minimize impacts** through our understanding and local context of the Project site. We will use innovative design and construction solutions to **maximize value** through resilient and durable designs that minimize future maintenance costs.

Project Management

Firms don't deliver projects—people do. As DB Project Manager, **Paul Coogan** (BHD) is committed to turning your vision into reality. He will lead the Project from conceptual design through final construction, coordinating with RIDOT every step of the way. Joining Paul are Design Manager **Joe Wanat** (VHB), Deputy Design Manager **Jeff Klein** (VHB), and Construction Manager **Dennis Ferreira** (BHD) who will manage the design and construction teams, respectively.

Our project leaders bring exceptional DB, accelerated bridge construction (ABC), traffic management, and RIDOT experience, having successfully managed projects of similar nature and complexity. These passionate professionals bring an effective approach that delivers unmatched responsiveness and a constant adherence to schedule and budget.

As depicted in **Figure 3-1: Project Team Organization Chart**, our leadership team is supported by key personnel and specialists experienced in their specific disciplines. Our organizational structure is straightforward, with clear lines of communication and responsibility to provide RIDOT with a trusted team to deliver the project on time and within budget.

Maximize Value: Route 79/I-195 and Braga Bridge DB

"The Route 79/Braga Bridge mega project will bring many benefits to Fall River, but none may be as noticeable as restoring all three lanes on the Braga Bridge. I continue to be impressed at the pace of construction [Barletta, Aetna Bridge, VHB] and I'm absolutely thrilled that we are achieving these major milestones ahead of schedule."

—Michael Rodrigues, Massachusetts State Senator

Organizational Chart Narrative—Team Functionality and Responsibilities

Executive Committee

Mike Foley (BHD), **Jeff Bostock** (AET), and **Tom Jackmin** (VHB) will oversee the project management and quality teams. They are empowered to fully commit their respective firms and allocate resources to keep this project moving forward smoothly.

Project Management

Paul Coogan (BHD), Design-Build Project Manager, will oversee all project design, construction, quality management, and contract administration, making sure that the design and construction teams are integrated into a single organization and are communicating with their counterparts. He will be committed to this project and responsible for all elements of project delivery. He will be the primary contact for RIDOT and will be in constant communication with Design Manager **Joe Wanat** (VHB) and Construction Manager **Dennis Ferreira** (BHD).

Safety Manager

Joan Zapatka (AET) will develop/oversee compliance with the site-specific Health and Safety Plan and will report directly to **Paul Coogan** (BHD).

Quality

QC Administrator **Kris Kretsch** (VHB) will lead the QC team with support from Design QC Manager **Jamie Pisano** (VHB) and Construction QC Manager **William Kearns** (BHD). The quality team will develop and implement an overall Quality Management Plan (QMP) for both design and construction teams to follow. They will report directly to **Paul Coogan** (BHD) and the Executive Committee, independent from the design and construction management functions. They have the sole authority to approve project work products or request modifications.

Design

Technical Advisors

Tom Donald (VHB) and **Don Cooke** (VHB) will provide the design team additional insight to structural, ABC techniques, and traffic solutions gleaned from 30+ years working on the owner's and consultant's side to deliver complex bridge and highway projects.

Design Managers and Discipline Leads

Design Manager **Joe Wanat** (VHB) will hold overall design management responsibility and internal and external VHB coordination, confirming the project design is consistent with project objectives and in conformance with the Contract Documents. Joe and Deputy Design Manager **Jeff Klein** (VHB) will lead the day-to-day operations of the design subconsultants and discipline leads: Civil/Highway–**Rick Rhodes** (VHB), Traffic–**Peter Pavao** (VHB), Environmental–**Susan Moberg** (VHB). Joe and Jeff will make certain that the design team adheres to the Design QMP developed by the QC team.

Construction

Construction Manager **Dennis Ferreira** (BHD) will lead the construction process making sure that the materials used and work performed meet the contract requirements and are in accordance with the “issued for construction” plans and specifications. He will coordinate with Construction Superintendent **Rick McGinn** (AET), Scheduler **Steve Thurber** (BHD), and subcontractors to manage the construction activities and keep them on track. Dennis will make certain that the construction team adheres to the Construction QMP developed by the QC team.

