



STATEMENT OF QUALIFICATIONS
A DESIGN-BUILD PROJECT

TRANSPORTATION IMPROVEMENTS AT HYDRAULIC ROAD AND US 29

CITY OF CHARLOTTESVILLE AND ALBEMARLE COUNTY, VIRGINIA

State Project No.: 0029-M03-371, C501, P101, R201
Federal Project No.: STP-5104 (299)
Contract ID Number: C00118880DB114

June 7, 2022





SECTION 3.2

Letter of Submittal

June 7, 2022

Commonwealth of Virginia
Department of Transportation (VDOT)
1401 E. Broad Street
Richmond, Virginia 23219
Attention: Brian W. Stevenson, PE, DBIA (APD Division)



**Re: A Design-Build Project | Transportation Improvements at Hydraulic Road and US 29
City of Charlottesville and Albemarle County, Virginia | State Project No 0029-M03-371
Federal Project No.: STP5104 (299) | Contract ID Number: C00118880DB114**

Dear Mr. Stevenson:

Branch Civil, Inc. (Branch), as the Offeror, submits to the Virginia Department of Transportation (VDOT) this Letter of Submittal and accompanying Statement of Qualifications (SOQ) in response to the Request for Qualifications (RFQ) dated May 10, 2022 (Addendum 1) for Transportation Improvements at Hydraulic Road and US 29 (the "Project"). Branch is partnering with Lead Designer, **Timmons Group, Inc. (Timmons)** to furnish a product that exceeds design and construction expectations. **The Branch Team (Team)** offers the following in response to the RFQ's stated requirements:

3.2.1 - Offeror Information: The full legal name and address of the Offeror is as follows: Branch Civil, Inc., 442 Rutherford Avenue, NE, Roanoke, VA 24016.

3.2.2 - Offeror's Primary Contact:
Donald E. Bryson, Pursuit Manager
442 Rutherford Avenue NE
Roanoke, Virginia 24016
Phone: 704.572.1684, Fax: 540.982.4216

3.2.3 - Principal Officer for the Offeror:
Brian Evans, Senior Vice President, Operations
442 Rutherford Avenue NE
Roanoke, Virginia 24016
Phone: 757.438.4934, Fax: 540.982.4216

3.2.4 - Structure: Branch Civil, Inc. is structured as a Corporation, will be the legal entity, and have financial responsibility for the performance of the work. There are no liability limitations, and Branch will provide single, 100% performance and payment bonds.

3.2.5 - Lead Contractor/Designer: Branch Civil, Inc. will be the Lead Contractor for the Project, and Timmons Group, Inc. will be the Lead Designer.

3.2.6 - Affiliates and Subsidiary Companies: The full legal names and addresses of all affiliated and/or subsidiary companies of the Offeror are provided on the Department's provided form in *Appendix 3.2.6*.

3.2.7 - Debarment Forms: Signed Certification Regarding Debarment Forms for Primary and Lower Tiered Covered Transactions are provided in *Appendix 3.2.7*.

3.2.8 - VDOT Prequalification: Branch's prequalification number is B319 and our status is Active; evidence is provided in *Appendix 3.2.8*.

3.2.9 - Surety: *Appendix 3.2.9* contains a surety letter from our bonding company confirming their willingness to provide any and all bonds for this project.

3.2.10 - Virginia State Corporation Commission (SCC) and Department of Professional and Occupational Regulation (DPOR): *Appendix 3.2.10* contains Virginia SCC and DPOR information for all team members.

3.2.11 - DBE Participation Goal: Our Team is committed to achieving the Department's twelve percent (12%) DBE participation goal for the entire value of the Contract.

Our Team brings experience, innovation, quality, and attention to detail in every aspect of Project delivery. We provide the resources, experience, and commitment necessary to achieve VDOT's goals for this Project. On behalf of our Team, we thank VDOT for the opportunity to submit this SOQ. We look forward to partnering with VDOT to deliver another successful Project.

Respectfully Submitted,
Branch Civil, Inc.

A handwritten signature in blue ink that reads 'Brian Evans'.

Brian Evans
Senior Vice President, Operations



SECTION 3.3

Offeror's Team Structure

3.3 OFFEROR'S TEAM STRUCTURE



The Offeror and Lead Contractor, **Branch Civil, Inc. (Branch)**, will execute the design-build (D-B) contract with VDOT. Branch will undertake full financial responsibility, including providing performance and payment bonds and required insurance. As D-B experts, Branch promotes a team approach to identifying and managing issues and providing Project guidance. We will use a flexible, integrated approach to adapt quickly to change. Branch has successfully delivered *17 D-B contracts totaling more than \$800 million and over \$1 billion in D-B-B work* and comes to VDOT with the hands-on experience and highly qualified personnel required to execute design and construction and mitigate Project risks. Branch's VDOT D-B experience includes:

- **I-95 Express Lanes Southern Terminus Extension (STE) in Stafford County** (*completed nine months early and winner of an ACEC-VA Merit Award*)
- **I-64 Widening Exits 200 to 205 in Henrico and New Kent Counties** (*completed ahead of schedule in spite of heavy rain and flooding and recipient of an HCCA Excellence in Infrastructure Award*)
- **Military Highway Continuous Flow Intersection (CFI) in Norfolk** (*included the design and construction of Virginia's first CFI*)

Branch has a reputation for strategically aligning with D-B partners to exceed project needs and requirements. Branch has partnered with **Timmons Group, Inc.** (Timmons) as the Lead Designer for this Project. Timmons was specifically chosen, along with **Gary Johnson, PE, DBIA** as the Design Manager (DM), *because of their deep understanding of the Charlottesville area and the Project corridor*. Timmons' experience includes the current Barracks Road/Emmet Street (Route 29) Improvement Project for the City of Charlottesville. Gary has intimate knowledge of the Route 29 corridor through his role as the Lead Structural Engineer on Route 29 Solutions. Timmons' successful D-B delivery experience also includes VDOT's Capital Trail in Henrico County,

Richmond's GRTC Pulse/Bus Rapid Transit, and bridge replacement projects for NCDOT.

Our Team's success is further enhanced through the partners and specialty firms shown in *Figure 3.3-1* and in our Organizational Chart. *It is notable that most of these firms are Virginia-certified DBEs.*

Figure 3.3-1 | Branch Team Partners

FIRM NAME	ROLE
CES Consulting, LLC (CES) <i>(Virginia Certified DBE, SWaM Cert. #690040)</i>	Quality Assurance
Froehling & Robertson, Inc. (F&R) <i>(Virginia Certified MBE, SWaM Cert. #649650)</i>	Quality Assurance Laboratory/Testing
On Point Transportation PR, LLC (OPT) <i>(Virginia Certified DBE, SWaM Cert. #809337)</i>	Public Relations
Hassan Water Resources PLC (HWR) <i>(Virginia Certified DBE, SWaM Cert. #66280)</i>	Hydrologic & Hydraulic
H&B Surveying and Mapping, LLC (H&B) <i>(Virginia Certified DBE, SWaM Cert. #679423)</i>	Surveying

3.3.1 KEY PERSONNEL

We consider VDOT management and staff as our partners, working alongside Team members. Our relationship is highly effective, cohesive, and benefits from a joint accountability initiative: *to safely complete the Project expeditiously, with the highest level of quality.*

Our Key Personnel, provided in *Figure 3.3-2*, are highly qualified and capable professionals with local knowledge and substantial experience in D-B delivery and transportation projects in Virginia. Each individual was selected because of their extensive experience in designing, constructing, and administering D-B projects. Brief introductions of each follow and Key Personnel Forms are provided in *Appendix 3.3.1*.

Daniel (Dan) Lieberman, Branch Design-Build Project Manager (DBPM)

Dan has managed D-B projects throughout the Eastern US for *over 34 years*. He has overseen a diverse range of complex projects for VDOT and NCDOT, including

Figure 3.3-2 | Key Personnel

POSITION	NAME	YRS EXP.	D-B EXP.	VDOT EXP.	URBAN CORRIDOR EXP.	US 29 EXP.	COMPLEX MOT EXP.
Design-Build Project Manager (DBPM)	Daniel (Dan) Lieberman	34	■	■	■	■	■
Quality Assurance Manager (QAM)	Avtar Singh, PE, CCM, DBIA	26	■	■	■	■	■
Design Manager (DM)	Gary Johnson, PE, DBIA	29	■	■	■	■	■
Construction Manager (CM)	Greg Suttle	35	■	■	■		■

those in busy urban corridors. He is skilled at leading design and construction teams, coordinating utilities to mitigate risk, and managing the public outreach efforts on D-B projects. He is also well versed in the challenges of working on a busy arterial highway with active pedestrians and bicyclists.

**Avtar Singh, PE, CCM, DBIA, CES
Quality Assurance Manager (QAM)**

Avtar has *26 years of construction quality management and project controls experience* on transportation infrastructure projects. He served as the QAM for numerous VDOT D-B projects and has a well-established working relationship with Branch through the I-95 Express Lanes FredEx D-B project. In addition, he has provided technical guidance and oversight of QA, QC, and OIA (owner's independent assurance) management services of more than 20 D-B projects. He understands the complexities of managing transportation projects on congested roadways with bicycle traffic and pedestrians and has a proven ability to develop QA/QC plans, mitigate risks, and resolve design and field issues. Avtar has served as the QAM on the Route 29 Solutions D-B Project in the Albemarle County and is very familiar with the Project corridor.

**Gary Johnson, PE, DBIA, Timmons
Design Manager (DM)**

Gary has over *29 years of experience* and has provided engineering design and project management for D-B projects across the mid-Atlantic. As a DM, he routinely works with clients to design complex transportation solutions that help communities thrive. Gary has recent and relevant experience in the Route 29 corridor and served in a key role on the following D-B projects: Route 29 Solutions D-B project in Albemarle County; the I-64 Widening and Route 623 Interchange Improvements D-B project in Henrico and Goochland Counties; and multiple Express D-B bridge replacements for NCDOT. He is currently providing design management services for the 7th Street Pedestrian Bridge and Associated Improvements project in downtown Richmond.

**Greg Suttle, Branch
Construction Manager (CM)**

Greg has *over 35 years of transportation experience* and has overseen multiple complex roadway projects in crowded corridors with bicycle and pedestrian traffic and bridge/structure construction. He is skilled at performing constructability reviews to save clients time and money on D-B projects while ensuring safety and compliance. Greg

has the following certifications, which he will maintain throughout the construction of the Project: Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (#RLD03021), and VDOT Erosion and Sediment Control Contractor Certification (#1-01135). Greg is currently working as the CM on the Balls Ford Road Widening Project in Prince William County. His assignment will end in May 2023, and any remaining responsibilities will be delegated to another Branch employee.

VALUE ADDED STAFF AND GROUPS

We are committing the following Value-Added personnel and groups. Each will play an essential role in our ability to mitigate risk and complete the work ahead of schedule, under budget, and in a safe, quality manner, with minimal resource requirements from VDOT.

Executive Committee: The Executive Committee sits at the top of our organizational structure and includes **Brian Evans** of Branch and **Paul Trapp, PE** of Timmons. Brian and Paul will provide administrative oversight throughout design and construction. They will support the Project's management by committing design and construction personnel, equipment, materials, and financial resources. The Executive Committee will review the Project's progress and resolve issues to further support the team in meeting its commitments to VDOT throughout the design and construction of the Project.

☑ **Added Value:** Brian and Paul bring *72 years of combined design and construction leadership* on VDOT projects to the Team, providing an additional layer of commitment from these two long-established, Virginia-based firms.

Traffic Operations Manager (TOM): **Thomas Ruff, PE, PTOE** will report directly to the DBPM and serve as the Team's TOM. He will ensure safe mobility in the Project corridor by leading the development of a focused Maintenance of Traffic and Transportation Management Plan (MOT/TMP) and Pedestrian Work Zone Plan (PWZP). Thomas will oversee the Team's Traffic Management Task Force (TMTF), which will include members from the design and construction teams. He will oversee regular meetings to review the plan to optimize pedestrian and traffic safety and efficiency.

☑ **Added Value:** Thomas is a Senior Project Manager within Timmons' Traffic Analysis & Planning Group and has *over 10 years of experience* in traffic engineering, transportation planning, and roadway design, including pedestrian studies, innovative intersection design, and multi-modal infrastructure development. *He will be based*

in Timmons' Charlottesville office and provide technical expertise in operational and capacity analysis to support successful design decisions and coordinate maintenance of traffic during construction for vehicles and pedestrians.

Thomas recently provided detailed signal timing plans that optimized Routes 3, 17, and 60 through heavily congested corridors. He also recently performed traffic engineering services in the Route 29 corridor at a nearby intersection, Barracks Road. These alternatives analyses were aimed at optimizing the limited space available within the right of way (ROW) to ensure that vehicles and pedestrians were accommodated in addition to the study of MOT alternatives.

Utility Coordination Manager (UCM)

Chris Kiefer, PE, Assoc. DBIA, will report to the DBPM and lead our in-house efforts to manage utility relocations as an integral part of our D-B program. His experience and close relationships with multiple utility owners enable him to thoroughly understand the relocation process, risks, costs, schedule, and interaction with other Project disciplines. Chris will actively coordinate existing and adjusted utilities with the design, right-of-way (ROW), permitting, safety, and construction disciplines. He will also coordinate with third parties. As a liaison with each utility company, Chris will provide full integration of utilities into the Project scope and schedule. His priority will be working with the design team to avoid relocations to the extent practical. When utility adjustments/relocations are unavoidable, he will ensure that they are coordinated and completed within schedule.

☑ **Added Value:** Chris has *over 34 years of experience with Timmons* in the transportation field, including the design of urban roadways, roundabouts (RABs), drainage, Complete Streets, shared-use paths, and bicycle/pedestrian-focused projects. Additionally, he manages utility coordination, providing cost-effective and efficient solutions for complex multi-utility projects in mature corridors. **He previously served as the UCM on the VDOT BRT D-B Project in Richmond.**

Chris provides public and private utility coordination services for roadway design projects, working with stakeholders to understand the issues and develop a plan for the successful resolution of any number of utility issues that may arise. He has a track record of successful utility coordination in dense suburban and urban areas. With extensive local knowledge, Chris has worked on many VDOT-funded projects in Albemarle

County and/or the City of Charlottesville during his career, including Route 660, Route 601, Route 671, Route 631, 240/250 RABs, VE Study for Belmont Bridge, Barracks/Emmett (Route 29), West Main Street, 10th/Wetland Intersection, and Monticello Bikes.

Design-Build Coordinator (DBC)

Having managed previous D-B projects as a VDOT Project Manager, **Amanda Cox, DBIA**, will serve as the DBC to ensure that all engineering work is fully integrated into a safe, quality, and timely project. Amanda will report to the DBPM while working closely with the DM and CM. She will help set schedule priorities for individual work packages and make certain that constructability reviews are completed for each package.

☑ **Added Value:** Amanda is a former VDOT Project Manager responsible for many D-B Projects including the 460 Connector Phase I Project that delivered the tallest bridge in the Commonwealth and voted as No. 1 on *Roads & Bridges' 2013 List of Top 10 Bridges*. She was the Project Manager for procurement of the Route 58 Lovers Leap PPTA/D-B where she ensured collaboration between the design, construction, estimating and VDOT teams. Her efforts led to the successful execution of the Route 58 Lovers Leap PPTA/D-B contract, where she currently serves as the Deputy Project Manager.

Public Relations Manager (PRM)

Clear communication and effective outreach are critical to engage the public and inform how the Project will affect their day-to-day commute. DBPM Dan Lieberman will lead all design and construction-related public communications. He will be assisted by PRM **Mike Carosi (OPT)**. Mike brings *over 24 years of experience* in public involvement strategy, public event design, promotion, and delivery and is very familiar with *VDOT's Policy Manual for Public Participation in Transportation Projects*.

☑ **Added Value:** Mike has extensive experience working with VDOT and with cities, counties, municipal and transit agencies in Virginia. He has delivered successful communications programs for many high-profile VDOT projects throughout the Commonwealth, including the Route 9 Roundabouts – Traffic Calming in Hillsboro and the Military Highway Continuous Flow Intersection (CFI) in Norfolk. He is skilled in overseeing comprehensive public meetings and producing associated communication materials. He also has direct experience delivering communications associated with RABs and other innovative interchanges.

Stakeholder Coordinator (SC)

Many stakeholders are present in the multi-jurisdictional Project corridor, from residents and numerous businesses to utility companies. Each will require constant and effective coordination to make certain that input is received, concerns are implemented/mitigated, and the schedule is maintained. In recognition of this, our Team has added **Brian Copeland, PE, DBIA** in the role of SC. Brian will be dedicated to this Project, report to the DBPM, and act as a conduit between the Team, VDOT, and stakeholders to ensure that each is proactively coordinated with and always kept aware of the Project's progress.

☑ **Added Value:** Brian has over 20 years of transportation engineering experience. He is a Senior Project Manager in Timmons' Transportation Design Group, where he manages a wide range of VDOT and locally administered roadway improvement projects. Along with experience in traditional road improvements, he has significant experience with the design of RABs and other alternative intersection design approaches (i.e., signalized continuous green-T's, turbo RABs, etc.). In this role, Brian will provide in-depth stakeholder coordination to optimize outcomes in the affected communities. Through outreach and extensive research, coupled with his recent, relevant work with the City, Brian can forge a deep understanding of how a project will affect a community, its residents, businesses, and local government representatives and provide solutions to facilitate the best outcomes for all.

Brian managed and facilitated a robust public outreach campaign for the locally administered VDOT project to improve the Barracks Road/Emmet Street (Route 29) intersection in the City of Charlottesville. He was involved in creating a project logo/website, hosted several in-person property owner meetings, and formed project steering and technical committees. Brian facilitated public workshops and open houses, presented rendered visualizations, solicited and analyzed public feedback through technology, and presented updates, feedback, and solutions to the City of Charlottesville Planning Commission, City Council, and other public venues. He has a passion for engaging all stakeholder involvement to formulate innovative solutions while also maintaining a clear understanding of the bigger picture of public needs and project purpose.

3.3.2 ORGANIZATIONAL CHART

Our Team's Organizational Chart, provided in *Figure 3.3-2* at the end of this Section, identifies key personnel members and depicts the team's reporting structure. Solid lines identify the direct lines of reporting from the DBPM to the design, construction, ROW, quality assurance (QA), safety, public relations, and stakeholder coordinator. Dashed lines represent lines of communication. Furthermore, our reporting structure separates construction quality control (QC) and construction QA duties, each with independent materials testing laboratory services.

MAJOR FUNCTIONS AND REPORTING RELATIONSHIPS OF KEY PERSONNEL

DBPM, Dan Lieberman: Dan will be responsible for the Project's overall design and construction. He *will report directly to VDOT and serve as VDOT's central point of contact*, facilitate communication among team partners and adjacent projects, proactively monitor design efforts to eliminate potential constructability issues, and commit resources to deliver the Project on time. Dan will work with Timmons to ensure that the design is on time and complies with VDOT's requirements. His interaction throughout the Contract will include technical work group (TWG), weekly design, monthly VDOT progress, and construction meetings to discuss how the team will build the Project. Should any issues arise, it will be Dan's responsibility to address them with the designer, construction team, and VDOT. His interaction with the QAM will be continuous to make certain that the Project complies with the specifications. Dan will also coordinate public outreach and public meetings.

QAM, Avtar Singh, PE, CCM, DBIA: Avtar will regularly report to the DBPM and coordinate with the CM on all quality issues. Any item of work failing to meet minimum standards will be rejected and corrected immediately. Construction personnel will have no authority over QA inspection staff, and Avtar and the DBPM will resolve issues raised by construction personnel. VDOT will be informed by the QAM of issues/solutions during all phases through weekly reports and progress meetings. *As QAM, Avtar will hold the authority to shut down the job if quality issues warrant.*

DM, Gary Johnson, PE: Gary will report to the DBPM and manage all design activities and personnel to make sure that the design conforms with the Contract Documents. He will also establish and oversee the design QA/QC program for all pertinent disciplines involved

in the design of the Project, including review of design, working plans, shop drawings, specifications, and constructability, as outlined in *VDOT's Minimum Requirements for Quality Control and Quality Assurance on D-B and PPTA Projects, July 2018*; specifically, as outlined in Sections 3 and 4.

