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VDOT
Virginia Department of Transportation

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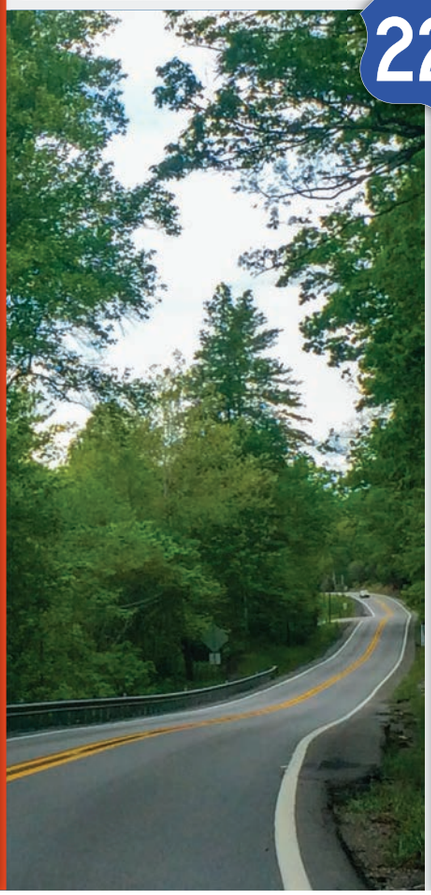
JUNE 8, 2016



Statement of Qualifications

ROUTE 220 CORRIDOR SAFETY IMPROVEMENTS

From: 0.129 mile south of Route 43 (Narrow Passage Road)
To: 0.331 mile north of Route 696 (Buhrman Rd.)

Botetourt County, Virginia
State Project No.: 0220-011-786 and 0220-011-788
Contract ID: C00105543DB88

BranchHighways | HNTB

Section 3.2

LETTER OF SUBMITTAL

June 8, 2016

Joseph A. Clarke, PE, DBIA
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: **Design-Build | Route 220 Corridor Safety Improvements | Botetourt County, Virginia**
State Project No.: 0220-011-786 and 0220-011-788 | Federal Project No.: NH-5128(326) and STP-5128(340) | Contract ID Number: C00105543DB88
Letter of Submittal – Statement of Qualifications

Dear Mr. Clarke,

Branch Highways, Inc. (Branch), as the Offeror, submits this Letter of Submittal and accompanying Statement of Qualifications in response to the Request for Qualifications dated April 25, 2016 for the above-referenced project. For this pursuit, Branch has teamed with HNTB Corporation (HNTB) to furnish a product that exceeds expectations with respect to design, cost, and schedule.

3.2.1 Full legal name and address of the Offeror:
Branch Highways, Inc. | P.O. Box 40004, Roanoke, VA 24022

3.2.2 Point of Contact and authorized representative of the Offeror:
Mr. Jason Hoyle, Director of Procurement
Address: P.O. Box 40004, Roanoke, VA 24022
Tel: (540) 982-1678 | Fax: (540) 982-4216 | Email: Jason.Hoyle@branchhighways.com

3.2.3 Principal Officer of the Offeror:
Mr. Patrick K. Bartorillo, President
Address: P.O. Box 40004, Roanoke, VA 24022
Tel: (540) 982-1678 | Fax: (540) 982-4216 | Email: Patrick.Bartorillo@branchhighways.com

3.2.4 Corporate 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.

3.2.5 Lead Contractor: Branch Highways, Inc. | **Lead Designer:** HNTB Corporation

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

3.2.7 Certifications Regarding Debarment (Attachments 3.2.7(a) and 3.2.7(b)) are in the Appendix.

3.2.8 VDOT Prequalification Branch's Vendor ID is B319; status is Active. See Appendix for Evidence.

3.2.9 Surety Letter is in the Appendix.

3.2.10 Full Size Copies of SCC Registration and DPOR Licenses (Attachment 3.2.10) are in the Appendix.

3.2.11 DBE Participation Goal: Branch recognizes and is committed to achieving the seven percent (7%) DBE goal for the entire value of the contract.

Branch and HNTB have extensive experience and are well respected within the heavy civil construction industry and Design-Build projects. Our team eagerly anticipates yet another successful delivery with this endeavor.

Sincerely,
Branch Highways, Inc.

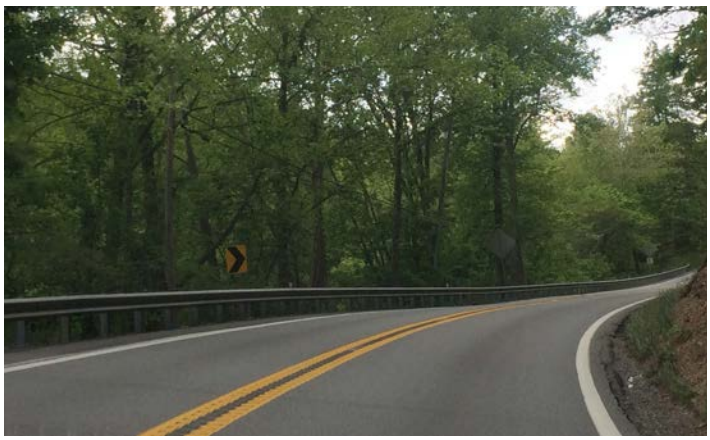
Patrick K. Bartorillo, President

Section 3.3

OFFEROR'S TEAM STRUCTURE

3.3 Offeror's Team Structure

The Route 220 Corridor Safety Improvements project (Project) will upgrade 6.2 miles of the two-lane roadway with better alignments, widened shoulders, turning lanes, more passing opportunities and other safety features. The improvements will also replace the narrow bridges to provide wider travel lanes and shoulders. Design innovation and proper execution of a strong maintenance of traffic (MOT) plan during construction will be vital to achieving Virginia Department of Transportation's (VDOT) goal of making this roadway safe for the traveling public.



The Route 220 Project will bring much needed safety improvements for travelers throughout the corridor.

Branch Highways, Inc. (Branch), teamed with HNTB Corporation (HNTB), has a proven history of delivering VDOT Design-Build (DB)/Public-Private Transportation Act (PPTA) projects. The Branch/HNTB team (Branch/HNTB) is committed to partnering with VDOT on the Project to facilitate completing quality work within budget and on schedule.

VDOT DB/PPTA Projects by Branch/HNTB in the Salem District:

- ***$19 million US Route 58 Meadows of Dan Bypass***
- ***$83 million US Route 58 Hillsville Bypass***
- ***$119 million US Route 58 Laurel Fork***

Branch/HNTB's successful teaming history brings a commitment to apply valuable lessons learned to deliver quality work on time, while addressing safety concerns.

Branch will manage the work throughout all phases of the Project. As lead contractor, Branch will self-perform a high percentage of the construction, manage qualified subcontractors and achieve the Project's 7% DBE goal. HNTB will serve as the lead designer and manage the design and construction quality control (QC).

