

# ROUTE 7 AND BATTLEFIELD PARKWAY INTERCHANGE

From: 0.75 Miles W. of Battlefield Parkway along Route 7  
To: 0.75 Miles E. of Battlefield Parkway along Route 7  
From: 0.25 Miles S. of Route 7 along Battlefield Parkway  
To: 0.40 Miles N. of Route 7 along Battlefield Parkway  
Town of Leesburg, Virginia

Contract ID Number C00106573DB101; State Project Nos.: 0007-253-009  
P101, R201, C501, B601; Federal Project No.: STP-5A01(704)

STATEMENT OF QUALIFICATIONS

A DESIGN-BUILD PROJECT

Battlefield Pkw

Submitted | January 31, 2018





## 3.2 LETTER OF SUBMITTAL

Battlefield Pkw







Stephen D. Kindy, P.E.  
 Alternative Project Delivery Division  
 Virginia Department of Transportation  
 1401 East Broad Street  
 Richmond, VA 23219

January 31, 2018

**Re: Request for Qualifications | a Design-Build Project | Route 7 and Battlefield Parkway Interchange | from 0.75 Miles W. of Battlefield Pkwy along Rte. 7 to 0.75 Miles E. of Battlefield Pkwy Along Rte. 7 | from 0.25 Miles S. of Rte. 7 along Battlefield Pkwy to 0.40 Miles N. of Rte. 7 along Battlefield Pkwy | Town of Leesburg, Virginia | State Project Nos. 0007-253-009, P101, R201, C501, B601 | Federal Project No.: STP-5A01(704) | Contract ID No. C00106573DB101**

Dear Mr. Kindy,

**Branch Civil, Inc. (Branch)**, as the Offeror, submits to the Virginia Department of Transportation (VDOT) this Letter of Submittal and accompanying Statement of Qualifications in response to the RFQ dated December 8, 2017 for the above-referenced project. Branch will partner with lead designer **STV Incorporated dba STV Group Incorporated (STV)** to furnish a product that exceeds your design, cost, and schedule expectations.

**3.2.1 Full legal name and address of the Offeror:**

Branch Civil, Inc. | 442 Rutherford Ave, NE, Roanoke, VA 24016

**3.2.2 Point of Contact for the Offeror:** Jason Hoyle, Vice President of Design-Build/Major Projects

Address: 442 Rutherford Ave, NE, Roanoke, VA 24016

Tel: (540) 982-1678 | Fax: (540) 982-4217 | email: jason.hoyle@branchcivil.com

**3.2.3 Principal Officer of the Offeror:** Patrick Bartorillo, President

Address: 442 Rutherford Ave, NE, Roanoke, VA 24016

Tel: (540) 982-1678 | Fax: (540) 982-4217 | email: patrick.bartorillo@branchcivil.com

**3.2.4 Structure of the Offeror:** Branch is a registered corporation in the Commonwealth of Virginia. Branch will take full financial responsibility for the project and has no known liability limitations. Branch will provide a single 100% performance bond and single 100% payment bond.

**3.2.5 Lead Contractor:** Branch Civil, Inc. | **Lead Designer:** STV Incorporated dba STV Group Incorporated

**3.2.6 Affiliated and/or Subsidiary Companies Table (attch. 3.2.6)** is in the Appendix.

**3.2.7 Executed Certifications Regarding Debarment (attch. 3.2.7(a) and (b))** are in the Appendix.

**3.2.8 VDOT Prequalification:** Branch's Vendor ID is B319; status is Active; evidence is in the Appendix.

**3.2.9 Surety Letter** is in the Appendix. Branch is capable of obtaining a performance and payment bond.

**3.2.10 SCC and DPOR registration (Attachment 3.2.10)** and supporting documents are in the Appendix.

**3.2.11 DBE Participation Goal:** Branch is committed to achieving 13% DBE participation for the entire value of the contract.

Branch and STV are well-versed and respected within the heavy civil construction industry, specifically with regard to design-build projects. Our team eagerly anticipates further proposal instructions.

Respectfully submitted,

Branch Civil, Inc.

Patrick K. Bartorillo, President



### 3.3 OFFEROR'S TEAM STRUCTURE

Battlefield Pkw






## 3.3 OFFEROR'S TEAM STRUCTURE




**Branch Civil, Inc. (Branch)** has assembled a team of industry veterans who have experience designing and building solutions to meet the unique demands of this project, combining the skills and experience of our member firms, resources, and personnel. Our design-build (D-B) team offers local resources and capacity, as well as the certifications and qualifications, to successfully complete the design and construction of this challenging project. **STV Incorporated (STV)**, the lead designer, will provide all required professional design and engineering services in support of the construction approach and schedule. **Fairfield-Echols, LLC (FE)** will serve as a major dedicated bridge subcontractor, bringing a depth of experience with interchange bridge projects. Various specialty items, such as signage, guardrail, and pavement striping, will also be under direct subcontract to Branch. Branch and STV have collaborated on other D-B pursuits and are currently working together on the NCDOT Future I-295 Fayetteville Outer Loop D-B.

As the offeror, Branch will hold financial responsibility for project completion and will manage the entire team, supervising design and construction and performing major elements of the construction work. The organization chart on page 7 illustrates the composition and structure of our team.

The Branch team comprises industry-leading bridge designers and contractors who understand the challenges and complexities of this project, including the procedures and expectations of VDOT. Each key participant has successfully completed projects of similar complexity, so we know what it takes to deliver creative and innovative design and construction solutions while *minimizing disruptions to local communities and the traveling public and maximizing safety and the value of every dollar invested*. Each team member is highly qualified to provide the services specific to their scope of work.

 **BRANCH CIVIL** Branch is an employee-owned company with corporate headquarters in Roanoke, VA, and regional offices in Manassas and Virginia Beach. Branch continuously ranks as a Top 400 Contractor (#209) by *ENR*. Branch will apply management lessons learned from successfully completing more than \$700 million D-B and PPTA projects including the \$38 million I-95 Southern Terminus Extension (recently completed nine months ahead of contract completion) to expedite delivery of the Route 7 and Battlefield Parkway Interchange. Branch will also use experience gained on constructing the bid-build \$38 million Southgate Drive Interchange Improvements project where the at-grade intersection is being converted to a grade-separated DDI. This project is currently tracking to finish six months ahead of schedule.

 **STV** STV has more than 105 years of engineering experience and has provided well-conceived, cost-effective solutions for bridge and roadway design challenges in the Southeast for more than 50 years. The firm consistently ranks among *ENR*'s Top 500 Design Firms, and is ranked No. 11 among the Top 50 in Transportation, No. 14 among the Top 25 in Bridges, and No. 20 among the Top 25 in Highways. STV has provided services to VDOT continuously for the past 30 years and, in 2017, received two awards for its design of the VDOT I-581/Valley View Boulevard Interchange. Not originally conceived as a DDI, a DDI was proposed through STV-led value engineering, which resulted in significant cost savings. STV brings unique experience with our I-395/Capitol Crossing interchange reconstruction project in the central business district of Washington, D.C., and has designed SPUIs at US 17/Route 707 in South Carolina and I-77/Tyvola Road in North Carolina. All of these innovations were designed under tight constraints with multiple utility conflicts, high traffic volumes, and large adjacent businesses with access issues.





Fairfield-Echols, founded in 1929 and based in Fishersville, Virginia, has been successfully building structures for VDOT and other clients since their inception. In 2015, Fairfield partnered with Branch to construct a bridge and MSE walls carrying traffic on Route 636 over CSX railway. Fairfield has completed several bridges in Northern Virginia and are currently constructing a bridge on Route 28 over Kettle Run in Prince William County that will be completed by using phased construction while maintaining traffic. Fairfield will perform all structure construction on the project as a dedicated subcontractor to Branch.

Our team includes the following firms to enhance D-B delivery and maximize DBE/SWaM participation:

Firm	Role	Experience/Benefits
Fairfield-Echols, LLC	Bridge/Retaining Wall Construction	<ul style="list-style-type: none"> <li>Phased bridge construction in Prince William and Frederick counties</li> <li>Partnered with Branch to construct a bridge on Route 636 over the CSX railway</li> </ul>
Engineering & Materials Technologies, Inc. [DBE/SWaM]	QC Manager/ QC Inspection	<ul style="list-style-type: none"> <li>QC Manager for Branch on I-95 STE D-B</li> <li>QC Manager for Branch on Route 3 at I-95 D-B</li> <li>QC Manager on VDOT Route 1 North Project</li> <li>QC Services for VDOT I-395 Express Lanes</li> </ul>
Bowman Consulting Group, Ltd.	Survey/SUE/ROW/ Utilities	<ul style="list-style-type: none"> <li>Virginia-based since founded in 1995</li> <li>STV team member on Capitol Visitor Center and R Tunnel Egress Improvements D-B</li> </ul>
CES Consulting LLC [DBE/SWaM]	QA Manager	<ul style="list-style-type: none"> <li>Independent VDOT D-B QA experience</li> <li>QAM on VDOT Route 29 Solutions</li> </ul>
Dulles Geotechnical and Material Testing Services, Inc. [DBE/SWaM]	QA Lab	<ul style="list-style-type: none"> <li>Extensive VDOT testing experience</li> <li>AASHTO-cert. Materials Reference Lab</li> </ul>
Endesco, Inc. [DBE/SWaM]	Drainage/ Hydraulics/E&SC	<ul style="list-style-type: none"> <li>VDOT D-B experience</li> <li>VDOT I-95 Replacement Bridges over Meherrin River with STV</li> </ul>
GeoConcepts Engineering, Inc.	Geotechnical Engineering	<ul style="list-style-type: none"> <li>Local office in Ashburn, Virginia</li> <li>History of 60 VDOT projects (28 VDOT D-B)</li> <li>37 total successful transportation D-B projects</li> <li>700 projects in Loudoun County (12 VDOT)</li> </ul>
Harris Miller Miller & Hanson Inc. [DBE/SWaM]	Noise Analysis	<ul style="list-style-type: none"> <li>Internationally recognized leader in noise and vibration control</li> <li>Teamed with STV on VDOT I-581/Valley View D-B</li> </ul>
Sharp & Company, Inc.	Public Relations	<ul style="list-style-type: none"> <li>35 years of PR experience in the NOVA/DC area</li> <li>Extensive VDOT experience and with STV</li> </ul>

### 3.3.1 KEY PERSONNEL

Below we have provided brief qualifications for the required key personnel as outlined in the RFQ. Key Personnel Resume Forms (Attachment 3.3.1) for each are included in the Appendix. The Branch team acknowledges that job duties and responsibilities of key personnel will not be delegated to others for the duration of this contract. All key personnel proposed are full-time employees of their respective firms.



**Design-Build Project Manager (DBPM)—Jason Hoyle** (Branch) will oversee the overall project, including the design, construction, quality management, contract administration, and other services required by the contract documents, including procuring and furnishing all materials, equipment, services, and labor reasonably inferable from the contract documents in a timely manner. With over 22 years of construction experience, Jason’s interchange construction projects include the Greensboro Eastern Loop, I-73/PTIA Design-Build, and Macy Grove Road Design-Build. Jason was the Design-Build Project Manager for the Route 3 Widening Project in the Culpeper District and worked with the Branch team on the I-95 Southern Terminus Extension D-B project. *His D-B experience will be integral in facilitating team partnering to make sure that appropriate and consistent communication is maintained among all parties.*

Jason will be responsible for meeting the Design-Builder’s project obligations under the contract, providing answers to questions/inquiries relevant to the project, overseeing the avoidance and resolution of disputes, and coordinating any public outreach efforts. The Quality Assurance Manager, Design Manager, Construction Design Coordinator, Construction Manager, Safety Manager, ROW Manager, Lead Utility Coordination Manager, and Public Relations Manager will all report directly to Jason. Jason will attend all required meetings, including all progress meetings.

**Quality Assurance Manager (QAM)—Avtar Singh, P.E., QAM (CES)** will report directly to the DBPM and will have direct, independent access to VDOT. He has more than 20 years of construction industry experience, including 6 years as Area Construction Engineer for VDOT’s Northern Virginia District. In this role he was the responsible charge engineer providing CM oversight for 28 projects valued at more than \$230 million. With CES, he recently served as QAM for the VDOT Route 29 Solutions project in Charlottesville. Avtar is familiar with *VDOT Minimum Requirements for Quality Assurance and Quality Control on Design-Build and P3 Projects* (January 2012) and is fully qualified to provide QA for this D-B project. Avtar will be responsible for the QA program and will coordinate with VDOT, supervise project QA inspection staff, and coordinate with the QA testing firm, Dulles Geotechnical and Material Testing Services, Inc. (DGMT). He will monitor conformance with the contract documents including the “approved for construction” plans and specifications. Avtar will have overall responsibility for the development of and adherence to the Design-Build QA/QC Plan. Avtar will report to the DBPM but will function independently from the Construction QC Manager, auditing and monitoring Branch’s Quality Control Program. He will have the authority to stop construction activities, to ensure compliance with the specifications, and issue Non-Compliance Reports (NCRs) if necessary. Avtar will submit monthly written QA program reports to both VDOT and the Branch team.

**Design Manager (DM)—Michael Hooshangi, P.E. (STV)** will coordinate all design activities so that the design conforms to the contract documents. He will establish and oversee the design QA/QC program, prepare responses to internal D-B team RFIs, and remain fully involved during the construction phase. Mike has more than 35 years of experience in highway design, including urban interchanges, roadway widening and reconstruction, intersection improvements, drainage systems, stormwater management, ROW, MPT, and utility relocations in Virginia and the Washington, D.C. region. He managed VDOT projects that improved six sections of Fairfax County Parkway with interchanges at Baron Cameron Avenue (SPUI), Route 7 (compressed urban diamond), Sunset Hills Road, Route 50, and Route 29. For the I-581/Valley View Interchange D-B, Mike led a team value engineering exercise that relocated a pedestrian path and significantly reduced project costs. The project has won awards from both VTCA and ACEC. Mike also brings a strong working relationship with Town of Leesburg staff from his role as project manager on the Sycolin Road improvements project.



**Construction Manager (CM)—Greg Suttle** (Branch) will manage all on-site construction as well as scheduling, safety, environmental compliance, utilities, and MOT. He will supervise the QC Manager, superintendents, and field staff, and will manage the construction process including all QC activities so that the materials used and work performed meet contract requirements and the “approved for construction” plans and specifications. Greg will coordinate with the Construction Design Coordinator and Design QA Manager in constructability reviews, utility coordination, ROW, and MOT. He holds a VDEQ Responsible Land Disturber (RLD) Certification and a VDOT Erosion and Sediment Control Contractor Certification (ESCCC). He will also work with STV in coordinating the design and construction forces with respect to environmental requirements. Greg and his staff will see that construction is performed safely and, along with our QC Manager, that materials and work conform to the approved plans/contract documents. He will coordinate with the DM during construction for accurate and timely distribution and review of RFIs and shop drawings. He will be assigned to the project and on-site full time. Greg now serves in a similar role for VDOT’s Route 3 at I-95 D-B project (Fredericksburg District). This project will be complete before this project begins allowing Greg to be fully dedicated and available for this project.

**Lead Utility Coordination Manager—Todd Philipp, P.E.** (Bowman) will be responsible for coordination of all utility relocations. His D-B experience working with VDOT and other clients includes verifying conflicts, determining cost responsibility, conducting field utility investigations, coordinating utility relocation design, review and approval of utility relocation plans and estimates, and inspection of utility relocation construction. He will review field conditions to determine if the utility relocation design needs to be modified. On a monthly basis, Todd will provide an update to the Branch team as well as to VDOT concerning utility relocation status. His relevant experience includes managing the coordination and design of utility relocations for the ongoing VDOT Transform I-66 Express Lanes (Outside the Beltway) project and many other past projects in the NOVA and Washington, D.C. metro areas.

#### **VALUE ADDED POSITIONS (INTEGRAL TO OUR DESIGN-BUILD APPROACH)**

**Construction-Design Coordinator—Jenny Eggleston** (Branch) will review constructability issues with STV and assist in eliminating field conflicts and tracking design progress. Jenny will report to the DBPM and will facilitate timely review of plan submissions and advance construction activities.

**Safety Manager—Danny Minnix** (Branch) has over 20 years of experience in safety management and will report to the DBPM. He will confirm compliance with all applicable safety regulations and has sole responsibility for project-wide safety. Danny has experience with large-scale heavy civil safety program development and management, and is the Director of Safety and Risk at Branch.