Figure 3-1: Project Team—Organization Chart

Safety Manager
•Joan Zapatka (AET)

Public Outreach
Regan Checchio (▲RVA)

Compliance Manager
Gena Mohan (BHD)

Technical Advisors

Bridge/ABC
Tom Donald, PE (VHB)

Traffic
Don Cooke, PE, PTOE (VHB)

Design-Build Project Manager
•Paul Coogan (BHD)

Executive Committee
Mike Foley (BHD)
Jeffrey Bostock (AET)
Tom Jackmin, PE, ENV SP (VHB)

Design

Design Manager
•Joseph Wanat, PE, PTOE, ENV SP (VHB)

Deputy Design Manager
•Jeffrey Klein, PE, ASSOC. DBIA (VHB)

Structural Lead
•Jeffrey Klein, PE, ASSOC. DBIA (VHB)

Structural/Bridge Design
Tom Hennessy, PE (VHB)
Andrew Prezioso, PE (VHB)
Will Rauseo, PE (VHB)
David Titus, PE (CE&C)
Niverio Carvalho, PE (CE&C)

Geotechnical
Bill Ladd, PE (GZA)
David Carchedi, PhD, PE (GZA)
Jeffrey Bruso, PE (GZA)

Civil/Highway Lead
•Richard Rhodes, PE (VHB)

Civil/Highway Design
Shawn Giatas, PE (VHB)

Drainage Design
Theresa McGovern, PE (VHB)

Survey
▲Bryant Associates, Inc.
▲Welch Associates Land Surveyors, Inc.

Lighting
Steven Costa, PE, LEED AP (CEC)

Landscape Architecture
Erik Bednarek, RLA, CLARB

Traffic Lead
•Peter Pavao, PE, PTOE (VHB)

Traffic Modeling
Amphone Souparath (VHB)
Kristin Caouette, PE, ENV SP (VHB)

Transportation Management Plan
Matt Lomas, PE (VHB)
Bob Clinton, PE (VHB)

Detour Monitoring and Traffic Signal Fine-Tuning
Chris Fay, PE, IMSA III (VHB)

Active Traffic Management System
Ron Hartman, PE (VHB)

Environmental Manager
•Susan Moberg, PWS, CFM (VHB)

Environmental/ Permitting Support
Chelsea Glinka (VHB)

SWPPP Monitoring/ Soil Evaluations
▲Applied Bio-Systems, Inc.

Hazardous Materials
Peter Grivers, PE, LSP (VHB)

Cultural/Historical Resources
Quinn Stuart (VHB)

Construction

Construction Manager
•Dennis Ferreira (BHD)

Construction Superintendent
•Rick McGinn (AET)

Bridge Superintendent
Scott Thompson (AET)

- *Bridge Project Engineer*
- *Superstructure Construction*
- *Substructure Construction*
- *Bridge Preservation Repairs*

Civil Superintendent
Mike Ferreira (BHD)

- *Civil Project Engineer*
- *Grading/Sitework*
- *Drainage/Utilities*
- *Highway/Road*
- *Marine Construction*

Survey
John Meyers (BHD)

Scheduler
•Steve Thurber (BHD)

Utility Coordination Manager
Brian DeMarco (BHD)

Quality

QC Administrator
•Kris Kretsch, PE, CQA, QAT, ENV SP (VHB)

Design QC Manager
•Jamie Pisano, PE (VHB)

Construction QC Manager
•William Kearns, QAT (BHD)

LEGEND

BHD	Barletta Heavy Divison, Inc.
AET	Aetna Bridge Company
VHB	Vanasse Hangen Brustlin, Inc.
CEC	Creative Environment Corp.
CE&C	Commonwealth Engineers and Consultants
GZA	GZA GeoEnvironmental, Inc.
RVA	Regina Villa Associates, Inc.

● Key personnel
▲ DBE firm

Case Number: PC-2024-04526
Filed in Providence/Bristol County Superior Court
Submitted: 10/31/2024 9:36 AM
Envelope: 4861648
Reviewer: Victoria H

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Key Personnel

Our key personnel comprise our most experienced and local DB, complex highway and bridge design, and construction practitioners. All offer broad perspective on best practices gained from decades of successful project delivery for RIDOT and similar transportation agencies. **Figure 3-2** shows how each of our key personnel meet/exceed the minimum qualifications requirements as outlined in the RFP. Summary resumes for our project management team and key personnel are provided on the following pages.