CM, Greg Suttle: Greg will report directly to the DBPM and communicate regularly with the DM. **He will be on the Project site full-time for the duration of construction operations.** His daily duties will include safety and the coordination of personnel, including subcontractors and construction QC. He will hold the ultimate responsibility for managing the Project's construction schedule and will coordinate with the adjacent projects. Greg will hold routine meetings with the QA inspection team to discuss ongoing construction activities. He will also review all QC reports and lab results to certify the materials used and work performed meet contract requirements and the "approved for construction" plans and specifications. Greg will make sure that any item not conforming to the specifications is addressed immediately with corrective action.

DESIGN & CONSTRUCTION COORDINATION

Our design and construction Team will collaborate from design through delivery and utilize the coordination methods highlighted in *Figure 3.3-3*. DBPM Dan Lieberman will be involved in all design development and construction processes to provide overall quality management, adherence to the contract, and commit resources to meet the Project's schedule. Dan will lead focused, regularly scheduled discipline coordination meetings throughout design and construction. They will serve as a conduit for disseminating Project-critical information and be the central point of decision-making and communication amongst the Team. As an added benefit, VDOT will be invited to attend these open forums of discussion to facilitate the resolution of issues, clearly define Project criteria, address corridor-wide safety and constructability issues, and provide consistency in operations before impacting schedule or budget.

This Project will require extensive coordination and integration between the design-builder, lead designer, VDOT, stakeholders, and adjacent projects. Instruments we will use to coordinate information include TWG meetings, progress meetings, file sharing websites, and a robust public outreach program led by the Team's PRM, **Mike Carosi**. Items such as safety, constructability, MOT, environmental, and schedule conformance are

Figure 3.3-3 | Team Collaboration Methods

- SharePoint®, Procore®, MS Teams®, and Bluebeam Revu® will be used for real-time sharing and tracking of information between the design and construction teams, such as plan reviews, RFIs, action items, and file transfers.
- ProjectWise® will be used for live sharing and distribution of calculations, evaluations, specifications, and plans.
- PlanGrid® will be utilized for live sharing of inspection reports with VDOT during construction.
- TWG meetings that will focus on design, constructability, and the schedule.
- Weekly design team meetings to coordinate the design across all design disciplines and team members.
- Interdisciplinary reviews to provide cross checks between disciplines and the contractor before issuing submittals for review to VDOT.
- "Over the shoulder" reviews to provide input and advice from VDOT subject matter experts.

enhanced by early collaboration. Through this approach, we create solid relationships and truly integrated D-B functions that set the foundation to interact and partner with VDOT and third-party stakeholders, streamline reviews, eliminate potential construction field issues, and deliver the Project safely and on schedule.

INDEPENDENT QA/QC

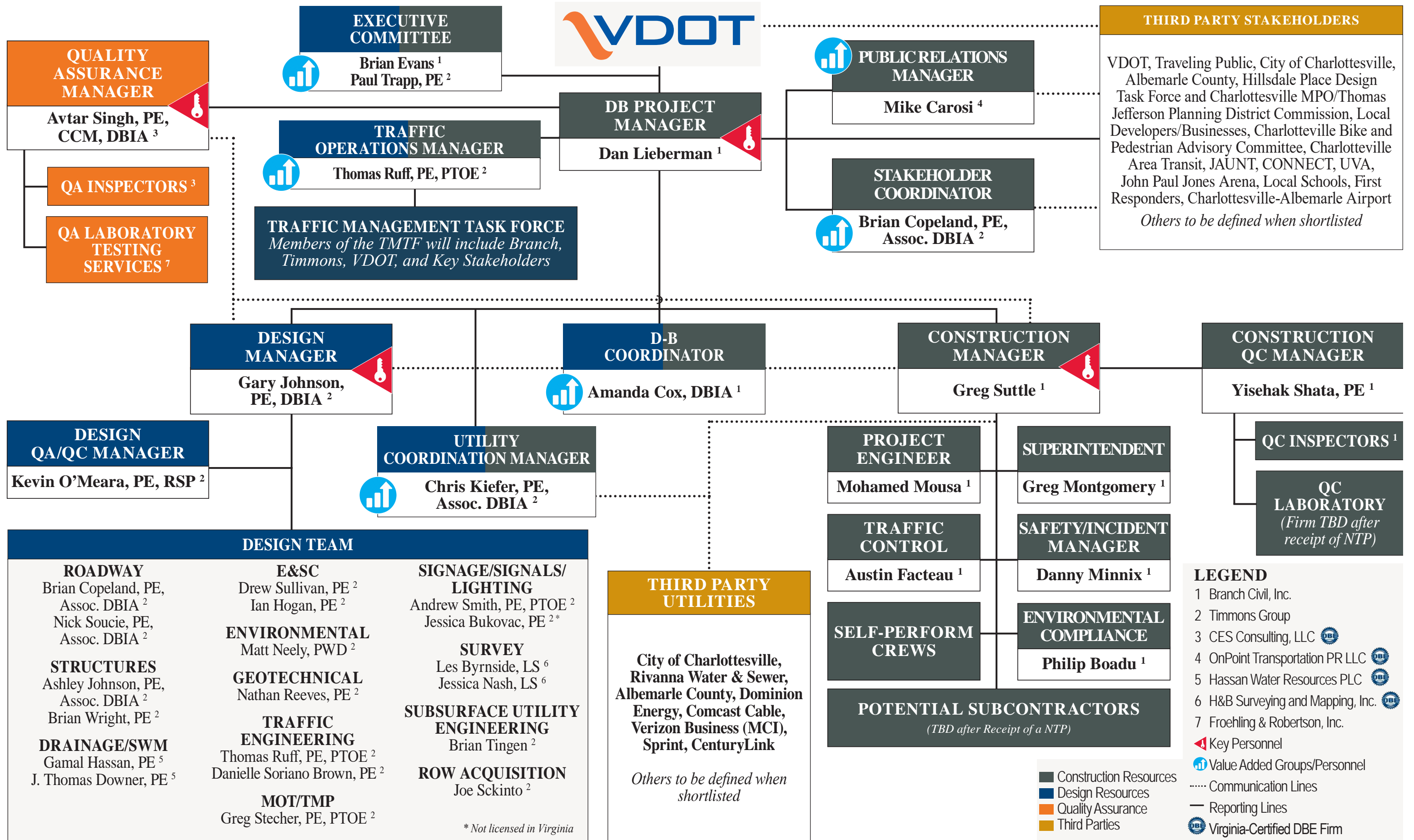
Construction QA

QAM, **Avtar Singh, PE, CCM, DBIA**, will confirm the results of QC efforts by performing tests and inspections for verification using an independent testing laboratory. Reporting to the DBPM, he will make sure that any non-compliant work is documented and corrected using an approved method to facilitate acceptance by VDOT. He will review, comment on, and approve the monthly invoices to VDOT and facilitate preparatory inspection meetings for major elements with QA, QC, and Team staff to review contract requirements pertaining to the construction, inspection, and acceptance of the work.

Construction QC

Our Team will develop and implement a Project-specific Quality Control Plan (QCP) that will focus on VDOT standard QC policies and procedures and identify key staff responsibilities, guidelines for testing and sampling, and documentation procedures for non-conforming work. The QCP will confirm that all work conforms to plans and specifications. Construction QC Manager **Yisehak Shata, PE** will report to the CM and be responsible for quality oversight, conduct regular audits of the QCP, and test/verify samples for internal QC to approve conformance with contract requirements.

Figure 3.3-2 | Organizational Chart





SECTION 3.4
Experience of the
Offeror's Team

SECTION 3.4

Experience of the Offeror's Team

3.4 EXPERIENCE OF THE OFFEROR'S TEAM



Our Team has successfully delivered some of the most challenging roadway and bridge projects in the southeast and mid-Atlantic, including the I-64 Widening Exit 200 to 205 D-B, I-95 Express Lanes Fredericksburg Extension D-B, I-95 Express Lanes Southern Terminus Extension (STE) D-B, Fayetteville Outer Loop D-B, and Dominion Boulevard Widening. *We have a proven history of partnering with clients and stakeholders to provide exceptional results despite technical, environmental, and MOT challenges.* As a result, we deliver high-quality projects safely, on time, and at significantly lower prices than our competitors.

Work history forms for the Contractor and Lead Designer are provided in *Appendix.3.4.1*. Furthermore, *Figure 3.4-1* demonstrates our Team's extensive experience working on other relevant projects.

Branch Civil, Inc. (Branch), Lead Contractor/Offeror: Branch has a 75-year tradition of building enduring infrastructure projects in Virginia and the mid-Atlantic and southeastern United States. As an employee-owned company, Branch is headquartered in Roanoke and has

offices in Chesapeake, Richmond, Manassas, and Morrisville, North Carolina. As one of the largest Virginia-based contractors, Branch's experience includes successful D-B, Public-Private Transportation Act (PPTA), and Design-Bid-Build (D-B-B) projects across Virginia. Branch has successfully delivered 17 D-B contracts totaling more than \$800M.

Timmons Group, Inc. (Timmons), Lead Designer: Timmons is a multi-disciplined engineering and technology firm recognized for over 25 as one of *Engineering News-Record's* Top 500 Design Firms. Timmons provides civil engineering, surveying environmental, geotechnical, landscape architecture and GIS/geospatial technology services to a diverse client base, including VDOT and local governments. Founded in 1953, Timmons has over 350 employees across nine offices in Virginia, including Charlottesville and their corporate headquarters in Richmond. Their firm has extensive experience with D-B project delivery, including the design of over \$4 billion in federal, state, and local projects across the mid-Atlantic since 2006.

Figure 3.4-1 | Additional Team Experience

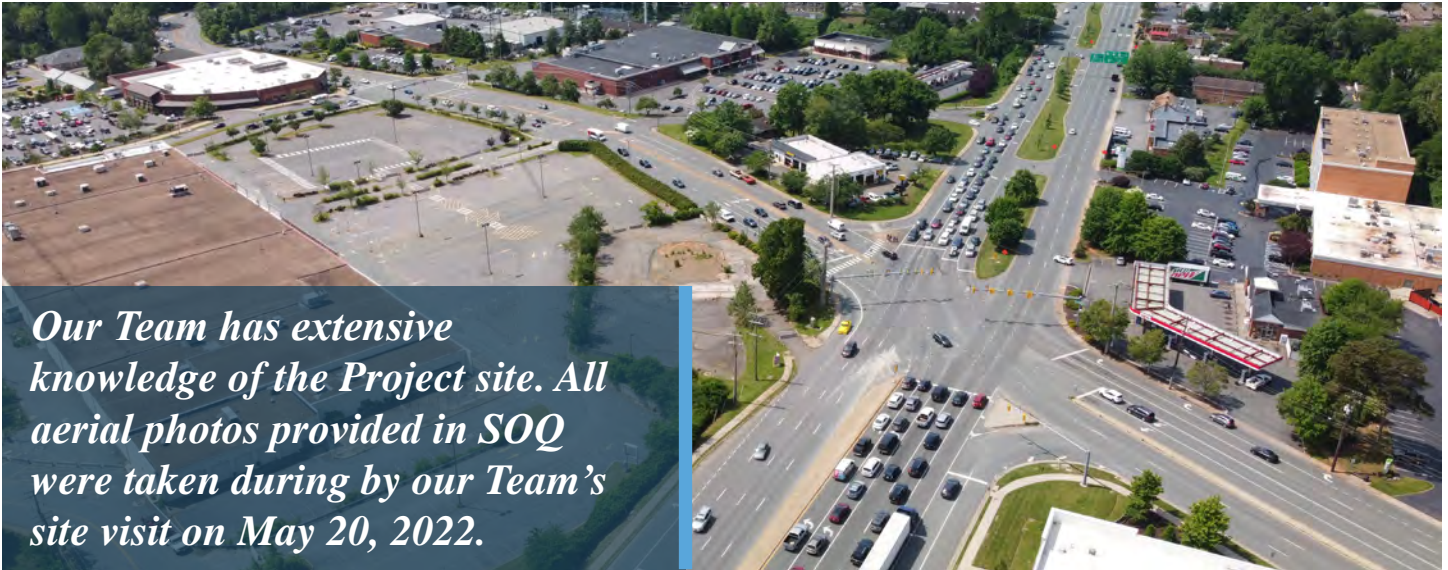
 I-64 Widening Exits 200-205 D-B	FIRM(S)	PROJECT TYPE	PROJECT VALUE	RISK MATCH			OTHER SIMILARITIES							
				SAFE MOBILITY	STAKEHOLDER COORDINATION	UTILITIES	ROAD IMPROVEMENTS	STRUCTURES	GEOTECHNICAL	ENVIRONMENTAL	PERMITTING	DRAINAGE / SWM	PUBLIC INVOLVEMENT	
Fayetteville Outer Loop (U-2519AA&AB), Cumberland and Robeson County, NC	Branch	D-B	\$235M	■	■	■	■	■	■	■	■	■	■	■
Military Highway CFI, Norfolk, VA	Branch	D-B	\$62M	■	■	■	■	■	■	■	■	■	■	■
I-64 Widening Exit 200 to 205, Henrico and New Kent Counties, VA	Branch	D-B	\$48M	■	■	■	■	■	■	■	■	■	■	■
George Mason University Campus Connector, Fairfax County, VA	Branch	D-B	\$17M	■	■	■	■	■	■	■	■	■	■	■
I-95 Express Lanes FredEx, Fredericksburg, VA	Branch	D-B	\$400M	■	■	■	■	■	■	■	■	■	■	■
R-2721A/B Triangle Expressway (2 Contracts), Wake County, NC	Branch	D-B	\$412M	■	■	■	■	■	■	■	■	■	■	■
Atlee Station Road, Hanover County, VA	Timmons	D-B-B	\$27M	■	■	■	■	■	■	■	■	■	■	■
Virginia Capital Trail Park Phase, Henrico County, VA	Timmons	D-B	\$6.3M	■	■	■	■	■	■	■	■	■	■	■
Barracks Road/Emmet Streetscape Improvements, Charlottesville, VA	Timmons	D-B-B	\$8.6M	■	■	■	■	■	■	■	■	■	■	■
State of Good Repair Bridge Bundle Design Services, City of Charlottesville, VA	Timmons	D-B-B	\$11M	■	■	■	■	■	■	■	■	■	■	■



SECTION 3.5

Project Risks

3.5 PROJECT RISKS



Our Team has extensive knowledge of the Project site. All aerial photos provided in SOQ were taken during by our Team's site visit on May 20, 2022.

Our Team performed a formal risk analysis of the Project's scope, site characteristics, travel patterns, and crash history to determine its issues. By leveraging our knowledge of the Project corridor, and experience on multiple roadway improvement projects throughout Virginia, we've determined that the following are the most critical risks that will require further exploration. Each is equally critical and, if not adequately mitigated, could negatively impact schedule, cost, quality, safety, and/or public perception.

RISK 1: SAFE MOBILITY IN THE PROJECT CORRIDOR

RISK IDENTIFICATION & WHY IT'S CRITICAL

This Project consists of five primary elements in separate locations within the Route 29, Hydraulic Road, Hillsdale Drive, and Route 250 Bypass corridor, each having unique operational characteristics. Safely maintaining vehicular and pedestrian mobility during and after construction is a critical risk because of the significant traffic pattern modifications being proposed for all users. Vehicles will have more restricted and directed but safer routes. Pedestrians will have a new crossing of Route 29 to connect new neighborhoods and commercial areas, drawing new pedestrian trips.

Maintaining the safety of drivers and pedestrians will be paramount, considering the following accident data obtained from the publicly available VDOT crash history:

- Six pedestrian-related crashes have occurred within the aggregate Project area, four immediately at the Route 29 at Hydraulic Road intersection.

- A pedestrian fatality occurred south of Route 29 at Route 250 Bypass interchange, where possible contributors were congestion and poor pedestrian facilities.
- A total of 26 severe (Type A or Fatal) crashes have occurred within the Project area in the last five years that involved only vehicles.

IMPACTS ON THE PROJECT

The impacts of the risks identified are to the traveling public and pedestrians throughout the Project area. If drivers are impatient or forced to perform complex maneuvers, the safety of all roadway users and the on-site workers will be at risk. Lane closures will reduce existing roadway capacity and mobility in an already high-traffic area. Community dissatisfaction could become a daily issue impacting progress and public support. The following impacts may be realized if proper and continuous mitigation strategies are not implemented during the construction of the Project:

- Added travel delays for commuters and commercial vehicles beyond what would typically be acceptable for a construction zone.
- Safety concerns for the traveling public, construction workers, bicyclists, and pedestrians.
- Delays for emergency responders and school buses.
- Project schedule delays.
- Negative publicity for the Project.

RISK MITIGATION STRATEGIES

Our strategies for minimizing impacts to travel routes and integrating multi-modal improvements prioritize the importance of the Transportation Management Plan, the sequence of construction, and public outreach

during all phases of design and construction and include the following.

Investigate the Use of a Turbo “Hybrid” Roundabout Design for Hydraulic Road at Hillsdale Drive

The proposed dual-lane configuration of the RAB can accommodate a higher traffic volume; however, it can be challenging to navigate for drivers and pedestrians, especially those being re-routed from typical patterns. A turbo RAB (or elements thereof) may be able to better direct traffic through the RAB to specific destinations and reduce the weaving required for drivers. Some potential turbo RAB elements that can be studied include:

- Maximizing vehicular throughput.
- Enhanced lane delineation.
- Allowance for South leg direct entry into RAB (from Kroger/Dominion Power)
- Enhanced pedestrian movements and refuge areas.

As demonstrated in **Figure 3.5-1**, Timmons previously designed a turbo RAB for VDOT on the Atlee Station Project in Hanover County. Timmons worked closely with the locality and VDOT staff to ensure that each design element and approach was considered carefully from multiple standpoints, including traffic operations, pedestrian safety, driver education, maintenance, snow removal, vehicle routing, and improved visibility.

Investigate an Early Work Package for the US 29 and Hydraulic Road Signalized Pedestrian Crossings

A designated crossing of US 29 does not exist, and the area has a history of pedestrian accidents. Our Team will explore the potential to complete an Early Work Package for the proposed improvements of this intersection to alleviate this existing safety situation as soon as practical. It is anticipated that the construction of the intersection improvements can progress within a shorter time frame relative to the Project areas, pending early procurement of the signal pole materials.

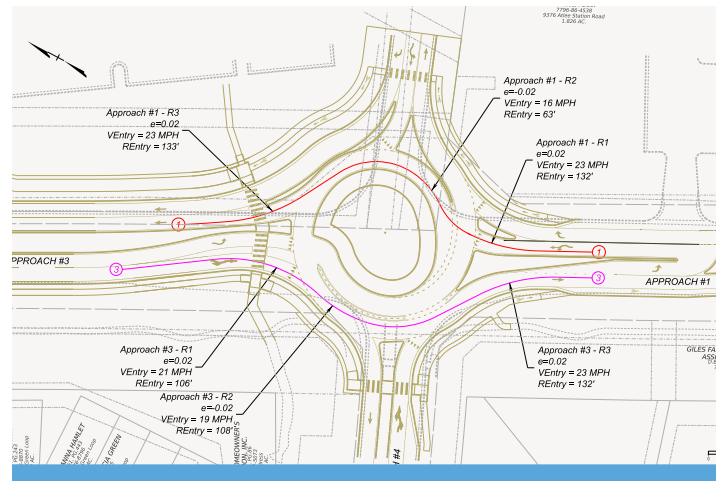
Lane Closure Coordination

The sequence and timing of lane closures will occur during off-peak traffic periods. Our construction will consider the Saturday commercial peak times and the effects on special events at the University of Virginia (UVA) and John Paul Jones Arena. Coordination with UVA for special events and activities on the US 29 corridor will help engage the community and reduce traffic impacts for unfamiliar or out-of-town drivers.

Traffic Analyses

Our Team will conduct traffic analyses and utilize portable message boards and messaging along I-64, US 29,

Figure 3.5-1 | Rendering of Timmons Turbo RAB Design for Atlee Station Project in Hanover County, VA



and the Route 250 Bypass to encourage the use of other viable alternative travel routes. For example, Hillsdale Drive and Hydraulic Road have other connections to US 29 that can reduce volumes and congestion through the work zones. If determined to be beneficial, we will coordinate with VDOT and the City of Charlottesville to make signal timing adjustments in conjunction with work zone lane closures.