**Public Relations Manager—Charise Geiling** (Sharp & Co.) leads engagement campaigns at the federal, state, and local levels, to facilitate community involvement with transportation initiatives. As a part of a GEC for I-66 Inside and Outside the Beltway, Charise was the on-site senior communication specialist for the nearly \$3 billion, high-profile project that involves transforming I-66 to express toll lanes. Charise will report to the DBPM and will support the Public Relations effort.

**Traffic Management Task Force**—This group will consist of VDOT, Branch, and STV project staff, and third-party stakeholders. The Task Force will meet regularly (at least monthly) to review MOT and optimize traffic safety and efficiency by minimizing delays to the traveling public, reducing disruptions to adjacent businesses, and protecting safety throughout the project duration. Recommendations generated by this group will be implemented into the MOT plan continuously to address issues that arise. PR Manager Charise Geiling will be part of this task force.



### 3.3.2 TEAM ORGANIZATION

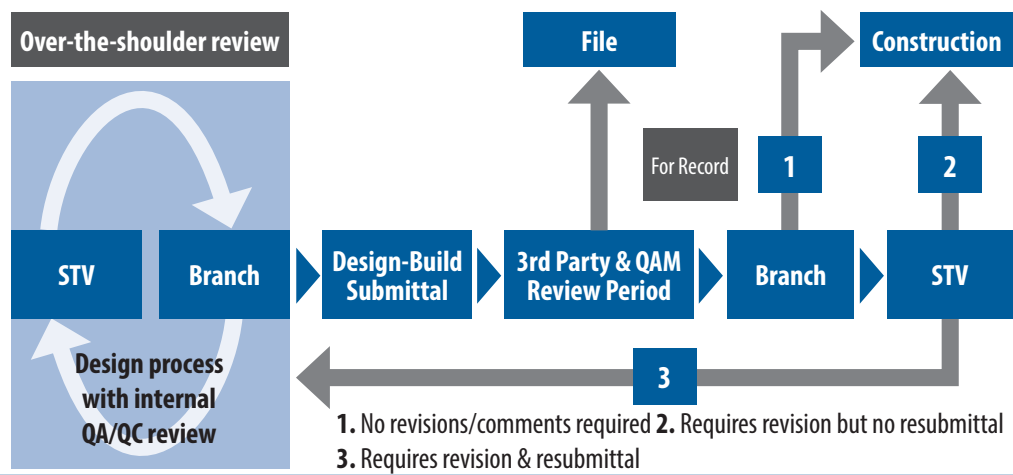
**DESIGN & CONSTRUCTION COORDINATION:** Our D-B philosophy considers design and construction to be integrated functions. Early D-B integration enables and enhances constructability as design and construction personnel work together from project inception. By connecting design groups with their construction counterparts, we expedite information exchange and problem solving. Design reviews maximize schedule and cost efficiencies and minimize construction related community impacts.

Consistent and open communication is key to achieving project goals. We will conduct regular monthly partnering meetings with design, construction, QA, and VDOT managers to discuss progress. A standard agenda will be established and followed throughout the project’s duration and modified as needed to emphasize special activities. Key discussion items include status of plans, schedule, materials, environmental/permitting, ROW, safety, and community interface. Quality is a central focus of partnering meetings and our QAM offers significant D-B experience, including lessons learned. Meeting minutes will be distributed promptly so that action items or unresolved issues are tracked until a resolution is confirmed.

The Branch team is organized to integrate design, procurement, construction inspection, testing, and safety certification into one cohesive group with the single point of contact for VDOT being DBPM Jason Hoyle. Jason has the authority to represent and make decisions for Branch, overseeing the performance of the D-B team. Our CM, Greg Suttle, will report to Jason, overseeing construction execution with the authority to make all day-to-day decisions to keep the project moving.

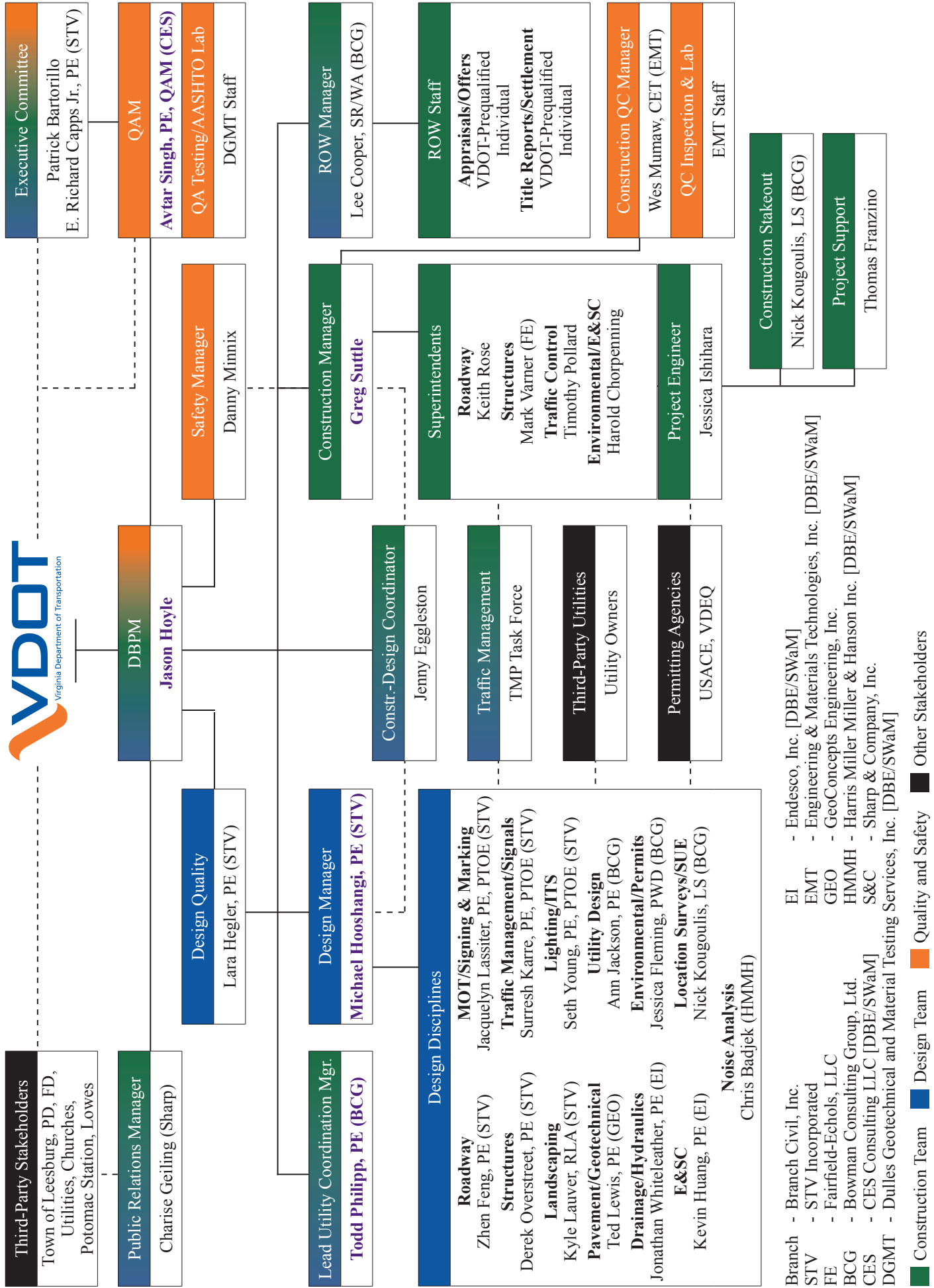
Our DM, Mike Hooshangi, P.E., will also report to the DBPM, and will manage the design and oversee all design discipline leads and subconsultants to develop timely design deliverables in support of the construction approach and schedule. Construction Design Coordinator, Jenny Eggleston, will act as a liaison between design and construction to make sure the team is working in concert to achieve project goals.

**INDEPENDENT QA/QC:** To maintain clear separation between QA and QC functions, CES will provide independent QA inspection and testing. Avtar Singh, P.E., QAM, will confirm the results of QC efforts by performing tests and inspections for verification using a separate and independent testing laboratory. He will document and confirm that non-compliant work is corrected using an approved method to facilitate acceptance by VDOT and FHWA. He will review, comment on, and approve monthly invoices to VDOT. He will plan and facilitate preparatory inspection meetings for major elements with QA, QC, and Branch staff to review contract requirements pertaining to the construction, inspection, and acceptance of work.



*Design review includes design, construction, and VDOT personnel and an established, proven QA/QC process.*





- Branch - Branch Civil, Inc.
- STV - STV Incorporated
- FE - Fairfield-Echols, LLC
- BCG - Bowman Consulting Group, Ltd.
- CES - CES Consulting LLC [DBE/SWaM]
- DGMT - Dulles Geotechnical and Material Testing Services, Inc. [DBE/SWaM]
- EI - Endesco, Inc. [DBE/SWaM]
- EMT - Engineering & Materials Technologies, Inc. [DBE/SWaM]
- GEO - GeoConcepts Engineering, Inc.
- HMMH - Harris Miller Miller & Hanson Inc. [DBE/SWaM]
- S&C - Sharp & Company, Inc.



### 3.4 EXPERIENCE OF OFFEROR'S TEAM

Battlefield Pkw





# 3.4 EXPERIENCE OF OFFEROR'S TEAM

Depth of experience means more than just design and construction of grade-separated interchanges. Experience that will truly benefit VDOT is exemplified in a team with D-B capability, understanding of VDOT procedures and expectations, and established relationships formed through the delivery of this work. Branch and STV not only bring a depth of D-B experience in Virginia and beyond, we have successfully teamed together to pursue and have been awarded the contract to construct the \$129 million NCDOT Future I-295 Fayetteville Outer Loop D-B.

Branch has completed more than \$700 million in D-B projects. Using resources and lessons learned on multiple projects throughout Virginia, Branch has led the development, design, and construction improvements on the multi-phased expansion of the US Route 58 Corridor and I-95 Southern Terminus project. Branch is now completing the Southgate Drive Interchange bid-build project, where an existing at-grade intersection is being replaced with a grade-separated DDI. Branch has had the opportunity to pursue two VDOT D-B projects where ATCs have been permitted: High Rise Bridge and Warrenton Southern Interchange. Branch will use experience with the ATC process to determine whether any innovative concepts are feasible for this project. Their Manassas office is within 30 miles of the site and Branch is ready to support the Route 7 and Battlefield Parkway Interchange D-B with over 135 local, qualified staff. Branch has established relationships with VDOT, stakeholders, and review agencies through work performed on the following projects:



*The successful VDOT I-95 Southern Terminus project is representative of Branch's work in the VDOT NOVA district.*

at-grade intersection is being replaced with a grade-separated DDI. Branch has had the opportunity to pursue two VDOT D-B projects where ATCs have been permitted: High Rise Bridge and Warrenton Southern Interchange. Branch will use experience with the ATC process to determine whether any innovative concepts are feasible for this project. Their Manassas office is within 30 miles of the site and Branch is ready to support the Route 7 and Battlefield Parkway Interchange D-B with over 135 local, qualified staff. Branch has established relationships with VDOT, stakeholders, and review agencies through work performed on the following projects:

- VDOT I-95 Southern Terminus Extension D-B (\$38 million)
- VDOT Route 7 over Dulles Toll Road D-B (as a subcontractor) (\$2.8 million)
- Stafford County Garrisonville Road PPTA (\$12.9 million)
- Fairfax County Lorton Road Improvements (\$28.2 million)
- City of Fairfax Northfax Intersection Improvements (\$23 million)



*The I-581/Valley View Interchange was not originally envisioned as a DDI—this came about through the D-B process.*

STV ranks among the premier D-B consultants in the industry. As Lead Designer, STV will work with all project stakeholders, design, construction, VDOT, and third parties to develop designs which support stakeholder goals for the project while meeting the demands of the construction approach and schedule. STV is currently delivering D-B services to VDOT as Lead Designer on the Pulse BRT in Richmond, VA, which features complex MOT along a 7.6-mile route through high-density areas and the I-581/Valley View Boulevard (DDI) Interchange Phase II in Roanoke. The firm has significant interchange design experience, including SPUI and DDI, for VDOT and other clients in the Southeast, including:



- VDOT I-581/Valley View Boulevard Interchange Improvements D-B (\$39 million, DDI)
- City of Alexandria Monroe Avenue Bridge Replacement (\$43 million, urban Alexandria, VA)
- SCDOT US 17 Bypass and SC 707 Interchange (\$120 million, SPUI)
- NCDOT Tyvola Road Bridge over I-77 (\$2.6 million, SPUI)
- I-95 Bridge Replacement over Meherrin River (\$22.5 million, traffic phasing)
- DDOT I-395/Capitol Crossing Final Design (\$1.3 billion, urban with major adjacent development)

**Fairfield-Echols** was founded in 1929 and is based in Fishersville, VA. Fairfield has been successfully building structures for VDOT and other clients since their inception. In 2015, Fairfield partnered with Branch to construct a bridge and MSE walls carrying traffic on Route 636 over CSX. Fairfield will be a dedicated subcontractor to Branch to perform all structure construction on the project. Some relevant projects include:

- Prince William County Route 28 over Kettle Run (\$3.7 million bridge project)
- Frederick County Snowden Bridge (\$2.7 million bridge project)
- City of Charlottesville Route 250 Bypass over McIntire Road (\$2.1 million bridge project)
- City of Harrisonburg Erickson Avenue over I-81 (\$6.8 million bridge project)



*Branch's Southgate project is an at-grade intersection being improved to a grade-separated DDI in Blacksburg, VA.*



*STV has a wealth of experience with complex urban interchanges, like this SPUI at US 17/SC 707 in South Carolina.*

### 3.4.1 WORK HISTORY FORMS

The Work History Forms, Attachments 3.4.1 (a) and (b), are included in the Appendix. Below is a snapshot of similar features to this Route 7/Battlefield Parkway Interchange project.

VDOT Project Experience	Limited Access	Staged Const.	Risk Factors		
			MOT	Utilities	Geotech
Southgate Drive Interchange	✓	✓	✓	✓	✓
I-64 Jackson River Bridge Replacement	✓	✓	✓	✓	✓
I-95 Express Lanes Southern Terminus Ext.	✓	✓	✓	✓	✓
I-581/Valley View Blvd. Interchange	✓	✓	✓	✓	
I-95 over Meherrin River Bridge Replacement	✓	✓	✓	✓	
US 17 Bypass and SC 707 Interchange		✓	✓	✓	✓



### 3.5 PROJECT RISKS

Battlefield Pkw





# 3.5 PROJECT RISKS

The Branch team will employ the CMAA-endorsed approach to risk management using a “Risk Register” which lists formally identified risks, potential project impacts, and mitigation strategies for each. Our risk management process has already commenced, will continue throughout design and construction, and enables the team to respond to changes in an organized and proactive way as specific project issues unfold.

The Branch team will employ a 5-step risk management approach including the following stages:

1. **Identify**—Name risks facing the project, determine cause and effect, and categorize risks.
2. **Assess**—Assign probability of occurrence, severity of impact, and determined response.
3. **Analyze**—Quantify risk severity, determine risk exposure, establish risk tolerance level, and determine risk contingency (applicable during preliminary design and pricing).
4. **Manage**—Define response plans and actions, establish ownership of risk, and manage response (after NTP).
5. **Monitor/Review**—Monitor/review/update risks, monitor response plans, update risk exposure, analyze trends, and produce reports (after NTP, during design, during construction).



We have reviewed the available information for the project, visited the site to understand current conditions, and jointly discussed the major risks. Because project risk has the potential to impact the safety of the traveling public and construction staff, as well as project schedule and budget, the team has identified the three most critical risks facing the D-B team during the course of the project:

## RISK NO. 1—MAINTENANCE OF TRAFFIC (MOT)

**RISK IDENTIFICATION:** MOT during construction is critical due to the high volume of commuter traffic along Route 7. Traffic must be maintained and disturbance minimized to provide efficient and safe road operations during construction.

**WHY THIS RISK IS CRITICAL:** The proposed improvements consist of constructing a new grade-separated interchange at the existing intersection of Route 7 and Battlefield Parkway. The conceptual plans call for constructing a bridge-supported SPUI at this intersection to allow Route 7 traffic to flow freely. With regard to traffic, the following design issues are significant:

- Average daily traffic (ADT) on Route 7 is shown as 80,000 vehicles per day (year 2015 data).
- The new bridge will be within the existing intersection, approximately 20 feet above current grade.
- All traffic movements on Route 7 and Battlefield Parkway must be maintained throughout construction.