As evidenced by their qualifications, our professionals bring the right combination of national and local experience; knowledge of the Washington Bridge, its challenges, and opportunities; and deep relationships with RIDOT, the Cities of Providence and East Providence, and additional stakeholders.

Full-page resumes for key personnel are included in ➥Appendix A—Resumes.

Figure 3-2: Meeting RIDOT's Key Personnel Criteria (RFP 6.6 Requirements)

The table identifies each of our key personnel and outlines only those qualifications as required in the RFP. Additional qualifications for all key personnel are further detailed on the following pages.

	Role | Key Personnel	Minimum Evaluation Criteria
✓	**Design-Build Project Manager** Paul Coogan	OSHA 30—Management/Supervisory; OSHA HazMat Certification; First Aid/CPR
✓	**Quality Control (QC) Administrator** Kris Kretsch, PE, CQA, QAT, ENV SP	Rhode Island registered Professional Engineer #13029
✓	**Design Manager** Joe Wanat, PE, PTOE, ENV SP	Rhode Island registered Professional Engineer #11337
✓	**Deputy Design Manager/Structural Lead |** Jeff Klein, PE, ASSOC. DBIA	19 years of bridge design experience; Project Manager/Design Lead on six RI DB projects; Rhode Island registered Professional Engineer #9718
✓	**Civil/Highway Lead** Rick Rhodes, PE	16 years of civil design experience; Rhode Island registered Professional Engineer #11185
✓	**Traffic Lead** Peter Pavao, PE, PTOE	15 years of traffic design experience; Rhode Island registered Professional Engineer #9565
✓	**Design QC Manager** Jamie Pisano, PE	Rhode Island registered Professional Engineer #6757
✓	**Construction Manager** Dennis Ferreira	OSHA 30—Management/Supervisory; OSHA HazMat Certification; OSHA Fall Protection; OSHA Trench Safety; First Aid/CPR
✓	**Construction QC Manager** Bill Kearns, QAT	BS in Chemical Engineering; 20+ years construction QC direct oversight/management experience
✓	**Construction Superintendent** Rick McGinn	American Institute of Steel Construction—Advanced Certified Steel Erector; OSHA 30—Management/Supervisory; ATSSA Work Zone Safety Training—Supervisor; OSHA Crane Safety Training 1.1; Aerial Lift & Forklift Safety Training; First Aid/CPR
✓	**Safety Manager** Joan Zapatka	19 years of experience in direct charge of project safety
✓	**Scheduler** Steve Thurber	39 years experience in direct charge of schedule development, 16 of which for design-build projects
✓	**Environmental Manager** Susan Moberg, PWS, CFM	Professional Wetland Scientist #1631; Certified Floodplain Manager #US-13-07080

Leaders Who Deliver—*Project Management Team*

Paul Coogan (BHD) | *Design-Build Project Manager*

43 years of experience

Paul manages multidisciplinary teams on complex construction projects, primarily in urban settings. During his career, he has been involved in the conceptual planning, constructability reviews, scheduling, cost estimating and construction management of complex bridge, highway, and interchange projects, including those delivered under the DB method. Paul's notable DB experience includes serving as Senior Project Manager for the NHDOT Memorial Bridge Replacement, which represented a blend of cutting-edge design and innovative engineering. As Barletta's Project Manager on the $66M Henderson Bridge Reconstruction, Paul has proven his ability to seamlessly collaborate with RIDOT and VHB to meet project goals.

Design-Build Experience

- NHDOT, $84M Memorial Bridge Replacement over Piscataqua River
- MassDOT, $292M Whittier Bridge Replacement over the Merrimack River
- MWRA, $50M Spot Pond Covered Storage

Additional Experience: RIDOT, $66M Henderson Bridge Reconstruction | CTDOT, $98.5M I-95 NB to Route 34 WB Flyover Bridge, New Haven, CT | MassDOT, $130M Central Artery/Tunnel

Dennis Ferreira (BHD) | *Construction Manager*

39 years of experience

Dennis is an accomplished Construction Manager who delivers multifaceted construction projects. He has served as Construction Manager for complex bridge, interchange, tunnel and sewer projects, including the Reconstruction of Route 6/10 Interchange and MassDOT's Route 79/I-195 Interchange and Braga Bridge DB projects, bringing lessons learned and proven construction techniques, processes, and procedures. His previous work with Aetna Bridge and VHB will facilitate a seamless integration among the design and construction teams.