Branch - Offeror, Legal Entity, Lead Contractor | Branch, a full-service, heavy-civil highway contractor, is a member of The Branch Group of employee-owned companies, incorporated in 1986. Company headquarters are located in Roanoke, Virginia with regional offices located in Northern Virginia and Cary, North Carolina. Branch has a long-standing history of completing work on time, within budget and with no claims. This includes more than $425 million in DB/PPTA projects for VDOT and local governments. Branch has constructed more than $325 million in traditional design-bid-build and DB/PPTA work in the Salem District. Branch currently has resources throughout the Salem District completing the $18 million Exit 150 and $42 million Southgate Drive Interchange projects. With company headquarters located within 25 miles of the Project, Branch is ready to support the project with 125 local employees.

HNTB - Lead Designer | HNTB has provided innovative, cost-effective solutions on complex alternative delivery, bridge and roadway projects nationally for more than 100 years. This includes the $800 million 95 Express Lanes and the $1.6 billion 495 Express Lanes DB/PPTA projects. Locally, HNTB has provided roadway and bridge design, quality management and inspection services throughout the Commonwealth of Virginia for more than 55 years, including work in the Salem and Bristol Districts. These projects are located in terrain similar to the Project and with many of the same MOT challenges.

Branch/HNTB Team Features:

- ***Experienced and fully-integrated team***
- ***Team local to the Project***
- ***Proven performance working together on previous DB projects in the Salem District***
- ***Established professional relationships with VDOT, stakeholders and review agencies***

Benefits to VDOT:

- ***Team with VDOT partnering experience***
- ***Rapid responsiveness***
- ***No learning curve***
- ***Compliant with technical requirements***
- ***Efficient, safe working environment***

Subconsultants | Branch/HNTB has chosen subconsultants whose strengths will support mitigating the Project's risks. As shown in Figure 1, Branch/HNTB is fortified with highly qualified and local subconsultants. Members of our team have worked together and with VDOT for many years, which

includes working on similar DB/PPTA projects. As noted in Figure 2: Organizational Chart, Page 6, four of these subconsultants are Small Women and Minority Owned (SWaM) firms. We are committed to meeting the 7% DBE goal and will be supported by DBE subcontracting firms.

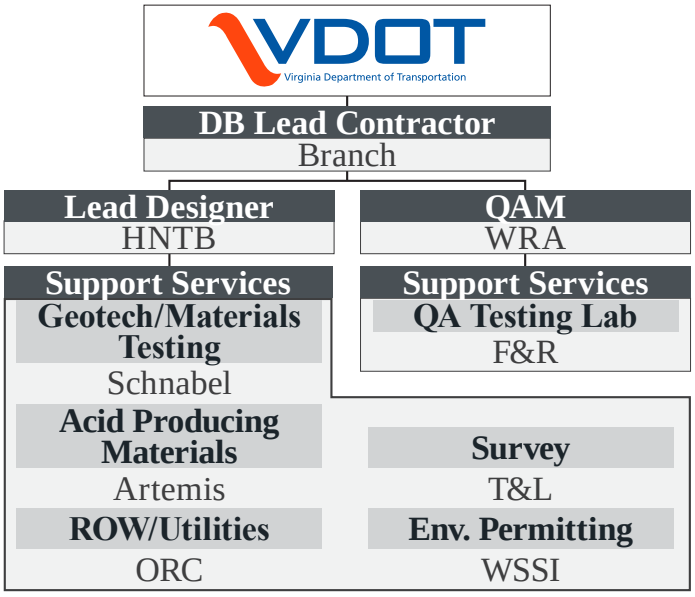


Figure 1: Team Structure Chart

Schnabel Engineering (Schnabel) | As a nationally recognized firm in operation for 60 years, Schnabel has routinely provided geotechnical engineering and materials testing services on highway projects in Virginia. Schnabel has extensive experience providing these services on an "on-call" basis throughout the Commonwealth of Virginia to support capital improvement and other projects. Schnabel supported Branch/HNTB on the Route 58 Hillsville Bypass and Laurel Fork projects in the Salem District.

Whitman, Requardt & Associates, LLP (WRA) | WRA will provide the independent Quality Assurance Manager (QAM). WRA has provided construction management and project inspection services for VDOT and localities on DB/PPTA and design-bid-build projects for more than 100 years. WRA's Construction Management and Inspection Division have performed QA/QC roles on eight separate DB projects, five of which were for VDOT. On four of those projects, WRA teamed with Branch. They most recently served as QAM on the 95 Express Lanes project.

Froehling & Robertson, Inc. (F&R) | Established in 1881, F&R is an independent consulting engineering/testing firm that maintains a fleet of drilling equipment as well as accredited geotechnical and construction material testing laboratories. F&R's materials testing field and laboratory professionals are DOT-certified throughout the mid-Atlantic to provide the most thorough inspections and accurate reporting available in the industry. They have a long work history with WRA and will provide the independent QA testing lab.

Artemis Consulting Services, LLC (Artemis) | Artemis is a small, woman-owned business located in southwest Virginia. Artemis' knowledge base is focused on environmental issues, such as acid-producing materials, associated with large land-disturbing projects. Artemis' experience includes the use of preliminary laboratory testing to develop solutions ranging from isolating potential acid-producing material to controlling total dissolved solids in watersheds.

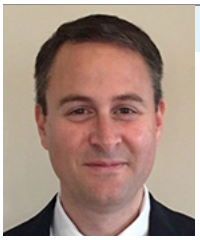
O. R. Colan Associates, LLC (ORC) | ORC, founded in 1969, remains a family-owned, woman-owned business. The firm specializes in right-of-way (ROW) acquisition, appraisal, relocation and program management for land acquisition projects. ORC is a VDOT-prequalified Fee and Review Appraiser and maintains a national staff of more than 150 full-time ROW professionals. ORC has an understanding of VDOT work through their experience, which includes the Route 726 Danville and Route 460 projects. ORC will coordinate the utility relocations for the Project, and will rely on its experienced team and years of working with utility companies to proactively solve utility conflicts.

Thompson & Litton (T&L) | T&L, established in Wise, Virginia in 1956, is a SWaM firm. T&L has extensive experience with local municipalities, public service authorities and VDOT. T&L has a certificate of authorization and will have licensed professional surveyors assigned to the Project. Due to extensive survey experience with VDOT projects, T&L supplies a team that fully understands VDOT's standards and specifications. T&L supported Branch/HNTB on the Route 58 Hillsville Bypass and Laurel Fork projects in the Salem District.

Wetland Studies and Solutions, Inc. (WSSI) | WSSI, a subsidiary of the Davey Tree Company, is one of the leading natural and cultural resources consulting firms in the region, and the largest in the local area. WSSI brings experience working on more than 5,000 projects, including the 495 Express Lanes (with HNTB), 95 Express Lanes (with HNTB and Branch) and the Route 58 Hillsville Bypass project (with HNTB and Branch).