Coordination with Online Technology Platforms

Our Team will work with VDOT to provide influencing information to Google Maps, Waze, and other online technology methods to re-route traffic away from the US 29 and Hydraulic Road area. Adding minor changes to the methodology for trip choice may re-route roadway users away from the Project area. Branch is successfully performing these services on the I-95 Express Lanes FedEx D-B in Stafford County. We work in conjunction with VDOT on a daily basis to ensure that traffic is minimally impacted by construction and is aware of traffic pattern changes.

Our Team will leverage Timmons’ GIS capabilities to geo-locate each construction phase to provide preliminary information to technology companies for routing decisions. By providing GIS layers of pre-determined construction zones, online technology platforms can give the drivers pre-route and real-time routing updates to avoid congested conditions.

Traffic Management Task Force (TMTF)

Our Team will implement a TMTF comprised of highly qualified construction, design, and safety personnel to immediately facilitate internal and external communications upon receiving the Notice to Proceed. The TMTF will be

led by TOM **Thomas Ruff, PE, PTOE** and will focus on planning, designing, and implementing the Project’s work zone traffic control program for vehicular and pedestrian traffic. General and breakout sessions will be held with the VDOT Culpeper District, VDOT’s Regional Traffic Operations Center, emergency responders, the City of Charlottesville, Albemarle County, and other stakeholders. TMTF sessions will gain insight into stakeholder needs, develop options for efficient and safe vehicular traffic management, ensure safe pedestrian access, and implement the agreed-upon decisions and determinations.

Incident Management Plan (IMP)







Our Team will prepare and implement an IMP. The IMP, highlighted in **Figure 3.5-2**, will be developed based on our extensive local knowledge of the US 29 corridor and surrounding roadways. Safety/Incident Manager **Danny Minnix** will facilitate the IMP and work in concert with the Team and first responders to ensure that incidents are responded to effectively. He will provide real-time information and communications to the VDOT Traffic Operations Center (TOC) to relay real-time information to the SSP, Virginia State Police, local first responders, and incident coordinators.

We will coordinate with wrecker services before and throughout construction to minimize response times to incident sites and quickly move disabled vehicles from the roadway. Access will be maintained to allow law enforcement and other first responders to reach incident sites rapidly. Incident reports will be issued detailing incident causes and effects and recommendations to minimize the potential for repeat occurrences.

Public Awareness

Our Team will collaborate closely with VDOT public affairs personnel to deliver regular updates via traditional print media, social media, VDOT’s project website, and virtual stakeholder meetings. Traffic pattern changes, alternate routes, and lane closures will be coordinated with the Regional Traffic Operations Center to provide motorists with real-time travel information through the Virginia 511 traffic information website and mobile applications. We will collaborate with VDOT to encourage commuters to avoid construction work zones by taking alternate routes to prevent traffic congestion. We will also create a complete Public Information Plan, facilitated by PRM **Mike Carosi**, to provide work zone information, construction sequencing updates, information about construction activities that may affect traffic, and advanced congestion notifications.

Figure 3.5-2 | Incident Management Plan Elements

- ☑ A Safety/Incident Manager, who will serve as a 24/7 point of contact for emergency notification of incidents. 
- ☑ Established methods for coordinating with VDOT to establish planned alternate routes in advance, including communications and public outreach. 
- ☑ An agency and stakeholder responsibilities matrix and contact checklist. 
- ☑ Pre-planned messages for various types of incidents for PCMS systems. 
- ☑ Contact information for local wrecker services, which will quickly remove disabled vehicles from the roadway throughout construction operations. 
- ☑ Methods for partnering with VDOT to provide information regarding construction progress, work zone changes, and incident reports to stakeholders and first responders. 

ROLE OF VDOT AND OTHER AGENCIES

Through coordination meetings and assessments, our Team will work closely with VDOT to address concerns. Because the development of the TMP may influence the local transportation network, these meetings may include the City of Charlottesville and Albemarle County employees. We anticipate VDOT playing an active role in our collaboration, including reviewing and approving the TMP. We also recommend that VDOT be in attendance at TMTF meetings to ensure that the Department is well-informed and approves coordination efforts, public outreach/notifications, and our overall approach to safety and traffic management in the corridor.

RISK 2: STAKEHOLDER BUY-IN

RISK IDENTIFICATION & WHY IT’S CRITICAL

The involvement of key stakeholders in the decision-making process will be critical to obtaining Project buy-in, securing ROW approvals, and starting construction components promptly. **Figure 3.5-3** on the next page provides a preliminary list of the Project’s stakeholders and coordination requirements.

This Project is an integral part of the Charlottesville area’s roadway network, and maintaining the schedule will be paramount. Albemarle County and the City of Charlottesville have high citizen engagement and stakeholder coordination is an especially critical risk because of the input needed from numerous entities, starting from the early design phase and continuing through to construction.

EXHIBIT 3.5-3 | List of Project Stakeholders and Coordination Requirements

STAKEHOLDER	COORDINATION REQUIREMENTS
City of Charlottesville	<ul style="list-style-type: none"> Project status and updates, particularly for the Department of Public Works, Department of Economic Development, and Department of Neighborhood Development Services. Coordination of the TMP.
Albemarle County	<ul style="list-style-type: none"> Providing information pertaining to the project status and updates on construction changes. Coordination of the TMP.
Hillsdale Place Design Task Force and Charlottesville MPO/Thomas Jefferson Planning District Commission	<ul style="list-style-type: none"> Providing information pertaining to the project status and updates on construction changes. Confirming that public hearing comments are considered and incorporated into the overall design and construction of the Project.
Developers and Businesses	<ul style="list-style-type: none"> ROW acquisition for the pedestrian bridge, RAB, and shared-use path. Coordinate new entrances, sidewalk, and other features with the developer of Hillsdale Place (Riverbend Development) and other businesses along Route 29 and Hydraulic Road. Information on new and modified traffic movements.
Utility Companies/Owners	<ul style="list-style-type: none"> Avoidance/minimization of facilities and services.
Charlottesville Bike and Pedestrian Advisory Committee	<ul style="list-style-type: none"> Information on new and modified shared-use paths, sidewalks, crosswalks, RAB design, pedestrian bridge.
Charlottesville Area Transit, JAUNT, and CONNECT	<ul style="list-style-type: none"> Proposed bus zones and bus shelters. Lane closure and work zone updates.
UVA and John Paul Jones Arena	<ul style="list-style-type: none"> Avoidance of lane closures during special events.
Local Schools	<ul style="list-style-type: none"> Lane closure and work zone updates.
Traveling Public	<ul style="list-style-type: none"> Utilize a proactive Public Information Program to ensure that the public is aware of traffic changes and revised permanent traffic patterns.
First Responders	<ul style="list-style-type: none"> Lane closure and work zone updates.
City of Charlottesville DPQ	<ul style="list-style-type: none"> City of Charlottesville Lane Disturbance Permit and Street Cut Permit for work performed inside City-maintained streets.
Charlottesville-Albemarle Airport	<ul style="list-style-type: none"> Project status/updates. Lane closure and work zone updates.

IMPACTS ON THE PROJECT

The following impacts may be realized if proper and continuous mitigation strategies are not implemented during the design and construction of the Project:

- Ongoing opposition or delayed approvals from stakeholder groups could adversely impact the schedule.
- Inadequate coordination with critical stakeholders could result in misinformation and negative public perception and media coverage.
- Delays in ROW acquisition.
- Additional costs to public or private entities.

RISK MITIGATION STRATEGIES

Early Stakeholder Involvement

Our Team is very familiar with the Hydraulic Road/US 29 Project corridor and understands the challenges presented by its many stakeholders. Our organizational structure includes Value-Added Stakeholder Coordinator **Brian Copeland, PE, Assoc. DBIA** of Timmons to ensure that issues with stakeholders are resolved without impacting the schedule. Brian has extensive experience working with stakeholders in the Charlottesville area

and will ensure that the proper communication method is chosen for each stakeholder in the Project corridor.

We will engage key stakeholders early to receive input and build on comments and concerns raised during previous community meetings. Discussion items will include the project objectives, funding and schedule constraints, and additional stakeholder comments. This early, proactive communication will help set the boundaries for targeted stakeholder feedback for the remainder of the Project. Our experience has shown that early stakeholder coordination maximizes the ability to develop optimal designs while minimizing the costs of design changes.

Focused Agency Coordination

In addition to the early stakeholder meetings noted above, individual-focused meetings will be required to ensure communications are tailored to address specific concerns. Stakeholders' buy-in to the ultimate design will allow ROW acquisition and other approvals to progress so that the start of construction is not delayed. ***Our Team has established relationships with the key stakeholders involved in this Project.*** We understand that the City of

Figure 3.5-4 | Communication Goals and Strategies

GOAL	COORDINATION REQUIREMENTS
Increase Awareness of the Project’s Activities, Impacts, and Progress	<ul style="list-style-type: none"> • Work with VDOT to generate content for the Project’s website, social media, and newsletters. • Confirm that all Team members have access to the most current Project information. • Before and during construction, have progress meetings.
Build Long-Term Relationships with Stakeholders	<ul style="list-style-type: none"> • Use email lists, issues tracking, presentations, meetings, and site visits to be proactive in our relationship development with stakeholders. • Ensure that all stakeholders have easy and quick access to current Project information.
Establish and Maintain a Successful Partnership with All Stakeholders	<ul style="list-style-type: none"> • Commit to formal and informal communication with all stakeholders. • Offer a two-way communication channel to build trust with key individuals and maintain a transparent, open, information-sharing atmosphere.
Anticipate and Address Issues that May Impact the Schedule	<ul style="list-style-type: none"> • Anticipate concerns and collaborate to find a viable solution. • Encourage communication standards and practices that are open and transparent. • Allow for multiple methods for providing input to the Team and keep track of trends and essential themes.

Charlottesville has designated Route 29 and Hydraulic Road within the Project limits as “Entrance Corridors.” We will maintain the City’s streetscape, signing, and utility design requirements. Sidewalks, bicycle routes, and pedestrian routes play a significant role in providing alternative modes of transportation for the City’s residents and visitors. We will design and construct each with the utmost concern for connectivity and safety.

Our Team will coordinate with adjacent developers and landowners, particularly for the proposed RAB, pedestrian bridge, and shared-use path improvements. Our Team is aware of the coordination elements required with Riverbend Development, the developer for Hillsdale Place, concerning the new entrance locations, perimeter sidewalk, crosswalks, and utility placements as we seek to gain ROW approvals. We will design the pedestrian bridge, ramp, and retaining walls to ensure that they blend with the existing contours to minimize ROW takings and secure adjacent property owner approvals. We will coordinate with the Brandywine Homeowners Association to minimize their concerns regarding the permanent and temporary ROW acquisitions for the proposed shared-use path along Hydraulic Road East.

Several bus providers have designated routes within the Project area, including the Charlottesville Area Transit, JAUNT, and CONNECT. Proposed bus zones and bus shelter locations will be thoroughly coordinated. Finally, emergency responders, school districts, UVA, and the John Paul Jones Arena will be consulted to develop an MOT plan that minimizes disruptions to their services during construction to the greatest extent possible. During construction, follow-up coordination meetings will also be conducted to confirm commitments made during the design phase are followed through with and adjustments made as necessary to ensure minimal disruptions to the services being provided.

A Proactive Communications Plan

Our Team will develop a VDOT-approved communications plan. Taking the Project to the community is vital to disseminating accurate information and listening to public concerns. Attending select community events is an opportunity to build our stakeholder database for the release of Project updates such as new traffic pattern changes and other notices. To ensure that stakeholders remain fully engaged throughout the Project, our Team will maintain a constant flow of communication, as listed above in *Figure 3.5-4*.

ROLE OF VDOT AND OTHER AGENCIES

We anticipate that VDOT will be involved in the early key stakeholder meetings and individual-focused meetings throughout design development. VDOT’s approval of our Team’s Communication Plan will also be required. VDOT will ultimately provide ROW acquisition approvals upon the conclusion of the outreach to the adjacent property owners. During construction, VDOT will be invited to participate in monthly project status meetings and be consulted for any adjustments needed resulting from stakeholders’ input.

RISK 3: UTILITIES

RISK IDENTIFICATION & WHY IT’S CRITICAL

The Project corridor contains numerous existing utilities. City of Charlottesville water, sewer, gas lines, Dominion Energy power lines, street lights, VDOT traffic control lines, and privately-owned telecommunications lines are prevalent throughout the Project area. The Project’s utility coordination risks are magnified due to the fully developed corridor, with very little open space to accommodate utility relocations. Our Team has researched the information provided with the RFQ, and *Figure 3.5-5* on the next page provides details regarding the potentially affected utilities.

Figure 3.5-5 | Affected Utilities in the Project Corridor

OWNER/TYPE	LOCATION	POTENTIAL CONFLICT(S)	BRANCH TEAM RESPONSIBILITIES
Rivanna Water & Sewer Authority and City of Charlottesville Public Utilities Division	Route 29 west curb and gutter/landing area	<ul style="list-style-type: none"> • Pedestrian bridge foundations and retaining walls with 12” and 8” respectively water mains 	<ul style="list-style-type: none"> • Positively locate and design to avoid conflict as practical.
Dominion Energy Electric Power Lines	Multi-circuit aerial pole in the eastern quadrant of US 29/Hydraulic Road	<ul style="list-style-type: none"> • Pedestrian improvements and/or pedestrian signal actuation equipment. 	<ul style="list-style-type: none"> • Design surficial improvements to avoid conflicts.
VDOT Traffic Control Infrastructure	Route 29 at Angus Road and Hydraulic Road	<ul style="list-style-type: none"> • Maintain the Route 29 mainline progression for optimization throughout construction. • VDOT does not participate in “Miss Utility of VA” calls. 	<ul style="list-style-type: none"> • Maintain communications throughout construction. • Establish contacts at the VDOT Signal shop to have facilities marked and refreshed. • Have emergency repair materials and equipment on standby. • Utilize the VDOT NOI process.
City of Charlottesville Public Utilities Division (Gas)	Route 29 median and eastern landing area	<ul style="list-style-type: none"> • Pedestrian foundations and retaining walls are in conflict with two natural gas mains. 	<ul style="list-style-type: none"> • Positively locate and design to avoid conflict as practical.
Rivanna Water & Sewer Authority and City of Charlottesville Public Utilities Division	Hydraulic Road/Hillsdale Drive RAB	<ul style="list-style-type: none"> • Fire hydrant assembly is in conflict. • Water, sewer, and gas lines may be in conflict with RAB drainage structures. 	<ul style="list-style-type: none"> • Relocate the fire hydrant assembly and ensure the new location meets fire code. • Design inlets and storm system pipes to avoid existing utilities to the extent possible.
Dominion Energy Street Light Facilities	Hillsdale Drive north of Hydraulic Road	<ul style="list-style-type: none"> • In conflict with the current roundabout layout. 	<ul style="list-style-type: none"> • Coordinate with facility owner to have them replaced. • Coordinate to have roundabout lighting as desired.
Dominion Energy Multi-Circuit Aerial Pole and Guying Elements	Southern quadrant of Hydraulic and Hillsdale	<ul style="list-style-type: none"> • Dominion Energy’s substation and regional employment center are located at this intersection. 	<ul style="list-style-type: none"> • Design to avoid conflict as practical as this substation is vitally important to the region.
Dominion Energy Transmission High Voltage Overhead	Hydraulic Road east side between Route 250 and Brandywine	<ul style="list-style-type: none"> • Cutting the landing area to allow space for the shared-use path could undermine the foundation. 	<ul style="list-style-type: none"> • Employ retaining wall as necessary. • Explore alternative geometry to avoid the conflict.
Verizon Telecommunication Duct Bank	Route 29 Mainline	<ul style="list-style-type: none"> • Proposed storm sewer and/or foundations for pedestrian bridge or associated ramps. 	<ul style="list-style-type: none"> • Positively locate the duct bank and design to avoid conflict. • Likely will be able to avoid.

IMPACTS ON THE PROJECT

Utility coordination will be critical, beginning during the Technical Proposal stage and continuing throughout construction. Planned avoidances and relocations will need to be coordinated early to confirm agreement by all parties and proper schedule inputs. Utility coordination discussions and field meetings will need to be held throughout construction to ensure all parties are engaged and committed to successfully executing the avoidance or relocation plan. Any adverse impacts on existing utility systems could result in potential disruptions to VDOT’s signal and lighting systems, unplanned utility outages to the local communities, safety issues for construction workers, or delays in the construction schedule.

Our Team has begun researching the potential utility conflicts during the RFQ phase. We are committed to ensuring mitigation strategies are fully implemented to minimize any utility risks to the extent possible. Utilities controlled by third parties are a schedule risk since they must be relocated before affected construction work can commence. Design and relocation work

for most private utilities are performed by others, of which their current workload and labor constraints can be outside the D-B team’s direct control. The following impacts may be realized if proper and continuous mitigation strategies are not implemented:

- Negative publicity for the Project.
- Potential utility strikes/unplanned outages.
- Disruptions to the VDOT-owned signal systems.
- Lighting outages could result in visibility concerns for motorists.
- Schedule delays.

RISK MITIGATION STRATEGIES

Value-Added Utility Coordination Manager (UCM)

Our Lead Designer, Timmons, maintains a local office in the City of Charlottesville and has very well-established relationships with the Project’s many stakeholders. **Chris Kiefer, PE, Assoc. DBIA**, the Team’s Value-Added UCM, will mitigate the Project’s utility challenges. Chris has over 34 years of experience in roadway design and utility coordination and has fulfilled the UCM role on VDOT D-B projects and hundreds of traditionally procured proj-

ects. *Chris is the Team Leader for design improvements for the City of Charlottesville at the nearby Route 29/Barracks Road intersection.* Timmons is working with the *same utility providers for this Project* and has established excellent working relationships and a protocol for mitigating utility risks for a successful delivery. A primary strategy to mitigate risks is to develop a design that avoids the existing utilities altogether or, at the very least, limits the impacts to surface adjustments of the vault and manhole tops. Our honest and ongoing relationships have established a strong reputation within the industry, and we are committed to working together to make the utility coordination as smooth as possible.

Early Utility Coordination

Upon receipt of a Notice to Proceed (NTP), our Team will meet with all utility providers to brainstorm solutions for the potentially impacted facilities, prioritizing avoidance and minimization. We will check to see if consolidation of facilities or joint duct banks may be desirable by any companies that could be used for re-routing lines in conflict with the proposed work. We fully understand that early coordination and upfront notifications will be essential to providing adequate time for public and private utility plan reviews and agreement processing.

Our UCM has already begun investigation activities to determine the appropriate utility agencies in the Project corridor. This knowledge will be expanded upon during the development of a Technical Proposal and will continue throughout design and construction. We can then refine the overall schedule to include the specific utility relocation time frames, focusing on the most critical activities. Early mitigation activities will consist of:

- Assembling a utility matrix that identifies each potential utility conflict, including its location, type, owner, cost responsibility, and details.
- Conducting a utility partnering meeting immediately after NTP to discuss a mutually beneficial plan to identify potential conflicts and discuss avoidance-versus-relocation options. Agreeable solutions for resolving conflicts expeditiously will also be developed.
- Conducting independent utility verification of existing post-award utilities to determine if new utilities have been added since the finalized bridging documents.
- Obtaining supplemental test holes on existing utilities at critical locations.
- Coordinating utility work to ensure that relocations remain off the critical path to the extent possible.
- Identifying easements needed for utility relocations.

- Developing an alternative analysis for the determined utility conflicts for methods of potentially avoiding or minimizing conflicts (e.g., re-design a storm sewer run).
- Coordinating the final determination on utility conflicts with affected utility providers to establish cost, responsibility, and schedule commitments.
- Establishing contact with the City and VDOT permit managers to alert us in the situation whereby new utilities are to be installed to ensure that they will not become concerns during construction.