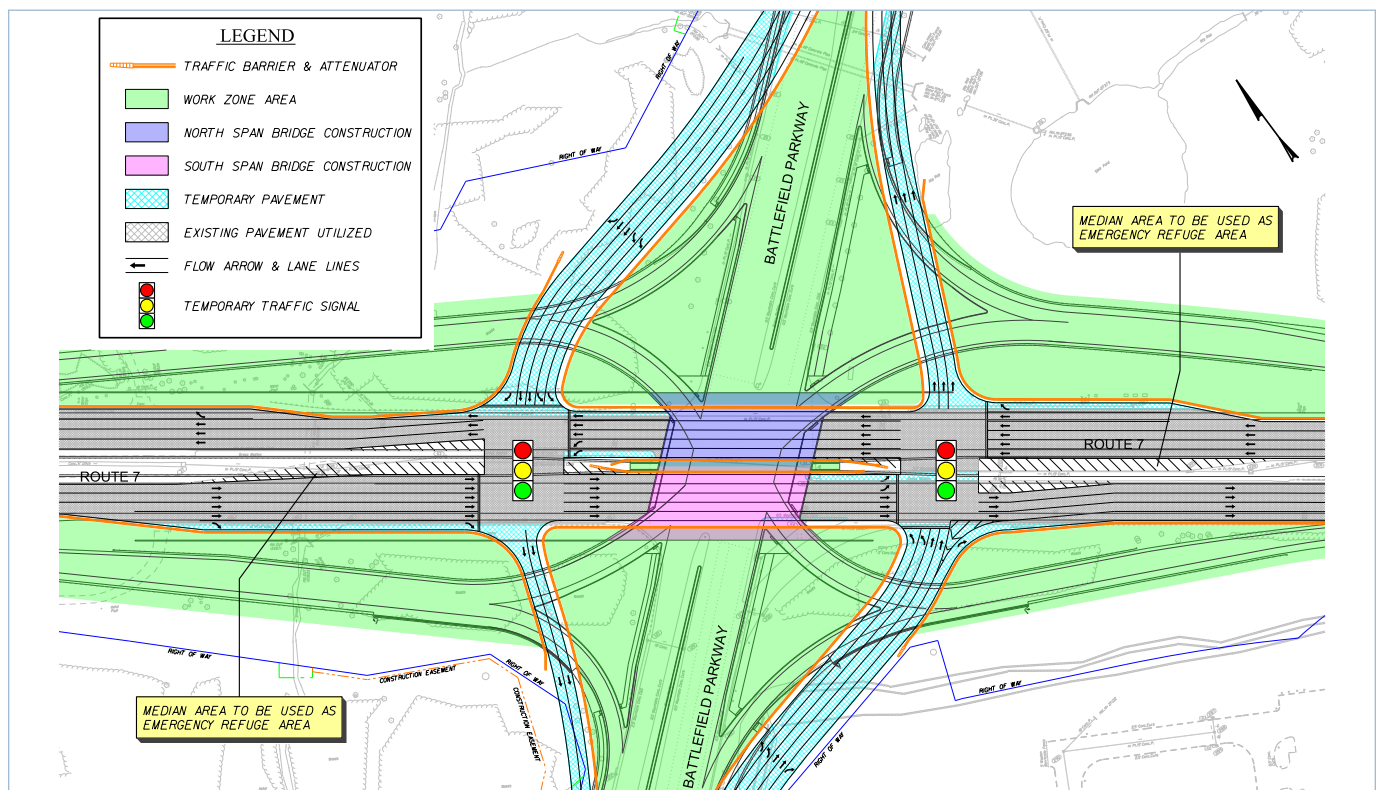
Reducing the number of travel lanes will impact traffic flow severely on Route 7 and Battlefield Parkway during peak hours, so any such reduction will likely be unacceptable. Lane restrictions, closures, or narrowing can increase the hazards associated with installation of MOT on both roadways, and the safety of construction workers and the traveling public is paramount.

The concerns associated with the MOT risk are numerous:

- Inattentive motorists entering the work zone pose a safety hazard to other motorists and workers.
- Shifting traffic patterns during phased construction introduce alignment shifts, a safety concern.
- Entry to and egress from Route 7 and Battlefield Parkway travel lanes may cause traffic to slow or stop.
- Traffic congestion during construction heightens risk of rear-end collisions as traffic slows; once such an accident occurs, extensive delays may occur as traffic comes to a sudden stop.

**RISK IMPACT TO THE PROJECT & MITIGATION STRATEGIES:** A properly developed and executed MOT plan allows for safe travel through the work zone, minimizes travel delays, and shortens or maintains project duration. The Branch team will incorporate lessons learned from prior work and a proven system to facilitate a broad, multi-faceted transportation management plan (TMP) to facilitate MOT for the duration of the project. Phasing of bridge construction will be integral to development of effective MOT. Below is a list of mitigation strategies we will consider for this project:

- Immediately upon contract award, the Branch team proposes to conduct the first Traffic Management Task Force partnering meeting with VDOT, third-party stakeholders, and the project team to review project requirements and discuss traffic and other project-related issues. We will develop a checklist of responsibilities and time lines to achieve mutually agreeable activities/goals for a successful TMP.
- We will devise a Bridge Construction Phasing Plan (below) that minimizes the number of traffic shifts necessary to widen the roadway while raising the profile grade line of Battlefield Parkway, with careful attention to separating the work zone from travel lanes. The MOT plan will incorporate temporary roadway, signals, and signage needed to safely shift traffic to coordinate with bridge construction. A possible MOT plan to consider for this project follows the Bridge Construction Phasing Plan.



Route 7 and Battlefield Parkway Interchange MOT Concept



- The MOT plan will include advance warning signage and public notifications. Our Traffic Control Coordinator will patrol the project corridor continually to verify that MOT devices are working properly. Our Task Force will meet monthly to discuss MOT concerns and make changes as needed.
- Adequate separation will be provided between the traveling public and construction work areas. Portable barrier walls will be incorporated into the TMP to provide positive separation.
- If it is desired (or if required), our team will prepare a comprehensive Incident Management Plan (IMP) as part of the TMP. A well conceived IMP addresses critical issues such as (a) a plan for immediate notification of Virginia State Police/Highway Patrol if a traffic incident occurs, (b) potential detour routes if a complete shut-down of Route 7 or Battlefield Parkway is necessary, and (c) contacting local wrecker services to facilitate vehicle removal from the travel lane if necessary.
- Given that a substantial amount of fill material will need to be brought in to raise the roadway profile of Battlefield Parkway, we will develop a plan for safely hauling borrow material to the work zone. To minimize impacts to the traveling public, we will consider hauling borrow material at night. The significant grade changes along Battlefield Parkway will require temporary shoring to construct the embankment while maintaining traffic.
- Access points into and out of the construction areas will be minimized and identified. These access points will be clearly marked for construction vehicles and to alert the traveling public. Construction planning will account for material deliveries and construction traffic into and out of the construction areas and will be scheduled during off peak hours. Message boards and other advanced warning techniques will be used to notify the traveling public.

**Sharp & Co.** is available to support VDOT's public awareness efforts, and will develop a public awareness plan to communicate project work zone information, updates on construction sequencing, construction activities that may impact traffic, and congestion notifications. This plan will incorporate active driver awareness measures approaching, and within, the work zone and may include rumble strips, portable changeable message signs, radar speed signs, and law enforcement presence.

**ROLE OF VDOT AND OTHER AGENCIES:** The Branch team will manage all risks and constructability issues associated with MOT. VDOT's role will be limited to coordinating with our team to post appropriate messages to the traveler information system. No other agency is expected to have a significant role.

## RISK No. 2—UTILITY CONFLICTS

**RISK IDENTIFICATION:** Route 7 is one of the oldest roadways in Northern Virginia and has accumulated many parallel and crossing utilities, both subsurface and overhead. Most of these utilities are located outside the existing travel lanes, but within the project ROW and limits of proposed improvements.

**WHY THIS RISK IS CRITICAL:** Utility location, relocation, and coordination could result in significant schedule delays that cannot be mitigated solely by the D-B team. Risks associated with utilities include:

- Accuracy and completeness of utility designation
- Coordination with multiple utility owners
- Potential vertical clearance issues with overhead Dominion Energy transmission line
- Potential horizontal and vertical clearance issues with the following:
  - 6-inch Washington Gas transmission line and proposed guardrail installation
  - Town of Leesburg 8–10-inch water line and proposed grading, storm sewer, and BMP

- Town of Leesburg 12-inch gravity sewer and proposed fill, MSE walls, and box culvert extension
- Electric, fiber, telecom, and cable television (CATV) lines and proposed grading, curb installation, storm sewer, MSE walls, pedestrian facilities, and BMP facilities

**RISK IMPACT TO THE PROJECT & MITIGATION STRATEGIES:** The risks associated with utility conflicts are primarily project schedule impacts. Numerous utility owners are involved, including Dominion Energy (electric); Town of Leesburg (sanitary sewer and water); Washington Gas (gas); Verizon (telephone); Comcast (cable); CenturyLink, Lighttower, and SummitIG (fiber optic); and VDOT (traffic control). Notable are potential impacts to the Dominion Energy overhead distribution line (and associated telecom/fiber attachments), water and gas lines running parallel and to the south of Route 7, and gas lines in the existing median. These lines run nearly the length of the proposed project, with the power line turning south at approximate Sta. 1049+15, the water line turning south at approximate Sta. 1070+50, and the gas line turning north at approximate Sta. 1075+80. These locations impact the proposed improvements.

**MITIGATION STRATEGIES:** Lead Utility Coordination Manager Todd Philipp, P.E., has over 25 years of engineering and project management experience, including utility design, coordination, and conflict analysis. He will be supported by a dedicated Utility Coordinator from the construction team to effectively mitigate utility risks. Our utility coordination team will acquire **accurate and thorough location of existing utilities**, supplementing VDOT-provided information with a review of utility records, utility owner discussions, and subsurface utility designating to Quality Level B and Quality Level A (test pits), as appropriate. The resulting utility survey will be provided to each utility company for review and concurrence. We will also develop a **detailed understanding of the design, construction, and property rights requirements** of each utility relocation including information necessary (including schedule) to be timely and responsive. Each utility has unique and specific administrative, procedural, and technical requirements. Early establishment of contacts, ongoing communication with utility owners, and faithful adherence to their requirements mitigates the risk in coordinating with the utility companies.

Major utility conflicts, risk impact, and proposed mitigation strategy are identified below:

Utility in Conflict	Construction Conflict	Risk Impact	Mitigation Strategy
Dominion Energy (transmission)	Vertical clearance from Sta. 1049+00 to Sta. 1053+00	Construction schedule for Battlefield Parkway and ramps south of intersection	Design team will engage Dominion Energy early to determine relocation plan; begin relocation early
Washington Gas (transmission)	Within existing Route 7 median	Construction schedule for proposed roadway and bridge improvements	Determine early whether gas line can remain in median during improvements without impact; design team will engage Washington Gas early if relocation is necessary
Town of Leesburg (8-inch water)	Running parallel to Route 7 on south side	Construction schedule for widening Route 7 EB lane	Design team will define conflict and work with Leesburg to relocate water



Utility in Conflict	Construction Conflict	Risk Impact	Mitigation Strategy
Town of Leesburg (12-inch gravity sewer)	Crossing Route 7 at Sta. 1045+80	Additional fill required for ramp construction could crush pipe; construction schedule for MSE wall and box culvert extension	Design team will define conflict and work with Leesburg to relocate sewer
Town of Leesburg (8-inch gravity sewer)	Just south of Route 7 near intersection	Additional fill required for ramp construction could crush pipe	Design team will define conflict and work with Leesburg to relocate sewer

### EXPECTATIONS FOR VDOT AND OTHER AGENCIES

Branch team member, Bowman Consulting Group, will perform utility owner coordination and preparation of acquisitions and easements for relocations. VDOT's role will be limited to normal review and approval of construction drawings, and no other agency involvement is required.

### RISK No. 3—GEOTECHNICAL ISSUES

**RISK IDENTIFICATION:** By reviewing available reports, historical aerials, topographic maps, soil survey maps, and USGS geologic maps, we have developed an understanding of the soil conditions anticipated within the project limits. The geotechnical risks summarized in Table 1, below, are based on the project segments and geologic conditions, specifically the presence of soft, unconsolidated soils.

TABLE 1—POTENTIAL GEOTECHNICAL RISKS AT PROJECT LOCATIONS

Structures	Geotechnical Risks <sup>1</sup>				
	Slope/Global Stability	Unsuitable Soils	Settlement	Corrosion	Boulder/Rock Excavation
Bridge over Route 7	Yes	No	Yes	No	Yes
Retaining Walls	Yes	Yes	Yes	No	Yes
Roadway Widening	Yes	Yes	Yes	No	Yes
Drainage Structures	No	Yes	No	Yes	Yes

Note 1: Risks identified with “yes” and our associated mitigation strategy are discussed in Table 2.

**MITIGATION STRATEGIES:** Assessment of the identified geotechnical risks is based on probability of occurrence (varies from “unlikely” to “frequent”), and potential impacts if encountered (varies from “low” to “very high”). We consider five risk factors to be in the “high” risk rating category, namely: settlement and slope/global stability of the bridge area, retaining wall and embankments, unsuitable soils, corrosion of drainage structures, and rock excavation. These risks vary from “occasional” to “frequent” with “medium” to “very high” project impacts. We anticipate the risk ratings can be reduced to “low” using the controls and mitigation options we describe in Table 2, on the following page.

The soils at this location can present multiple challenges, including slope/global stability, variable consistency and strength characteristics, long-term and differential settlement of the overpass and supporting retaining wall structures, approach embankments, and drainage structures. Isolated boulders and subsurface ledges of shallow bedrock are common throughout the outcrop zone of the local diabase. The channel of an unnamed tributary of the Tuscarora Creek extends from north to south, passing beneath Route 7 approximately 500 feet west of the intersection. The drainage channel of this intermittent stream is underlain by soils prone to seasonal high-water tables. The potential for corrosion of steel can be high.

TABLE 2—SPECIFIC RISKS AND ASSOCIATED MITIGATION STRATEGY

Risk Factors	Project Impacts	Recommended Controls/Mitigation
Slope/Global Stability	<ul style="list-style-type: none"> <li>Residual soils of underlying rock can contain significant amounts of CH clay which may need to be removed/undercut</li> <li>Increased schedule and construction costs</li> </ul>	<ul style="list-style-type: none"> <li>Perform field investigation (e.g., VST, DMT)</li> <li>Increase lab testing to determine properties</li> <li>Perform probabilistic analyses related to shear strength parameters</li> <li>Remove/eliminate the material causing issues</li> <li>Avoid steep slopes or use stability piles</li> </ul>
Unsuitable Soils	<ul style="list-style-type: none"> <li>Drying excavated soils by spreading and aerating may be necessary to obtain proper compaction (not practical during wet months, especially for clayey soils that absorb and retain high amounts of water)</li> <li>Increased truck traffic to deliver higher quality soil and dispose of unsuitable soil (public safety)</li> <li>Increased schedule and construction costs</li> </ul>	<ul style="list-style-type: none"> <li>Distribute test locations evenly and better define the limits of unsuitable soils at the subgrade for pavement support</li> <li>Perform Proctor and CBR tests to determine compressibility and support properties</li> <li>Develop an “unsuitable soils” plan to define the limits and provide remediation options including undercut and replacement, improvement, or use of geotextile fabric</li> <li>Modify soils using lime to lower moisture for compaction and increase CBR value of subgrade soils</li> </ul>
Settlement	<ul style="list-style-type: none"> <li>Supporting bridge downdrag load and stresses on deep foundations</li> <li>Short- and long-term performance of retaining walls and embankments</li> <li>Increased schedule and construction and maintenance cost</li> </ul>	<ul style="list-style-type: none"> <li>Perform consolidation and triaxial tests to determine compressibility properties and strength characteristics of underlying natural soils along with in-situ tests to better define these properties</li> <li>Evaluate the variable thickness of the compressible materials and undercut completely</li> <li>Use lightweight fill material or geofoam to limit settlement</li> <li>Evaluate potential mitigation techniques (e.g., waiting period, surcharge and wick drains)</li> </ul>
Corrosion	<ul style="list-style-type: none"> <li>Corrosive soils can damage substructure elements over time, and result in degradation of concrete and steel pipes</li> </ul>	<ul style="list-style-type: none"> <li>Collect additional samples by drainage pipes</li> <li>Evaluate the severity of corrosion and develop the limits of the corrosive soils</li> <li>Select cost-efficient protection</li> </ul>
Boulders/Rock Excavation	<ul style="list-style-type: none"> <li>Excavation methods (e.g., hoe-ramming, blasting) require special permits with associated delays and costs</li> </ul>	<ul style="list-style-type: none"> <li>Profile may be revised to avoid deep cuts, reducing excavation requirements</li> <li>Retrieve rock cores where encountered to evaluate the rock mass properties</li> </ul>

In addition to Standard Penetration Testing (SPT), we will perform in-situ testing, such as Cone Penetrometer Testing (CPT), Dilatometer Testing (DMT), and Vane Shear Testing (VST). Extensive soil lab testing will determine the compressibility and shear strength characteristics of the underlying soils. Analysis based on these tests and other factors will provide confidence and reliability in our evaluation of risk.