3.3.1 Key Personnel

Key personnel were selected based on their experience with VDOT, DB project delivery and their capabilities to maximize project innovation and efficiencies using this delivery method. These key personnel are fully committed to the Project and job duties will not be delegated to others throughout the duration of the DB contract. Detailed information about our key personnel is included in Appendix 3.3.1 – Key Personnel Resume Forms.



Jason Hoyle | *Design-Build Project Manager (DBPM)* — Branch

Jason will oversee the Project, including the design, construction, quality management, contract administration and public outreach and meetings. He is the primary point of contact for VDOT and stakeholders. He will facilitate partnering amongst the team and make sure that appropriate and consistent communication is maintained between all parties. He will be responsible for meeting obligations and avoidance/resolution of disputes per the Contract. The DM, Design-Build Coordinator, CM and Safety Manager will all report directly to Jason.

- 21 years of experience in the heavy civil/ construction industry
- Experienced and successful manager of overall project design, construction, planning, scheduling, quality, safety, overall contract administration and procurement of resources
- DBPM for VDOT's $11 million Greenview Drive and $25 million Route 3 projects, which will be completed prior to the start of this contract

Brian Henschel, PE, CCM, PMP | *Quality Assurance Manager (QAM)* — WRA

Brian is responsible for the independent QA inspection and testing of all materials and work. He will verify that all work and materials, testing and sampling on the Project are performed in conformance with the contract requirements and the "approved for construction" plans and specifications. As QAM, Brian will develop the QA plan, manage the QA testing and sampling program, monitor the contractor's QC program, assure quality in meeting contract requirements, maintain project documentation and test reporting, review and certify payments to VDOT and communicate closely with VDOT on compliance results. He is a registered, licensed Professional Engineer (PE) in the Commonwealth of Virginia.

- More than 25 years of experience, which includes serving as a VDOT DB project manager on five DB projects
- Was a VDOT Area Construction Engineer responsible for over $200 million in construction and for supervising up to 25 inspection personnel
- Has completed a total of 13 DB projects, with 10 of those for VDOT.
- Currently oversees 45 inspectors and construction managers at WRA and has served as QAM on three projects with Branch

Randy Epperly, PE | *Design Manager (DM)* — HNTB

Randy, a registered, licensed PE in the Commonwealth of Virginia, will manage the design in conformance with the contract documents and will be responsible for coordinating the individual design disciplines. He will coordinate with the Construction Manager during construction to confirm field conditions meet design assumptions and reevaluate these assumptions if necessary. Other duties include establishing and overseeing the design QA/QC program, including review of design, working plans, shop drawings, specifications and constructability of the Project. He will also coordinate subconsultant activities and schedules.

- More than 46 years of experience designing roads and bridges throughout Virginia and West Virginia
- 10 years of experience as a DB design manager for projects totaling more than $220 million
- Design manager on the VDOT Route 58 Laurel Fork, Hillsville Bypass and Meadows of Dan Bypass projects with Branch, Schnabel and T&L
- Design and construction experience with acid-producing materials and impacted streams

Greg Suttle | *Construction Manager (CM)* — **Branch**

Greg will manage on-site construction, including Project Controls, QC Manager, superintendents and field staff, including scheduling, safety, environmental compliance, utilities and MOT. He will be assigned to the Project and be on site full time throughout construction. He will play a key role in conjunction with the Design-Build Coordinator and Design QA Manager in design constructability reviews, utility coordination, ROW and MOT. He will also work with HNTB and WSSI coordinating the design and construction forces with respect to environmental requirements. Along with his staff, Greg will focus on ensuring construction is performed safely and along with our QC Manager, that materials and work are in conformance with the approved plans/contract documents. He will coordinate with the DM during construction for the accurate and timely issuance and review of any RFIs and shop drawings, as well as field visits, preparation of as-builts and plan revisions.

- More than 28 years of experience managing construction, including QC activities
- VDOT Erosion and Sediment Control Contractor Certification (ESCCC), Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification
- DB experience as the CM on the $47 million 95 Express Lanes, $25 million Route 3 and $54 million Route 15 projects

Steve Conner, PE | *Lead Geotechnical Engineer* — **Schnabel**

Steve is responsible for the geotechnical design of the retaining walls, foundations, soil and rock cut and fill slopes, embankment materials and construction, ground improvement (as required), geotechnical instrumentation and pavement subgrade and structure. He will also review designs and be available to verify and modify designs, if necessary, based on field conditions and construction activities. His expertise includes understanding the potential impacts and challenges posed by acid-producing materials and will work with the Acid Producing Materials Specialist.

- More than 29 years of experience in geotechnical engineering; is familiar with geologic conditions in western Virginia
- Route 11/220/200A Access Management at I-81 Exit 150 and the Lexington Bridge Bundle VDOT projects
- Geotechnical engineering experience in karst terrain, and in mitigation of geotechnical challenges presented by subsurface conditions and acid-producing material