Notice of Intent (NOI) Process

Our Team understands the critical nature of any impacts to the VDOT-owned signal and electrical facilities, and will strictly adhere to VDOT's NOI process. Our UCM will be responsible for ensuring VDOT assets are field verified prior to the start of any adjacent construction, and for maintaining an asset tracking system throughout the Contract's life to minimize the potential for accidental hits. He will conduct meetings at the start of construction to ensure field staff are fully aware of the NOI process, including the initial notification, second notification, confirming/final notifications, work progression notices, and notification of work completed. Additionally, required signal and electrical materials will be purchased early during construction for immediate utilization if needed for repairs.

Continuous Coordination

In addition to the previously indicated coordination, utility and ITS coordination and field meetings must continue throughout the life of this Project. Upfront markings and field verification of the existing utility locations will be essential to avoid utility strikes and unplanned outages. Ongoing communications and field inspections of planned relocations will be necessary to ensure that the agreement commitments are adhered to. Our Team will be engaged with the Project's utility owners throughout construction to help provide the successful execution of our utility plans.

ROLE OF VDOT AND OTHER AGENCIES

Our Team will follow the standard VDOT processes for the relocations, and the District Utility Engineer will be invited to all meetings with the utility companies. The scope of relocation work, inspection requirements, payment responsibilities, and other terms of the utility agreements will all be coordinated with VDOT. For any impacted VDOT assets, the Department will review, comment on, and approve notification documents during the various steps of the NOI process described above.



APPENDICES

APPENDIX 3.1.2

SOQ Checklist and Contents

ATTACHMENT 3.1.2

Project: 0029-M03-371

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Offerors shall furnish a copy of this Statement of Qualifications (SOQ) Checklist, with the page references added, with the Statement of Qualifications.

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	Appendix 3.1.2
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Appendix 2.10
Letter of Submittal (on Offeror's letterhead)				Page 1
Authorized Representative's signature	NA	Section 3.2.1	yes	Page 1
Offeror's point of contact information	NA	Section 3.2.2	yes	Page 1
Principal officer information	NA	Section 3.2.3	yes	Page 1
Offeror's Corporate Structure	NA	Section 3.2.4	yes	Page 1
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	Page 1
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	Appendix 3.2.6
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appendix 3.2.7
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Appendix 3.2.8
Evidence of obtaining bonding	NA	Section 3.2.9	no	Appendix 3.2.9

ATTACHMENT 3.1.2

Project: 0029-M03-371

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	Appendix 3.2.10
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix 3.2.10
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix 3.2.10
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix 3.2.10
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	Appendix 3.2.10
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	Page 1
Offeror's Team Structure				Pages 2-7
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Page 2-5
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix 3.3.1.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix 3.3.1.2
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix 3.3.1.3
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix 3.3.1.4
Organizational chart	NA	Section 3.3.2	yes	Page 7
Organizational chart narrative	NA	Section 3.3.2	yes	Pages 5-6

ATTACHMENT 3.1.2

Project: 0029-M03-371

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
Experience of Offeror's Team				Page 8
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix 3.4.1(a)
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix 3.4.1(b)
Project Risk				Pages 9-15
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	Pages 9-15

APPENDIX 2.10

Form C-78-RFQ

ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

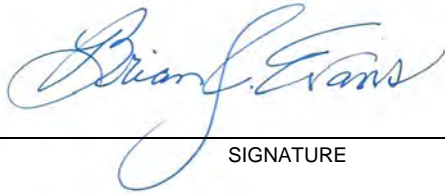
RFQ NO. C00118880DB114
PROJECT NO.: 0029-M03-371

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

Acknowledgement shall be made of receipt of the Request for Qualifications (RFQ) and/or any and all revisions and/or addenda pertaining to the above designated project which are issued by the Department prior to the Statement of Qualifications (SOQ) submission date shown herein. Failure to include this acknowledgement in the SOQ may result in the rejection of your SOQ.

By signing this Attachment 2.10, the Offeror acknowledges receipt of the RFQ and/or following revisions and/or addenda to the RFQ for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover letter of RFQ – April 19, 2022
(Date)
2. Cover letter of Addendum #1- May 10, 2022
(Date)
3. Cover letter of _____
(Date)



SIGNATURE

June 7, 2022

DATE

Brian Evans

PRINTED NAME

Senior Vice President
Branch Civil, Inc.

TITLE

APPENDIX 3.2.6

List of Affiliated and/or
Subsidiary Companies

ATTACHMENT 3.2.6

State Project No. 0029-M03-371

Affiliated and Subsidiary Companies of the Offeror

Offerors shall complete the table and include the addresses of affiliates or subsidiary companies as applicable. By completing this table, Offerors certify that all affiliated and subsidiary companies of the Offeror are listed.

<input type="checkbox"/> The Offeror does not have any affiliated or subsidiary companies.
<input checked="" type="checkbox"/> Affiliated and/ or subsidiary companies of the Offeror are listed below.

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Affiliate (Parent Company)	The Branch Group, Inc.	PO BOX 40004, Roanoke, VA 24022
Affiliate	Branch & Associates, Inc.	PO BOX 40051, Roanoke, VA 24022
Affiliate	Branch Builds, Inc.	5732 Airport Road NW, Roanoke, VA 24012
Affiliate	G.J. Hopkins, Inc.	PO BOX 12467, Roanoke, VA 24025
Affiliate	Balfour Beatty Infrastructure, Inc./ E.V. Williams, Inc. JV	430 Eastwood Road, Wilmington, NC 28403
Affiliate	Corman - E.V. Williams, a Joint Venture	12001 Guilford Road, Annapolis Junction, MD 20701
Affiliate	Flatiron Branch, a Joint Venture	385 Interlocken Crescent, Suite 900, Broomfield, CO 80021
Affiliate	Flatiron Branch II, a Joint Venture	385 Interlocken Crescent, Suite 900, Broomfield, CO 80021
Affiliate	Branch Flatiron, a Joint Venture	442 Rutherford Avenue NE, Roanoke, VA 24016
Affiliate	Corman-Branch, a Joint Venture	442 Rutherford Avenue NE, Roanoke, VA 24016
Affiliate	Branch-Orders Joint Venture	442 Rutherford Avenue NE, Roanoke, VA 24016
Affiliate	G.J. Hopkins/Lacy	442 Rutherford Avenue NE, Roanoke, VA 24016
Affiliate	Branch-Sloan Joint Venture	442 Rutherford Avenue NE, Roanoke, VA 24016

APPENDIX 3.2.7

Debarment Forms

SIGNED PRIMARY DEBARMENT FORM
BRANCH CIVIL, INC.

ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0029-M03-371

1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

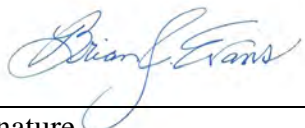
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; and have not been convicted of any violations of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1) b) of this certification; and

d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.



Signature

June 7, 2022

Date

Senior Vice President

Title

Branch Civil, Inc.

Name of Firm

SIGNED LOWER TIER DEBARMENT FORM
TIMMONS GROUP

ATTACHMENT 3.2.7(b)

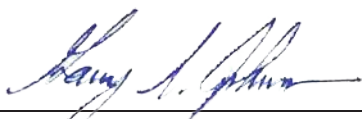
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0029-M03-371

1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.



Signature

May 4, 2022

Date

Principal, Director of Transportation Design Build,
Director of Bridges & Structures

Title

Timmons Group, Inc.

Name of Firm

SIGNED LOWER TIER DEBARMENT FORM
CES CONSULTING, LLC

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0029-M03-371

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.



Signature

4/27/2022

Date

President

Title

CES CONSULTING LLC

Name of Firm

SIGNED LOWER TIER DEBARMENT FORM
FROEHLING & ROBERTSON, INC.


ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0029-M03-371

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

 5/23/22 Branch Manager
Signature Date Title

Froehling and Robertson, Inc.
Name of Firm

SIGNED LOWER TIER DEBARMENT FORM
ON POINT TRANSPORTATION PR, LLC

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0029-M03-371

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.



Signature

5.18.22

Date

President

Title

On Point Transportation PR

Name of Firm

SIGNED LOWER TIER DEBARMENT FORM
HASSAN WATER RESOURCES PLC

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0029-M03-371

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.



5/4/2022

President

Signature

Date

Title

Hassan Water Resources, PLC

Name of Firm

SIGNED LOWER TIER DEBARMENT FORM
H&B SURVEYING AND MAPPING, LLC

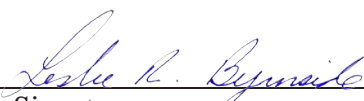
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0029-M03-371

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.



Signature

May 13, 2022

Date

Vice President

Title

H & B Surveying and Mapping, LLC

Name of Firm

APPENDIX 3.2.8
Offeror's VDOT
Prequalification Certificate



**Department's List of Prequalified Vendors
Includes All Qualified Levels As Of 11/3/2021**

- B -

Vendor ID: B1164
Vendor Name: BRACT RETAINING WALLS AND EXCAVATING LLC
Prequal Level: Prequalified
Prequal Exp: 02/28/2022

-- PREQ Address --

P.O. BOX 2099
ASHLAND, VA 23005
Phone: (804)798-5097
Fax: (804)798-5098

Work Classes (Listed But Not Limited To)

006 - PORTLAND CEMENT CONCRETE PAVING
056 - MASONRY CONSTRUCTION
101 - EXCAVATING

Bus. Contact: MCCULLOUGH, AARON MICHAEL
Email: AARON@BRACTWALLS.COM

-- DBE Information --

DBE Type: N/A
DBE Contact: N/A

Vendor ID: B319
Vendor Name: BRANCH CIVIL, INC.
Prequal Level: Prequalified
Prequal Exp: 02/28/2022

-- PREQ Address --

P. O. BOX 40004
ROANOKE, VA 24022-0004
Phone: (540)982-1678
Fax: (540)982-4216

Work Classes (Listed But Not Limited To)

002 - GRADING
003 - MAJOR STRUCTURES
045 - UNDERGROUND UTILITIES

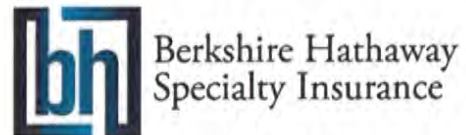
Bus. Contact: COLBERT, MICHAEL ANDREW
Email: BCIESTIMATING@BRANCHCIVIL.COM

-- DBE Information --

DBE Type: N/A
DBE Contact: N/A

APPENDIX 3.2.9

Surety Letter



April 28, 2022

Bryan W. Stevenson, P.E., DBIA
Alternative Project Delivery Division
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Re: Branch Civil, Inc. - Surety Prequalification
Transportation Improvements at Hydraulic Road and US 29, RFQ No.: C00118880DB114

Dear Sir or Madam:

It has been the privilege of American Global LLC and Federal Insurance Company and Berkshire Hathaway Specialty Insurance Company to provide surety bonds on behalf of Branch Civil, Inc., a subsidiary of The Branch Group. In our opinion, Branch Civil, Inc. remains properly financed, well equipped, and capably managed. At the present time, Federal Insurance Company and Berkshire Hathaway Specialty Insurance Company provide a \$300,000,000.00 single project / \$1,250,000,000.00 aggregate surety program to Branch Civil, Inc.

As surety for Branch Civil, Inc., Federal Insurance Company and Berkshire Hathaway Specialty Insurance Company are capable of providing a Performance Bond and a Labor and Materials Payment Bond in the amount of the anticipated cost of construction and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this Project.

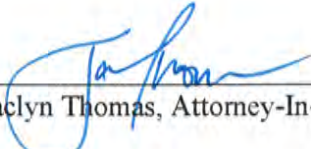
As always, Federal Insurance Company and Berkshire Hathaway Specialty Insurance Company reserves the right to perform normal underwriting at the time of any bond request, including, without limitation, prior review and approval of relevant contract documents, bond forms, and project financing. We assume no liability to your or any of your affiliates if for any reason we do not execute such bonds.

Federal Insurance Company is listed on the U.S. Treasury Department's Listing of Approved Sureties (Department Circular 570) and is rated A++, XV by A.M. Best Company.

Berkshire Hathaway Specialty Insurance Company is listed on the U.S. Treasury Department's Listing of Approved Sureties (Department Circular 570) and is rated A+ XV by A.M. Best Company.

Very truly yours,

Federal Insurance Company
Berkshire Hathaway Specialty Insurance Company



Jaclyn Thomas, Attorney-In-Fact


ACKNOWLEDGEMENT OF SURETY COMPANY

STATE OF NEW JERSEY

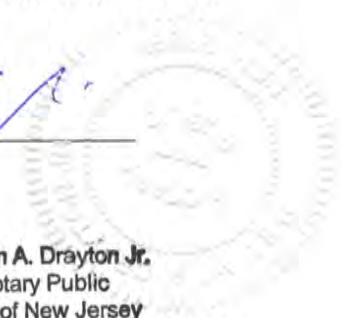
COUNTY OF MORRIS

ON THE 28th DAY OF APRIL, 2022 BEFORE ME PERSONALLY APPEARED Jaclyn Thomas TO ME KNOWN, WHO BEING BY ME DULY SWORN, DID DEPOSE AND SAY; THAT (S)HE IS THE ATTORNEY-IN-FACT OF **Federal Insurance Company and Berkshire Hathaway Specialty Insurance Company**, THE CORPORATION THAT EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT SUCH CORPORATION EXECUTED THE SAME.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY OFFICIAL SEAL, AT MY OFFICE IN THE ABOVE COUNTY, THE DAY AND YEAR WRITTEN ABOVE.



Notary Public



William A. Drayton Jr.
Notary Public
State of New Jersey
My commission expires April 9, 2026



Power Of Attorney

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY

Know all men by these presents, that BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at One Lincoln Street, 23rd Floor, Boston, Massachusetts 02111, NATIONAL INDEMNITY COMPANY, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 3024 Harney Street, Omaha, Nebraska 68131 and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, a corporation existing under and by virtue of the laws of the State of Connecticut and having an office at 100 First Stamford Place, Stamford, Connecticut 06902 (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: Jaclyn Thomas, Kevin T. Walsh, Jr., Thomas MacDonald, Krystal L. Stravato, 100 South Jefferson Road, Suite 101, of the city of Whippany, State of New Jersey, their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of December 20, 2018. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively. The following signature by an authorized officer of the Company may be a facsimile, which shall be deemed the equivalent of and constitute the written signature of such officer of the Company for all purposes regarding this Power of Attorney, including satisfaction of any signature requirements on any and all undertakings, bonds, or other such writings obligatory in the nature thereof, to which this Power of Attorney applies.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY,

[Handwritten signature of David Fields]

By: David Fields, Executive Vice President



NATIONAL INDEMNITY COMPANY, NATIONAL LIABILITY & FIRE INSURANCE COMPANY,

[Handwritten signature of David Fields]

By: David Fields, Vice President

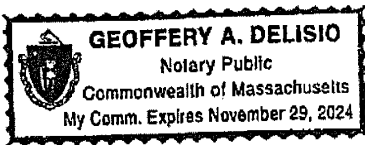


NOTARY

State of Massachusetts, County of Suffolk, ss:

On this 20th day of December, 2018, before me appeared David Fields, Executive Vice President of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY and Vice President of NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.

[Notary Seal]



[Handwritten signature of Geoffrey A. Delisio]

Notary Public

I, Ralph Tortorella, the undersigned, Officer of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies which is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, see hereunto affixed the seals of said Companies this April 28, 2022.



[Handwritten signature of Ralph Tortorella]

Officer

To verify the authenticity of this Power of Attorney please contact us at: BHSISurety Department, Berkshire Hathaway Specialty Insurance Company, One Lincoln Street, 23rd Floor Boston, MA 02111 | (770) 625-2516 or by email at Jennifer.Porter@bhspecialty.com THIS POWER OF ATTORNEY IS VOID IF ALTERED To notify us of a claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at claims@bhspecialty.com, via fax to (617) 507-8259, or via mail.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BYLAWS)

ARTICLE V.

CORPORATE ACTIONS

....

EXECUTION OF DOCUMENTS:

....

Section 6.(b) The President, any Vice President or the Secretary, shall have the power and authority:

- (1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and
- (2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

NATIONAL INDEMNITY COMPANY (BY-LAWS)

Section 4. Officers, Agents, and Employees:

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)

ARTICLE IV

Officers

Section 1. Officers, Agents and Employees:

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

**BERKSHIRE HATHAWAY SPECIALTY
INSURANCE COMPANY**

1314 Douglas Street, Suite 1400, Omaha, Nebraska 68102-1944

ADMITTED ASSETS*

	<u>12/31/2020</u>	<u>12/31/2019</u>	<u>12/31/2018</u>
Total invested assets	\$ 5,475,240,588	\$ 5,172,183,338	\$ 4,313,185,189
Premium & agent balances (n)	603,615,506	368,086,012	301,849,144
All other assets	157,897,676	127,524,677	140,930,406
Admitted Assets	<u>\$ 6,236,753,770</u>	<u>\$ 5,667,794,027</u>	<u>\$ 4,755,964,739</u>

LIABILITIES & SURPLUS*

	<u>12/31/2020</u>	<u>12/31/2019</u>	<u>12/31/2018</u>
Loss & loss exp. unpaid	\$ 921,923,948	\$ 634,745,558	\$ 463,103,223
Unearned premiums	372,836,160	314,117,549	241,835,588
All other liabilities	1,054,922,210	744,738,458	570,628,148
Total Liabilities	<u>2,349,682,318</u>	<u>1,693,601,565</u>	<u>1,275,566,959</u>
Total Policyholders' Surplus:	<u>3,887,071,452</u>	<u>3,974,192,463</u>	<u>3,480,397,780</u>
Total Liabilities & Surplus	<u>\$ 6,236,753,770</u>	<u>\$ 5,667,794,028</u>	<u>\$ 4,755,964,739</u>

* Assets, liabilities and surplus are presented on a Statutory Accounting Basis as promulgated by the NAIC and/or the laws of the company's domiciliary state.



Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company
Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Thomas MacDonald, Marisol Mojica, Edward Reilly, Krystal L. Stravato, Jaclyn Thomas and Kevin T. Walsh Jr. of Whippany, New Jersey; Andrea E. Gorbert of Jericho, New York; Neil C. Donovan, and Gerard Leib of Berwyn, Pennsylvania

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY have each executed and attested these presents and affixed their corporate seals on this 6th day of April, 2022.

Dawn M. Chloros (handwritten signature)

Dawn M. Chloros, Assistant Secretary

Stephen M. Haney (handwritten signature)

Stephen M. Haney, Vice President



STATE OF NEW JERSEY
County of Hunterdon

SS.

On this 6th day of April, 2022 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros and Stephen M. Haney, to me known to be Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros and Stephen M. Haney, being by me duly sworn, severally and each for herself and himself did depose and say that they are Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2316685
Commission Expires July 16, 2024

(Handwritten signature of Notary Public)

Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016; WESTCHESTER FIRE INSURANCE COMPANY on December 11, 2006; and ACE AMERICAN INSURANCE COMPANY on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
(2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
(3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
(ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this April 28, 2022



Dawn M. Chloros (handwritten signature)

Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:
Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com

FEDERAL INSURANCE COMPANY
STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis
 December 31, 2021
 (in thousands)


<i>ASSETS</i>		<i>LIABILITIES AND SURPLUS TO POLICYHOLDERS</i>	
Cash and Short Term Investments	\$ (587,306)	Outstanding Losses and Loss Expenses	\$ 8,701,383
United States Government, State and Municipal Bonds	4,271,534	Reinsurance Payable on Losses and Expenses	1,484,198
Other Bonds	5,994,673	Unearned Premiums	2,400,711
Stocks	675,588	Ceded Reinsurance Premiums Payable	366,332
Other Invested Assets	<u>1,647,712</u>	Other Liabilities	<u>498,472</u>
TOTAL INVESTMENTS	<u>12,022,201</u>	TOTAL LIABILITIES	<u>13,451,094</u>
Investments in Affiliates:		Capital Stock	20,980
Great Northern Ins. Co.	414,638	Paid-in Surplus	2,711,474
Vigilant Ins. Co.	354,896	Unassigned Funds	<u>1,903,522</u>
Chubb Indemnity Ins. Co.	183,242	SURPLUS TO POLICYHOLDERS	<u>4,635,976</u>
Chubb National Ins. Co.	190,801		
Other Affiliates	116,373		
Premiums Receivable	1,726,653		
Other Assets	<u>3,078,486</u>		
TOTAL ADMITTED ASSETS	<u>\$ 18,087,070</u>	TOTAL LIABILITIES AND SURPLUS	<u>\$ 18,087,070</u>

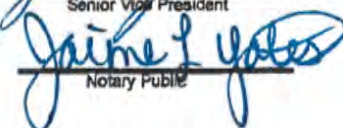
Investments are valued in accordance with requirements of the National Association of Insurance Commissioners. At December 31, 2021, investments with a carrying value of \$508,085,162 were deposited with government authorities as required by law.