Design-Build Experience

- RIDOT, $270M Reconstruction of Route 6/10 Interchange—*with Aetna and VHB*
- MassDOT, $228M Route 79/I-195 Interchange and Braga Bridge—*with Aetna and VHB*
- MassDOT, $34M Hines Bridge Replacement—*with VHB*

Additional Experience: Narragansett Bay Commission, $66M Woonasquatucket CSO Interceptor Main | MassDOT, $130M Central Artery/Tunnel | MWRA, $148M North Dorchester Bay CSO Storage Tunnel

Feature Project

As Project Manager for RIDOT's Henderson Bridge project, Paul has worked closely with VHB, the Owner's Design Team, to modify the design to facilitate construction while maintaining the original design considerations and to advance alternate access designs to better coordinate with construction means and methods while maintaining overall public safety. He coordinated scheduling and traffic control management with VHB to resequence the project and eliminate disruptions in activities caused by early engineering approvals and procurements.

Dennis was the Construction Manager for the award-winning Route 79/I-195 Interchange and Braga Bridge DB project, which included the design and reconstruction of the interchange; removal of the entire two-level Route 79 viaduct and nine associated highway ramps; and the reconstruction/rehabilitation of four bridges. As manager of the on-site construction team, he was instrumental in bringing this very challenging project to successful completion 211 days ahead of schedule.

Joe Wanat, PE, PTOE, ENV SP

(VHB) | *Design Manager*

27 years of experience

For the majority of his career, Joe has focused on improving transportation infrastructure for local and state agencies throughout Rhode Island, especially RIDOT. He provides leadership, strategic guidance, thoughtful project management, and innovative solutions, most recently as the VHB Project Manager for the Reconstruction of the Route 6/10 Interchange DB project. He has built a great rapport with RIDOT and the Cities of Providence and East Providence through leading robust public outreach and stakeholder engagement, recently for the Henderson Bridge Reconstruction project. Joe brings local knowledge of the Washington Bridge having supported the traffic modeling for the $25M Federal FY 2020 BUILD grant.

Design-Build Experience

- RIDOT, $270M Reconstruction of Route 6/10 Interchange—*with Barletta and Aetna*
- MassDOT, $228M Route 79/I-195 Interchange—*with Barletta and Aetna*
- RIDOT, $210M Providence Viaduct NB Interchange Reconstruction (Owner's Representative Services)

RIDOT Experience: Henderson Bridge Reconstruction | Providence Viaduct Interchange Reconstruction (SB & NB) | Highway Safety Improvement Program | On-Call Traffic Design Consultant

Jeffrey Klein, PE, ASSOC. DBIA

(VHB) | *Deputy Design Manager/ Structural Lead*

19 years of experience

Jeff is well-respected and known to RIDOT, having played a key role in many of its prominent bridge rehabilitation/replacement projects. His experience on RIDOT DB projects as both Design Manager and Owner's Representative provides him with a keen understanding of DB delivery and the importance of meeting client's project objectives. His collaborative working relationship with Barletta and Aetna Bridge, gained from his experience on the Route 6/10 Interchange DB, Louisquisset Pike Bridge DB, and Wood River Valley Bridge DB projects, will facilitate seamless communication.

Design-Build Experience

- RIDOT, $270M Reconstruction of Route 6/10 Interchange—*with Barletta and Aetna*
- RIDOT, $15M Louisquisset Pike Bridge—*with Aetna*
- RIDOT, $12M Rehabilitation of the Wood River Valley Bridge—*with Aetna*
- RIDOT, $210M Providence Viaduct NB Interchange Reconstruction (Owner's Representative Services)

RIDOT Experience: Washington Pedestrian Bridge | Reconstruction of Henderson Bridge | Replacement of Providence Viaduct Bridge No. 578 (SB) | Stillwater Viaduct Bridge Inspection and Rehabilitation

Feature Project

For the Reconstruction of the Route 6/10 Interchange, RIDOT's largest DB project, Joe oversaw VHB's bridge design, highway design, and traffic operations teams. He played a pivotal role in the effort to develop a vision for the corridor, working closely with leadership from RIDOT and the City of Providence to develop a 3D model and traffic simulation model for the corridor and vetting the concept for engineering constructability and community cohesion.