Tim Browning, PE | *Acid-Producing Materials Specialist* — **Artemis**

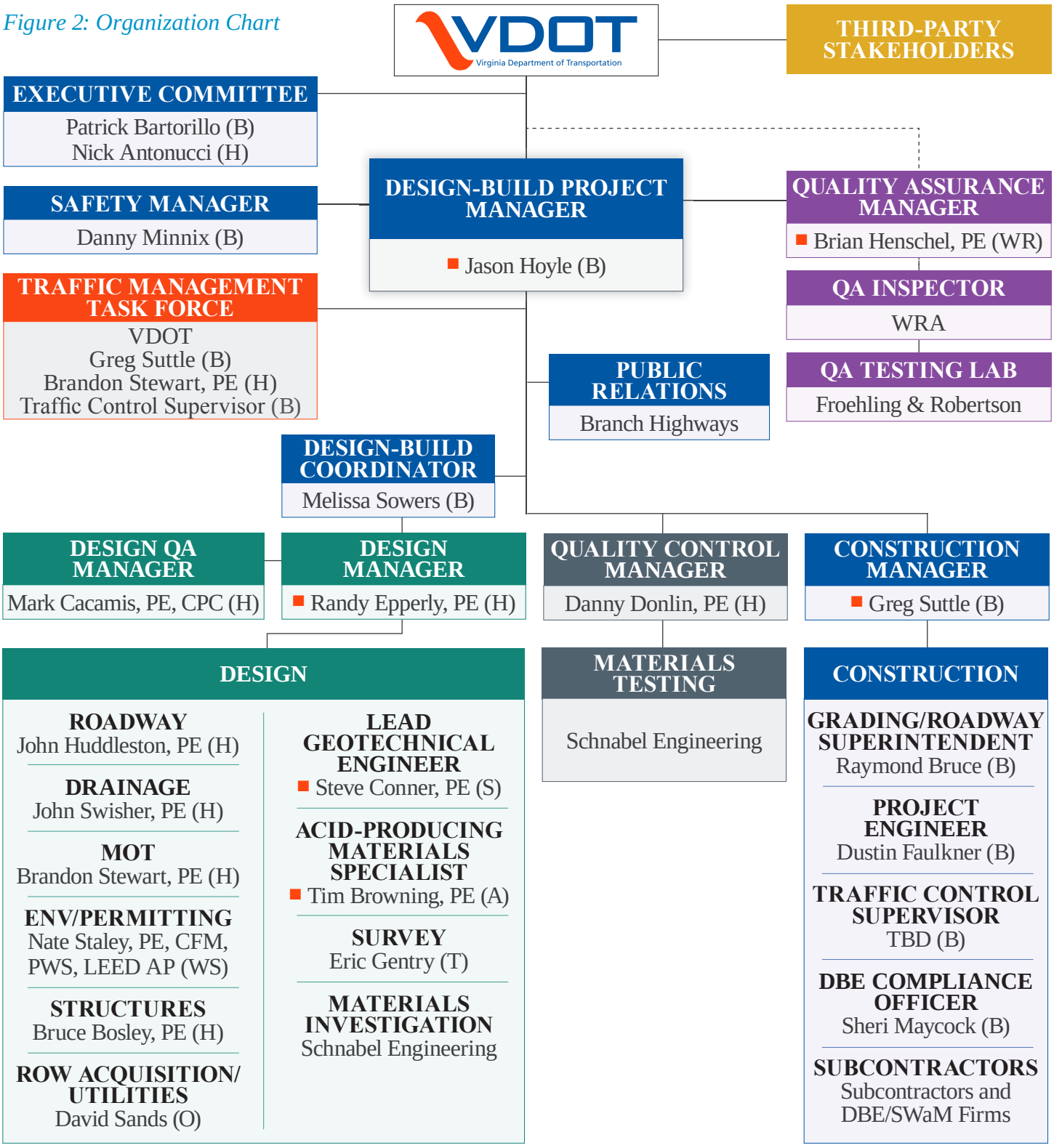
Tim, a registered, licensed PE in the Commonwealth of Virginia, will be responsible for the duties outlined in the Project's RFQ. He will develop a characterization plan to identify potential acid-producing material that may be disturbed during the Project. He will work closely with the DM and lead geotechnical engineer to develop a final design that minimizes disturbance to acid-producing material. Tim will also develop acid-producing material handling plans, including locations, construction monitoring plans, construction details, mitigation measures and identifying suitable disposal areas for these materials. During construction, he will be available for on-call site visits, on at least a monthly basis, and monitor field operations.

- More than 17 years of experience developing and reviewing plans to identify, manage and mitigate acid-producing materials during land disturbing activities in southwest Virginia, West Virginia and Kentucky
- Responsible charge engineer for Virginia DMLR during design and construction of acid discharge treatment facilities under its Abandoned Mine Lands program

3.3.2 Organizational Chart

Branch/HNTB is organized around a delivery-focused approach that is designed to integrate all members of the team to fully support VDOT in delivering innovative and cost-effective solutions. While the chain of command of all companies is shown in Figure 1, Page 3, the Project's lines of responsibility are shown on the organization chart in Figure 2, Page 6.

Figure 2: Organization Chart



LEGEND

Key Personnel (■)
Branch Highways, Inc. (B)
HNTB Corporation (H)
Artemis Consulting Services, LLC (A) (SWaM)
Froehling & Robertson, Inc. (F) (SWaM)
O. R. Colan Associates (O) (SWaM)
Schnabel Engineering, LLC (S)
Thompson & Litton, Inc. (T) (SWaM)
Whitman, Requardt & Associates, LLP (WR)
Wetland Studies and Solutions, Inc. (WS)
Reporting (————————)
Communication (----------)

Functional Relationships and Communication

DBPM Jason Hoyle will work directly with VDOT and serve as the single point of contact. **DM Randy Epperly, PE** will oversee all aspects of the design. Randy is supported by **Lead Geotechnical Engineer Steve Conner, PE** and **Acid-Producing Materials Specialist Tim Browning, PE**. As Jason manages the overall project, he will be supported by **CM Greg Suttle**.

The reporting structure shows a distinct separation between Construction QA and QC. This includes separation between QA and QC inspection and field/laboratory testing in accordance with the regulations outlined in the RFQ. **QAM Brian Henschel, PE, CCM, PMP** will lead the independent QA program.

Table 1 explains the roles and functional relationships of the additional personnel assigned to the organization chart.

Table 1: Functional Relationships and Experience of Additional Personnel

NAME/ROLE/YEARS EXP.	EXPERIENCE AND RESPONSIBILITIES
Danny Minnix (B) Safety Manager 20 Years	• Reports to the DBPM, ensures compliance with all applicable safety regulations and has sole responsibility of project-wide safety • Experience with large-scale heavy civil safety program development and management; is director of safety and risk at Branch
Melissa Sowers (B) Design-Build Coordinator 6 Years	• Reports to the DBPM, coordinates between design and construction teams, performs constructability reviews, manages design submittal schedule and assists with coordination between QAM and VDOT, as well as QCMs • Worked on the US Route 58 Hillsville Bypass and Laurel Fork projects
Raymond Bruce (B) Grading/Roadway Superintendent 40 Years	• Reports to the CM and is 100% dedicated to the Project • Served as Roadway Superintendent on all three sections of US Route 58
Dustin Faulkner (B) Project Engineer 3 Years	• Reports to the CM and will be responsible for project communication, such as RFIs, construction schedules and changes encountered on the Project • Worked on the US Route 58 Laurel Fork projects
Sheri Maycock (B) DBE Compliance Officer 24 years	• Reports to the CM and oversees day-to-day DBE compliance for the Project • Currently serves as the DBE/EEO Compliance Officer for Branch
Danny Donlin, Jr., PE (H) Quality Control Manager 19 Years	• Reports to the DBPM, verifies that all workmanship, materials, inspections, and testing are in compliance with contract requirements • Experience includes US Route 58 Hillsville Bypass and Meadows of Dan Bypass projects
Mark Cacamis, PE, CPC (H) Design QA Manager 33 Years	• Supports the DM with verification of the Design QC Plan • Was a VDOT State Construction/Contract Engineer and served as the Assistant District Administrator/District Construction Engineer in the Hampton Roads District
John Huddleston, PE (H) Roadway Engineer 18 Years	• Reports to the DM and is responsible for all aspects of the roadway design • Served as a roadway project manager on US Route 58 Hillsville Bypass and 495 Express Lanes projects
John Swisher, PE (H) Drainage Engineer 6 Years	• Reports to the DM and is responsible for developing all drainage plans • Was the drainage lead on the US Route 58 Laurel Fork project responsible for drainage design, including erosion and sediment control
Brandon Stewart, PE (H) MOT 14 Years	• Reports to the DM and is responsible for developing the MOT plans • Was responsible for MOT and construction sequencing on the US Route 58 Hillsville Bypass and 495 Express Lanes projects

Table 1: Functional Relationships and Experience of Additional Personnel

NAME/ROLE/YEARS EXP.	EXPERIENCE AND RESPONSIBILITIES
Nate Staley, PE, CFM, PWS (WS) Environmental Permitting 10 Years	• Reports to the DM and oversees the environmental permit procurement process, including any natural and cultural resource studies needed for permit applications, and – if needed – any compensation planning for impacts to wetlands
Bruce Bosley, PE (H) Structures 23 Years	• Reports to the DM and is responsible for developing structure design plans • Is a structures section manager and previously served on the US Route 58 Hillsville Bypass Project
David Sands (O) ROW/Utilities 20 Years	• Reports to the DM and is responsible for ROW acquisition and utility coordination • Extensive VDOT experience including Route 460 and Route 726 work
Eric Gentry (T) Survey 28 Years	• Reports to the DM and ensures necessary surveying services are provided and completed on time and within budget constraints.