### EXPECTATIONS FOR VDOT AND OTHER AGENCIES

No involvement by VDOT or any other agency is anticipated in identification/mitigation of geotechnical risks.



**APPENDIX**

**Battlefield Pkw**





## Attachment 3.1.2—SOQ Checklist



**ATTACHMENT 3.1.2**

**Project: 0007-253-009**

**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.

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

**ATTACHMENT 3.1.2**

**Project: 0007-253-009**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
<b>SCC and DPOR registration documentation (Appendix)</b>	Attachment 3.2.10	Section 3.2.10	no	Appendix
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	not applicable
<b>DBE statement within Letter of Submittal</b> confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	1
<b>Offeror's Team Structure</b>				2-7
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	4-5, 7
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix
Key Personnel Resume – Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.5	no	Appendix



**ATTACHMENT 3.1.2**

**Project: 0007-253-009**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
Organizational chart	NA	Section 3.3.2	yes	7
Organizational chart narrative	NA	Section 3.3.2	yes	6
<b>Experience of Offeror's Team</b>				8-9
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix
<b>Project Risk</b>				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	10-15

Attachment 2.1.0—Form C-78-RFQ



**ATTACHMENT 2.10**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**

RFQ NO. C00106573DB101  
PROJECT NO.: 0007-253-009

**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 – December 8, 2018  
(Date)
2. Cover letter of \_\_\_\_\_  
(Date)
3. Cover letter of \_\_\_\_\_  
(Date)

*Patrick K. Bartolillo*  
SIGNATURE

1-24-2018  
DATE

PATRICK K. BARTORILLO  
PRINTED NAME

PRESIDENT  
TITLE

Attachment 3.2.6—  
Affiliated and Subsidiary Companies of the Offeror



**ATTACHMENT 3.2.6**

**State Project No. 0007-253-009**

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

<b>Relationship with Offeror (Affiliate or Subsidiary)</b>	<b>Full Legal Name</b>	<b>Address</b>
Affiliate (Parent Company to Branch)	The Branch Group, Inc.	P.O. Box 40004   Roanoke, VA 24022
Affiliate	Branch and Associates, Inc.	P.O. Box 40051   Roanoke, VA 24022
Affiliate	G.J. Hopkins, Inc.	P.O. Box 12467   Roanoke, VA 24025
Affiliate	Corman - E.V. Williams, a Joint Venture	12001 Guilford Road   Annapolis Junction, MD 20701
Affiliate	Balfour Beatty Infrastructure, Inc./ E.V. Williams, Inc. JV	430 Eastwood Road   Wilmington, NC 28403
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	Corman – Branch, a Joint Venture	442 Rutherford Ave., N.E.   Roanoke, VA 24016

Attachment 3.2.7(a) and 3.2.7(b)—  
Certification Regarding Debarment  
Primary and Lower Tier Covered Transactions



**ATTACHMENT 3.2.7(a)**

**CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS**

**Project No.: 0007-253-009**

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.

Robt K Batorillo                      1-24-2018                      PRESIDENT  
Signature                                      Date                                      Title

BRANCH CIVIL, INC.  
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0007-253-009**

- 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

January 31, 2018  
Date

J. Edward Jenkins  
Senior Vice President  
Name and Title

STV Incorporated dba STV Group Incorporated

Name of Firm






ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0007-253-009**

- 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 Date Title

Fairfield-Echols, LLC  
Name of Firm

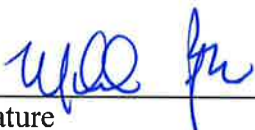
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0007-253-009**

- 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.
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\_\_\_\_\_  
Signature

January 31, 2018  
\_\_\_\_\_  
Date

Michael Bruen  
Chief Operating Officer  
\_\_\_\_\_  
Name and Title

Bowman Consulting Group, Ltd.  
\_\_\_\_\_  
Name of Firm



**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0007-253-009**

- 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.
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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

January 31, 2018  
Date

Chowdhary S. Gondy  
Principal and Executive Vice President  
Name and Title

CES Consulting LLC

Name of Firm





ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0007-253-009**

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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

January 31, 2018  
Date

Kevin G. Huang—President  
Name and Title

Endesco, Inc.  
Name of Firm


**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0007-253-009**

- 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	1/23/2018 _____ Date	Principal Engineer _____ Title
--	----------------------------	--------------------------------------

Engineering & Materials Technologies, Inc. (E.M. Tech)  
\_\_\_\_\_  
Name of Firm



**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0007-253-009**

- 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

January 31, 2018  
Date

Tadeusz Lewis, P.E.  
Senior Principal  
Name and Title

GeoConcepts Engineering, Inc.  
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0007-253-009**

- 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

January 31, 2018  
\_\_\_\_\_  
Date

Mary Ellen Eagan  
President and CEO  
\_\_\_\_\_  
Name and Title

Harris Miller Miller & Hanson Inc.  
\_\_\_\_\_  
Name of Firm

**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0007-253-009**

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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

January 31, 2018  
Date

Susan Sharp—President  
Name and Title

Sharp & Company, Inc.

Name of Firm



# Offeror's VDOT Prequalification Certificate



COMMONWEALTH OF VIRGINIA



# CERTIFICATE OF QUALIFICATION

## BRANCH CIVIL, INC.

Vendor Number: **B319**

In accordance with the Regulations of the Virginia Department of Transportation, your firm is hereby notified that the following Rating has been assigned to your firm:

### PREQUALIFIED

Your firm specializes in the noted Classification(s):

**GRADING; MAJOR STRUCTURES; UNDERGROUND UTILITIES**

Issue Date: February 28, 2017

Suzanne FR Lucas, State Prequalification Officer

This Rating and Classification will Expire: February 28, 2018

Don E. Silies, Director of Contracts

It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other than those named on this certificate.

Surety Letter



Employee Owned



Est. 1864

January 22, 2018

10 Franklin Road SE, Suite 550  
Roanoke, VA 24011  
Tel (540) 343-8071  
Fax (540) 224-1764  
www.scottins.com

Mr. Stephen D. Kindy, P.E.  
Alternative Project Delivery Division  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

Re: **Branch Civil, Inc.**

Virginia Department of Transportation  
REQUEST FOR QUALIFICATIONS  
A DESIGN-BUILD PROJECT

ROUTE 7 AND BATTLEFIELD PARKWAY INTERCHANGE/F

From: 0.75 Miles W. of Battlefield Pkwy Along Route 7 To: 0.75 Miles E. of Battlefield  
Parkway and From: 0.25 Miles S. of Rte. 7 Along Battlefield Pkwy To: 0.40 Miles N. of  
Rte. 7 Along Battlefield Pkwy

Town of Leesburg, Virginia

State Project No.: 0007-253-009, P101, R201, C501, B601

Federal Project No.: STP-5A01(704)

Contract ID Number: C00106573DB101

Dear Mr. Kindy:

The Hartford, through its operating entities, has issued surety bonds to Branch Civil, Inc., a subsidiary of The Branch Group since 1995. During this time we have favorably considered projects up to \$150,000,000 with an aggregate program of \$850,000,000 for member companies of The Branch Group. Our experience with Branch Civil, Inc. has been excellent, and we highly recommend them to you.

As surety for Branch Civil, Inc., The Hartford, is capable of obtaining 100% Performance Bond and 100% 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, subject to acceptable review of the contract documents and bond forms, financing, availability of reinsurance, and Branch Civil, Inc. continuing to satisfy other underwriting considerations at the time the bonds are requested.

Property & Casualty, Employee Benefits, Bonds, Captives and Private Risk  
Charlotte | Greensboro | Greenville | Knoxville | Lynchburg | Nashville | Raleigh | Richmond | Roanoke

Scott Insurance, a division of James A. Scott & Son, Inc.

Please understand that any arrangement for any bonds is a matter between Branch Civil, Inc. and The Hartford and we assume no liability to third parties or you if, for any reason, we do not issue requested bonds.

Branch Civil, Inc. bonds are issued through Hartford Fire Insurance Company which is listed on the U.S. Treasury Department List and has an A.M. Best Rating of "A+" with Financial Size Category: XV (\$2 Billion or greater). They are licensed to do business in the State of Virginia.

Sincerely,

  
Nancy L. Adams, Attorney-In-Fact

cc: Branch Civil, Inc.  
Hartford Fire Insurance Company

# POWER OF ATTORNEY

Direct Inquiries/Claims to:

THE HARTFORD  
BOND, T-12  
One Hartford Plaza  
Hartford, Connecticut 06155  
[Bond.Claims@thehartford.com](mailto:Bond.Claims@thehartford.com)

call: 888-266-3488 or fax: 860-757-5835

KNOW ALL PERSONS BY THESE PRESENTS THAT:

Agency Code: 14-730214 (MC), 14-730836, 14-731912  
Agency Name: JAMES A SCOTT & SON INC

- Hartford Fire Insurance Company**, a corporation duly organized under the laws of the State of Connecticut
- Hartford Casualty Insurance Company**, a corporation duly organized under the laws of the State of Indiana
- Hartford Accident and Indemnity Company**, a corporation duly organized under the laws of the State of Connecticut
- Hartford Underwriters Insurance Company**, a corporation duly organized under the laws of the State of Connecticut
- Twin City Fire Insurance Company**, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of Illinois**, a corporation duly organized under the laws of the State of Illinois
- Hartford Insurance Company of the Midwest**, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of the Southeast**, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut, (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, **up to the amount of unlimited:**

*Christi Horn, Lisa M. Battista, B. Jones III of Franklin TN; Stephen B. Dolin, Joanna M. Carson, Barbara Dawn Martin, Melissa L. Vlar of Lynchburg VA; Stacey W. Hall, Nancy L. Adams, James J. Roberts, III, Stacey Boyle of Richmond VA; Robert M. Coon of Greensboro NC; Windy Lovelady of Raleigh NC; Tambri Doby of Charlotte NC; Sherrie B. Denison, Bethany Murphy, Deanna W. Sparks, Theresa S. Stump of Roanoke, VA*

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by , and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

**In Witness Whereof**, and as authorized by a Resolution of the Board of Directors of the Companies on May 6, 2015 the Companies have caused these presents to be signed by its Senior Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.



*John Gray*

John Gray, Assistant Secretary

*M. Ross Fisher*

M. Ross Fisher, Senior Vice President

STATE OF CONNECTICUT }  
COUNTY OF HARTFORD } ss. Hartford

On this 11th day of January, 2016, before me personally came M. Ross Fisher, to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Senior Vice President of the Companies, the corporations described in and which executed the above instrument; that he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that he signed his name thereto by like authority.



*Kathleen T. Maynard*  
Kathleen T. Maynard  
Notary Public  
My Commission Expires July 31, 2021

**CERTIFICATE**

I, the undersigned, Assistant Vice President of the Companies, 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 still in full force effective as of *January 22, 2018*  
Signed and sealed at the City of Hartford.



*Kevin Heckman*

Kevin Heckman, Assistant Vice President



## Attachment 3.2.10—SCC and DPOR Information

## ATTACHMENT 3.2.10

### State Project No. 0007-253-009

#### SCC and DPOR Information

Offerors shall complete the table and include the required state registration and licensure information. By completing this table, Offerors certify that their team complies with the requirements set forth in Section 3.2.10 and that all businesses and individuals listed are active and in good standing.

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
Branch Civil, Inc.	02956183	Corporation	Active/ Good Standing	PO Box 40004 Roanoke, VA 24022	Class A Contractor Classifications H/H	2701029434	03-31-2019
STV Incorporated DBA STV Group Incorporated	F0253452	Foreign Corporation	Active	2722 Merrilee Drive Suite 350 Fairfax, VA 22031	Business Entity Branch Office Registration	0411000661	02-28-2018
STV Incorporated DBA STV Group Incorporated	F0253452	Foreign Corporation	Active	1400 I Street NW Suite 1100 Washington, D.C. 20005	Business Entity Branch Office Registration	0411001178	02-28-2018
STV Incorporated DBA STV Group Incorporated	F0253452	Foreign Corporation	Active	7125 Ambassador Road Suite 200 Baltimore, MD 21244	Business Entity Branch Office Registration	0411000845	02-28-2018
STV Incorporated DBA STV/Ralph Whitehead Associates	F0253452	Foreign Corporation	Active	1000 West Morehead Street, Suite 200 Charlotte, NC 28208	Business Entity Branch Office Registration	0411000710	02-28-2018
Fairfield-Echols, LLC	S1665795	LLC	Active	85 Construction Lane, Fishersville, VA 22939	Class A Contractor Classifications H/H	2705116070	07-31-2019
Bowman Consulting Group, Ltd.	04481982	Corporation	Active	650A Nelms Circle, Fredericksburg, VA 22406	Business Entity Branch Office Registration	0411000421	02-28-2018
Bowman Consulting Group, Ltd.	04481982	Corporation	Active	3951 Westerre Pkwy Suite 150 Richmond, VA 23233	Business Entity Branch Office Registration	0411000610	02-28-2018
CES Consulting LLC	S3416007	LLC	Active	23475 Rock Haven Way Suite 255 Dulles, VA 20166	Business Entity Registration	0407005783	12-31-2019

**ATTACHMENT 3.2.10**

**State Project No. 0007-253-009**

**SCC and DPOR Information**

Offerors shall complete the table and include the required state registration and licensure information. By completing this table, Offerors certify that their team complies with the requirements set forth in Section 3.2.10 and that all businesses and individuals listed are active and in good standing.