As Design Manager for the Wood River Valley Bridge Rehabilitation DB, Jeff worked closely with RIDOT and Aetna Bridge to improve the structural integrity and strengthen the structure to meet current AASHTO Loading Standards. VHB developed a unique approach to replacing the expansion bearings on the existing piers that not only reduced the price of the project, but also expedited the project schedule.

Quality Team Means Quality Results

Quality Control Key Personnel

Our Quality Control Team is made up of Rhode Island registered professional engineers, certified quality auditors, and certified quality assurance technologists, each with 25+ years of experience. They will implement the Quality Management Plan and will make certain that team members adhere to it. Kris Kretsch, Quality Control Administrator, will have direct communication with Paul Coogan and the Executive Committee, all of whom are focused on the overall quality of the project.

Kris Kretsch, PE, CQA, QAT, ENV SP (VHB) | *Quality Control Administrator* | 32 years of experience

Kris brings a regional perspective, having provided QA/QC oversight on bridge design projects throughout New England, including on multiple DB projects, balanced with a local context gleaned as the QC Administrator for the Louisquisset Pike Bridge DB project and as Design QC Manager for the Wood River Valley Bridge DB project.

DB Experience: RIDOT, $15M Louisquisset Pike Bridge Replacement | RIDOT, $12M Rehabilitation of the Wood River Valley Bridge | MBTA, $100M Rail Bridge Replacements | MassDOT, $34M Hines Bridge Replacement | MassDOT, $10M Route 147 (Memorial Ave) Rotary Replacement | NYSDOT, $31M Accelerated Bridge Program | VTrans, $66M I-91 Bridges Design-Build Support

Jamie Pisano, PE (VHB) | *Design Quality Control Manager* | 29 years of experience

Jamie has spent much of his career supporting RIDOT on significant highway design projects, focusing on quality and safety. He brings lessons learned from his recent experience as Project Manager for the Henderson Bridge Reconstruction project and his work on the Route 6/10 Interchange DB project.

DB Experience: RIDOT, $270M Reconstruction of the Route 6/10 Interchange

RIDOT Experience: Washington Bridge No. 200 | Providence Viaduct Bridge No. 578 | Henderson Bridge | Stillwater Viaduct Bridge | Pleasant Valley Bridge No. 777 | Taunton Avenue Ramp CR-1 Bridge

William Kearns, QAT (BHD) | *Construction Quality Control Manager* | 40 years of experience

Bill is committed to developing and implementing Quality Control Programs for multidiscipline, complex construction projects. He has served as Construction Quality Control Manager for numerous DB projects throughout Rhode Island and Massachusetts and is committed to establishing, approving, and maintaining the Quality Control Program.

DB Experience: RIDOT, $270M Reconstruction of the Route 6/10 Interchange | MassDOT, $228M Route 79/I-195 Interchange and Braga Bridge | MassDOT, $34M Hines Bridge Replacement

Additional Experience: MassDOT, Central Artery/Tunnel Project—I-90/Route 1A Interchange | MWRA, Carroll Water Treatment Plant

Feature Project

Delivering Results with Design Excellence

Design Team Key Personnel

Our Design Discipline Leads are the same people who have delivered on many of the recent RIDOT bridge projects, including Louisquisset Pike Bridge, Wood River Valley Bridge, and Henderson Bridge. Together, they will leverage their understanding of DB project delivery, local context, traffic management, and regulatory nuances to deliver results.

Jeffrey Klein, PE, ASSOC. DBIA (VHB) | *Structural Lead* | 19 years of experience

Please refer to page 27 for a summary of Jeff's qualifications.