Transparent communication, achieved through team integration, is required to improve efficiency and eliminate surprises. To facilitate integration throughout the Project's duration, Branch/HNTB will apply these proven processes and techniques:

- **Executive Committee** leadership that is engaged throughout the Project's successful completion
- Assignment of a **DB Coordinator** to facilitate communication on all levels
- Use of **design task force meetings** and **over-the-shoulder design reviews** (OTS) to involve VDOT and stakeholders
- Use of a **traffic management task force** to mitigate safety and maintenance of traffic risks
- **QC processes** throughout all Project phases, including establishing hold points and witness points
- **Environmental compliance hold point meetings** to verify that permit requirements are met
- **Safety management** program to maintain the highest levels of safety for our workers and travelers through the work zone
- **Selection of key subcontractors** whose core values and commitment match those of Branch/HNTB coupled with continuous communication

Executive Committee

Branch/HNTB has assembled an executive committee comprised of leaders from Branch and HNTB to reinforce our commitment to partnering with VDOT. Executive committee members **Patrick Bartorillo**, President of Branch and **Nick Antonucci, PE**, Vice President of HNTB, will meet with VDOT leadership to verify Branch/HNTB is delivering as promised. Issues will be proactively identified and addressed.

Benefits of the Executive Committee:
- ***Reinforces our commitment to partnering***
- ***Drives the culture of respect and teamwork***
- ***Provides rapid resolution of issues***
- ***Ensures appropriate resource allocation to facilitate on-time delivery***

Design-Build Coordinator

DB Coordinator Melissa Sowers serves in this role and will be critical to the integration of the team. She is ultimately the liaison between the multi-disciplined design and construction groups. Her responsibilities include providing the design team with oversight, as it relates to the constructability and efficiency of the design. She will also assist in eliminating potential field conflicts and tracking design progress.

Design Task Force Meetings and OTS Reviews

HNTB will work closely with Branch during the design phase to seamlessly deliver design plans and related documents. The task force process is a proven method that facilitates interactive participation in the design development process. Task force meetings provide opportunities for the Project's subject matter experts to coordinate all stages of design and address geotechnical, structures, roadway, drainage and MOT design components.

Branch/HNTB has successfully implemented this approach on previous DB projects to effectively manage accelerated schedules, allow timely owner and contractor input during the design development process and resolve issues. These task forces are an invaluable collaboration between the designer, contractor, owner and impacted third-party stakeholders. Each task force will concentrate on specific technical elements of the Project throughout design. Task forces generally follow the structure of the organizational chart and break down the project into manageable areas, assigning clear responsibilities of duties to key team members.

As shown in Figure 3, Branch/HNTB will proactively seek early and continuous involvement of VDOT and third-party stakeholders during all project phases. VDOT and third-party stakeholders, such as utility owners will be invited to participate in design task forces throughout design development.

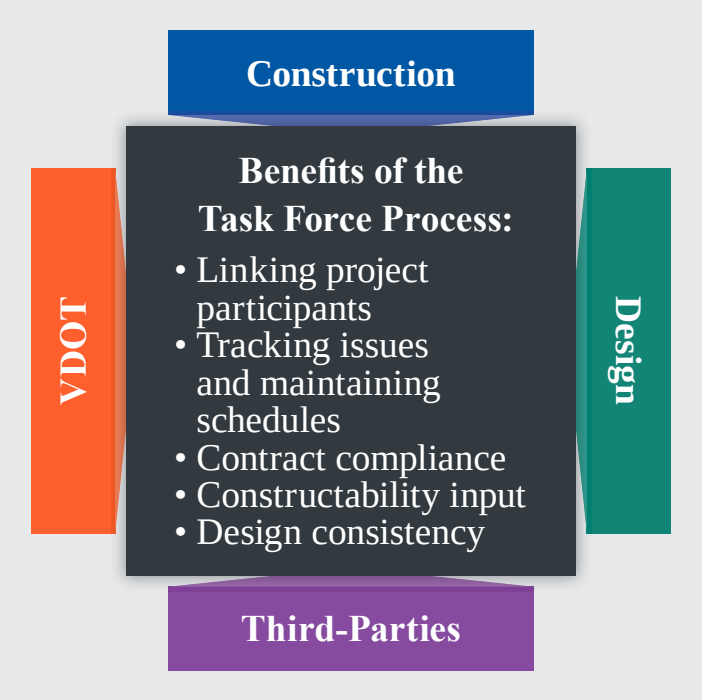


Figure 3: Benefits of the Task Force Process

Branch/HNTB will seek regular OTS reviews by VDOT representatives. During construction, VDOT and third-party stakeholder representatives will be invited to participate in weekly coordination meetings. Branch/HNTB is committed to partnering with VDOT to resolve issues in a timely manner. An issue resolution process will be established to resolve project issues at the lowest possible level while ensuring that no issue resides at any one level of authority for an extended period of time.

Traffic Management Task Force

While Branch/HNTB will establish multiple task forces, we have found that a task force dedicated to traffic management is an effective method to manage the risk. We demonstrate the importance of this focus by including this task force on our organization chart. This group will consist of Project staff, VDOT and stakeholders. It will be led by the Construction Manager and supported by the MOT Engineer and Roadway Superintendent. The task force will meet routinely, at least monthly to review the current MOT plan and determine if any changes need to be made to address concerns.

This task force will also review the construction schedule and determine if the MOT plan needs to be revised to address any concerns. These meetings will also aid in keeping VDOT and the stakeholders up-to-date on the progress of the Project and any upcoming changes in the traffic pattern.

Quality Control

Design QC: Branch/HNTB will manage our design quality process through the use of conformance checks, independent technical reviews and audits to verify our drawings and specifications are prepared in compliance with applicable criteria and contract requirements. Design QC, including checks, verifications and reviews by our structural and civil design leads and discipline leads will be verified by **Design QA Manager Mark Cacamis, PE, CCM, CPC**. Mark will be an integrated member of the design management team who works closely with the design manager and various discipline leads to verify that the review process is proceeding in accordance with the Quality Control Plan (QCP).