STATE OF PENNSYLVANIA
 COUNTY OF PHILADELPHIA

John Taylor, being duly sworn, says that he is Senior Vice President of Federal Insurance Company and that to the best of his knowledge and belief the foregoing is a true and correct statement of the said Company's financial condition as of the 31 st day of December, 2021.

Sworn before me this March 16, 2022


 Senior Vice President


 Notary Public

September 19, 2023
 My commission expires

Commonwealth of Pennsylvania - Notary Seal
 Jaime L. Yates, Notary Public
 Philadelphia County
 My commission expires September 19, 2023
 Commission number 1357070
 Member, Pennsylvania Association of Notaries

APPENDIX 3.2.10

SCC and DPOR
Information

SCC AND DPOR INFORMATION TABLE

ATTACHMENT 3.2.10

State Project No. 0064-122-470

SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ SECTIONS 3.2.10.3 AND 3.2.10.4)						
Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
Timmons Group	Gary Johnson, PE	1001 Boulders Pkwy, STE 300, Richmond, VA 23225	1701 Summit Ave, Loft 9, Richmond, VA 23230	Professional Engineer	0402033863	2023-09-30
CES Consulting, LLC	Avtar Singh, PE, CCM, DBIA	23475 Rock Haven Way, STE 255, Dulles, VA 20166	12423 Henderson Rd, Clifton, VA 20124	Professional Engineer	0402035169	2023-01-31

**FULL SIZE SCC AND DPOR
SUPPORTING REGISTRATION/
LICENSE DOCUMENTATION**

SCC AND DPOR INFORMATION
BRANCH CIVIL, INC.
OFFEROR, PRIME CONTRACTOR

Commonwealth of Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That Branch Civil, Inc. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is November 25, 1986;

That the period of its duration is perpetual; and

That the corporation is in existence and in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
January 16, 2017*

Joel H. Peck
Joel H. Peck, Clerk of the Commission

Entity Information

Entity Information

Entity Name: Branch Civil, Inc.

Entity ID: 02956183

Entity Type: Stock Corporation

Entity Status: **Active**

Series LLC: N/A

Reason for Status: Active and In Good Standing

Formation Date: 11/25/1986

Status Date: 12/14/2021

VA Qualification Date: 11/25/1986

Period of Duration: Perpetual

Industry Code: 0 - General

Annual Report Due Date: N/A

Jurisdiction: VA

Charter Fee: \$0.00

Registration Fee Due Date: Not Required

Registered Agent Information

RA Type: Entity

Locality: HENRICO COUNTY

RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO
TRANSACTION BUSINESS IN VIRGINIA

Name: C T CORPORATION SYSTEM

Registered Office Address: 4701 Cox Rd Ste 285, Glen Allen, VA, 23060 - 6808,
USA

DPOR License Lookup License Number 2701029434

License Details

Name	BRANCH CIVIL INC
License Number	2701029434
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	442 RUTHERFORD AVE, ROANOKE, VA 24016
Specialties²	Highway / Heavy (H/H)
Initial Certification Date	1987-03-12
Expiration Date	2023-03-31

SCC AND DPOR INFORMATION
TIMMONS GROUP, INC.
LEAD DESIGNER
AND
GARY JOHNSON, PE, DBIA
DESIGN MANAGER (KEY PERSONNEL)

SCC Certificate: Timmons Group, Inc. - Lead Designer

Entity Information

Entity Name: Timmons Group, Inc.

Entity ID: 02640431

Entity Type: Stock Corporation

Entity Status: **Active**

Series LLC: N/A

Reason for Status: Active and In Good Standing

Formation Date: 11/30/1984

Status Date: 12/18/2018

VA Qualification Date: 11/30/1984

Period of Duration: Perpetual

Industry Code: 70 - Other DULY LICENSED PROFESSIONAL ENTITY
not listed below as SPECIFIED in Section 13.1-543
of the Code of Virginia

Annual Report Due Date: N/A

Jurisdiction: VA

Charter Fee: \$80.00

Registration Fee Due Date: Not Required

Registered Agent Information

RA Type: Entity

Locality: RICHMOND CITY

RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO
TRANSACTION BUSINESS IN VIRGINIA

Name: CORPORATION SERVICE COMPANY

Registered Office Address: 100 SHOCKOE SLIP, 2ND FLOOR, RICHMOND, VA,
23219 - 0000, USA

DPOR License Lookup License Number 0405000456

License Details

Name	TIMMONS GROUP INC
License Number	0405000456
License Description	Professional Corporation Registration
Firm Type	PC - Professional Corporation
Rank	Professional Corporation
Address	1001 BOULDERS PKWY STE 300, RICHMOND, VA 23225
Initial Certification Date	1984-12-26
Expiration Date	2023-12-31

DPOR License Lookup License Number 0410000161

License Details

Name	TIMMONS GROUP INC
License Number	0410000161
License Description	Professional Corporation Branch Office Registration
Rank	Professional Corporation Branch Office
Address	608 PRESTON AVE STE 200, CHARLOTTESVILLE, VA 22903
Initial Certification Date	2006-04-27
Expiration Date	2024-02-29

Related Licenses ¹

DPOR License Lookup License Number 0402033863

License Details

Name	JOHNSON, GARY SEBASTIAN
License Number	0402033863
License Description	Professional Engineer License
Rank	Professional Engineer
Address	RICHMOND, VA 23230
Initial Certification Date	1999-09-01
Expiration Date	2023-09-30

SCC AND DPOR INFORMATION
CES CONSULTING, LLC
QUALITY ASSURANCE SERVICES
AND
AVTAR SINGH, PE, CCM, DBIA
QUALITY ASSURANCE MANAGER (KEY PERSONNEL)

SCC Certificate: CES Consulting, LLC

Entity Information

Entity Name: CES Consulting, LLC

Entity ID: S3416007

Entity Type: Limited Liability Company

Entity Status: **Active**

Series LLC: No

Reason for Status: Active

Formation Date: 10/14/2010

Status Date: 10/14/2010

VA Qualification Date: 10/14/2010

Period of Duration: Perpetual

Industry Code: 70 - Other DULY LICENSED PROFESSIONAL ENTITY
not listed below as SPECIFIED in Section 13.1-543
of the Code of Virginia

Annual Report Due Date: N/A

Jurisdiction: VA

Charter Fee: N/A

Registration Fee Due Date: Not Required

Registered Agent Information

RA Type: Individual

Locality: FAIRFAX COUNTY

RA Qualification: Member or Manager of the Limited Liability
Company

Name: AVTAR SINGH

Registered Office Address: 12423 Henderson Rd, Clifton, VA, 20124 - 2021,
USA

DPOR License Lookup License Number 0407005783

License Details

Name	CES CONSULTING LLC
License Number	0407005783
License Description	Business Entity Registration
Firm Type	LLC - Limited Liability Company
Rank	Business Entity
Address	23475 ROCK HAVEN WAY SUITE 255, DULLES, VA 20166
Initial Certification Date	2010-11-05
Expiration Date	2023-12-31

DPOR License Lookup License Number 0402035169

License Details

Name	SINGH, AVTAR
License Number	0402035169
License Description	Professional Engineer License
Rank	Professional Engineer
Address	CLIFTON, VA 20124
Initial Certification Date	2001-01-18
Expiration Date	2023-01-31

SCC AND DPOR INFORMATION
FROEHLING & ROBERTSON, INC.
QUALITY ASSURANCE LABORATORY & TESTING SERVICES

Entity Information

Entity Name: FROEHLING & ROBERTSON, INCORPORATED

Entity ID: 00272112

Entity Type: Stock Corporation

Entity Status: **Active**

Series LLC: N/A

Reason for Status: Active and In Good Standing

Formation Date: 10/11/1924

Status Date: 11/13/2009

VA Qualification Date: 10/11/1924

Period of Duration: Perpetual

Industry Code: 0 - General

Annual Report Due Date: N/A

Jurisdiction: VA

Charter Fee: \$2480.00

Registration Fee Due Date: Not Required

Registered Agent Information

RA Type: Individual

Locality: RICHMOND CITY

RA Qualification: Member of the Virginia State Bar

Name: J. THOMAS O'BRIEN Jr.

Registered Office Address: 411 E Franklin St Ste 600, Spotts Fain Pc,
Richmond, VA, 23219 - 2200, USA

DPOR License Lookup License Number 0411001433

License Details

Name	FROEHLING & ROBERTSON INC
License Number	0411001433
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	6185 ROCKFISH GAP TPKE, CROZET, VA 22932
Initial Certification Date	2018-06-13
Expiration Date	2024-02-29

SCC INFORMATION (DPOR INFO NOT APPLICABLE)
ON POINT TRANSPORTATION PR LLC
PUBLIC RELATIONS

SCC Certificate: On Point Transportation PR LLC

Entity Information

Entity Name: On Point Transportation PR LLC
Entity ID: S7190905
Entity Type: Limited Liability Company
Entity Status: **Active**
Series LLC: No
Reason for Status: Active
Formation Date: 12/08/2017
Status Date: 01/11/2019
VA Qualification Date: 12/08/2017
Period of Duration: Perpetual
Industry Code: 0 - General
Annual Report Due Date: N/A
Jurisdiction: VA
Charter Fee: N/A
Registration Fee Due Date: Not Required

Registered Agent Information

RA Type: Individual
Locality: CHESAPEAKE CITY
RA Qualification: Member of the Virginia State Bar
Name: CHRISTOPHER DAVIS
Registered Office Address: 555 Belaire Ave Ste 340, CHESAPEAKE, VA, 23320 -
4686, USA

SCC AND DPOR INFORMATION
HASSAN WATER RESOURCES, PLC
H&H DESIGN

SCC Certificate: Hassan Water Resources

Entity Information

Entity Name: Hassan Water Resources, PLC

Entity ID: S2293282

Entity Type: Limited Liability Company

Entity Status: **Active**

Series LLC: No

Reason for Status: Active

Formation Date: 07/16/2007

Status Date: 08/01/2014

VA Qualification Date: 07/16/2007

Period of Duration: Perpetual

Industry Code: 70 - Other DULY LICENSED PROFESSIONAL ENTITY
not listed below as SPECIFIED in Section 13.1-543
of the Code of Virginia

Annual Report Due Date: N/A

Jurisdiction: VA

Charter Fee: N/A

Registration Fee Due Date: 07/31/2022

Registered Agent Information

RA Type: Individual

Locality: GOOCHLAND COUNTY

RA Qualification: Member or Manager of the Limited Liability
Company

Name: GAMAL E HASSAN

Registered Office Address: 2255 PARKERS HILL DR, MAIDENS, VA, 23102 -
0000, USA

DPOR License Lookup License Number 0413000299

License Details

Name	HASSAN WATER RESOURCES PLC
DBA Name	HWR
License Number	0413000299
License Description	Professional Limited Liability Company
Rank	Professional Limited Liability Company
Address	2255 PARKERS HILL DRIVE, MAIDENS, VA 23102-2244
Initial Certification Date	2009-07-06
Expiration Date	2023-12-31

SCC AND DPOR INFORMATION
H&B SURVEYING AND MAPPING, LLC
SURVEYING

SCC Certificate: H&B Surveying and Mapping, LLC

Entity Information

Entity Name: H & B Surveying and Mapping, LLC

Entity ID: S2905604

Entity Type: Limited Liability Company

Entity Status: **Active**

Series LLC: No

Reason for Status: Active

Formation Date: 04/27/2009

Status Date: 04/27/2009

VA Qualification Date: 04/27/2009

Period of Duration: Perpetual

Industry Code: 0 - General

Annual Report Due Date: N/A

Jurisdiction: VA

Charter Fee: N/A

Registration Fee Due Date: Not Required

Registered Agent Information

RA Type: Individual

Locality: HENRICO COUNTY

RA Qualification: Member of the Virginia State Bar

Name: TIMOTHY H GUARE

Registered Office Address: TIMOTHY H GUARE PLC, 6802 PARAGON PL STE
100, HENRICO, VA, 23230 - 0000, USA

DPOR for Businesses: Name - H&B Surveying & Mapping, LLC (Richmond)

DPOR License Lookup License Number 0407005432

License Details

Name	H & B SURVEYING & MAPPING LLC
License Number	0407005432
License Description	Business Entity Registration
Rank	Business Entity
Address	614 MOOREFIELD PARK DR, RICHMOND, VA 23236
Initial Certification Date	2009-05-05
Expiration Date	2023-12-31

DPOR for Businesses: Name - H&B Surveying & Mapping, LLC (Roanoke)

DPOR License Lookup License Number 0411001268

License Details

Name	H & B SURVEYING & MAPPING LLC
License Number	0411001268
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	2105 ELECTRIC RD SW STE 103, ROANOKE, VA 24018
Initial Certification Date	2016-03-31
Expiration Date	2024-02-29

APPENDIX 3.3.1

Key Personnel
Resume Forms

APPENDIX 3.3.1.1
KEY PERSONNEL RESUME
DESIGN-BUILD
PROJECT MANAGER (DBPM)

ATTACHMENT 3.3.1



KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.		
a. Name & Title: Daniel (Dan) Lieberman, Vice President of Construction Services		
b. Project Assignment: Design-Build Project Manager (DBPM)		
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Branch Civil, Inc. (Full Time)		
d. Employment History: With this Firm 1 Years With Other Firms 33 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Branch Civil, Inc., Vice President, Construction Services (2021 – Present) Responsible for the management of projects and personnel to ensure that pursuits/operations maintain a high level of control and support. He directs project leads and ensures all project activities are completed on time, within budget, and in accordance with contract specifications. He ensures that projects meet corporate safety, financial and environmental objectives. Dan manages and provides the necessary resources required for the construction projects to be successful and coordinates these resources with other regions of the company, addresses project issues, communicates design progress to owners, and adheres to project schedules. Flatiron Construction, Vice President, Operations Manager (2013 – 2021) Dan was responsible for Flatiron’s southeast division, with sustainable operations for both field and office staff organizations. He directly oversaw all ongoing projects, was responsible for profit and loss analysis, and developed and adhered to Flatiron policies and procedures. His role included a major emphasis on staffing, equipment management, major purchase order and subcontract review, schedule analysis, and issue resolution. Dan’s day-to-day activities included direct involvement with owner’s representatives and Flatiron’s corporate management, as well as progress meetings, means and methods, changes, and partnering. Thalle Construction Company, Operations Manager (2013 – 2013) Dan oversaw ongoing projects and was responsible for profit and loss analysis, adherence to company policies, staffing, equipment management, major purchase order and subcontract drafting, scheduling, and issue resolution. He was directly involved with owner’s representatives, progress meetings, means and methods, changes, monthly cost report reviews with project staff and was involved with company bid schedule development, bid reviews, and writing proposals. Tutor Perini Corporation, Senior Project Manager (2006 – 2013) Dan interfaced between corporate management, estimating, and accounting to assist in the management and oversight of policies and procedures. He supervised and managed the design, construction, quality management, contract administration, and other services required by the contract, including the procurement and timely delivery of all materials, equipment, services, and labor.		
SUMMARY OF RELEVANT EXPERIENCE		
<ul style="list-style-type: none"> • 34 years of transportation construction experience • 4 VDOT projects • Experience working on a diverse range of complex projects in crowded urban corridors 	<ul style="list-style-type: none"> • Extensive D-B project management experience • In-depth understanding of the constructability and QA/QC review process 	<ul style="list-style-type: none"> • Extensive experience working with stakeholders and public involvement • Extensive knowledge in process control and documentation
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: SUNY College of Environmental Science and Forestry / Syracuse / 1987 / BS, Construction Management		
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A		
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.		

1. US 220/NC 68 Connector (I-73) and Piedmont Triad International Airport (PTI) Taxiway Design-Build, Greensboro, North Carolina

Flatiron Construction, Inc., Design-Build Project Manager, 2014 – 2018 (Client: NCDOT)

Roles and Responsibilities: As the DBPM and primary NCDOT liaison, Dan was responsible for overall design and construction, schedule management, issue resolution, critical utility relocation coordination, quality management, contract administration, and stakeholder coordination. Dan managed the design through RFC plans and Notice to Commence Construction approval, and oversaw construction efforts including utility relocations, roadway, bridge, and bike/pedestrian facilities. This \$188M project included nine miles of new interstate, 23 bridges, 4 million cubic yards (CY) of embankment, a four-bent taxiway bridge as part of the PTI expansion, stormwater management facilities, extensive right-of-way (ROW) acquisitions, utility coordination and relocations, and

public/stakeholder coordination. A new interchange was constructed at I-73/I-68, and intersection improvements were made in several locations. He also led efforts to work in conjunction with NCDOT, the City of Greensboro, PTI Airport, and many residents and businesses to ensure that all parties were involved in the project throughout its lifecycle. This included management of a comprehensive stakeholder and public information program that included informational meetings, the development of brochures, and preparing information for NCDOT's project information website. *The project was an overwhelming success and well-accepted by the local community and was presented with a 2020 Community Impact Award from the DBIA-Southeast.*

Similar Scope & Complexity

- ✓ D-B for DOT
- ✓ Developed urban corridor
- ✓ Intersection improvements
- ✓ Structure construction
- ✓ MOT
- ✓ Stakeholder/public involvement
- ✓ Bicycle/pedestrian facilities
- ✓ Utility coordination/relocations

2. Business Route 40 from I/40 to Knollwood Avenue, Winston Salem, North Carolina

APAC, Inc., Project Manager, 2006 – 2008 (Client: NCDOT)

Role and Responsibilities: Dan managed this \$37 million heavy highway project that included two miles of local business route traffic calming and urban renewal in a heavily traveled and congested area. This project added third lane options to local traffic, intersection improvements, full replacement, and improvements to ITS, signage, median barrier, lighting, signalization, asphalt, and drainage to proper standards. Pedestrian traffic to the adjacent and significantly busy urban shopping plaza was managed with full awareness to safety and visibility resulting in no incidents. Dan was responsible for the overall construction of the interchange and various mainline repairs, quality, and safety programs, ensuring all requirements and specifications were delivered. He managed contract administration, directed project development and constructability reviews with the designers, defined project scope, goals, and deliverables, and collaborated with senior management and stakeholder coordination with NCDOT, local residents, and businesses. *This project was completed on time beating the year end seasonal shopping rush.*

Similar Scope & Complexity

- ✓ Developed urban corridor
- ✓ Structure construction
- ✓ Intersection improvements
- ✓ MOT
- ✓ Stakeholder coordination
- ✓ Fast-track schedule delivery that was completed on-time
- ✓ Utility coordination/relocations

3. US 421/I-40 Winston-Salem Parkway Design-Build, Greensboro, North Carolina

Flatiron Construction, Inc., Operations Manager, 2016 – 2020 (Client: NCDOT)

Role and Responsibilities: Dan managed this \$99.2M project throughout the design and build process. This D-B project included an owner-requested accelerated schedule after bid, which was built in a dense urban environment. The project required coordination with all stakeholders, which included the NCDOT, local official offices, architects, and designers. Dan was responsible for the review of preliminary designs for constructability and management. He also prepared budgets and the acceleration schedule and coordinated daily out-of-the-box approaches with subcontractors and suppliers. *A key project element was the unique dual-tied arch Green Street pedestrian bridge.* The design of this bridge

required a staged construction approach that implemented temporary shoring. Because of the complexity of the engineering details, the team modified its shoring concept to allow for the bridge to be partially under construction while traffic flowed beneath it. Dan provided on-site quality and safety control, assisted in cost control and coding, and participated in project meetings, facilitated daily safety meetings, and conducted new employee training. The project included design negotiations, major utility relocations, coordination with various owners, and strict traffic control guidelines. Dan supervised a 12-person engineering and administrative team and maintained, scheduled, and forecasted crews, equipment, and subcontractors. *This project was the Grand Prize Winner of an AASHTO 2021 America's Transportation Award from.*