Richard Rhodes, PE (VHB) | *Civil/Highway Lead* | 16 years of experience

Rick understands local context and how to work effectively with RIDOT through his work as Highway Design Lead for the Louisquisset Pike Bridge DB and Wood River Bridge DB, VHB Highway Design Lead for Route 6/10 Interchange DB projects, and Design Manager for the Pell Bridge Interchange.

DB Experience: $270M Reconstruction of the Route 6/10 Interchange Interchange | $15M Louisquisset Pike Bridge | $12M Rehabilitation of the Wood River Valley Bridge

RIDOT Experience: Henderson Bridge | Providence Viaduct Bridge No. 578 | Pell Bridge Interchange | Reconstruction of Two Mile Corner

Peter Pavao, PE, PTOE (VHB) | *Traffic Lead* | 15 years of experience

As Traffic Task Manager for the Henderson Bridge, Pell Bridge Interchange, and Louisquisset Pike Bridge DB projects, and VHB Traffic Task Manager for Route 6/10 Interchange DB, Peter has successfully navigated the traffic control designs involved in complex highway and bridge projects, enabling work to be performed with minimal impact to adjacent travel lanes.

DB Experience: $270M Reconstruction of the Route 6/10 Interchange | $15M Louisquisset Pike Bridge

RIDOT Experience: Washington Bridge No. 200 | Henderson Bridge | Providence Viaduct Bridge No. 578 | Pell Bridge Interchange | Stillwater Viaduct Bridge

Susan Moberg, PWS, CFM (VHB) | *Environmental Manager* | 28 years of experience

Susan has been partnering with RIDOT on environmental projects for most of her career, including managing VHB's On-Call Stormwater Services contract with RIDOT since 2014 and overseeing permitting for all VHB's signature bridge projects in Rhode Island.

DB Experience: $12M Rehabilitation of the Wood River Valley Bridge | $1.5M Arcadia Management Area Bridges Superstructure Replacement | MassDOT, $228 Route 79/I-195 Interchange

RIDOT Experience: Washington Bridge No. 200 and Pedestrian Bridge | Henderson Bridge | Providence Viaduct Bridge No. 578 | Stillwater Viaduct Bridge

Feature Project

Construction with Confidence

Construction Team Key Personnel

Under Paul Coogan's overall direction and with Dennis Ferreira's proven leadership, our key construction personnel will safely deliver a high-quality project, on schedule, that will reshape the Washington Bridge and surrounding area. These individuals have worked together on many DB projects, such as Route 6/10 Interchange and the Route 79/I-195 Interchange and Braga Bridge, providing a collaborative relationship to enable them to hit the ground running.

Rick McGinn (AETNA) | *Construction Superintendent* | 35 years of experience

Rick has completed more than a dozen bridge and civil projects for RIDOT valued at over $50 million, focusing on oversite and management of jobsite construction. He was the Construction Manager for $30M of structural repairs/replacements on the Braga Bridge portion of the Route 79/I-195 Interchange DB project. He also oversaw repairs on the 3R Improvements to I-95 Service Roads and Bridges.

DB Experience: RIDOT, $12M Rehabilitation of the Wood River Valley Bridge | MassDOT, $228M Route 79/I-195 Interchange and Braga Bridge

RIDOT Experience: 3R Improvements to I-95 Service Roads & Bridges | High Priority Repairs Sakonnet River Bridge | Robin Hollow Bridge Reconstruction | Tiverton Main Road Bridge Replacement | Warwick Toll Gate Bridge Rehabilitation

Steve Thurber (BHD) | *Scheduler* | 39 years of experience

Steve has unparalleled experience in project controls and scheduling for construction projects, including DB projects such as the Route 6/10 Interchange and the MassDOT Route 79/I-195 Interchange. He specializes in detail and precision as evidenced by his experience preparing and updating schedules for projects ranging from a few million dollars to $270M.

DB Experience: $270M Reconstruction of the Route 6/10 Interchange | MassDOT, $228M Route 79/I-195 Interchange | MassDOT, $34M Hines Bridge Replacement | MassDOT-funded, $35M Bill Delahunt Parkway | MWRA, $38M Blue Hills Covered Storage Facility

Additional Experience: MassDOT, I-95 Add-A-Lane Contract V | MBTA, Clayton St. ABC Bridge Replacement

Joan Zapatka (AETNA) | *Safety Manager* | 19 years of experience

With nearly two decades of health and safety leadership experience in the construction industry, Joan has exceptional knowledge of federal, state, and local compliance and regulations. Her relevant experience includes extensive safety training for staff and conducting jobsite safety inspections, most recently for the Louisquisset Pike Bridge project.