Construction QC: QC Manager Danny Donlin, Jr. will work with VDOT and has full authority to act as our agent to institute any and all actions necessary for successful implementation of the construction QCP. His sole responsibility is to make sure that the work is built to plans and specifications. He will manage the performance and documentation of all QC construction and materials testing. He will also administer, implement, monitor and as necessary, adjust the processes to provide compliance with the contract documents and resolve any discrepancies. Danny will facilitate preparatory meetings before the start of new activities and new subs on the Project. He will direct QC personnel on a daily basis to provide all necessary reports and testing/sampling data, including distribution of such reports to VDOT. QC checklists

will be used throughout this process and there will be a record of the tests to verify compliance with VDOT requirements for QA/QC on DB projects.

Materials Testing: Branch/HNTB will be responsible for internal QC testing, sampling and inspections. Schnabel will support Branch/HNTB for materials testing and provide technicians that are VDOT certified in the materials being tested. Additionally, Schnabel's labs are VDOT and AASHTO Materials Reference Laboratory certified.

Environmental Compliance Hold Point Meetings

Environmental compliance hold point meetings enforce our commitment to being a good steward of the environment and hold our team accountable to meeting permit requirements. These meetings will be conducted before construction begins in environmentally sensitive areas. Before entering these areas, the CM and Grading/Roadway Superintendent will meet with the construction work force, VDOT and appropriate agencies to review the details of the permit and to remind everyone of limitations established in the permit. A construction sequence and time line will be put together for everyone to review. Acid-Producing Materials Specialist Tim Browning will attend the hold point meetings to educate the team about handling and identification of acid-producing materials.

Safety Management

Branch is committed to **zero** accidents and has a current Experience Modification Rate of 0.71. Branch's safety team will be led by **Safety Manager Danny Minnix**, Branch's Safety Director. Danny will be involved during the planning process of the Project. This will allow risks to be identified before construction begins and will give the management team an opportunity to plan how each risk will be mitigated. During construction, monthly safety meetings will be held to review the previous month's work, discuss any safety concerns, incorporate changes and look ahead at the next month's activities. This process is proven to reinforce that appropriate focus on safety is being maintained.

Branch is committed to completing work safely, as evidenced by the following awards from the National Safety Council (NSC), Virginia Transportation Construction Alliance (VTCA) and American Road and Transportation Builders Association (ARTBA):

- ***NSC 2016 Occupational Excellence Achievement Award***
- ***NSC 2007, 2009, 2011, 2012, 2014 Excellence Achievement Award***
- ***NSC 2011 Perfect Record Award***
- ***VTCA 2009, 2011, 2012, 2014 Contractor Safety Award***
- ***VTCA 2010 Honorable Mention Award***
- ***ARTBA Category Winner 500,001 to 800,000: Branch Highways, Inc***

Subconsultants and Subcontractor Management

HNTB will manage each subconsultant through continuous communication, including regularly scheduled conference calls or meetings. This communication will identify problems or issues early that could affect timely completion of the Project. Communication and coordination with VDOT and Branch/HNTB during the design phase, along with constructability reviews, will minimize disruptions during construction.

During construction, all subcontractors will be held to the same level of accountability as those comprising the Branch/HNTB team. They will be required to comply with the same safety, quality and environmental compliance requirements as Branch/HNTB employees.

CM Greg Suttle will monitor their safety practices, quality verification, material procurement and schedule according to Branch/HNTB's standard operating procedures. Additionally, he will facilitate open lines of communication with each subcontractor are maintained and encourage their participation in on-site safety and quality programs and schedule and productivity meetings.

Section 3.4

EXPERIENCE OF OFFEROR'S TEAM

3.4 Experience of Offeror's Team

Branch/HNTB was formed to leverage and integrate the unique strengths of each team member and to deliver the best-value, quality solution to VDOT. Branch and HNTB provide significant regional DB experience, including projects similar in scope and magnitude.

Branch is a regional leader in the execution of highway construction projects. Branch has a respected resume full of DB experience, having performed more than $425 million worth of DB work, all of which has resulted in the client's satisfaction. HNTB is nationally recognized as an industry leader in planning, design and construction management of highway and bridge projects. HNTB has served as lead designer on nearly $14 billion of alternative delivery projects in the past 10 years.

The six projects summarized in Table 2, and provided in full in Appendix 3.4.1 (a) and 3.4.1 (b), demonstrate our qualifications and experience with performing the work described in the RFQ.

Branch/HNTB was formed in 2003 to design and construct the first DB/PPTA project for the Salem District; US Route 58 Meadows of Dan Bypass. Since then, two other projects have been completed by this team in the Salem District. Branch/HNTB brings more than 13 years of working together to the Project

Table 2: Work History

BRANCH HIGHWAYS WORK HISTORY	
US Route 58 Hillsville Bypass *(Branch/HNTB)*	• Constructed nearly 4 miles of new roadway; varying soil conditions necessitated use of various treatments; required environmental permitting, complex construction sequencing, and connections to existing roadways • Melissa Sowers (DB Coordinator) and Raymond Bruce (Roadway Superintendent) worked together on this project with HNTB
US Route 58 Meadows of Dan Bypass *(Branch/HNTB)*	• DB widening improvements project in the Salem District with similar scope in a rural setting • Provided earthwork management for differing subsurface conditions, managed construction of structures and environmental mitigation while minimizing impacts to the traveling public
Route 15	• Similar scope with rural setting, focus on MOT, and widening improvements that mirrors that of the Project • Sensitivity to safety and access of adjacent property owners with a focus on maintaining unimpeded access during the phased construction process • Careful coordination and planning to prevent increasing the risk of limited sight distance and quick stopping distances for commuters during construction
HNTB WORK HISTORY	
US Route 58 Laurel Fork *(Branch/HNTB)*	• Completed roadway design, drainage engineering, construction inspection, permit monitoring, utility administration, traffic sequencing and construction phasing, and risk and change proposal costs for 8.2 miles of new alignment
95 Express Lanes	• Led planning, conceptual design, final design, and post design services for this 29-mile project that was finished under a very aggressive construction schedule • Designed MOT, drainage improvements, foundations work and new barrier placement to allow phasing the project safely for the traveling public
495 Express Lanes	• Led conceptual design, final design, and post design services; value engineering of substructure foundation designs avoided quality issues and delays associated with shaft construction, and reduced cost • Responsible for inspection and materials testing for all 58 bridges, 14 miles of roadway and thousands of associated signs, toll structures and drainage structures

Section 3.5

PROJECT RISKS

3.5 Project Risks

3.5.1 Three Unique Project Risks

Branch/HNTB has identified MOT, acid-producing materials and permitting as the top three project risks. By leveraging our local expertise and contacts, experienced key personnel and risk management experience on similar work, we are positioned to successfully mitigate potential issues associated with these risks.

Risk 1: Maintenance of Traffic

Why it is a Risk

Traffic along Route 220 needs to be maintained during construction while keeping the traveling public and construction workforce safe. The Project's MOT plan will address these factors: access to adjacent properties; manageable sight distances; safe stopping distances; temporary traffic shifts; emergency situations; increased traffic flow due to detours on I-64 or I-81; and maintaining a safe flow of traffic during construction operations.