Similar Scope & Complexity

- ✓ D-B for DOT
- ✓ Developed urban corridor
- ✓ Intersection improvements
- ✓ MOT
- ✓ Stakeholder/public involvement
- ✓ Utility coordination/relocations
- ✓ Pedestrian bridge facilities

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Not applicable for this position

APPENDIX 3.3.1.2
KEY PERSONNEL RESUME
QUALITY ASSURANCE
MANAGER (QAM)



ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.		
a. Name & Title: Avtar Singh, PE, CCM, DBIA, President and Quality Assurance Manager		
b. Project Assignment: Quality Assurance Manager (QAM)		
c. Name of the Firm with which you are employed at the time of submitting SOQ.: CES Consulting, LLC (Full Time)		
d. Employment History: With this Firm 10 Years With Other Firms 16 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): CES Consulting, LLC, President and QAM (2010 - Present) Avtar is a hands-on manager who actively manages QA and QC services for DB and P3 projects. He develops and updates QA/QC plans and monitors compliance; conducts QA audits of the design QA/QC plan; manages QA inspection and testing to confirm correct frequency and accuracy of QC inspection and testing; approves materials testing reports; identifies and resolves non-compliant work and testing results; certifies compliance to contract requirements; leads preparatory inspection meetings; coordinates witness and hold points; prepares QA reports and NCRs; maintains the non-conformance log, deficiency log, and project testing /frequencies Materials Notebook; and generates the punch list and verifies completion. Avtar has 26 years of construction management and project control experience focused on transportation infrastructure. He served as the QAM or QCM for 6 DB and P3 projects including the regionally significant \$565M I-95 Express Lanes Fredericksburg Extension for Transurban. In addition, he has provided technical guidance and oversight of QA, QC, and OIA (owner’s independent assurance) management services of 20+ DB and P3 projects. Due to Avtar’s leadership and expertise, VDOT has rated his QAM services as ‘Exceeds Expectations’ and he has earned excellent CQIP scores for QA services ranging up to 100% . As a result, Avtar understands the complexities of managing large construction projects on congested interstates and has a proven ability to develop QA/QC plans; mitigate risks; and resolve design and field issues. As the former Area Construction Engineer for VDOT’s Northern Virginia District, Avtar was responsible for more than 28 projects with a cumulative construction value of more than \$230M. He ensured that project startup, execution, and closeout processes complied with VDOT and FHWA standards. VDOT Northern Virginia District, Area Construction Engineer (2006 – 2010) Avtar managed VDOT DBB projects and provided oversight of locally administered projects in Prince William and Loudoun counties. He was responsible for constructability and biddability reviews prior to advertisement, project startup and execution, pay application certifications, and contract closeouts. He resolved contractual issues with the District and central offices and field issues; reviewed and negotiated work orders; and resolved construction and schedule claims.		
SUMMARY OF RELEVANT EXPERIENCE		
<ul style="list-style-type: none"> • Over 26 years of construction management and project controls experience • Served as QAM on six D-B and P3 VDOT projects 	<ul style="list-style-type: none"> • Former Area Construction Engineer for VDOT and highly knowledgeable of VDOT’s requirements for D-B projects 	<ul style="list-style-type: none"> • VDOT has rated his QAM services as ‘Exceeds Expectations’ and he has earned excellent CQIP scores for QA services ranging up to 100%.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: George Washington University, Washington, DC/Master’s Certificate/2007/Project Management Queens University/Kingston, Ontario, Canada/MS/1994/Civil Engineering Queens University/Kingston, Ontario, Canada/BS/1992/Civil Engineering		
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2001/Professional Engineer/VA #0402 035169		
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.		

1. Route 29 Solutions Design-Build, Albemarle County and Charlottesville, Virginia

CES Consulting, LLC, Quality Assurance Manager, 2015 – 2017 (Client: VDOT)

Roles and Responsibilities: Avtar managed QA inspection and testing services for this \$117M project that included the simultaneous construction of three projects along the Route 29 corridor: (1) accelerated bridge construction (ABC) of a grade-separated intersection at Route 29 and Rio Road; (2) widening of a 3-mile segment of Route 29 from 4 to 6 lanes; (3) a 2.3-mile extension of Berkmar Drive including a new 715-foot-long bridge crossing over the Rivanna River, a bike lane, sidewalk, and shared-use path. Avtar prepared the QA/QC plan ensuring testing and sampling procedures met or exceeded the minimum requirements and oversaw QA inspections in compliance with the QA/QC Plan. He was responsible for QA staffing; reviewing and confirming inspection frequencies and reporting; conducting and participating in preconstruction and weekly meetings; reviewing and approving RFIs; and auditing ESC inspections. Avtar recommended procedural improvements that reduced rework and overall construction costs. He recommended solutions to project challenges such as meeting a fast-track schedule to avoid extensive monetary disincentives and 24-hour-a day-work operations requiring long QA/QC work hours and staffing coordination. Also, Avtar recommended solutions that involved maintaining heavy traffic volumes and safety for many pedestrians; wet and dry utility relocations with numerous latent conflicts and tight urban workspaces; and maintaining access and minimizing impacts to businesses.

Similar Scope & Complexity

- ✓ QAM services for VDOT D-B project
- ✓ Developed urban corridor
- ✓ Structures/bridges
- ✓ Roundabout construction
- ✓ Bicycle/pedestrian facilities
- ✓ Local to the Hydraulic Road/US 29 Project corridor

2. Albemarle Bundled Projects Design-Build, Charlottesville, Virginia

CES Consulting, LLC, Quality Assurance Manager, 2019 – 2023 (Client: VDOT)

Role and Responsibilities: Avtar is performing QA services for this \$28.5M DB project that includes the delivery of six bundled projects. The scope of services includes two new single-lane roundabouts to enhance safety, new connecting roads to enhance connectivity, a diverging diamond interchange to improve traffic flow and volume connecting to I-64, and entrance/exit ramp improvements to eliminate dangerous traffic weaving concerns. The design-builder concurrently designed several projects while starting construction on approved projects, which required extensive collaboration and coordination to confirm compliance with approved design and construction QA/QC plans. Avtar drafted the construction QA/QC plan; manages QA inspection and documentation to ensure construction activities are inspected, tested, and documented properly; reviews and approves inspection documentation; and reviews and certifies pay applications. Challenges include construction under heavy traffic adding safety concerns; coordinating multiple projects at various phases of scoping, design, and construction; scheduling and maximizing the work of limited staff to inspect and document multiple projects simultaneously. *Under Avtar's leadership, the QA team received an excellent CQIP score of 96.97%.*

Similar Scope & Complexity

- ✓ QAM services for VDOT D-B project
- ✓ Developed urban corridor
- ✓ Roundabout construction
- ✓ Local to the Hydraulic Road/US 29 Project corridor

3. Warrenton Southern Interchange Design-Build, Fauquier County, Virginia

CES Consulting, LLC, Quality Assurance Manager, 2018 – 2020 (Client: VDOT)

Role and Responsibilities: Avtar managed QA services for this \$18.5M project that included the construction of an innovative interchange (using a modified barbell interchange Concept) with two roundabouts at each end of the precast-concrete bridge to replace a signalized intersection. The single-lane roundabouts can handle tractor-trailers up to 69 feet long. The project also features a 2,000-foot-long pedestrian path across the bridge. Avtar drafted the Construction Quality Management Plan; managed QA inspection, testing, and documentation to ensure all construction activities were inspected, tested, and documented properly; reviewed and certified pay applications; coordinated OIA/IV testing with VDOT; and coordinated with the FHWA Area Engineer. Avtar recommended solutions to field challenges such as safety concerns due to extensive work in heavy traffic, limited staff to inspect day and night operations, and multiple MOT patterns to allow construction of the multiple ramps coming off the roundabouts, and coordination. In a 2020 VDOT performance evaluation, Avtar's QA/QC plan as well as the QA materials testing, and QA inspection services received an 'Exceeds Expectations' rating. *Due to Avtar's leadership and attention to detail, the QA team received a CQIP score of 100%.*

Similar Scope & Complexity

- ✓ QAM services for D-B project for VDOT
- ✓ Developed urban corridor
- ✓ Structures, including a pedestrian overpass across the roadway
- ✓ Roundabout construction

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Not applicable for this position

APPENDIX 3.3.1.3
KEY PERSONNEL RESUME
DESIGN MANAGER (DM)

ATTACHMENT 3.3.1



KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Gary Johnson, PE, DBIA, Director of Transportation Design-Build
b. Project Assignment: Design Manager (DM)
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Timmons Group, Inc. (Full Time)
d. Employment History: With this Firm 5 Years With Other Firms 24 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): <u>Timmons Group, Director Transportation Design-Build and Director of Bridges & Structures (2017 – Present)</u> As the Director of Transportation Design-Build, Gary is responsible for securing and successfully delivering transportation design-build projects. In his role as the Director of Bridges & Structures, he is leading the growth of the structural practice throughout the firm. He has 29 years of project management, design, and construction inspection experience in structures, roadways, and mass transit stations. His extensive project management experience, formal training (MBA) and hands-on participation in inspection (NBIS), design and construction engineering assignments afford him in-depth knowledge of project requirements. Additionally, his experience with design-build projects has developed his full understanding of the implementation of bridge plans and projects through construction. He is a former member of the VTCA Engineering Consultant Leadership Committee and currently serves on the VTCA/VDOT Design-Build Committee where he serves as a voice of the industry to VDOT. He is very involved in the development of design-build policy and was a founding member of the local chapter of DBIA and is Chairman of the DBIA National Certification Board of Directors. <u>RK&K, LLC Director of Design-Build and Structures (2010 – 2017)</u> As the Director of Design-Build, Mr. Johnson was responsible for the successful delivery of all design-build projects in Virginia. Under his leadership, the firm's presence in the design-build arena grew from very minor roles to delivering multiple projects including performing as the prime designer on one of the highest-profile design-build projects in Virginia (Route 29 Solutions). He also worked with the VDOT Alternative Project Delivery Division under a staff augmentation contract in a supporting role for the development of multiple design-build projects. During this tenure, he was also responsible for all structures projects in Virginia. <u>T.Y. Lin International, Mid-Atlantic Unit Manager (2005 – 2010)</u> Project Manager and Lead Structural Engineer for dozens of bridge projects. Oversaw staff of 20 structural engineers. Served as Engineer of Record for new bridge and replacement projects. Served as Principal in Charge for design-build projects in Virginia, North Carolina, and Washington DC.
SUMMARY OF RELEVANT EXPERIENCE
<ul style="list-style-type: none">• 29 years of design project management experience• Extensive knowledge of the Hydraulic Road/US 29 Project corridor• Design-Build Leader at the Local, State, and National level• 24 years working with VDOT• Designed multiple pedestrian bridge design projects• Designer of nine bridge projects in Charlottesville
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Commonwealth University, Richmond, VA / MBA / 2003 / Business Administration University of New Hampshire, Durham, NH / BSCE / 1993 / Civil Engineering
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1999 / Professional Engineer / VA / #0402 033863 2010 / DBIA Professional / #125387
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

1. Route 29 Solutions Design-Build, Albemarle County and Charlottesville, Virginia

RK&K, Lead Structural Engineer, 2015 – 2017 (Client: VDOT)

Roles and Responsibilities: Gary served in a leadership role for this \$116.7M project and was involved in the entire procurement, design process, and leadership during construction. He also served as the Lead Structural Engineer. He was personally responsible for the structural design of the bridges and retaining walls for the overall project that will reduce congestion on the busiest north-south corridor in the Charlottesville/Albemarle County region. Gary's responsibilities included coordination with multiple subconsultants, managing the design schedule, ensuring conformance with the contract documents, and adhering to the aggressive design schedule. **He personally was responsible for the development of an advanced design** where the Rio Road Bridge superstructure serves as a strut to support the retaining walls below. This innovative design allowed for the Grade Separated Intersection (GSI) to be constructed in less than 60 days. His extensive coordination with subconsultants and disciplines, including roadway, stormwater, right-of-way, utilities, traffic, geotechnical, lighting, and fire code experts, was instrumental in delivering this design and construction ahead of schedule. Design and construction for this project are complete. latent conflicts and tight urban workspaces; and maintaining access and minimizing impacts to businesses.

Similar Scope & Complexity

- ✓ D-B project for VDOT
- ✓ Local to the Hydraulic Road/US 29 Project corridor
- ✓ Complex bridge design
- ✓ Bicycle/pedestrian facilities
- ✓ Retaining walls
- ✓ MOT in an urban corridor
- ✓ Utility Coordination
- ✓ Stakeholder coordination and public involvement

2. McIntire Park Pedestrian Bridge, Charlottesville, Virginia

RK&K, Design Manager/Lead Structural Engineer, 2017 – 2019 (Client: City of Charlottesville)

Role and Responsibilities: Gary was the Design Manager and Lead Structural Engineer for this \$2.5M pedestrian bridge project over an active railroad. He led a multi-member, multi-disciplined project design team and coordinated all disciplines, including railroad, structural, MSE walls, civil, environmental, ADA access, drainage, geotechnical, and maintenance of traffic. Maintenance of traffic was critical to the tight project site and was needed to allow construction access and laydown areas. All connections to the nearby Route 250 bypass were maintained under Gary's leadership. He also led the public involvement efforts during design and presented at multiple public outreach events. The information from the public and stakeholders was analyzed and appropriate modifications to the project were then implemented. A result of this forward-thinking process led to the project being very well received by the public. During construction, he was hands-on with the contractor and subcontractors performing the construction as well as serving as a liaison to the Client.

Similar Scope & Complexity

- ✓ Local to the Hydraulic Road/US 29 Project corridor
- ✓ Pedestrian bridge design
- ✓ MSE walls
- ✓ MOT in an urban corridor
- ✓ Stakeholder coordination and public involvement

3. I-64 Widening and Route 623 Interchange Design-Build, Henrico and Goochland Counties, Virginia

RK&K, Principal-in-Charge, Lead Structural Engineer, 2013 – 2015 (Client: VDOT)

Role and Responsibilities: This \$34.8M design-build project involved the widening of 4.5 miles of Interstate 64 to the inside from a four-lane divided interstate to a six-lane divided interstate and improvements to the I-64/Route 623 Interchange. It also included two mainline bridge replacements. The interchange improvements include upgrading the existing traffic signal, widening the I-64 westbound ramp to Route 623 to provide an additional turn lane, adding a left-turn lane on Route 623 southbound to I-64 eastbound, and widening the I-64 eastbound off-ramp to Route 623 to provide an additional turn lane. Gary led and was responsible for the design of the bridges for this project, as well as the multiple retaining walls required for the project. During the proposal process, Gary served as the Principal-in-Charge and the lead coordinator amongst all of the in-house design disciplines and subconsultants to deliver the successful proposal and successful design of the project. This leadership continued during the construction where he maintained being fully involved in the management of the project. This project is complete.

Similar Scope & Complexity

- ✓ D-B project for VDOT
- ✓ Similar project size
- ✓ Bridge design
- ✓ MSE walls
- ✓ MOT
- ✓ Stakeholder coordination

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Not applicable for this position

APPENDIX 3.3.1.4
KEY PERSONNEL RESUME
CONSTRUCTION
MANAGER (CM)

ATTACHMENT 3.3.1



KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.		
a. Name & Title: Greg Suttle, Project Manager		
b. Project Assignment: Construction Manager (CM)		
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Branch Civil, Inc. (Full Time)		
d. Employment History: With this Firm 33 Years With Other Firms 2 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): <u>Branch Civil, Inc., Project Manager (1998 – Present)</u> Greg is responsible for constructing projects in Branch’s Virginia operations area. His regular duties include quality control (QC), executing work in accordance with “approved for construction” plans/specifications, and ensuring that work follows material and construction requirements. He is also responsible for planning, scheduling, allocating workforce and equipment resources, and managing owner, subcontractor, and supplier contracts. Greg supports EEO compliance and enforcement and adheres to corporate safety regulations and training. He has worked in a similar role on many design-build (D-B) and design-bid-build (D-B-B) projects in Virginia. Those projects have involved interstate, primary and secondary road widening/improvement/relocations, and intersection construction for various state and local departments of transportation, federal agencies, and private corporations. Greg has extensive experience working as a partner with the Virginia Department of Transportation (VDOT) to address public outreach and stakeholder concerns. His daily involvement with project operations creates a solid foundation because of his understanding and working knowledge of the impacts of challenging maintenance of traffic (MOT) issues, geotechnical concerns, and working around environmentally sensitive areas (ESAs). Greg emphasizes workplace safety and training while meeting or exceeding the owner’s expectations. His extensive VDOT construction experience, combined with his knowledge of constructability review and value engineering, will prove to be invaluable to our team throughout all phases of construction of the Project.		
SUMMARY OF RELEVANT EXPERIENCE		
<ul style="list-style-type: none">• Over 35 years of construction experience• Management of many construction projects in busy, urban corridors	<ul style="list-style-type: none">• Experience performing constructability reviews and VDOT requirements for QA/QC• Extensive VDOT experience	<ul style="list-style-type: none">• Experienced in performing value engineering reviews to pursue savings in time and money for Owners.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: West Virginia Institute of Technology / Montgomery, WV / 1987 / Bachelor of Science, Mining Engineering		
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2003/Virginia DEQ Responsible Land Disturber/No. RDL03021 1995/VDOT Erosion Sediment Control Contractor Certification (ESCCC)/No. 1-01135 1999/Virginia Blaster – Unrestricted/No. E269250 2013/ACI Concrete Certification/No. 01273969 2019/VDOT Intermediate Work Zone Traffic Control Training and Flagger Certification/No. 022219306		
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) <small>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</small>		

1. Route 3 Widening Design-Build, Culpeper, Virginia

Branch Civil, Inc., Construction Manager, 2015 - 2017 (Client: VDOT)

Role and Responsibilities: Greg was the CM for this \$25M DB project that widened a five-mile section of Route 3 from a two- to a four-lane divided highway. Greg worked with the designer to perform constructability reviews and provided input on MOT design during the design phase. He also provided guidance for working around environmentally sensitive areas (ESAs) and contributed to developing solutions to geotechnical issues. During construction, Greg worked closely with VDOT to coordinate scheduling and workflow as various project stages became accessible for construction activities. Two critical responsibilities were ROW acquisition and extensive utility coordination and relocations throughout the entire. Greg successfully led the construction team in working around approximately 1,500 linear feet (LF) of ESAs. Greg also created a strategy to work around substantial geotechnical issues, including unsuitable soils, rock, and highly plastic clays. To manage shareholder impacts, Greg effectively managed clear and concise communication with residents and local businesses throughout the construction of this project. He assisted in scheduling QA/QC inspections by preparing two-week look-ahead schedules and holding bi-weekly construction progress meetings with VDOT and inspection staff. He also managed the project's schedule and crafted monthly schedule updates and narratives for submission to VDOT.

Similar Scope & Complexity

- ✓ D-B project for VDOT
- ✓ Extensive MOT
- ✓ Intersection improvements
- ✓ Utility coordination/relocation
- ✓ Stakeholder coordination/public relations

2. Route 3 at I-95 Safety Improvements Design-Build, Stafford County, Virginia

Branch Civil, Inc., Construction Manager, 2017 - 2018 (Client: VDOT)

Roles and Responsibilities: Greg served as the CM for this \$18M DB project that improved ramps at the US Route 3 interchange with I-95 and widened the existing lanes on US Route 3. In concert with the designer, he worked to develop construction sequencing, MOT plans, and lay down and disposal areas to limit impacts on the traveling public and create safer conditions for site personnel in the project corridor. Greg's involvement with the placement of access points for construction along the ramps and US Route 3 was critical to the timely delivery of construction materials and efficient movement of vehicles through the work zone. Greg oversaw all roadway, clearing and grubbing, borrow, undercut excavation, storm drainage, and erosion control installation and maintenance activities. He also managed subcontractors and self-performed work, scheduled crews, ordered materials, ensured QA/QC in all aspects of construction, and generated monthly job cost status reports.