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
Dulles Geotechnical and Material Testing Services, Inc.	07582323	Corporation	Active	14119 Sullyfield Circle, Ste H, Chantilly, VA 20151	Business Entity Registration	0407006236	2019-12-31
Endesco, Inc.	F1337361	Foreign Corporation	Active	15245 Shady Grove Rd Ste 335 Rockville, MD 20850	Business Entity Registration	0407005431	12-31-2019
Engineering & Materials Technologies, Inc.	04786331	Corporation	Active	7857 Coppermine Dr, Manassas, VA 20109	Business Entity Registration	0407005994	12-31-2019
GeoConcepts Engineering, Inc.	05167671	Corporation	Active	19955 Highland Vista Drive Suite 170 Ashburn, VA 20147	Business Entity Registration	0407004404	12-31-2019
Harris Miller Miller & Hanson Inc.	F1451857	Foreign Corporation	Active	not applicable	not applicable	not applicable	not applicable
Sharp & Company, Inc.	F1761412	Foreign Corporation	Active	not applicable	not applicable	not applicable	not applicable





Full-Size SCC and DPOR Supporting  
Registration/License Documentation

Offeror and Team Members—  
SCC and DPOR Documentation



# 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*

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
03-31-2019

NUMBER  
2701029434

BOARD FOR CONTRACTORS  
CLASS A CONTRACTOR  
\*CLASSIFICATIONS\* H/H



BRANCH CIVIL INC  
PO BOX 40004  
ROANOKE, VA 24022-0004



*James W. DeBorja*  
James W. DeBorja, Director

Status can be verified at <http://www.dpor.virginia.gov>

BOARD FOR CONTRACTORS

# Commonwealth of Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That STV GROUP INCORPORATED (USED IN VA. BY: STVINCORPORATED), a corporation incorporated under the law of New York, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on August 9, 1999; and

That the corporation is 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:  
February 17, 2012*

*Joel H. Peck*  
\_\_\_\_\_  
*Joel H. Peck, Clerk of the Commission*

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON

02-28-2018

NUMBER

0411000661

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ARC, ENG



STV INCORPORATED  
STV GROUP INCORPORATED  
2722 MERRILEE DR SUITE 350  
FAIRFAX, VA 22031



*John W. DeBorja*  
John W. DeBorja Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
02-28-2018

NUMBER  
0411000462

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS-ENG



STV INCORPORATED DBA STV GROUP INC  
STV GROUP INC  
10800 MIDLOTHIAN TNPK SUITE 302  
RICHMOND, VA 23235



*James W. DeBorja*  
J. W. DeBorja, Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LJC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2018

NUMBER

0411000845

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG



STV INCORPORATED  
STV GROUP INCORPORATED  
7125 AMBASSADOR RD  
SUITE 200  
BALTIMORE, MD 21244

*James W. DeBorja*  
James W. DeBorja  
DPOR

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)  
(DETACH HERE)

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, September 27, 2005*

*This is to certify that the certificate of organization of*

**Fairfield-Echols, LLC**

*was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: September 27, 2005*



*State Corporation Commission*

*Attest:*

*Joel H. Beck*  
Clerk of the Commission

**COMMONWEALTH of VIRGINIA**

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

**EXPIRES ON  
07-31-2019**

**NUMBER  
2705116070**

**BOARD FOR CONTRACTORS  
CLASS A CONTRACTOR  
\*CLASSIFICATIONS\* H/H**



**FAIRFIELD-ECHOLS LLC  
PO BOX 479  
FISHERSVILLE, VA 22939**



*James W. DeBor*  
James W. DeBor, Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)



# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond,* June 7, 1995

*This is to Certify that the certificate of incorporation of*

*Bowman Consulting Group, P.C.*

*was this day issued and admitted to record in this office  
and that the said corporation is authorized to transact its business  
subject to all Virginia laws applicable to the corporation and its  
business. Effective date:*

June 7, 1995



*State Corporation Commission*

*William J. Budge*  
Clerk of the Commission

# Commonwealth of Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That BOWMAN CONSULTING GROUP, LTD. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is June 7, 1995;

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:  
July 21, 2017*

*Joel H. Peck*

*Joel H. Peck, Clerk of the Commission*

COMMONWEALTH OF VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
02-28-2018

NUMBER  
0411000421

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: L.S. ENG



BOWMAN CONSULTING GROUP LTD  
650A NELMS CIRCLE  
FREDERICKSBURG, VA 22406

*Jerry W. DeBoer*  
Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
02-28-2018

NUMBER  
0411000610

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG, LS



BOWMAN CONSULTING GROUP LTD  
3951 WESTERRE PKWY  
SUITE 150  
RICHMOND, VA 23233



*Jan W. DeBoer*  
Jan W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

DPOR-LIC (05/2015)  
(DETACH HERE)

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)



# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, October 14, 2010*

*This is to certify that the certificate of organization of*

**Construction Engineering & Scheduling Consulting  
Engineers, PLC**

*was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: October 14, 2010*



*State Corporation Commission*

*Attest:*

*Joel H. Beck*  
Clerk of the Commission

**COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION**

AT RICHMOND, OCTOBER 26, 2010

The State Corporation Commission has found the accompanying articles submitted on behalf of

**CES Consulting, LLC**  
(formerly known as Construction Engineering & Scheduling Consulting  
Engineers, PLC)

to comply with the requirements of law, and confirms payment of all required fees. Therefore, it  
is ORDERED that this

**CERTIFICATE OF AMENDMENT**

be issued and admitted to record with the articles of amendment in the Office of the Clerk of the  
Commission, effective October 26, 2010.

STATE CORPORATION COMMISSION

By



James C. Dimitri  
Commissioner

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
12-31-2019

NUMBER  
0407005783

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG



CES CONSULTING LLC  
23475 ROCK HAVEN WAY  
SUITE 255  
DULLES, VA 20166



*James W. DeBorja*  
James W. DeBorja, Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOBJ10102900171

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, November 26, 2012*

*This is to certify that the certificate of incorporation of*

**Dulles Geotechnical and Material Testing Services, Inc.**

*was this day issued and admitted to record in this office and that the said corporation is authorized to transact its business subject to all Virginia laws applicable to the corporation and its business.*

*Effective date: November 26, 2012*

*State Corporation Commission*

*Attest:*

*Joel H. Beck*  
*Clerk of the Commission*





**COMMONWEALTH of VIRGINIA**

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

**EXPIRES ON**  
12-31-2019

**NUMBER**  
0407006236

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY REGISTRATION**



**PROFESSIONS: ENG**



**DULLES GEOTECHNICAL AND MATERIAL TESTING  
SERVICES, INC  
14119 SULLYFIELD CIR STE H  
CHANTILLY, VA 20151**

*Jan W. Exline*  
Jan W. Exline, Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

Richmond, May 7, 1998

*This is to certify that a certificate of authority to transact business in Virginia was this day issued and admitted to record in this office for*

ENDESCO, INC.

*a corporation organized under the laws of MARYLAND and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business.*



State Corporation Commission

Attest:

*William J. Bridge*

*Clerk of the Commission*

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That ENDESCO, INC., a corporation incorporated under the law of Maryland, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on May 7, 1998; and

That the corporation is 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:*  
*September 13, 2017*

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

COMMONWEALTH OF VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
12-31-2019

NUMBER  
0407005431

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG



ENDESCO, INC.  
15245 SHADY GROVE RD STE 335  
ROCKVILLE, MD 20850



*James W. DeBorja*  
James W. DeBorja, Director

Status can be verified at <http://www.dpor.virginia.gov>

SEE REVERSE SIDE FOR RULES AND INSTRUCTIONS

DPOR-LIC (02/2017)



# Commonwealth of Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That ENGINEERING & MATERIALS TECHNOLOGIES, INC. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is January 29, 1997;

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:  
February 4, 2016*

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

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
12-31-2019

NUMBER  
0407005994

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY REGISTRATION

PROFESSIONS-ENG



ENGINEERING & MATERIALS TECHNOLOGIES, INC  
7857 COPPERMINE DR  
MANASSAS, VA 20109



*Jay W. DeBoer*  
Jay W. DeBoer, Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond,* February 25, 1999

*This is to Certify that the certificate of incorporation of*

*GeoConcepts Engineering, Inc.*

*was this day issued and admitted to record in this office  
and that the said corporation is authorized to transact its business  
subject to all Virginia laws applicable to the corporation and its  
business. Effective date:*

February 25, 1999



*State Corporation Commission*

*Joel H. Beck*

*Clerk of the Commission*

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That GeoConcepts Engineering, Inc. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is February 25, 1999;

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:  
March 15, 2017*

*Joel H. Peck*

*Joel H. Peck, Clerk of the Commission*



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
12-31-2019

NUMBER  
0407004404

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG



GEOCONCEPTS ENGINEERING INC  
19955 HIGHLAND VISTA DRIVE  
SUITE 170  
ASHBURN, VA 20147



*James W. DeBorja*  
James W. DeBorja, Director

Status can be verified at <http://www.dpor.virginia.gov>

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, December 6, 2000*

*This is to certify that a certificate of authority to transact business in Virginia was this day issued and admitted to record in this office for*

**Harris Miller Miller & Hanson Inc.**

*a corporation organized under the laws of MASSACHUSETTS and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business.*



*State Corporation Commission*

*Attest:*

*Joel H. Peck*

*Clerk of the Commission*

# Commonwealth of Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That SHARP & COMPANY INCORPORATED, a corporation incorporated under the law of Maryland, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on July 23, 2008; and

That the corporation is 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 4, 2018*

*Joel H. Peck*

*Joel H. Peck, Clerk of the Commission*

## Key Personnel—DPOR Documentation



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON

10-31-2018

NUMBER

0402019827

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
PROFESSIONAL ENGINEER LICENSE



MICHAEL M HOOSHANGI  
4707 SPRUCE AVENUE  
FAIRFAX, VA 22030



*James W. DeBorja*  
James W. DeBorja Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

01-31-2019

NUMBER

0402035169

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
PROFESSIONAL ENGINEER LICENSE



AVTAR SINGH  
6773 LEOPOLDS TRAIL  
HAYMARKET, VA 20169



*John W. DeBoer*  
John W. DeBoer Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)  
(ATTACH HERE)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation  
9960 Mayland Drive, Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

EXPIRES ON  
01-31-2018

NUMBER  
0402022869

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
PROFESSIONAL ENGINEER LICENSE



TODD MARCUS PHILIPP  
701 GOLD VALLEY ROAD  
LOCUST GROVE, VA 22508



*James W. DeBor*  
James W. DeBor, Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/201)

License has been renewed beyond 01-31-2018;  
this is not yet reflected on DPOR site.

Attachment 3.3.1—  
Key Personnel Resume Forms



## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>		
a. Name & Title:	<b>Jason Hoyle—Vice President of Design-Build/Major Projects</b>	
b. Project Assignment:	<b>Design-Build Project Manager</b>	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	<b>Branch Civil, Inc. (Full Time)</b>	
d. Employment History: With this Firm <u>  2  </u> Years With Other Firms <u> 20 </u> 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):		
<b>03-2017–present</b>	<b>Branch Civil, Inc.</b>	<b>Vice President of Design-Build/Major Projects</b>
Focused on D-B and other alternative procurement projects. Jason has the competencies to be the Design-Build Project Manager for large, complex construction projects and to provide oversight and direction for D-B procurement/construction processes and operations. His responsibilities include development of Branch’s procurement process for D-B projects, development and oversight of management practices, and reporting for Branch’s ongoing D-B projects. With over 20 years of experience, Jason’s proven track record of success, work ethic, and professionalism align directly with the company’s core values.		
<b>02-2016–03-2017</b>	<b>Branch Civil, Inc.</b>	<b>Director of Procurement</b>
Managed D-B and bid-build projects while overseeing Branch’s estimating and procurement operations. Project management responsibilities include serving as the primary point of contact with the owner and local public entities, oversight and management including both the construction knowledge and requirements associated with ROW acquisitions, environmental permitting and mitigation, as well as utility relocations both in-house and those associated with third-party utility owners.		
<b>06-2010–02-2016</b>	<b>Blythe Development Company</b>	<b>Division Manager</b>
Responsible for all aspects of heavy highway and civil improvement projects around Greensboro, NC and in Virginia. Oversaw the safety program and pursuit and construction of all Blythe Development projects in the region. Responsible for all D-B projects including selecting projects to pursue, developing responses to RFQs, preparing technical and price proposals, and managing construction operations from award through acceptance.		
<b>04-2003–06-2010</b>	<b>Blythe Development Company</b>	<b>Project Manager</b>
Managed multiple NCDOT heavy highway projects, including new location, improvement of existing infrastructure, and replacement of existing structures. Served as D-B Project Manager for two NCDOT projects (NC 73 and Macy Grove Road). Also served as Assistant D-B Project Manager as part of a JV for the NCDOT I-73/PTI project.		
<b>06-1995–04-2003</b>	<b>Blythe Development Company</b>	<b>Project Manager</b>
Managed several NCDOT projects around Charlotte, NC. Responsible for all construction aspects of new location, widening, and bridge replacement projects. Bridge construction included new construction and remove/replace. Bridges were constructed over roads, wetlands, streams, and railroads.		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>University of North Carolina at Charlotte/Charlotte, North Carolina/BS/1997/Civil Engineering</b>	
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>none</b>	

- g. Document the extent and depth of your experience and qualifications relevant to the Project.
1. *Note your role, responsibility, and specific job duties for each project, not those of the firm.*
  2. *Note whether experience is with current firm or with other firm.*
  3. *Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.*

**(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.)**

**NCDOT I-840 Greensboro Eastern Loop, Greensboro, NC (10/13–03/16)**  
**Project Manager (with Blythe Development Company)**

Led the estimating team through project award and actively managed the construction of this \$112 million project. Developed an aggressive schedule and led the team of internal staff and subcontractors to execute the work. Oversaw construction operations and provided adequate staff and equipment resources. This project consisted of widening 2 miles of US 29 and adding 4.2 miles of I-840 on new location. Moved approximately 2.2 million CY of material and constructed 12 structures. One new interchange included the construction of a 2-span bridge over US 29, which carries 65,000 vpd. Led the project team through a revised phasing plan that modified the MOT to reduce construction of this bridge by 2 months. Multiple traffic shifts, temporary shoring and night shift work were incorporated to perform the phased construction required to expedite the schedule. The project finished 12 months ahead of the contract completion date.

**Relevance:** FHWA guidelines and requirements, principal arterial road alignment/widening, new bridge construction and widening, ROW acquisition, utility relocations, wetland and stream mitigation, geotechnical challenges/mitigation including unsuitable material, TMP, public involvement/communications, QA/QC coordination.

**NCDOT I-73/PTIA Design-Build, Greensboro, NC (03/13–03/16)**  
**Assistant D-B Project Manager (with Blythe Development Company)**

Led Blythe's pursuit of the project (as part of a JV), responded to the RFQ, prepared technical and price proposals, introduced over 20 ATCs, and assisted with management of the project. Responsibilities on this \$181 million project included contract administration, communication with owner, document control, providing adequate resources, and monitoring project schedule. The project consisted of widening 1.5 miles of existing NC 68 (phased construction and MOT) and 9.4 miles of new location construction of I-73. Multiple ATCs with innovative interchanges were approved, and included fewer impacts to ROW, minimal utility impacts, and simplified MOT, resulting in lower cost and early completion. New grade-separated interchanges were constructed at five locations and included the replacement or new construction of bridges at each interchange. The existing at-grade intersection at NC 68 was replaced with a grade-separated, folded partial cloverleaf interchange where traffic along NC 68 (carrying 45,000 vpd) was maintained during construction using a phased MOT plan. To minimize impacts to adjacent property, MSE walls were used to support bridge abutments.

**Relevance:** DOT design-build, FHWA guidelines and requirements, interstate and minor arterial road alignment/widening, interchange construction, new and replacement bridge construction, ROW acquisition, utility relocations, wetland and stream mitigation, environmental monitoring, geotechnical challenges/mitigation including unsuitable material, development and execution of complex TMP/MOT, public involvement/communications, QA/QC coordination, ATCs.

**NCDOT Macy Grove Road Design-Build, Kernersville, NC (06/12–09/15)**  
**Design-Build Project Manager (with Blythe Development Company)**

Responsible for overall design and construction of this \$38 million project, including contract administration and partnering with NCDOT. Managed the procurement process, including proposing several ATCs. The project provided a new interchange with I-40 Business and Macy Grove Road to improve safety, access, and capacity along the roadways. An efficient MOT plan was developed and implemented to construct the project in two construction seasons while maintaining four active lanes of traffic (55,000 vpd along I-40 Business). A detailed utility coordination and construction plan was required due to extensive utilities, including relocation of three 30-inch, high-pressure gas transmission lines and overhead power lines that conflicted with bridge construction. Roadway improvements consisted of new ramps, realignment of Macy Grove Road, widening several secondary roads, and a new roundabout. Three bridges were constructed using MSE walls to span I-40 Business, East Mountain Street, and Norfolk Southern railroad. Phased construction was used to build a new bridge over I-40 Business and demolish the existing structure while maintaining traffic on I-40 Business.

**Relevance:** DOT design-build, FHWA guidelines and requirements, interstate and minor arterial road widening, ROW acquisition, utility relocations, wetland and stream mitigation, environmental monitoring, geotechnical challenges/mitigation, development and execution of complex TMP/MOT, public involvement/communications, QA/QC coordination, new interchange, bridge construction, MSE walls, roundabout, ATCs.

\* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

- 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 key personnel role**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>		
a. Name & Title:	<b>Avtar Singh, P.E., QAM—President</b>	
b. Project Assignment:	<b>Quality Assurance Manager (QAM)</b>	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	<b>CES Consulting LLC (full time)</b>	
d. Employment History: With this Firm <u>7</u> Years With Other Firms <u>16</u> 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):		
<b>12-2010—Present</b>	<b>CES-Consulting, Inc.</b>	<b>President and Senior Project Manager</b>
Providing quality assurance and quality control on D-B and P3 projects in Virginia, including many projects in compliance with VDOT minimum requirements. Manages a team of more than 10 project inspectors and engineers providing quality assurance, inspection, and management services on various VDOT projects. Recently provided quality assurance for the Route 29 Solutions project in Charlottesville. Performed signal structure final inspections and certifications for VDOT's Northern Regional Operations, which included structural inspection of 63 traffic signal intersections, generating punch lists, and developing final acceptance and final report submissions using VDOT's Sign Inspection Program for the NOVA NRO section.		
<b>01-2005—12-2010</b>	<b>Virginia Department of Transportation</b>	<b>Area Construction Engineer</b>
Responsible for over 28 projects with a cumulative construction value of over \$230 million in the VDOT Northern Virginia District. Provided construction management expertise, managed and mentored construction managers and inspectors, provided schedule analysis and claims reviews, provided technical expertise for field and design issues of ongoing and planned projects. Provided public outreach through seminars and speaking engagements with the public and various political representatives. Verified the proper execution of project startup, execution, and closeout processes and confirmed that work was performed in compliance with VDOT and FHWA standards.		
<b>01-2000—12-2004</b>	<b>NXL Construction Services</b>	<b>Project Engineer/Construction Manager/Sr. Inspector</b>
Supported corridor improvement projects along routes 123 and 234, and supported other major projects including the Springfield Interchange and Woodrow Wilson Bridge replacement projects.		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>Master's Certificate in Project Management, 2007; M.Sc. Civil Engineering, Queens University, Canada, 1994; B. Sc., Civil Engineering, Queens University, Canada, 1992</b>	
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>2001/Professional Engineer/VA#0402035169</b>	

- g. Document the extent and depth of your experience and qualifications relevant to the Project.
1. *Note your role, responsibility, and specific job duties for each project, not those of the firm.*
  2. *Note whether experience is with current firm or with other firm.*
  3. *Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.*

**(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.)**

**VDOT Route 29 Design-Build Team, Charlottesville, VA**

**(03/2015–08/2017)**

**Quality Assurance Manager**

**(for CES)**

Managed the QA inspection effort including preparation of the QA/QC plan that specified all testing and sampling procedures in accordance with *VDOT Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects*, and oversaw QA inspections to confirm they were performed in conjunction with the QA/QC program. The complex, \$150 million D-B project was delivered in three major phases including the Route 29/Route 250 Intersection, Rio Road Intersection (completed and opened to traffic 51 days ahead of schedule), and widening of Route 29. Mr. Singh was on site full time, leading the QA inspection team and coordinating closely with project stakeholders to confirm that all construction components were built to specifications. He was responsible for QA staffing, confirmation and review of inspection frequency and reporting, attending and conducting preconstruction and weekly meetings, review and approval of contractor submitted RFIs, and auditing of erosion and sediment control inspections. Mr. Singh worked closely with the Contractor's on-site construction staff to ensure the work was performed in accordance with VDOT's Road and Bridge Standards and Specifications, and periodically recommended procedural improvements that reduced rework and overall construction costs. He was ultimately responsible for successful execution of the QMP and timely closeout of the project.

**Relevance:** Full-time, on-site inspections for large, complex project with D-B delivery; team of QA inspectors; execution of project-specific QMP; phased construction; roadway widening; project closeout responsibilities.

**VDOT I-95 Shoulder Widening, Prince William County, VA**

**(2013–2015)**

**Construction Manager**

**(for CES)**

Managed the entire construction operation, as consultant to the contractor, on this \$40 million shoulder widening project on NB and SB I-95 in Prince William County, within the VDOT NOVA District. Mr. Singh also supported the VDOT NOVA District construction program by managing on-site QA/QC inspections, personnel, and documentation. He oversaw more than 10 CEI staff including construction managers and inspectors, served as a technical resource for field and design issues (e.g., review of RFIs and coordination with designer of record for speedy review and approval), reviewed and negotiated change orders to expedite design and construction of new bridges, coordinated with the I-95 Express Lanes contractor to provide smooth transition and MOT along the I-95 corridor; provided schedule analysis and review, and provided final closeout.

**Relevance:** On-site construction management for complex highway (shoulder widening) project, led a large team of inspection staff, project closeout responsibilities.

**Linton Hall and Route 29 Advance Detour, Gainesville, VA**

**(2009–2010)**

**Responsible Charge Engineer**

**(with VDOT)**

Led value engineering to successfully advertise this \$10 million project one year earlier than planned, thereby allocating utility and subsurface risk to a smaller value project compared to the \$124 million parent project. Two major quantity omissions were discovered after award of the project (\$500,000 water line and \$500,000 CTA). Mr. Singh proposed the use of lime stabilization to the designer to eliminate the CTA omission, and proposed shifting the water line construction with agreement from the Prince William County Service Authority (PWCSA), which mitigated the impact of the omissions without affecting the schedule of either project. Managed a team of 20 inspectors and served as a technical resource for field/design issues. Participated in partnering and construction meetings with the contractor and was the point of contact for resolution of claims and NOIs.

**Relevance:** Value engineering, managed large team of on-site inspection staff, resolved field/design issues.

\* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

- 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 key personnel role**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>Michael M. Hooshangi, P.E.—Engineering Chief</b>
b. Project Assignment:	<b>Design Manager (DM)</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	<b>STV Incorporated dba STV Group Incorporated (full time)</b>
d. Employment History: With this Firm <u>  5  </u> Years With Other Firms <u> 34 </u> 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):	<p><b>04-2013–present      STV Incorporated dba STV Group Incorporated      Engineering Chief, Senior Associate</b> Mr. Hooshangi is a Senior Associate and Engineering Director of STV’s Transportation Group, and has experience in highway design, including urban and rural interchanges, expressways, interstates, and primary and secondary highways in Virginia, Washington, D.C., Maryland, and West Virginia. His background includes developing design and related computational work from initial study and assessment of alternatives through the development of final construction plans and specifications. He has managed numerous multidisciplinary roadway design projects incorporating widening and reconstruction, intersection improvements, drainage systems, stormwater management, ROW, maintenance and protection of traffic (MPT), and utility relocations. As design-manager for multiple VDOT D-B projects, his typical duties include overseeing all design disciplines, establishing and overseeing the design QA/QC program, and preparing responses to internal D-B team RFIs. He remains involved in each D-B project during the construction phase.</p> <p><b>09-2000–03-2013      AECOM      Senior Program Director, Civil Department Manager</b> As Civil Department Director, Mr. Hooshangi managed the transportation groups of two AECOM offices, directing a staff of 30 that included project managers, engineers, and technicians, in plan development and design while meeting project deadlines and budgets. He participated in design and plan development of all highway and construction projects and was responsible from initial project planning and design through final construction plans. During this time, some notable projects included the following:</p> <ul style="list-style-type: none"><li>• Town of Leesburg Sycolin Road (managed design for widening and intersection improvements)</li><li>• VDOT Route 50 Courthouse Road and 10th Street Interchanges (managed design to replace two major intersections)</li><li>• FHWA George Washington Memorial Parkway (managed design for reconstruction of 7.6 miles of parkway)</li><li>• City of Alexandria Potomac Yard Development (design of intersection improvements for Route 1 into the city)</li><li>• DDOT 11th Street Corridor Design-Build (replacement and reconfiguration of interchanges at I-295 and I-695)</li></ul>
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>Marshall University, Huntington, WV/Master of Science/1978/Civil Engineering</b> <b>West Virginia University Institute of Technology, Beckley, WV/Bachelor of Science/1977/Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>1989/Professional Engineer/VA#019827</b>



- g. Document the extent and depth of your experience and qualifications relevant to the Project.
1. *Note your role, responsibility, and specific job duties for each project, not those of the firm.*
  2. *Note whether experience is with current firm or with other firm.*
  3. *Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.*

**(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.)**

**VDOT I-581/Valley View Boulevard Interchange Improvements Design-Build, Roanoke, VA (04/2013–Present)  
Design Manager (with STV)**

Designing a diverging diamond interchange (DDI) to facilitate high-volume left-turn movements from Valley View Boulevard onto I-581. Mr. Hooshangi is responsible for the design and preparation of all construction plans. The project includes design of a grade-separated DDI with two new auxiliary lanes along I-581 NB and SB lanes, widening of Valley View Boulevard to provide two through lanes in each direction and dual left turn lanes for both the NB and SB movements to I-58. Other design elements include bridge widening, five retaining walls, over 6,000 feet of sound barrier wall, two signalized intersections, drainage, stormwater management, ROW, signing, pavement markings, MOT, landscaping, and relocation of the Lick Run Greenway shared-use path including a new pedestrian bridge. The scope also includes four entrance/exit ramps, and parking lot relocation.

**Relevance:** The \$64 million D-B project will provide the region’s first DDI and includes permitting; milling and overlay of existing pavement; hydraulics; storm drainage and stormwater management facilities; TMP; signing, striping, and pavement marking; ROW; utilities; landscaping; QA/QC; construction engineering and inspection; and overall project management. Stakeholder and third-party coordination and public involvement conveyed the benefits of improved traffic flow and reduced congestion. The design concept for this congested project site was new to the local population.

**DDOT 11th Street Corridor Design-Build, Washington, D.C. (09/2009–3/2013)  
Project Manager (with STV)**

Led highway engineering efforts for a \$260 million D-B project along 11th Street for the replacement of two existing bridges across the Anacostia River for the District Department of Transportation (DDOT). The project involved reconstructing and reconfiguring interchanges at I-295, I-695, and Anacostia River crossings, and connections to the Southeast/Southwest Freeway. Mr. Hooshangi was responsible for the design and preparation of roadway plans associated with the design of the new interchange, including realignment of inbound I-695, new ramps, retaining walls, drainage, signage, and pavement markings. The project also included the design and improvements of five signalized intersections, a bicycle/pedestrian facility, and realignment of the Southeast Boulevard from Barney Circle to tie into 11th Street at a signalized intersection with Ramp D-3 on the western end of the project.

**Relevance:** Roadway improvements include milling and overlay of existing pavement; hydraulics; storm drainage and SWM facilities; signing, striping, and pavement marking; ROW; utilities; landscaping; stakeholder and third-party coordination; public involvement/relations; QA/QC; and overall project management. The D-B project includes traffic management and utility relocation planning for constructability and to maintaining access. The project was constructed in a congested area with high traffic volume, significant utility conflicts and relocations, complex ROW acquisitions, and a diverse stakeholder base. The team developed an effective public involvement strategy to communicate to all stakeholders and community at-large and addressed traffic management including frequent use of partial and full closures during construction.

**VDOT Route 50 Courthouse Road and 10th Street Interchanges, Arlington County, VA (12/2005–03/2013)  
Project Manager (with STV)**

Oversaw design to replace two major interchanges of Route 50 (Arlington Boulevard) with 10th Street and Courthouse Road in Arlington County, VA, at an estimated total cost of \$39 million. Mr. Hooshangi supervised design of new access roads, three traffic signals, new CD Roads, transportation management plans, 13 mechanically stabilized earth (MSE) retaining walls, and pedestrian improvements. He developed all required plan assemblies, implementation of project scheduling, client and subconsultant coordination, and implementation of QA/QC procedures. The context-sensitive design of MSE walls required close coordination with an artist hired by VDOT to beautify this gateway to Arlington.

**Relevance:** Interchange design and associated roadway improvements including pavement; hydraulics; storm drainage and stormwater management facilities; signing, striping, and pavement marking; ROW; utilities; landscaping; stakeholder and third-party coordination; public involvement/relations; QA/QC; and overall project management.

\* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

- 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 key personnel role**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>		
a. Name & Title:	<b>Greg Suttle—Project Manager</b>	
b. Project Assignment:	<b>Construction Manager (CM)</b>	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	<b>Branch Civil, Inc. (full time)</b>	
d. Employment History: With this Firm <u>26</u> Years With Other Firms <u>2</u> 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):		
<b>1998—Present</b>	<b>Branch Civil, Inc.</b>	<b>Construction Manager</b>
Responsible for project construction including quality control (QC) and the execution of work in accordance with “approved-for-construction” plans/specifications, and accountable for compliance with material and construction requirements. Additional responsibilities include planning, scheduling, and allocation of manpower/equipment resources. Greg also manages owner, subcontractor, and supplier contracts. He supports EEO compliance and enforcement, and adheres with corporate safety regulations and training. He has performed similar work on three D-B projects and numerous bid-build widening and relocations projects, including interstate, primary, and secondary roads, as well as interchange construction for various state and local departments of transportation, federal agencies, and private corporations. On the Route 3 Widening project, his role included partnering with VDOT to address public outreach and stakeholder concerns. Greg was also responsible for resolving geotechnical challenges and working around environmentally sensitive areas in the course of this project. He emphasizes workplace safety and training while meeting or exceeding owner expectations. His daily involvement with project operations creates a solid foundation for understanding and working knowledge of the impacts associated with geotechnical challenges, MOT, environmental concerns, and utility relocation issues.		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>West Virginia Institute of Technology, Montgomery, West Virginia/ Bachelor of Science/1987/Mining Engineering</b>	
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>2003/Virginia DEQ Responsible Land Disturber/RDL03021; 1995/VDOT Erosion Sediment Control Contractor Certification (ESCCC)/1-01135; 1999/Virginia Blaster—Unrestricted/E269250; 2013/ACI Concrete Certification/01273969</b>	
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> <b>(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.)</b>		

**VDOT Route 3 Widening Design-Build, Culpeper, VA  
Construction Manager**

**(10/2015–Present)  
(for Branch)**

During the design of this 5-mile section of road widening from two lanes to a 4-lane divided highway on Route 3, Greg worked with the design team to review constructability, commented on MOT design, presented guidance for working around environmentally sensitive areas, and helped to develop solutions to geotechnical issues. During construction of this \$25 million project, he worked closely with VDOT and their project staff to coordinate scheduling and work flow as various stages of the project became accessible for construction. His coordination of extensive utility relocations (Verizon, AT&T, Level 3, Qwest, Century Link, Dominion Virginia Power, Transco/Williams Gas, and Columbia Gas) throughout the corridor was critical. Greg successfully led the construction team in working around over 1,500 lf of stream impacts and wetland areas. A primary focus was his mitigation strategy for the substantial geotechnical issues resulting from unsuitable soils, rock, and highly plastic clays. His strategy to effectively manage shareholder impacts included maintaining effective communication with residents and local commercial, agricultural, and industrial businesses.

**Relevance:** VDOT D-B, FHWA guidelines and requirements, primary roadway widening, ROW acquisition, utility relocations, environmental permitting and monitoring, geotechnical challenges/mitigation including unsuitable materials, TMP development and execution (multiple traffic shifts), public involvement/communications, QA/QC coordination.

**VDOT 95 Express Lanes Design-Build, Prince William/Stafford Counties, VA  
Construction Manager**

**(08/2011–05/2015)  
(for Branch)**

Coordinated all roadway activities (including self-performed work and roadway subcontractors) for over 9 miles of new I-95 HOT lanes, including over 1.5 miles of interstate widening. Branch was a subcontractor to the concessionaire for the \$46 million project. Greg and his team successfully mitigated geotechnical, environmental, and MOT challenges. He was involved with developing the construction sequencing, MOT plans, interstate widening access points, and laydown areas within the I-95 corridor. His involvement with the placement of access points for construction in the median of I-95 along with acceleration and deceleration areas was critical to the timely delivery of construction materials and efficient movement of vehicles through the work zone. Greg oversaw clearing and grubbing, over 550,000 cy of on-site excavation, 400,000 cy of borrow, undercut excavation, chemical stabilization, storm drainage, and erosion control installation and maintenance. He coordinated all roadway activities with other trades, including construction of five bridges, widening three bridges, 15 bridge/ramp repairs, more than 1,000,000 sf of sound walls, retaining walls, box culvert extensions, and ITS installation.

**Relevance:** VDOT D-B, FHWA guidelines and requirements, roadway alignment/widening, bridge construction, ROW acquisition, utility relocations, environmental monitoring, geotechnical challenges/mitigation, TMP development and execution, public involvement/communications, QA/QC coordination.

**Prince William County Route 15, James Madison Highway DB, Haymarket, VA  
Construction Manager**

**(02/2007–12/2009)  
(for Branch)**

Directed the project team, including three area superintendents, foremen, project engineers, and staff. Duties included constructability reviews during the design phases for the five distinct roadway segments adjacent to the I-66/US 15 Interchange, including five bridge structures. Greg was instrumental in developing and implementing the QC program before and during construction. Coordinating with DEQ and USACE, he created and executed construction sequencing plans that enabled early start of construction activities in each segment of the project. These plans included MOT coordination with VDOT and Prince William County. The \$55 million project of 22 lane-miles had utility relocations throughout. Greg scheduled Branch crews and clearing to expedite initial critical relocation activities, such as pole installations and underground conduit/trenching. Intermittent segments of highly plastic, light, and saturated soils and rock in all five project segments required unique approaches for mitigation, including removal and replacement, mechanical manipulation, and chemical stabilization. Greg also met with local businesses, communities and developers through public outreach and face-to-face communication to address concerns and create a team atmosphere with shareholders.

**Relevance:** D-B roadway alignment/widening, bridge construction, ROW acquisition, utility relocations, environmental permitting and monitoring, stream mitigation, geotechnical challenges, TMP development and execution, public involvement/communications, QA/QC coordination.

\* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

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.

**Route 3 at I-95 D-B; will be 100% available for Contract No. C00106573DB101 before commencement.**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>		
a. Name & Title:	<b>Todd Philipp, P.E.—Senior Project Manager</b>	
b. Project Assignment:	<b>Lead Utility Coordination Manager</b>	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	<b>Bowman Consulting Group, Ltd. (full time)</b>	
d. Employment History: With this Firm <u>  1  </u> Years With Other Firms <u>  30  </u> 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):		
<b>2017–present</b>	<b>Bowman Consulting Group, Ltd.</b>	<b>Sr. Project Manager</b>
Responsible for ROW acquisition, utility relocation coordination, and utility design for various public and private projects including Transform I-66 Express Lanes (Outside the Beltway) and Dominion Energy Strategic Underground Program, as well as project processes and data management.		
<b>2015–2016</b>	<b>Draper Aden Associates, Inc.</b>	<b>Program Manager</b>
Responsible for coordination, survey, design, and ROW acquisition for the Dominion Energy Strategic Underground Program, as well as project processes and data management.		
<b>2011–2015</b>	<b>Freeland Engineering, P.C.</b>	<b>Department Manager</b>
Responsible for coordination, survey, design, and permitting of civil engineering and utility plans.		
<b>2008–2011</b>	<b>Orange County and Fauquier County Public Schools</b>	<b>Middle School Math Teacher</b>
Typical teaching responsibilities in middle school mathematics.		
<b>2006–2008</b>	<b>Dominion Development Resources, LLC</b>	<b>Operations Manager</b>
Responsible for coordination, design, and permitting of civil engineering and utility plans, as well as project processes and data management.		
<b>2005–2006</b>	<b>Resource International, Ltd</b>	<b>Senior Project Manager</b>
Responsible for coordination, design, and permitting of civil engineering and utility plans.		
<b>2001–2005</b>	<b>ATCS, PLC</b>	<b>Engineering Manager</b>
Responsible for coordination, design, and permitting of civil engineering and utility plans at this transportation engineering consultant firm.		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>Virginia Tech, Blacksburg, VA/BS Civil Engineering/1987/Land Development and Infrastructure</b>	
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>1991/Professional Engineer/VA#22869</b>	

- g. Document the extent and depth of your experience and qualifications relevant to the Project.
1. *Note your role, responsibility, and specific job duties for each project, not those of the firm.*
  2. *Note whether experience is with current firm or with other firm.*
  3. *Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.*

**(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.)**

**VDOT Transform I-66 Express Lanes D-B (Outside the Beltway), I-495 to Haymarket, VA (11/2017-present)  
Senior Project Manager (for Bowman)**

Responsible for managing the coordination and design of utility relocations, including electric, telephone, gas, fiber, and cable TV for this 22-mile highway expansion project. Mr. Philipp manages the utility design team and is verifying and resolving utility conflicts, reviewing utility design plans and estimates, coordinating design adjustments with ROW and construction, performing project tracking, and providing weekly status updates to the prime contractor.

**Relevance:** VDOT design-build, utility relocation, utility design, utility conflict resolution, coordination with ROW and design functions, project tracking and weekly status updates, QA/QC

**Dominion Energy Strategic Underground Program, VA (02/2017-present)  
Program Manager (for Bowman and, previously, Draper Aden Associates)**

Managing a team of survey, designers, and ROW agents in the relocation of approximately 35 miles per year of overhead electrical distribution lines to underground conduit and devices. Serves as the lead contact with construction contractor and Dominion project manager. He is reviewing preliminary design plans, coordinating design adjustments with ROW and construction, managing VDOT permitting, developing and maintaining a database for more efficient project tracking and reporting, performing project tracking, and providing weekly status updates.

**Relevance:** Design-build, utility relocation, utility design, utility conflict resolution, coordination with ROW and construction, project tracking and weekly status updates, QA/QC, public meetings

**VDOT North Town Center, Charlottesville, VA (2008–2009)  
Senior Project Manager (for Dominion Development Resources)**

Responsible for design and permitting of grading, stormwater management, and underground utilities including relocation of electrical, communications, sanitary sewer, and major storm drainage as part of VDOT road improvements and site construction on both sides of State Route 29. He reviewed plans for accuracy, constructability, and utility conflicts. Mr. Philipp also coordinated utility designs with owners and various utility companies.

**Relevance:** Coordination of utilities as part of larger construction project (some VDOT ROW), utility relocation, utility design, utility conflict resolution, project tracking and reporting, QA/QC, public meetings

\* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

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 key personnel role**



Attachments 3.4.1(a) and 3.4.1(b)—  
Lead Contractor and Lead Designer Work History Forms

**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 or Owner 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: <b>Southgate Drive Interchange</b> Location: <b>Blacksburg, Virginia</b>	Name: <b>A. Morton Thomas &amp; Associates, Inc.</b>	Name of Client/ Owner: Phone: <b>(please see below)</b> Project Manager: Phone: Email:	<b>December 2018</b>	<b>June 2018 (estimated)</b>	<b>\$38,700</b>	<b>\$39,600 (owner change of scope and quantity overruns)</b>	<b>\$39,600</b>

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.

Client/Owner Name: **VDOT**  
Phone: **(540) 387-5488**  
Project Manager: **Duane Mann, P.E.**  
Phone: **(540) 381-7195**  
Email: **m.mann@vdot.virginia.gov**

**NEW GRADE-SEPARATED DIVERGING DIAMOND INTERCHANGE**

**6 MONTHS AHEAD OF SCHEDULE**

Relevance:

- High traffic volumes
- Complex MOT
- Road widening and realignment
- Maintenance of existing lanes
- Safety and congestion concerns
- Geotechnical constraints
- Bridge construction
- Traffic control devices
- Stakeholder coordination
- Public involvement/relations
- Roadway signage
- Overhead signs

The existing at-grade intersection of US 460 and Southgate Drive functions as the gateway to Virginia Tech. The intersection experiences significant queues during the AM and PM peak hours as well as during major events on campus, thus hampering through movements along US 460 and creating safety concerns with rear end collisions. This project provides a grade separated diverging diamond interchange and re-alignment in a new location southeast of the existing intersection. Project improvements include 3.6 miles of roadway improvements, construction of two roundabouts, 175,000 cy of excavation, and 163,000 cy of borrow embankment. Structure construction includes two bridges, three pedestrian underpasses, and two MSE retaining walls. The bridges have extensive aesthetic components due to the location and proximity to Virginia Tech.

**PROJECT SCOPE**

- **STRUCTURES** | The new intersection is grade separated requiring a diverging diamond bridge design to carry traffic along Southgate Drive over US 460. Over 1,100lf of retaining walls is being constructed in order to prevent any other right-of-way impacts. There are three 3-sided box culvert pedestrian underpasses being constructed as part of this project to improve pedestrian safety.
- **ROADWAY IMPROVEMENTS** | The new intersection with US 460 and Southgate Drive is being constructed approximately 1,500lf east of the existing intersection along US 460. Southgate Drive is being re-aligned and includes 3.6 miles of new roadway, two at-grade intersections are being improved with the introduction of roundabouts, and the existing Huckleberry Trail will be improved or realigned including three grade-separated trail crossings. Overhead signs will be installed to guide drivers through the new intersection.
- **GEOTECHNICAL CHALLENGES** | Extensive adjustments to proposed structure foundation designs are necessary due to the inconsistent competent rock elevations relative to the original plans. A mixture of driven pile, pre-bored pile, and spread footings are being used to provide proper bearing.

- **PUBLIC RELATIONS** | Branch is partnering with VDOT and Virginia Tech to keep the public informed of planned improvements and current progress.
- **MAINTENANCE OF TRAFFIC AND TMP** | The existing intersection at US 460 and Southgate Drive is remaining active during construction. A phased traffic control plan is being followed to maintain traffic on US 460, which carries 38,000 VPD, and 14,580 VPD on Southgate Drive. Time restrictions are in place to limit disruptions to the travelling public. Intermediate completion dates and durations are in place to construct the project in areas where new construction overlaps with existing.

**BRANCH'S ROLE**

Branch is the Prime Contractor for the project which includes overseeing all aspects of construction. Branch is self-performing all activities associated with erosion control, mass grading, fine grading, storm drain, water/sewer, base stone, and traffic control installation and maintenance. Branch is managing all sub-contractors on the project including the construction of the diverging diamond bridges, pedestrian underpasses, overhead signs and asphalt paving. Branch is partnering with VDOT and Virginia Tech to participate in public outreach and education opportunities about the construction and the diverging diamond interchange.

**EVIDENCE OF GOOD PERFORMANCE**

- **PUBLIC AND STAKEHOLDER OUTREACH** | Branch is taking an active role in partnering with VDOT and Virginia Tech. Branch has hosted public outreach meetings to educate the industry, general public, and Virginia Tech affiliates on the improvements being constructed.
- **GEOTECHNICAL CHALLENGES** | Branch is proactively working with VDOT to mitigate impacts from the differing site conditions presented by the variations in rock discovered at all major structure locations and is assisting with establishing the most viable path forward to maintain scheduled progress.

- **MAINTENANCE OF TRAFFIC** | Branch worked with VDOT, Virginia Tech, and other project stakeholders to address traffic concerns during construction. In addition to reducing the phasing required to construct the Duck Pond Drive Roundabout, Branch utilized a night time detour along Route 460 to stage and erect girders for the diverging diamond bridges. The use of this detour dramatically reduced the impact to traffic along Route 460 and improved worker safety.
- **MEETING MILESTONE DATES** | Branch has successfully constructed the roundabouts at Research Center Drive and Duck Pond Drive as well as opened the diverging diamond interchange to traffic. The project is currently 6 months ahead of schedule.
- **VALUE ENGINEERING** | Branch provided a value engineering proposal that replaced a soil nail wall with a cut slope resulting in \$1.4M in project savings.





**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 or Owner 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: <b>I-64 Jackson River Bridge Replacement</b> Location: <b>Alleghany County, Virginia</b>	Name: <b>VDOT</b>	Name of Client/ Owner: Phone: <b>(please see below)</b> Project Manager: Phone: Email:	<b>June 2004</b>	<b>February 2005</b> <b>(actual—additional time due to differing site conditions)</b>	<b>\$11,300</b>	<b>\$11,444</b> <b>(owner changed scope and quantity overruns)</b>	<b>\$11,444</b>

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.

Client/Owner Name: **VDOT**  
Phone: **(540) 332-9075**  
Project Manager: **J.W. White, Jr.**  
Phone: **(540) 463-3108**  
Email: **jimmy.white@vdot.virginia.gov**

**COMPLETED ON SCHEDULE**

Relevance:

- Bridge construction
- High traffic volumes
- Complex MOT
- Road widening
- Maintenance of existing lanes
- Safety, congestion concerns
- Geotechnical constraints
- Traffic control devices
- Stakeholder coordination

The project consisted of upgrading to current Interstate Highway Standards, a 2.2 mile section of I-64 in Alleghany County that included replacement of two existing bridges on I-64 over the Jackson River. The work was performed sequentially with Interstate traffic maintained in both directions during the entire project utilizing two newly constructed temporary crossovers. Traffic on the eastbound and westbound lanes of I-64 was reduced to one lane then, by using the crossovers, both lanes were shifted into the existing eastbound lane. After traffic was shifted, the westbound lane bridge was demolished and a new seven-span bridge was constructed. One lane, two-way traffic was shifted onto the newly constructed westbound bridge to allow the existing eastbound bridge to be demolished. A new seven-span bridge was constructed in its place. Two lane, two-way traffic was placed in its final pattern after the eastbound bridge construction was complete.

**PROJECT SCOPE**

- **STRUCTURES** | The existing I-64 bridges were replaced with two bridges spanning 600 ft. each over the Jackson River. Causeways and cofferdams were used to access the work adjacent to the Jackson River. There was particular focus on environmental controls with construction being adjacent to the Jackson River. Concrete girders were used for bridge construction. Scour was addressed with the installation of over 4,000 tons of grouted rip rap below the bridge.
- **ROADWAY IMPROVEMENTS** | Over 2 miles of I-64 was reconstructed including over 5,000LF of new storm drain installation and two stormwater management basins. 40,000CY of undercut and backfill was performed to overcome soft soils and 45,000 tons of asphalt was placed.
- **GEOTECHNICAL CHALLENGES** | Shallow rock and marginal soils were issues for the project. Different foundation designs for the bridges were explored including H-pile, drilled shaft, and spread footings. Existing soils were modified or replaced to achieve the proper bearing for roadway construction.

- **MAINTENANCE OF TRAFFIC AND TMP** | A phased TMP was used to maintain traffic flow on I-64 and to allow construction to progress. Median crossovers were put in place to revise traffic to a one lane, two-way configuration. Traffic was kept in this pattern and shifted from the westbound lane to the eastbound lane to accommodate construction. Barrier wall was installed in two locations to separate the lanes of traffic as well as to provide a positive protection between traffic and the construction work area.

**BRANCH'S ROLE**

Branch was the Prime contractor for this design-bid-build project which included managing all construction activities, constructing all roadway improvements and performing all work to replace the dual bridges over the Jackson River. The project team was responsible for all erosion control, grading, stormwater management and maintenance of traffic. Branch partnered with VDOT and other project stakeholders to address any traffic and safety concerns.

**EVIDENCE OF GOOD PERFORMANCE**

- **GEOTECHNICAL CHALLENGES** | Branch worked with VDOT to overcome the differing site conditions associated with structure foundations. Branch helped to coordinate on-site investigation and foundation alternatives with VDOT. Branch quickly responded to address the low CBR value material on existing I-64.
- **MAINTENANCE OF TRAFFIC** | Branch's project team partnered with VDOT and the Virginia State Police to safely and effectively shift traffic throughout the many phases of the Traffic Management Plan. Branch designated a Traffic Control Supervisor to monitor the work zone and make adjustments as necessary. Branch coordinated with other project stakeholders and worked with the Virginia State Police to clear accidents within the work zone.

- **MEETING MILESTONE DATES** | Branch experienced geotechnical, weather, and access challenges throughout construction. Additional resources and re-prioritizing activities in the schedule contributed to help overcome the challenges and complete the project on time. Branch made every effort to respond quickly when project challenges arose.





**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 or Owner 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: <b>I-95 Express Lanes Southern Terminus Ext. D-B</b> Location: <b>Stafford, Virginia</b>	Name: <b>Whitman, Requardt and Associates, LLP</b>	Name of Client/ Owner: Phone: <b>(please see below)</b> Project Manager: Phone: Email:	<b>August 2018</b>	<b>November 2017 (actual)</b>	<b>\$31,000</b>	<b>\$38,000 (increase due to owner-directed scope changes)</b>	<b>\$38,000</b>

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.

Client/Owner Name: VDOT  
Phone: (703) 259-2362  
Project Manager: Paul Nishimoto  
Phone: (571) 419-0504  
Email: paul.nishimoto@vdot.virginia.gov

**COMPLETED 9 MONTHS AHEAD OF SCHEDULE**

- Relevance:
- VDOT design-build project
  - High traffic volumes
  - Complex MOT
  - Road widening
  - Maintenance of existing lanes
  - Safety and congestion concerns
  - Environmental permitting
  - Geotechnical constraints
  - Traffic control devices
  - Utility relocation
  - Stakeholder coordination
  - Public involvement/relations
  - Innovative approach (permitting)

The I-95 Express Lanes Southern Terminus Extension project extends the existing express lanes further south to alleviate the congestion challenges at the current merge point and entry in Stafford County. The project consisted of constructing 2.2 miles of a reversible lane beginning at the current southern end of the I-95 Express Lanes (located north of Garrisonville Road), and the creation of new northbound and southbound ramps between the express lanes and the general purpose lanes. The improvements will reduce AM peak delays and queues for the northbound general purpose lanes, reduce PM peak delays and queues for the southbound express lanes, improve overall safety and decrease rear-end collisions by reducing vehicle weaving, and increase capacity while reducing congestion within the existing right-of-way.