DB Experience: $270M Reconstruction of the Route 6/10 Interchange | $15M Louisquisset Pike Bridge Replacement | $12M Rehabilitation of the Wood River Valley Bridge | $35M Route 295 Bridges—Contract 2 | $15M Rhodeworks Toll Facilities

Additional Experience: RITBA Newport Bridge Deck Rehabilitation at East Approach

Technical Specialists

In addition to our key personnel as outlined in the RFP, our team features highly skilled technical specialists—all local and trusted by RIDOT—who are crucial to the design and construction of this project. Each of these team members brings directly relevant experience, having served in similar roles for many of our highlighted DB projects and high-profile RIDOT projects.

Tom Hennessy, PE (VHB) | *Structural/Bridge Design* | 34 years of experience

Well versed in RIDOT policies and procedures, routinely serves as Structural Lead for bridge design projects, performs QC Design reviews for Design-Build projects

DB Experience: Route 6/10 Interchange | Louisquisset Pike Bridge | Wood River Valley Bridge

RIDOT Experience: Washington Pedestrian Bridge | Henderson Bridge | Providence Viaduct Bridge 578 | Stillwater Viaduct Bridge

Chris Fay, PE, IMSA III (VHB) | *Detour Monitoring and Traffic Signal Fine-Tuning* | 21 years of experience

Experience in design, operations and inspections of traffic signal systems, performs field reviews that aid in development of site-specific traffic control plans for complex projects

DB Experience: Route 6/10 Interchange | Louisquisset Pike Bridge | Wood River Valley Bridge

RIDOT Experience: Washington Bridge No. 200 | Henderson Bridge | Providence Viaduct Bridge 578 | Stillwater Viaduct Bridge

Bill Ladd, PE (GZA) | *Geotechnical* | 34 years of experience

Provides foundation investigations, recommendations, and designs for large-scale bridge and highway projects, including structures supported on shallow foundations, driven or drilled piles, or drilled shafts

DB Experience: I-95 N. and S. at Toll Gate and Centerville Roads Bridges | I-295 Contract 2 | Laurel Avenue Bridge

RIDOT Experience: Washington Bridge No. 200 Reconstruction | Providence Viaduct Bridge 578 | Route 37 Bridges | Morgan Avenue Bridge Rehabilitation

Scott Thompson (AETNA) | *Bridge Superintendent* | 15 years of experience

Completed dozens of bridge projects, 14 for RIDOT; many included construction using prefabricated bridge components and maintenance and protection of traffic on divided highways

DB Experience: Reconstruction of the Route 6/10 Interchange | MassDOT, Route 79/ I-195 Interchange and Braga Bridge | MassDOT, Fore River Bridge Replacement

RIDOT Experience: Henderson Bridge Repairs | Pettaconsett Bridge Repairs | Wellington Ave. over I-95 Repairs | Improvements to I-195 Bridges | Moshassuck River Bridge Repairs

Mike Ferreira (BHD) | *Civil Superintendent* | 33 years of experience

Specializes in projects with complex traffic control in urban work zone settings; served as Civil Superintendent on high-profile RIDOT and MassDOT DB projects

DB Experience: Reconstruction of the Route 6/10 Interchange | MassDOT, Route 79/I-195 Interchange and Braga Bridge

Additional Experience: MWRA East Boston Branch Sewer Interceptor Microtunnel | MWRA North Dorchester Bay CSO Storage Tunnel

Feature Project

Team Commitment and Availability

Your success is our success; our Team is committed to providing the right resources that are available, ready, and dedicated to successfully deliver a safe, reliable, and quality project.

As a value-added benefit, we have established an Executive Committee made up of Barletta's Vice President **Mike Foley**, Aetna Bridge's Vice President of Construction **Jeff Bostock**, and VHB's Senior Vice President **Tom Jackmin**. Mike, Jeff, and Tom commit their respective firms to this project and are empowered to allocate the resources necessary to keep the project moving forward smoothly.