Similar Scope & Complexity

- ✓ D-B project for VDOT
- ✓ Developed urban corridor
- ✓ Extensive MOT
- ✓ Intersection improvements
- ✓ Stakeholder coordination/public relations
- ✓ Utility coordination/relocation
- ✓ Fast-track construction that was completed ahead of schedule

3. Route 636 Public-Private Transportation Act/Design-Build, Augusta County, Virginia

Branch Civil, Inc., Construction Manager, 2013 - 2015 (Client: Augusta County)

Role and Responsibilities: Greg served as the CM for this \$15M project that connected US Route 250 (Jefferson Highway) and the existing US Route 636. A 1.3-mile, two-lane facility just over one mile long and an 8-foot-wide multi-use path were constructed. A new structure was constructed to carry traffic on U.S. Route 636 over Norfolk Southern Railway tracks. The new roadway provided better access for workers at the hospital and shortened the traveling route for ambulances by more than 10 minutes. The new roadway required a tie into the existing heavily traveled US Route 250. A new turn lane was also added as well as a new traffic signal. Constructed in a busy corridor with multiple residents and businesses, Greg worked with Augusta County to facilitate an active public involvement program to ensure that the traveling public was aware of traffic changes throughout construction. To do so, he prepared and distributed notices for lane closures and major traffic shifts and assisted in the development and presentation of presentations at public meetings for affected stakeholders. He also assists the County in responding to any concerns or issues brought up by the residents. Greg oversaw all roadway, clearing and grubbing, borrow, undercut excavation, storm drainage, and erosion control installation and maintenance activities. He also managed subcontractors and self-performed work, scheduled crews, ordered materials, and generated monthly job cost status reports. He performed constructability reviews to ensure that QA/QC was incorporated into all elements of construction. *Through coordination with the adjacent property owner to balance the earthwork operations between the adjacent developer's property and the roadway, Greg was able to save the client 15% of the project value.*

Similar Scope & Complexity

- ✓ D-B project
- ✓ Developed urban corridor
- ✓ Extensive MOT
- ✓ Constructability reviews
- ✓ Stakeholder coordination/public relations
- ✓ Utility coordination/relocation
- ✓ Stakeholder/public involvement

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Greg is currently assigned as the Construction Manager for the Balls Ford Road Widening/Improvements Design-Bid-Build Project in Prince William County, which is scheduled for completion in May 2023, which is before the start of construction for the Hydraulic Road/US 29 Project.

APPENDIX 3.4.1

Work History Forms

APPENDIX 3.4.1(a)
WORK HISTORY FORM
LEAD CONTRACTOR

ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: Route 3 Widening Design-Build Location: Culpeper, Virginia	Name: Johnson, Mirmiran & Thompson, Inc.	Name of Client/Owner: VDOT Phone: 434.906.7979 Project Manager: Greg Cooley, PE Phone: 434.906.7979 Email: Gregory.Cooley@VDOT.Virginia.gov	05/2017	09/2017 <i>(completion date extended by VDOT)</i>	\$23,593	\$25,028 <i>(increases due to owner-directed scope changes)</i>	\$25,028

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

- PROJECT SIMILARITIES:**
- VDOT D-B Project
 - Intersection Improvements
 - Right of Way Acquisition
 - Maintenance of Traffic
 - Geotechnical Challenges
 - Safety and Congestion Concerns
 - Environmental Permitting
 - Third Party Stakeholder Communication & Coordination
 - Public Involvement & Outreach
 - Erosion and Sediment Control & Stormwater Management
 - Utility Coordination and Relocations
 - Earthwork, Grading, and Drainage
 - QA/QC

This design-build (D-B) project reconstructed and widened approximately five miles of existing Route 3 to a four-lane divided highway between Culpeper and Lignum, VA. Construction included a final section of a large improvement plan that increased capacity and safety along the Route 3 corridor between Culpeper and Fredericksburg by increasing the size of the existing two-lane highway to four lanes. Branch was the Prime Contractor and oversaw all aspects of design and construction. Branch self-performed all activities associated with erosion control, mass grading, fine grading, storm drain, base stone and traffic control.

FINISHING CONTRACTS ON TIME OR EARLIER: Additional work added by VDOT extended the completion date of the project by four months. This project was delivered to VDOT on-time, with zero lost time incidents.

DELIVERING PROJECTS IN DEVELOPED URBAN CORRIDORS: The primary need for this D-B project was to help reduce the number of vehicle accidents on Route 3. The number of vehicles, including tractor trailers, that traveled the road had steadily increased since the 1990's, and will continue to rise in the decades ahead. The Route 3 Widening project reconstructed and widened approximately five miles of the existing roadway to a four-lane divided highway between Culpeper and Lignum, Virginia. This construction marked the final section of a large improvement plan that increased capacity and safety in the Route 3 corridor between Culpeper and Fredericksburg by increasing the size of the existing two-lane highway to four lanes. The project scope included the following elements:

- **Roadway Widening:** This project was constructed in phases and consisted of moving 140,000 cubic yards (CY) of material on site, hauling in 90,000 CY of borrow material, removing 180,000 CY of unsuitable material, installation of over 13,000 LF of storm drain, and placement of 80,000 tons of asphalt.
- **Utility Coordination:** Overhead and underground utilities need to be relocated to accommodate the improvements. Right-of-way (ROW) coordination was prioritized based on the utility conflicts with construction. A 4" gas line owned by Columbia Gas was relocated along with several large diameter casings that were extended for gas transmission lines owned by Williams. Power and communication lines were relocated throughout.
- **Maintenance of Traffic (MOT) and Transportation Management Plan (TMP):** The team was required to maintain two lanes of traffic during construction. Multiple traffic shifts were required to construct the improvements to facilitate this. A phased construction plan was developed to allow appropriate space to make the improvements, maintain traffic, and keep the traveling public safe.

USE OF INNOVATION: A substantial portion of the subgrade was within stratum of existing soil with CBR values below minimum requirements. In order to achieve a suitable subgrade, multiple solutions to improve the existing soil conditions were utilized, including undercut and backfill, use of geosynthetics and borrow material, and chemical stabilization. The CH/MH type soils within the excavation were restricted in their use within the roadway prism, which forced the team to utilize offsite borrow when necessary. A substantial amount of borrow material was obtained from overburden from the nearby quarry. Branch worked with VDOT staff to overcome low CBR values on the project site. Several techniques were used to overcome this geotechnical challenge: chemical stabilization, geosynthetics and undercut. Greg Suttle was the Construction Manager on the Route 3 Widening project will perform in the same role for the Hydraulic Road/US 29 Project.

LIMITING IMPACTS TO THE TRAVELING PUBLIC, BUSINESSES, AND COMMUNITY: With 58 parcels impacted by construction, Branch took an active role in working with the adjacent property owners to let them know when construction operations affected them. Branch worked in

concert with the design team to develop and implement a comprehensive TMP and MOT Plan to manage traffic during construction, which included a traffic operations plan, temporary traffic control plan and public communications plan. VDOT required that two lanes of traffic needed to be maintained during construction and multiple traffic shifts were required to construct the improvements. A phased construction plan was developed to allow appropriate space to make the improvements, maintain traffic, and keep the traveling public safe. Throughout design and construction, Branch partnered with VDOT to keep the traveling public informed of upcoming traffic shifts and construction activities.

DEVELOPING AND MANAGING EFFECTIVE COMMUNICATION STRATEGIES: Branch partnered with VDOT to address the local citizens and help property owners overcome issues. The team developed an integrated Public Information Plan, which included holding public information meetings, stakeholder workshops, and informational brochures to all affected parties. Branch also developed relationships with all of the utility companies having facilities on the project, including Columbia Gas and Williams, as well as a better understanding of their concerns during design and construction. The experience of the project team in coordinating with companies like Verizon, Fiberlight, AT&T, and Level3 will be valuable while working on the Hydraulic Road/US 29 Project.

Our proposed Construction Manager, Greg Suttle, was instrumental in working with VDOT, the ROW agent, and property owners to address ROW acquisition concerns on the Project. In order to keep the project on schedule, Greg worked with property owners to resolve property access issues throughout the design process. His activities continued into construction, where he finalized the ROW process to ensure timely project completion.

DELIVERING MULTIPLE ELEMENTS CONCURRENTLY ON A FAST TRACK SCHEDULE:

The construction of this project was divided into three areas in order to manage the design and construction as well as ROW acquisition and utility relocation. Careful coordination of ROW acquisition and utility relocation was required to allow for road widening to begin and maintain progression.



ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: I-95 Safety Improvements at Route 3 Design-Build Location: Fredericksburg, Virginia	Name: Whitman, Requardt & Associates, LLP	Name of Client/Owner: VDOT Phone: 703.259.2362 Project Manager: Mike Coffey, PE Phone: 540.899-4288 Email: MichaelT.Coffey@vdot.virginia.gov	08/2018	08/2018	\$18,000	\$19,118 <i>(increase due to owner-initiated scope changes)</i>	\$19,118

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

- PROJECT SIMILARITIES:**
- VDOT D-B Project
 - Intersection Improvements
 - Structures
 - MOT with High Traffic Volumes
 - Use of a Traffic Management Task Force
 - Geotechnical Challenges
 - Safety and Congestion Concerns
 - Environmental Permitting
 - Third Party Stakeholder Communication & Coordination
 - Public Involvement & Outreach
 - Erosion and Sediment Control & Stormwater Management
 - Utility Coordination and Relocations
 - Earthwork, Grading, and Drainage
 - QA/QC



Branch was the Prime Contractor for this design-build (D-B) project to modify on- and off-ramps at the interchange of Route 3 and I-95. The changes were intended to reduce vehicle merging and weaving that led to many crashes, injuries, and congestion to traffic on the interstate and local roadways.

FINISHING CONTRACTS ON TIME OR EARLIER: The project corridor contained an intersection/interchange with the highest daily traffic in the area: 150,000 ADT on I-95, and 84,000 ADT on Route 3. With an excellent safety record, the team posted 46,035 man-hours between May, 2017 and April, 2019, all without a lost time incident or injury. Because of the team's dedication to schedule acceleration, 100% of roadway was delivered one month earlier than the contract completion date.

The increase in the project's value from \$18M to \$19.1M was directed by VDOT for intersection upgrades at Route 3 and Carl D. Silver Parkway. This project was awarded a *2018 Safety & Infrastructure Award, Category A; Structural Concrete & Steel, Highway Construction* by HCCA.

DELIVERING PROJECTS IN DEVELOPED URBAN CORRIDORS: The project corridor contained an intersection/interchange with the highest daily traffic in the area: 150,000 ADT on I-95, and 84,000 ADT on Route 3. The team making sure that the employees and the public are safe was a challenge for the team. With an excellent safety record, the team posted 46,035 man-hours for this project, all without a lost time incident or injury.

USE OF INNOVATION: Given the location of the project and high daily traffic volume, the overall schedule of the project was the team's largest hurdle. To meet VDOT's accelerated schedule, the team developed a creative approach to permitting that allowed construction to begin early. During initial roadway design development, the team proposed improvement to the conceptual roadway design to widen the I-95 Southbound to Route 3 Westbound ramp without delaying the project delivery time and impact to the ROW acquisition. The proposed improvement was accepted by VDOT.

The widening provided an additional 9,500-foot-long storage for vehicles exiting into the ramp by opening the up to three lanes much sooner from I-95 southbound than the initial design. The widening also better prepare the ramp to accommodate the additional exist lane to be tied in as part of the I-95 Southbound Collector Distributer Lanes Project.

LIMITING IMPACTS TO THE TRAVELING PUBLIC, BUSINESSES, AND COMMUNITY: Minimizing impacts to the traveling public was a critical aspect of this congested corridor. *Led by DBPM Yisehak Shata, PE and our Team's proposed Construction Manager, Greg Suttle*, the team applied the use of a Traffic Management Task Force (TMTF) from the pursuit phase through implementation of the overall Traffic Management Plan (TMP). The TMTF was comprised of designers, construction personnel, VDOT representatives, first responders (local fire and police), and key stakeholders. The TMTF developed the TMP around the goals of safety, efficiency, stability, access, and communication.

The team assigned a dedicated Traffic Control Manager responsible for implementing the plan and acting as the single point of contact for all MOT issues. Regular meetings were held with third party stakeholders regarding MOT phasing, upcoming traffic shifts, and construction activity. An Incident Management Plan with communication protocols with law enforcement and first responders to clear accidents was implemented. Finally, strategically located lay down and storage areas reduced construction traffic and minimize trucks from entering existing traffic lanes. During the closure, no construction or traveling public safety issues were reported.

DEVELOPING AND MANAGING EFFECTIVE COMMUNICATION STRATEGIES

The team implemented a public outreach campaign that included seven message boards, media coordination, web updates, and direct communications with key stakeholders, such as property owners and local elected officials. Because of its location in a crowded urban corridor, the project had the potential for affecting numerous business owners, residents, and the traveling public. The team worked diligently with stakeholders to maintain a constant public outreach campaign to keep the traveling public and nearby residents up to speed on the status of the project and the impacts it may cause to them. Efforts included regular public meetings, "Pardon our Dust" meetings, and mailings. The team also instilled a voting process for the sound wall to enable the community to have a say in the project's construction. This proactive campaign kept stakeholders informed and resulted in minimal comments from the traveling public.

The team worked in conjunction with VDOT's communication team to provide updates were provided to the community and all affected stakeholders by posting display boards in local shopping centers near the highest-traffic locations. These boards provided information about the project as well as project information sheets with milestone dates. The public was also notified for any change in traffic patterns as "Traffic Alert" postings.

DELIVERING MULTIPLE ELEMENTS CONCURRENTLY ON A FAST TRACK SCHEDULE: The team identified the bottle neck of the project schedule during the early planning and fast tracked the waterline design while roadway design and the permit application is progressing. By limiting the footprint of land disturbance and developing a separate package for the waterline, the team started the relocation work earlier than the baseline schedule. The additional advance work page helped gain 45 days of early start to the construction phase. Due to the highest daily traffic and the complex routing of vehicles through the existing cloverleaf interchange coupled with the nearby road connections located in less than 2,000 feet, performing multiple operations was critically needed to deliver the project on time.





ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: I-95 Southern Terminus Extension Design-Build Location: Stafford County, Virginia	Name: Whitman, Requardt & Associates, LLP	Name of Client/Owner: VDOT Phone: 703.259.2362 Project Manager: Susan Shaw Phone: 571.221.5219 Email: Susan.Shaw@VDOT.Virginia.gov	08/2018	11/2017 <i>(completed ahead of schedule)</i>	\$31,000	\$37,000 <i>(increase due to owner-initiated scope changes)</i>	\$37,000

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

- PROJECT SIMILARITIES:**
- D-B project for VDOT
 - MOT in an urban corridor
 - Environmental permitting and wetlands mitigation
 - Stakeholder coordination and public involvement
 - Erosion and sediment control & stormwater management
 - Utility coordination and relocations
 - Earthwork, grading, and drainage
 - QA/QC



The I-95 Express Lanes Southern Terminus Extension (STE) project extended the existing express lanes (ELs) further south to alleviate congestion challenges at the previous merge point and entry in Stafford County. Approximately 2.2 miles of a reversible lane was constructed starting at the beginning of the current southern end of the I-95 ELs (located north of Garrisonville Road) and included development of new northbound (NB) and southbound (SB) ramps between the ELs and the general purpose (GP) lanes. As prime contractor, Branch oversaw all aspects of design and construction. Branch self-performed all mass grading, erosion control, maintenance of traffic (MOT), drainage, fine grading, base stone placement activities, and contract administration and coordination with QA/QC. To streamline the design process and expedite construction, Branch used a Construction Design Coordinator, **Yisihak Shata, PE (our Team's proposed QC Manager)**, to perform constructability reviews during design development. Branch's close coordination with the design team and VDOT allowed the construction schedule to be accelerated. Construction challenges such as unsuitable soils, coordination with Transurban (the Concessionaire), and maintaining existing traffic were encountered and successfully solved by Branch during construction.

DEMONSTRATED EXPERIENCE DELIVERING PROJECTS IN DEVELOPED URBAN CORRIDORS: The improvements reduce delays and queues for the NB GP lanes during AM peak, reduce delays and queues for the SB ELs during PM peak, improve overall safety, decrease rear-end collisions by reducing vehicles weaving to enter and exit the lanes (which caused a significantly high incident rate), and increased capacity while reducing congestion within the existing right-of-way (ROW). To widen the roadway, a new left entrance south of the Garrisonville Road overpass (Route 610) was constructed to accommodate NB traffic entering the ELs. SB traffic using the ELs was able to merge into the GP lanes at a new exit point approximately one mile south of Garrisonville Road. High traffic volumes during peak hours required safe and well-marked access and egress points.

INNOVATIONS | VDOT's conceptual design for the project included impacting 500 LF of stream on the southern end of the project. Instead, the team's innovative design led to a reinforced soil slope (green wall) and the impact to 500 LF of stream was completely eliminated. This design approach helped expedite the water quality permit application process and saved VDOT approximately \$350,000 that would have been spent to purchase stream credits. Additionally, prior to contract award, VDOT took an innovative approach and obtained the VPDES and water quality permits for the project. VDOT worked with Branch during design development along with the permitting agencies to transfer the permits to Branch. During the design development and permit transfer stage, Branch proceeded at-risk with clearing and grubbing, grading, and drainage installation to accelerate the construction schedule. This proactive permitting approach allowed construction to begin within 45 days of the Notice to Proceed.

STRATEGIES FOR LIMITING IMPACTS TO THE TRAVELING PUBLIC AND COMMUNITY: Branch took a partnering approach to actively engage with VDOT, Transurban, the design team, and other third-party stakeholders early in design development to review plans at various stages and to reduce the amount of time required for review. This coordination proved successful as evidenced by the project being completed ahead of schedule. When developing the Transportation Management Plan, both safety and flow of the traveling public were critical elements. Additionally, VDOT imposed heavy lane use fees if lanes were disturbed along the I-95 corridor. Through proper planning and coordination, Branch did not receive any lane use fees during design, scope validation, or the construction phase of the project.

EARLY CONTRACTOR INVOLVEMENT: Branch, VDOT and Transurban built a strong relationship that created a means for commitment and timely responsiveness. As this trust developed, Branch requested to begin work at-risk, ahead of schedule and ahead of Approved for Construction (AFC) plans. This trust continued all the way through closeout, as project stakeholders provided one unified punch list inspection, which was quickly closed out through their combined efforts. The quality team, along with Branch's Construction Manager, worked together to identify quality

issues and address them promptly, exceeding VDOT's and Transurban's expectations. Branch's early works package items included MOT, clearing, and Phase I erosion and sediment control. VDOT had already obtained a VPDES Construction permit based on the RFP plans, which was issued to Branch with NTP. A revision was made to the VPDES permit based on the team's plans; however, work proceeded during the processing of the revision. VDOT had also submitted the JPA prior to NTP and the USACE Individual Permit was issued four months after the NTP. Branch began working in non-jurisdictional areas prior to permit acquisition and roadway earthwork began after issuance of the permit. One month after we started roadway grading the team's dedicate ITS subcontractor (Chesapeake) began installing duct bank in the area where roadway grading was complete. Branch completed this project nine months earlier than the contract completion date.

STAKEHOLDER COORDINATION: Because there were multiple stakeholders involved, developing an open and collaborative relationship was crucial to achieving the common project goals. Public meetings, along with individual local elected officials meetings, were held to describe the benefits of the Project, including the congestion relief that would result in both the NB and SB general purpose lanes upon completion of the Project. Expected construction impacts were also explained. Additional meetings were held with residents deemed to be benefitted by the proposed soundwall, with discussion including wall heights, wall finishes, and the soundwall voting process. This proactive, open stakeholder relationship resulted in the Project being viewed as a success by the local community, and the Project was a **winner of a 2019 ACEC-VA Merit Award**.

SUCCESSFUL COLLABORATION WITH THE OWNER: This partnership allowed the team to proactively address review and approval of the design, submittals, and overall constructibility. Design and construction of the ITS scope of work were adapted to address Transurban's specific requirements and operational needs. Midway through the project, VDOT added a second lane change order to revise the design, grading, electrical, utility, and overall roadway work to avoid conflicts with a future second lane design. However, the change order did not include an extension of contract time or milestone dates. Branch worked with VDOT to successfully negotiate the addition of \$5.6M of work to the project. This additional work was constructed within the same timeline as the original scope of work. All new work had to be completed by the original interim and final milestone dates. **With continuous integration and coordination with the designer and subcontractors, the project was still finished nine months ahead of schedule.**

SAFETY: Approximately 154,749 man-hours were required to complete the I-95 project. All work was performed with zero lost time incidents.