**PROJECT SCOPE**

- **PERMITTING APPROACH** | 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 has allowed construction to begin with 45 days of the Notice to Proceed.
- **ROADWAY WIDENING** | A new left entrance south of the Garrisonville Road overpass (Route 610) was constructed to accommodate northbound traffic entering the express lanes. Southbound traffic using the express lanes will be able to merge into the general purpose lanes at a new exit point approximately 1 mile south of Garrisonville Road. The new reversible lane required moving 100,000 cy of material, placing 60,000 tn of cement treated aggregate and 100,000tn of asphalt.
- **MAINTENANCE OF TRAFFIC AND TMP** | High traffic volume, similar to the Route 7 and Battlefield Parkway Interchange project, which increases during peak hours, meant that safe and well-marked access and egress points

were critical. Safety and flow of the motoring public were also critical elements as the TMP was revised. VDOT imposed heavy lane use fees if lanes were disturbed along I-95. Through proper planning and coordination, Branch did not receive any lane use fees during design, scope validation, or the construction phase of the project.

**BRANCH'S ROLE**

Branch was the prime contractor for this D-B project overseeing all aspects of design and construction. Branch self-performed all mass grading, erosion control, MOT, drainage, fine grading, and base stone placement activities while providing contract administration and coordination with QA/QC. To streamline the design process and expedite construction, Branch utilized the Construction Design Coordinator (CDC) role to perform constructability reviews during the design development. Branch's close coordination with the design team and VDOT allowed the construction schedule to be accelerated. Construction challenges like unsuitable soils, coordination with Transurban, and maintaining existing traffic were encountered and successfully solved by Branch during construction.

**EVIDENCE OF GOOD PERFORMANCE**

- Project completed nine months earlier than the contract completion date.
- Even though formal partnering was not required, Branch took a partnering approach to include the design team, VDOT, Transurban, 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.
- VDOT and Branch successfully negotiated to add another \$5.6M in additional work to the project. This additional work was constructed within the same timeline as the original scope of work.





**ATTACHMENT 3.4.1(b)**

**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: <b>I-581/Valley View Blvd. Interchange Improvements D-B</b> Location: <b>Roanoke, Virginia</b>	Name: <b>Lane Construction</b>	Name of Client: <b>(please see below)</b> Phone: Project Manager: Phone: Email:	<b>April 2014</b>	<b>October 2017</b>	<b>\$38,475</b>	<b>\$38,900</b>	<b>\$3,489</b>

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.

Client/Owner Name: VDOT  
Phone: (540) 378-5083  
Project Manager: Bobby Phlegar  
Phone: (540) 598-7202  
Email: r.phlegar@vdot.virginia.gov

**NEW DDI AND BRIDGE REHABILITATION AND WIDENING**

Relevance:

- VDOT D-B project
- Similar interchange approach
- Complex MOT
- Safety concerns
- Reduced interchange
- Footprint
- Complex geological features
- Stakeholder coordination

STV was the lead designer providing professional engineering services for the modification of an existing partial interchange to provide better local access to the regional Valley View Mall and relieve congestion along Hershberger Road. During the design-build procurement of this almost \$40 million project, the STV team proposed a diverging diamond interchange (DDI) to improve the existing partial interchange. The DDI provided many advantages over the one quadrant partial cloverleaf interchange proposed in the RFP document. The DDI reduced the overall footprint of the interchange, reduced the required width of the bridge carrying Valley View Boulevard over I-581 by 37.5 feet, and reduced the southbound I-581 deceleration lane by 900 feet. The DDI also eliminated over 900 lf of stream relocation work, significantly reduced impacts to existing utilities, and entirely eliminated the need for the acquisition/demolition of five residential structures, which significantly reduced project risk. STV's offices in Fairfax and Richmond performed the design work. This project was designed to allow for the extension of Valley View Boulevard in the future. This includes the design and construction of stub-outs for the interchange ramps and installing conduits on the bridge and under the roadway for future traffic signals.

**PROJECT SCOPE**

**STRUCTURES** | STV developed design plans for the widening and rehabilitation of the bridge carrying Valley View Boulevard over I-581, a shared use path bridge over I-581 and ramps W and X, three retaining walls, an extension of an existing box culvert, and more than 6,000 feet of sound barrier walls. Staged construction was implemented to complete the bridge widening, modification, and rehabilitation work on the bridge while maintaining traffic throughout construction.

**DIFFICULT GEOLOGY** | The project is underlain by two geologic formations susceptible to karst formations. A detailed karst evaluation was completed during the geotechnical investigation and development of the final geotechnical engineering report. Recommendations and appropriate methods of mitigation were

incorporated into the design, such as the use of clay liners for the stormwater management basins.

**MAINTENANCE OF TRAFFIC** | I-581 is a critical linkage between I-81 and the City of Roanoke. STV developed a detailed TMP, which involved extensive coordination and input from various design disciplines, members of the construction team, VDOT, FHWA, the City of Roanoke, and other stakeholders. Integrating the construction and widening of the bridges and retaining wall structures was a critical component to the development of the Sequence of Construction (SOC) plans. Construction activities also required coordination with an adjacent bridge replacement project that was taking place concurrently on I-581 at Elm Avenue.

**EVIDENCE OF GOOD PERFORMANCE**

**PUBLIC AND STAKEHOLDER OUTREACH** | Public understanding and acceptance of the DDI concept was essential to project success. STV hosted a Citizen's Information Meeting (CIM) supported by DDI animations to keep stakeholders and the traveling public informed about the safety, constructability, and financial value inherent in the DDI concept. This was vital to the project moving forward into construction.

**LOW-MAINTENANCE SOLUTION** | The existing bridge carrying Valley View Boulevard over I-581 was retrofitted to eliminate the existing expansion joints and the new shared use path bridge is entirely jointless.

**RESPONSIVE TO CONSTRUCTION INQUIRES** | During construction, the team encountered challenges when driving piles on the project, due to the highly variable rock surface. By having our geotechnical engineer on-site during the pile installation work and STV's bridge engineers on-call, we were able to redesign two foundation elements in a matter of hours, allowing the contractor to move equipment to the next foundation element.





**ATTACHMENT 3.4.1(b)**

**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: <b>I-95 Bridge Replacement over the Meherrin River</b> Location: <b>Emporia, Virginia</b>	Name: <b>G.A. &amp; F.C. Wagman, Inc.</b>	Name of Client: <b>(please see below)</b> Phone: Project Manager: Phone: Email:	<b>January 2016</b>	<b>October 2019 (estimated)</b>	<b>\$22,245</b>	<b>\$22,495 (estimated)</b>	<b>\$1,750</b>

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.

Client/Owner Name: VDOT  
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Project Manager: Jeff Li  
Phone: (804) 371-2778  
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**DETAILED TRANSPORTATION MANAGEMENT PLAN FOR A HIGH-TRAFFIC PROJECT ZONE**  
**SUCCESSFUL PUBLIC OUTREACH CAMPAIGN OVERSEEN BY STV**  
**COMPLEX STRUCTURAL, GEOTECHNICAL, AND MAINTENANCE OF TRAFFIC CHALLENGES**

Relevance:

- Complex MOT challenges
- Complex geological features
- Innovative bridge design
- Permitting
- Outreach

STV was the lead designer for the replacement of the 540-foot-long dual bridges and associated approaches on I-95 over the Meherrin River. The existing bridges were built in 1959 and have been recommended for replacement to improve safety by correcting the functionally obsolete shoulder widths and to correct the low sufficiency ratings of the existing structures. STV's scope of services includes bridge and structure design, roadway design, traffic control devices, transportation management plans, hydraulics, scour analysis, geotechnical, and public involvement/relations. STV's offices in Fairfax and Richmond performed the design work. STV prepared a bridge concept study to evaluate alignment alternatives for the replacement of the existing structures. STV evaluated eight alignment alternatives, applying different MOT strategies and accelerated bridge construction (ABC) techniques. Factors considered included construction cost, constructability, impacts to the horizontal/vertical alignment, lifecycle costs, and hydraulic impacts. VDOT accepted STV's recommendation to construct a new southbound structure on a new alignment while the northbound structure will be reconstructed along its present alignment. This approach expedites the schedule and minimizes safety and traffic operations impacts. The MOT scheme employs shifting southbound traffic to the new southbound bridge once completed, shifting northbound traffic to the former southbound bridge so the northbound bridge can be demolished and reconstructed along the same horizontal alignment. This approach provided two new bridges with adequate typical sections to address safety deficiencies as well as ample space for future widening. The final structure design and roadway approaches were completed on an accelerated schedule to meet the scheduled advertisement.

**PROJECT SCOPE**

**STRUCTURES** | The new bridges were designed as 5-span, 540-foot structures using prestressed concrete 61-inch-deep bulb-T beams made continuous for live load with semi-integral abutments. Two different stand patterns were developed and incorporated into the plans for the prestressed concrete beams, allowing the use of either 0.5-inch diameter strands or 0.6-inch diameter strands. The new structures are entirely jointless, and require a deck drainage system. The piers

for each bridge consist of two hammerhead piers adjacent to the river and two multi-column piers in the floodplain. Two foundation designs were developed for Pier 1 on each bridge, which allows the contractor the option to construct either a spread footing foundation or a drilled shaft foundation system. Pier 2 on each bridge is supported by drilled shaft foundations while all other substructure elements are supported by steel H-piles driven to refusal.

**DIFFICULT GEOLOGY** | Soft ground conditions were identified in the vicinity of the northern approach to the southbound bridge in planned fill areas. Densified aggregate piers (DAPs) were incorporated in the design to improve the conditions. The location of DAPs was coordinated with the deep foundations for the northern bridge abutment. Steel H-piles were designed using plumb piles to avoid damage to the DAPs and because down drag forces could act on the piles.

**MAINTENANCE OF TRAFFIC** | Developed a detailed TMP to maintain traffic on this heavily traveled roadway just south of the existing US 58 interchange. One phase requires southbound I-95 to reduce to a single lane to facilitate tie-in work along realigned southbound I-95. STV and VDOT studied traffic counts and determined that the southbound lane closure needed to occur from January–March to avoid excessive queues (2 miles long during summer). A temporary work zone speed reduction is being implemented during select phases of construction where it was not possible to design the shifting tapers and other MOT elements for a minimum design speed of 70 mph. In these select phases of construction, STV designed all of the shifting tapers and MOT elements for a minimum design speed of 70 mph to the greatest extent possible as a mitigation strategy against motorists who may not slow down through the work zone.

**ROADWAY** | The project includes 1.1 miles of interstate roadway reconstruction, with existing bridges located in a sag vertical curve, which did not meet a minimum design speed of 70 mph, and the low point located on the south end of the existing bridges. To meet the minimum design speed of 70 mph, locate the low point in the sag vertical curve off of the new bridges, and meet all hydraulic requirements, the roadway profile was raised approximately 4 feet.

**EVIDENCE OF GOOD PERFORMANCE**

**PUBLIC AND STAKEHOLDER OUTREACH** | STV coordinated and met individually with several project stakeholders throughout the project development process, including FHWA, the City of Emporia, Greensville County, adjacent property owners, the owners of four advertising billboards, and the owner of a nearby truck stop facility. These meetings were critical to obtaining public acceptance of the project with no requests to hold a public hearing.

**LOW-MAINTENANCE SOLUTION** | STV's approach to the design of the new bridges was to develop a cost effective bridge design and reduce long-term maintenance needs for VDOT. The new bridges are entirely jointless, utilize corrosion resistant reinforcing steel in accordance with VDOT S&B-IIM-81.7, and utilize low permeability concrete.





**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

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					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>US 17 Bypass and SC 707 Interchange</b> Location: <b>Myrtle Beach, South Carolina</b>	Name: <b>Balfour Beatty Infrastructure, Inc.</b>	Name of Client: <b>(please see below)</b> Phone: Project Manager: Phone: Email:	<b>July 2011</b>	<b>April 2015 (actual)</b>	<b>\$120,000 (total project cost)</b>	<b>\$120,000 (total project cost)</b>	<b>\$5,355</b>

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.

Client/Owner Name: SCDOT  
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**HIGHLY VISIBLE, TRANSFORMATIVE INTERCHANGE IMPROVEMENTS**  
**JULY/AUGUST 2015 ASCE CIVIL ENGINEERING ARTICLE TITLED “MYRTLE BEACH INTERCHANGE PROJECT OVERCOMES GEOTECHNICAL LIMITATIONS”**

Relevance:

- Single-point urban interchange (SPUI)
- Complex MOT challenges
- Multiple traffic phases
- Complex geological features
- Adjacent urban development
- Major bridge (staged construction)
- Utility coordination
- Stormwater management plan
- Permitting
- STV worked with Terracon (GeoConcepts)

Myrtle Beach is one of the country’s busiest tourism centers and the largest golf and shopping destination in the Southeast. With more than 14 million visitors annually, traffic congestion is common and was particularly bad at the US 17 Bypass and SC 707/Farrow Parkway interchange. The location is a key access way to The Market Common mixed-use development. To improve conditions, Horry County and the South Carolina Department of Transportation (SCDOT) replaced the former at-grade intersection with a 1.7-mile, single-point interchange grade separation to provide uninterrupted traffic flow and improve roadway access. STV, together with its team of subconsultants, provided complete turnkey services, including project management, environmental documentation, permitting, traffic analysis, roadway and bridge design, utility coordination, hydraulic analysis, and geotechnical investigations for the \$120 million project.

Known locally as the “back gate” of the former military base, the interchange and surrounding infrastructure underwent a complete makeover with new curbs and gutters, erosion control, drainage and stormwater management systems, and other aesthetic improvements covering 5.7 miles and 71 acres.

**GEOTECHNICAL** | The team faced extensive geotechnical challenges because of the proximity to the South Carolina coast. Three major design techniques solved the problem:

1. The design team specified prefabricated vertical drains (PVDs/wick drains) to expedite settlement time on all ramp and bridge approach roadways.
2. They used lightweight aggregate borrow around single-, double-, and triple-phase MSE walls to decrease settlement time and produce adequate soil-bearing capacity.
3. Deep soil cement mixing (DSM), in isolated adjacent areas, strengthened the soil and allowed construction to proceed swiftly while maintaining a viable traffic control plan.

The team’s geotechnical design was not only innovative but was also coordinated effectively. The project schedule was expedited while the soil bearing capacity was increased to support the structure and surrounding roadways.

**UTILITIES** | Accommodating the needs of the Market Common and other local businesses made utility coordination another priority. Because of limited right-of-way, extensive ground modifications, and adjacent power transmission easements, STV coordinated with 13 utilities to relocate services into a 1-mile corridor to provide easier maintenance access and convenient relocation by branching off, as needed. Utility impacts were extensive, so the team advanced clearing and grubbing and utility relocation contracts early on. This proactive approach shaved eight months from the overall construction schedule and the contractor was able to start work with minimal active utility conflicts.

**MOT** | To maintain access during construction, the frontage road was extended to intersect Temperance Drive and a new road was constructed between Temperance Drive and Farrow Parkway. Macklen Road was extended to intersect Harbour Towne Drive at Port Drive, and a U-turn was constructed at the north end of the interchange under the bridge. The construction team was prohibited from closing traffic lanes during the daytime through this high-density commercial area while coordinating multiple traffic shifts. Despite these constraints, the team perfectly executed the geotechnical ground improvement work, while also sequencing the wall, roadway, structure, and drainage construction to maximize effect, while minimizing disruptions.

The client’s mandate was to relieve extreme congestion at a major intersection. STV’s single point urban interchange (SPUI) design provides an excellent solution that has reduced traffic and increased safety. It allows highway traffic to move without stopping while minimizing delays on cross streets. Long ramps, generous acceleration/decelerations lanes, proper sight distance, highly visible signing, and clear pavement markings make the roadway easy to navigate. Multiple secondary roads, along with the surrounding neighborhoods, have also benefitted from new entrances, exits, traffic lights, crosswalks, and coordinated signal timing. The project team was also responsive to the concerns of the many businesses around the site and designed the walls and geotechnical features to minimize abutter impacts.

**AESTHETICS** | The interchange is a highly visible gateway to a major commercial center, so STV designed a signature roadway. Craftsman incorporated recognized symbols of South Carolina—Palmetto trees and crescent moons—into the MSE wall panels and pier cap extensions. Selected paint colors also match the style of the nearby Market Commons. In addition, pier caps were attractively arched while bridge barrier walls were textured to match the MSE wall panels, further enhancing aesthetics. Project lighting also provides both safety and attractiveness. Finally, for additional local appeal, bicycle lanes, sidewalks, and multiuse trails line the side roads to connect to an existing recreational trail.

**PERMITTING** | The large-scale project required extensive collaboration with several entities, including the FHA, Horry County, SCDOT, the City of Myrtle Beach, and the Myrtle Beach Air Force Base Redevelopment Authority. The USACE approved a general permit to fill in a small part of a wetland, and the South Carolina Department of Health and Environmental Control authorized a Land Disturbance Permit.