Barletta and Aetna Bridge combined have

200+ **professional staff and trades people**

specializing in highway and bridge construction.

VHB has direct access to

60+ **local structural engineers**

200+ **transportation engineers**

who can be made available should the need arise.

Our collective experience, know-how, and resources allow us to tackle the most challenging bridge construction projects.

Performance Locations

Our Team will be based primarily in the Providence area—Barletta has a Project Office in Providence; Aetna Bridge has an office in Warwick, just 10 minutes from the project site; and VHB is located in downtown Providence, 1 mile from RIDOT. Barletta key personnel will also be co-located in Aetna Bridge and VHB offices for collaboration. **Our proximity to each other, the project site, and RIDOT will be invaluable for site visits, team meetings, utility coordination, and community outreach.** We can be available at a moment's notice should something arise that needs immediate attention.

Maximize Value: Capacity to Perform

None of our existing projects provide any constraint on team member availability to complete the project within your schedule.

RIDOT is a valued client to our Team and we are devoted to strengthening our partnership by delivering reliable and consistent results that you can depend on. The timing of this project aligns perfectly with the completion of other long-term infrastructure projects—as the Route 6/10 Interchange DB moves into the final construction season, a significant portion of the more complex work will be completed; the design of Henderson Bridge and Providence Viaduct NB are complete, and are well into construction. We are ready to assist RIDOT with the Washington Bridge project which is scheduled to ramp up this winter, allowing for a seamless transition of our key personnel.

Design/Construction Integration

Our Team is built on a foundation of trust, fostering a culture of communication and collaboration through all levels of our Project Team, including subconsultants/subcontractors, and with RIDOT. DB Project Manager, Paul Coogan, will draw from his project management experience to guide our project leaders to consistently perform as an integrated team during all aspects of design, construction, and quality control.

Our previous experience working together on projects such as Route 79/I-195 Interchange and Braga Bridge, and Reconstruction of Route 6/10 Interchange have provided us with lessons learned and relationships that will allow our Team to efficiently streamline the integration of design and construction activities. Our established process, quality, and communication procedures, as we have further described in ➥Section 6—Management Overview, will be of great benefit to RIDOT.

4 Technical Approach

4 Technical Approach

The Barletta/Aetna Bridge Team has developed a technical approach that demonstrates how we will successfully advance the BTC as provided in the RFP and where we will enhance the design with our innovations and approved alternative technical concepts (ATCs) to deliver added value and benefits to RIDOT. As summarized on **Figure 4-2** on the following page, these enhancements were developed with a focus on three key goals—to **minimize risk** to RIDOT and the project schedule, **minimize impacts** to the community and traveling public, and **maximize value** by delivering durable, sustainable, and low-maintenance infrastructure.

What's New

In developing our ATCs, we began with the enhancements from our 2020 proposal submission, but made sure to find new ways to bring value to RIDOT and this project. In particular, our ATCs 4 and 8 have added benefits and further expand our initially planned improvements, including:

ATC 4 realigns Gano Street, the bikeway, and the new Gano Street On-Ramp to achieve the required goals of the INFRA Grant while **adding safety and traffic operations improvements with reduced infrastructure that minimizes RIDOT's long-term maintenance costs**. This ATC improves the access from the heavier volume Gano Street Southbound to I-195 via a right turn to improve safety and provide easier access to the higher volume of users. The relocation of the on-ramp away from the existing off-ramp maintains today's bikeway crossing, improving bicycle and pedestrian crossing safety.

ATC 8 modifies the Washington Bridge widening, using a new steel beam-supported deck in spans 1–3 that **minimizes the existing deck widening to lighten the overall loads to the substructure**. This lighter configuration of shiplap beams eliminates the need for supplementing piles at existing supports and eliminates all in-water work at pier foundations. A new column in span 1 will be supported on new drilled high-capacity micropiles to minimize environmental and utility impacts. The revised span configuration eliminates the fracture-critical tie-down in the BTC's span 4, further reducing long-term life-cycle infrastructure costs.

Figure 4-1: Gano Street Visualization

Reconfigured Gano Street and On-Ramp provides major traffic operations, pedestrian/bicycle safety, and infrastructure maintenance benefits.

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