During construction, the commitment of all stakeholders to an agreed process for oversight and acceptance, including a single unified punchlist, significantly benefited project success. Also worthy of noting is that throughout the entire D-B delivery process, the team's agreed commitment to safety was evident. The benefit of this commitment was completion of the entire project with zero lost time incidents. As a result of the combined efforts of BCI, VDOT, and 95 Express, the team was able to successfully deliver the STE ahead of schedule, meeting or exceeding all quality requirements, and with an excellent safety record.

RICH PREZIOSO
Project Delivery Manager, 95 Express Lanes/Transurban

APPENDIX 3.4.1(b)
WORK HISTORY FORM
LEAD DESIGNER

ATTACHMENT 3.4.1(a)
LEAD DESIGNER - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: 7th Street Pedestrian Bridge & Associated Bridge Improvements Location: Richmond, VA	Name: Jones Lang Lasalle	Name of Client/Owner: Jones Lang Lasalle, on behalf of Virginia Commonwealth University Phone: 804.314.2418 Project Manager: Mark Ahern Phone: 804.314.2418 Email: mark.ahern@am.jll.com	05/2023	05/2024	\$2,500	\$2,500	\$250

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

PROJECT SIMILARITIES:

- D-B Project
- New Pedestrian Overpass
- Extensive MOT in an Urban Corridor
- MSE Walls
- VDOT Coordination
- Coordination with City Agencies
- FHWA Coordination

Timmons Group's (Timmons) Richmond office provided engineering services for the design of a pedestrian bridge and associated ramp widening for Virginia Commonwealth University (VCU) Health Services' I Lot Parking Deck Design project. The Timmons structural engineering team developed a Stage I bridge report based on the layout of a parallel structure and investigated different bridge configurations to include drawings for the recommended final bridge design. The bridge design utilized continuous steel girders to minimize structure depth and allow for the required vertical clearance over I-95. The design also included integral abutments supported on steel piles and hammerhead piers supported by a single drilled shaft. Timmons also developed a conceptual Maintenance of Traffic (MOT) layout focused on projected bridge pier locations.

Timmons' engineering team coordinated the approval of the bridge design through VDOT's Richmond District and Ashland Residency, including coordination of Land Use Permit and approval from the Commonwealth Transportation Board (CTB). Design services on the project include bridge design, roadway design and on-ramp improvements at I-64 EB and I-95 NB/I-64 WB. The project also included design improvements to the Duval/5th Street intersection. Additional services provided by Timmons included survey, utility location, geotechnical, environmental, and construction phase services. A key component of this project involved transportation and traffic analysis and planning for the parking deck located along 7th Street adjacent to the I-64/I-95 interchange ramps in Downtown Richmond. The proposed development replaces a surface parking lot with a 1,361-space parking structure. Timmons provided traffic/transportation analysis and planning for this project including traffic analyses, advanced modeling using VISSIM, and design alternatives for the access points and surrounding roadway network. The analysis included interstate access onto 7th Street, the adjacent bridge of I-95, the I-95/I-64 merge/diverge points, and six adjacent intersections in the City of Richmond. The VISSIM analysis included modeling and visualization of a congested, over-saturated street and interstate network within the study area. The 7th Street interchange with I-64/I-95 was one of the major outflow points for traffic within the downtown core of the City of Richmond. The reporting involved the completion of a VDOT Interchange Access Report, Operational and Safety Analysis Report (IAR/OSAR) in support of the proposed improvements on 7th Street and the interstate ramps. The study included a review of existing crash incidence within the study area and a predictive crash analysis of the proposed improvements. The project involved City and VDOT maintained roadways and coordination with the Federal Highway Administration (FHWA). Timmons also prepared traffic signal design plans, roadway/bridge widening plans on 7th Street, and ramp widening plans for the I-64 EB on-ramp.

FINISHING CONTRACTS ON TIME OR EARLIER: This project is currently on schedule for an on-time completion in May 2024.

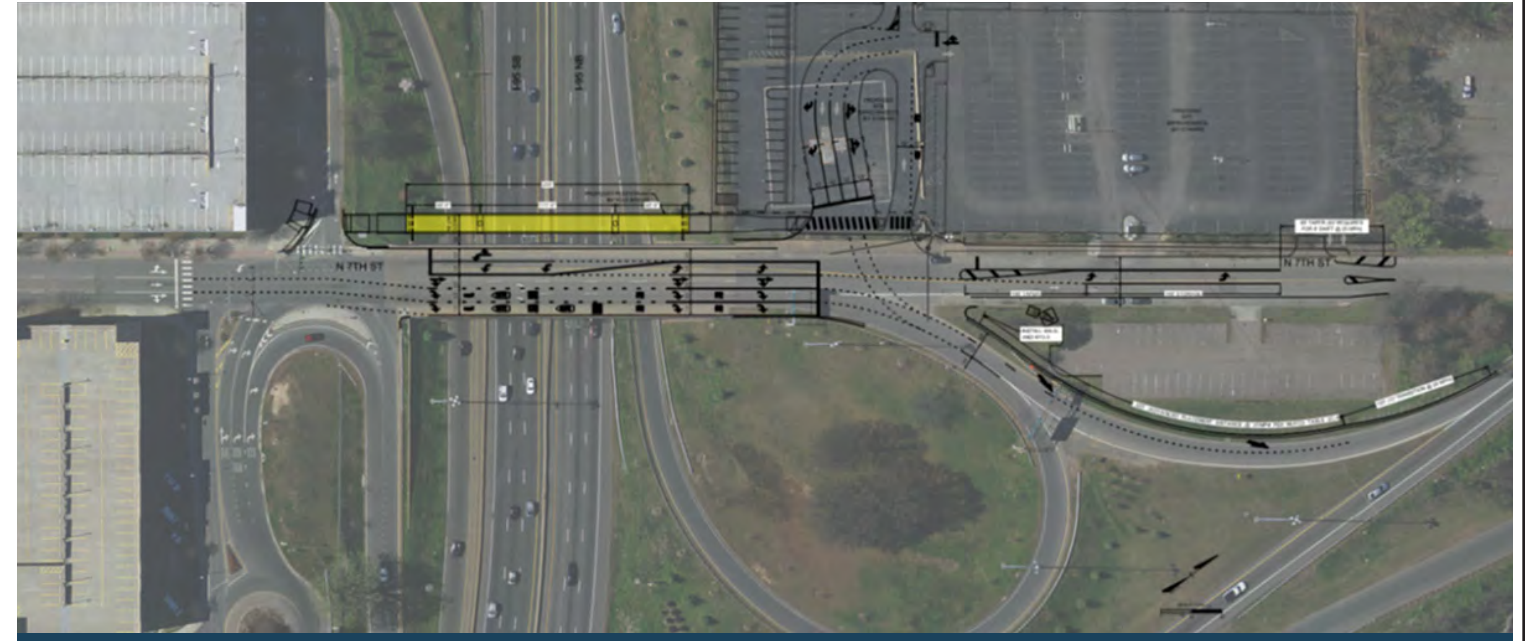
DELIVERING PROJECTS IN DEVELOPED URBAN CORRIDORS: This project was located parallel to North 7th Street in Downtown Richmond over I-95, near the eastern interchange of I-95 & I-64. The average daily traffic (ADT) on I-95 between I-64 E and Belvidere carries approximately 77,000 ADT (NB) and 84,000 ADT (SB) in each direction, with a combined 161,000 ADT for both directions of travel and 7th Street has an ADT of 9,100. The on ramp to I-95 NB, I-64 WB, and I-64 EB serves as a main access point to unload Richmond's downtown PM peak exodus each weekday. Engineers developed complex MOT plans to accommodate high traffic volumes and minimize traffic backups. Engineers designed turning radii and lane widths to account for a mix of passenger vehicles and large trucks, while understanding the context of preserving the urban feel of the corridor and minimizing the potential for accidents.

USE OF INNOVATION: Structurally, single drilled shafts were used to minimize the footprint on I-95. Additionally, a cantilevered pier cap was designed to maximize the offset between the pier and adjacent 80-year-old storm sewer infrastructure. This innovation minimized the potential for construction delays and cost increases during construction. This project was the first traffic study in the Richmond District under the new IIM-LD-200.10 guidelines issued September 8, 2020 to comply with FHWA's Policy on Access to the Interstate System released May 22, 2017. Timmons worked through the steps with members of VDOT's Central Office, Richmond District, FHWA, and the City of Richmond.

DEVELOPING AND MANAGING EFFECTIVE COMMUNICATION STRATEGIES: Timmons performed extensive coordination with the City of Richmond, VDOT, FHWA and end users, including VCU Health Services. During the design development stage of this project, VDOT advertised a design-build (D-B) project for the reconstruction and rehabilitation of various bridges crossing over I-95 in downtown. Timmons coordinated with VDOT Procurement and Delivery staff during the procurement to provide data on the status of our project that helped to modify the procurement to avoid possible re-work between the two projects. After the D-B was awarded, Timmons continued the coordination with the vendor and VDOT. Timmons coordinated internally with weekly task force meetings, and externally with other stakeholders on a bi-weekly or monthly basis to ensure a project-focused design.

LIMITING IMPACTS TO THE TRAVELING PUBLIC, BUSINESSES, AND COMMUNITY: Limiting impacts to traffic and providing safe pedestrian accommodations during construction was a major driver for the overall design of the project. Providing safe and efficient unloading of that portion of downtown during the PM peak was a major focal point of the City as all regional-connected traffic signals are coordinated to help arrive at that ramp to provide access to the interstates. Together with the City and VDOT, traffic was switched to all NB for the bridge deck rehabilitation work by VDOT, which allowed for the proposed work on 7th Street to occur at the same time to minimize disturbance to the public. Due to the fact that the area was a parking facility for VCU Health, there were many pedestrians that use the area for parking for support of the hospital uses. Engineers created detailed MOT plans to ensure coordination between the two projects and minimize traffic disruptions. Traffic changes and other traffic details were communicated to the public through VCU's outreach system.

DELIVERING MULTIPLE ELEMENTS CONCURRENTLY ON A FAST TRACK SCHEDULE: Timmons navigated the IAR/OSAR process while developing the traffic signal design, site design, pedestrian bridge design concurrently, all with overlapping components and coordinating with the VDOT D-B project. To deliver this project, Timmons worked with City staff to secure Work In Streets Permit (WISP) process and Traffic Engineering staff on the traffic; the Virginia Department of General Services' Division of Engineering and Buildings (DEB) on the site; VDOT Central Office - TMPD and L&D staff; Richmond District Traffic, L&D, Environmental staff; Ashland Residency office for Limited Access Land Use Permit; and VDOT Alternative Project Delivery staff. Engineers created construction phasing concepts that saved time, money, and frustration across both projects.



ATTACHMENT 3.4.1(a)
LEAD DESIGNER - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: Creighton-Cold Harbor Roundabout Location: Hanover County, VA	Name: J.L. Kent & Sons	Name of Client/Owner: Hanover County Phone: 804.365.6181 Project Manager: Joe Vidunas Phone: 804.365.6176 Email: javidunas@co.hanover.va.us	09/2019	07/2020	\$3,860	\$3,744	\$551

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

PROJECT SIMILARITIES:

- Roadway Design
- Street and Intersection Safety Improvements
- Roundabout Design
- Utility Coordination
- Public and Stakeholder Outreach
- Construction Administration and Management
- Pedestrian Accommodations

The existing signalized intersection at Creighton Road and Cold Harbor Road in Hanover County experienced high peak hour traffic volumes during the busiest times of the day and operated at an overall Level of Service (LOS) F. Considering these deficiencies, in 2011, Hanover County began the development of a project (by another design consultant) to expand the intersection with roadway widening, dedicated turn lanes, and a new modernized traffic signal to address overall congestion.

As the design progressed to the public hearing stage, the project's cost grew to be well in excess of the available budget (almost twice the available funding), which led the County to request Timmons Group (Timmons) provide an independent value engineering evaluation of the project. As a result of this evaluation, Timmons recommended the project be converted to a modern roundabout design with an estimated cost of approximately half the price of the original design. Other advantages include fewer impacted properties, a better LOS, and enhanced safety and access to adjacent properties.

This federally-funded, locally-administrated project, provided a single-lane roundabout retrofit to the existing intersection with restored access to peripheral businesses and residences. *The project was awarded a VTCA Engineering Award for Design Innovation following construction.*

FINISHING CONTRACTS ON TIME OR EARLIER: The project was substantially complete by the fixed completion date, with the roundabout and access open to full traffic operations.

DELIVERING PROJECTS IN DEVELOPED URBAN CORRIDORS: The project was constructed within the existing footprint of a heavily-traveled intersection flanked by gas stations in two quadrants. A nearby elementary school and residential development also constrained the corridor. A significant challenge was providing similar but safer access to the existing commercial entrances located too close to the existing intersection.

To resolve, Timmons proposed entrance relocations and site reconfiguration to locate right-in/right-out entrances farther from the roundabout while convincing the owners that the roundabout provided better access to and from any direction due to its ability to provide defacto U-turns. For safety, the use of extended splitter islands was used to maintain right-only turning movements anywhere within the functional area of the roundabout.

USE OF INNOVATION: Timmons developed VISSIM traffic simulations to evaluate various design alternatives and ultimately recommended to Hanover County that a single-lane roundabout could operate equal to or better than a traffic signal while getting the project back on budget. The County and VDOT both supported the concept, and Timmons was hired to complete the design for the County.

Considering the roundabout was to be constructed within the footprint of an existing signalized intersection, Timmons developed a plan to utilize a temporary signal configuration (using wood poles and span wire) that would allow for quick maneuvering of signal head placement, removal of the existing signal equipment (in conflict with construction) and manipulation of approaching travel lanes as needed to build the roundabout in phases. Once the overall footprint of the roundabout was established, construction flagging operations were implemented in accordance with the *Virginia Work Area Protection Manual*.

LIMITING IMPACTS TO THE TRAVELING PUBLIC, BUSINESSES, AND COMMUNITY: This project involved the second roundabout ever constructed within Hanover County, and the public's concern about how to navigate a roundabout was still an issue. To overcome this, the team held several public information meetings where the VISSIM simulations and other renderings were successfully used to show the public and businesses how traffic would navigate all movements within the roundabout.

Timmons designed the roundabout so that a significant portion of the roundabout could be built without impacting existing traffic patterns. This allowed the construction to be efficient and less disruptive to vehicular traffic. At the project's conclusion, the reduction in delay experienced was much better than the traffic simulations forecasted.

DEVELOPING AND MANAGING EFFECTIVE COMMUNICATION STRATEGIES: Along with using the VISSIM simulations for public education, the design team worked with County staff to post up-to-date plans on the County website. Timmons staff also regularly met with property owners upon request to provide technical input, particularly with regard to maintaining equivalent access to each of the gas stations.

DELIVERING MULTIPLE ELEMENTS CONCURRENTLY ON A FAST TRACK SCHEDULE: Although the project was not developed on a fast-track schedule, the design team was able to pivot the entire design concept quickly to provide substantial savings to the project. Hanover County could have spent years trying to obtain additional funding to support the original design. Instead, the project was completed efficiently and safely, eliminating the congestion at and around the intersection.



ATTACHMENT 3.4.1(a)
LEAD DESIGNER - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: Sliding Hill Road Widening (UPC 104957) Location: Hanover County, VA	Name: Curtis Contracting, Inc.	Name of Client/Owner: Hanover County Phone: 804.365.6181 Project Manager: Joe Vidunas Phone: 804.365.6176 Email: jevidunas@co.hanover.va.us	07/2019	12/2020	\$6,999	\$7,060	\$700

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

- PROJECT SIMILARITIES:**
- Roadway Design
 - Street and Intersection Safety Improvements
 - Continuous Green-T Intersection Design
 - Utility Coordination
 - Public and Stakeholder Outreach
 - Construction Administration and Management
 - Pedestrian and Bicycle Accommodations

Sliding Hill Road (Route 656) is a critical link between the I-95/U.S. Route 1 corridor and U.S. Route 301 in Hanover County, providing access to substantial commercial/retail, residential, and industrial developments, including the Hanover County Airport. The project involved the widening of Sliding Hill Road to a four-lane divided typical section and included pedestrian sidewalks, dedicated bicycle facilities, turn lane improvements, traffic signal modifications, and access management enhancements.

The project featured Hanover County's first signalized continuous green-T intersection, an innovative intersection treatment whereby westbound traffic at New Ashcake Road will travel continuously unimpeded through the intersection while all other movements are signal-controlled. With the addition of a large new distribution facility to the corridor, this treatment was proposed during construction to maximize the throughput of traffic headed towards I-95.

The project also featured an innovative approach to addressing stormwater management compliance at a natural stormwater outfall. Due to the presence of highly valued property with expansive environmental constraints, the project converted traditional roadside ditches to stormwater management swales providing the necessary onsite detention while minimizing right-of-way and environmental impacts.

This project was funded by VDOT and administered by Hanover County using a combination of local, state, and federal funds. Timmons Group (Timmons) worked with Hanover County to ensure that all VDOT and Federal Highway Administration (FHWA) requirements were met, successfully facilitated a design public hearing to fulfill public involvement requirements and gained FHWA concurrence of a Categorical Exclusion E-level National Environmental Policy Act (NEPA) document.

FINISHING CONTRACTS ON TIME OR EARLIER: No contract extensions were requested, and the project was completed and opened to full traffic operations before the fixed completion date. All punch list items were completed, and project closeout materials confirmed by the fixed completion date.

DELIVERING PROJECTS IN DEVELOPED URBAN CORRIDORS: Approximately half of the project's one-mile length was improved to a four-lane divided section in an urban setting comprised of fully built-out commercial retail sites located near the improvements. The project also included modifications to various site elements (e.g., driveways, landscaping, signage) to improve site access and replace features impacted through right-of-way acquisition and/or negotiations.

The existing corridor was full of overhead and underground utility facilities of various ages and conditions. The design team meandered the sidewalk to avoid power poles where practical and adjusted curbing in several locations to prevent sanitary sewer manhole adjustments. Timmons analyzed, coordinated, and resolved potential utility conflicts with several gravity sanitary sewer lines, two 12" water mains, a 16" water main, an 8" natural gas line, VDOT traffic control infrastructure, multiple Verizon fiber, and buried copper lines, CATV facilities, and other telecom fiber facilities.

USE OF INNOVATION: As described above, the project featured two innovative design solutions aimed at (1) improving traffic operations and (2) compliance with current state stormwater management regulations. The project implemented Hanover County's first continuous green-T signalized intersection, which was retrofit to an existing stop-controlled intersection to improve levels of service for westbound access to I-95. The project also utilized stormwater management swales (in conjunction with an onsite BMP) to address on-site stormwater detention requirements.

Another innovative aspect of the project involved dealing with three separate telecom providers (Level 3, Lumos, and Comcast). Timmons proposed designing a combined duct bank agreeable to all three utilities who each provided their conduits. Combining all three utilities into one duct bank saved space and negated the need for additional utility easements.

LIMITING IMPACTS TO THE TRAVELING PUBLIC, BUSINESSES, AND COMMUNITY: Due to the presence of commercial sites on both sides of the roadway, the design team assessed various alternatives and methods for providing access, focusing on minimizing impacts to private property owners. For example, during design development, a new Walmart was constructed with frontage improvements that had to be considered part of the project. Timmons worked closely with Hanover County staff to create a phased implementation (including a temporary signal) to ensure the private development improvements could operate within the ultimate widening design and in a way that would minimize disruption to the traveling public.

DEVELOPING AND MANAGING EFFECTIVE COMMUNICATION STRATEGIES: The design team worked closely with Hanover County staff to facilitate citizen information meetings and a design public hearing to solicit feedback early in the project development process from the local business owners in the area. The team also met individually with those owners most affected by the project to minimize the impacts on businesses during and after construction.

DELIVERING MULTIPLE ELEMENTS CONCURRENTLY ON A FAST TRACK SCHEDULE: During project development, the design team overcame the challenge of accommodating the needs of two large-scale businesses (Walmart and Wegmans) under construction during the design and towards the end of construction, respectively. Design modifications, including the addition of the continuous green-T intersection treatment, were successfully implemented while keeping the project on schedule and within budget.





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