Impacts of Risk 1

Access to Adjacent Properties: Proposed improvements will cause disruption to the homes and businesses with direct access to Route 220. Each access point will need to be reviewed and provisions made to keep their access open and safe.

Managing Sight Distance: Construction equipment will be parked along Route 220. Operations and equipment storage and placement will need to be considered to allow the traveling public to maintain a safe sight distance.

Safe Stopping Distance: Traffic shifts needed to build the work could change the stopping point for vehicles approaching Route 220. If this is not clearly defined, the potential exists for a traveler to pull into oncoming traffic or into a work zone.

Temporary Traffic Shifts: The existing Route 220 alignment does not meet current design standards. For improved safety, changes to the vertical and horizontal alignments are necessary. Temporary traffic shifts will be required to move traffic out of the work zone.

Incident Management: Delays could be experienced by emergency vehicles that need to travel through the work zone if proper coordination is not in place. Unsafe situations and traffic congestion typically occurs in the case of an accident or vehicle breakdown, so it is critical to maintain access.

Detours on I-64 and I-81: Traffic will potentially need to be diverted to Route 220 in case of an accident on I-64 or I-81, increasing the volume of traffic. Delays are likely if a contingency plan is not in place to address construction activities during such event.

Mitigation Strategy

Access to Adjacent Properties: During construction, it will be critical to evaluate property access from a safe and traversable standpoint. There is potential to alter the access point itself or route to that point. Alignments and sight distances will be evaluated and coordinated within the existing and proposed ROW to make sure safe access is in place. The Traffic Management Task Force (TMTF) will lead the team in revising access. Alternate access will be identified, as needed prior to each stage of construction and communicated to the affected properties.

Managing Site Distance: Sight distance triangles will be identified and flagged in the field to provide a means for controlling clear sight distance. When equipment or work occurs in these areas, additional measures, such as advance intersection warning signs, will be established to assist vehicles entering onto Route 220. Proper signing and sight distances will be implemented to properly warn drivers of access points and entering vehicles. If needed, flaggers will be used to direct equipment or the traveling public.

Safe Stopping Distance: The TMTF will monitor all stopping distances throughout construction to make sure adequate advanced warning measures are in place. Advance signage will be installed on all access roads leading to and along Route 220. This will warn drivers of revised access points, changes in alignment and reduced speed requirements for particular areas. The warnings will be delivered via signage, roadway striping or message boards to alert travelers to changes in stopping points.

Temporary Traffic Shifts: Temporary traffic shifts during various phases of construction will be evaluated for proper design speed and sight distances. Every effort will be made to continue to use the existing roadway whenever possible, including the use of sheet piling walls as shown in Figure 4. These shifts will be signed for acceptable speed limits and sight triangles that are field identified for safe operation. All shifts will be properly signed per VDOT signing standards for maintaining traffic and additional signs added, as needed to maintain a safe work zone for the traveling public and workers. The number of traffic shifts will be minimized through design and constructability reviews.

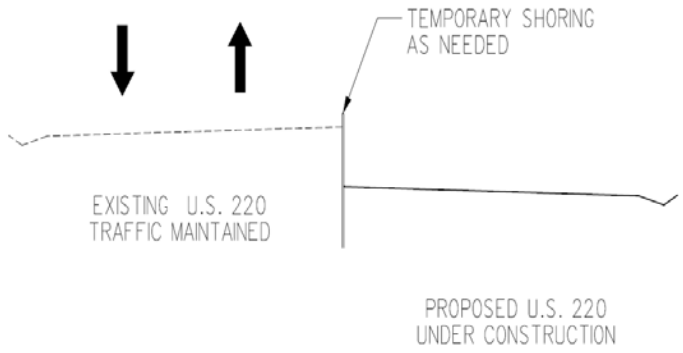


Figure 4: Temporary Traffic Shift Mitigation Option

Incident Management: Construction personnel will be trained to handle emergency traffic. Branch/HNTB will maintain route designation signage and provide a temporary typical section width that will allow emergency vehicles to maneuver around the traffic queue. Emergency services will be notified of any adjustments to traffic flow or patterns. Pull-off areas will be established at designated locations throughout each stage of the work zone. Towing services and emergency services will be coordinated and pre-staged as appropriate. This coordination will be documented in the Traffic Management Plan (TMP), which will also include measures for public notification. The TMP will include the recommendations identified by the TMTF that has been established to mitigate risk associated with incident management. Branch will designate a Traffic Control Supervisor to manage all traffic control, work with stakeholders and coordinate with state police and local emergency responders.

Detours on I-64 and I-81: If a detour from I-64 or I-81 is in place along Route 220, workers will maintain clear roadway from construction traffic or any operation that may stop traffic. Any construction operation that would require traffic to stop along Route 220 will be suspended until the traffic returns to normal volumes. Tow vehicles will be in place at staging locations identified in the TMP to remove disabled vehicles blocking the detour route. The Traffic Control Supervisor will work with highway patrol and local officials to monitor the increase in traffic. If necessary, Branch/HNTB will suspend allconstruction operations until traffic volumes resume to normal.

VDOT's Role

Prior to construction, VDOT will provide input and coordination as a stakeholder in the TMTF and during the development of the TMP. During construction, Branch/HNTB will coordinate with VDOT to facilitate the public outreach components of the TMP.

Risk 2: Acid-Producing Materials

Why it is a Risk

This section of Route 220 is known to contain areas of acid-producing materials. When acid-producing materials are exposed to air and water, a natural chemical reaction occurs. This reaction produces sulfuric acid and mobilizes metal ions, including iron, manganese, aluminum and occasionally arsenic, that are all harmful to the environment.

Stormwater runoff from areas with exposed acid-producing materials can have a significant impact on nearby streams. When stormwater containing sulfuric acid enters a stream, the pH level of the receiving water decreases. The metals resulting from the acid-producing materials have an additive effect on the downstream environment. Under low pH conditions, these metals remain aqueous (dissolved), but as the acidic runoff meets other streams, the slightly higher pH causes a precipitate to form, which can suffocate the aquatic community.

In addition to stream impacts, the integrity of the road system could also be put at risk. Acid-producing materials can deteriorate construction materials, causing pipe culverts to corrode, reacting with calcareous aggregates and making the paving structure weak, and eventually causing failure.

Impacts of Risk 2

Environmental Concerns: Most freshwater lakes, ponds and streams have a natural pH in the range of 6 to 8. The introduction of sulfuric acid causes harmful ecological effects when the pH falls below 6. As the pH approaches 5, plankton and mosses typically begin to invade and populations of fish disappear. Below a pH of 5, other fish populations begin to disappear and the bottom of the water body is covered with non-decayed material with moss dominating the shore line. Below a pH of 4.5, the water will become devoid of fish. The most serious chronic effect of lowering the pH is the interference with the reproductive cycles of fish. Calcium levels in female fish may be lowered to the point where eggs cannot be produced.

Along with the effects of a low pH, the increase in metal content is also a concern. An increase in metals can kill fish by stimulating an excessive mucus formation that causes their gills to become clogged, which eventually leads to asphyxiation. Metals can also cause chronic stress and lead to lower body weight and a reduced size. This typically results in fish not being able to compete for food and habitat.

Wells are predominately used to supply water along the corridor. Exposing groundwater sources to low pH and metal laden runoff will diminish the water quality. If these conditions persist, the well could be compromised.

Deterioration of Construction Materials: The impact on materials, especially concrete, from exposure to sulfuric acid can be devastating. Portland cement concrete does not have good resistance to acids. The acids attack concrete by dissolving both hydrated and non-hydrated cement compounds, as well as calcareous aggregate. In most cases, the chemical reaction forms water-soluble calcium compounds, which are then leached away. This deterioration could cause retaining walls, box culverts, concrete driveways and reinforced concrete pipe to fail.

Construction Delays: Time will be required during the preliminary engineering phase of the project to identify any acid-producing materials. If acid-producing materials are found during construction, additional steps will be introduced to handle the material and remediation measures will require additional time.

Mitigation Strategy

Acid-Producing Materials Specialist Tim Browning will lead the efforts on behalf of Branch/HNTB to mitigate this risk. From his prior experience managing all aspects of large land-disturbing projects as a consultant and regulating the surface coal mining industry in southwest Virginia as a state employee, Tim has a working knowledge of design principles, environmental permitting and construction, in addition to extensive experience with state and federal regulations to deliver practical solutions to this issue.

Figure 5: Branch mitigated acid-producing rock on the 95 Express Lanes Project with the use of agricultural lime

During the preliminary engineering phase, borings and lab work will be performed to determine if the proposed alignment will encounter any acid-producing materials. If materials are found, Branch/HNTB will consider revising the horizontal and vertical alignment to avoid the material to the maximum extent practicable. If the design cannot be revised to avoid the material or if the material is found during construction, then the following design and construction measures will be taken.

Design Priorities:

- Use preliminary geotechnical investigation to avoid acid-producing material.
- Evaluate adjacent streams before construction begins to determine pre-construction pH levels, then monitor stormwater runoff and streams for changes. If changes are found, measures will be taken to normalize pH levels.
- Consider using a different construction material, such as coating on RCP or concrete mix additive if concrete construction materials are going to be installed in areas with acid-producing materials.
- During construction, we will isolate materials from the acid-producing materials as a buffer or use screenings to isolate storm drain pipe.
- Develop a handling plan that provides clear instruction for construction personnel and addresses issues, such as minimizing time and area of exposure to weather, construction of liners, monitoring and use of disposal areas during construction.

Construction Priorities:

- During excavation operations, identify the acid-producing material and encapsulate.
- Designate disposal areas for acid-producing material and generate a plan for containment.
- Divert water runoff during construction to avoid any areas of acid-producing materials; construct basin(s) to contain any stormwater runoff in the area of acid-producing materials, if necessary.
- Consider using a geotextile or liner to contain the material.
- Follow the construction monitoring plan developed during the design process; this includes educating construction personnel about characteristics of acid-producing materials to allow for field identification of material requiring consultation with design team.
- Use limestone materials near designated disposal areas to provide an alkaline additive that reduces the impact of sulfuric acid produced by the materials.

VDOT's Role

HNTB, Schnabel and Artemis will evaluate all preliminary engineering information to develop design solutions. Branch/HNTB will keep VDOT informed and discuss the proposed solutions. VDOT will be involved during construction to discuss the mitigation options.

Risk 3: Permitting

Why it is a Risk

Branch/HNTB will be required to obtain the 404 permit from USACE and the 401 permit from VA Department of Environmental Quality. The environmental permits will potentially have restrictions concerning seasonal limitations, mitigation sites and moratoriums, which could impact the construction schedule. Time to prepare and submit the required documents will be accounted for in the schedule. Branch/HNTB also anticipates the Project could involve additional coordination with the US Fish and Wildlife Service (USFWS) due to several threatened or endangered species in the area.

Figure 6: Branch/HNTB completed the Pine Run stream mitigation on the Route 58 Hillsville Bypass project.

Impacts of Risk 3

Schedule Impacts: Additional time will be required to obtain the permits and complete mitigation, if necessary. The permit may require time restrictions or seasonal limitations if work is in or around streams or wetlands.

Threatened or Endangered Species: The Indiana Bat was listed as endangered in 1967. The Northern Long-Eared bat was listed as a federal threatened species with the Interim 4(d) Rule on May 4, 2015. The Gray bat was added to the US List of Endangered and Threatened Wildlife and Plants in 1976. There is potential that any of these species of bats could be located in trees in the Project area, or even under the deck of the existing bridges, which impacts the schedule for demolition of the existing structures.

Section 7 consultation may be required between the Federal Highway Administration (FHWA) and USFWS. This risk is critical because the Project's development time could be subjected to a regulatory prescribed time frame of 135 days for USFWS to issue their Biological Opinion, with additional time to prepare the biological assessment to support the Project's design. This would need to be completed prior to a NEPA reevaluation and water quality permit issuance.

Mitigation Strategy

Schedule Impacts: HNTB will design the Project to minimize environmental and schedule impacts. If a shift in alignment is needed, the option of using a wall or change in slope to eliminate an impact will be examined. The planning and education design and preconstruction will effectively minimize schedule impacts.

Threatened or Endangered Species: Branch/HNTB will investigate to confirm the Project will have no adverse effects on threatened or endangered species. Per the FHWA/USFWS Programmatic Agreement, any tree removals proposed will adhere to a restriction from April 15 through September 15 of each year.

Branch/HNTB has the option of using exclusion devices, such as noise machines or netting prior to April and leaving them in place through May, to discourage bats from resting on structures. If work must be performed on any structure between April 1 and August 15, a visual inspection will be performed to check for evidence of bat activity, prior to doing the work. If no evidence of bat activity is documented, photos of potential habitat will be provided to obtain a determination of whether or not they are a protected species.

VDOT's Role

Branch/HNTB will request that VDOT provides existing documentation of the clearances used to secure the reevaluation of the existing EIS. As on many projects, VDOT will be asked to provide EQ 103, EQ 200 and EQ 201 acceptance documentation. VDOT could also be required to participate in agency negotiations with the FHWA and the appropriate resource agencies for Cultural Resources and threatened and endangered species.

Branch/HNTB will have Environmental Compliance Hold Point Meetings to educate construction personnel, as well as VDOT employees and representatives from the permitting agency. These meetings will review the purpose of the permit, review prescribed construction techniques and inform everyone working in the sensitive area of any restrictions.

Appendix 3.1.2

SOQ CHECKLIST

ATTACHMENT 3.1.2

Project Nos.: 0220-011-786 & 022-011-788, Contract ID#: C00105543DB88
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

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

ATTACHMENT 3.1.2

Project Nos.: 0220-011-786 & 022-011-788, Contract ID#: C00105543DB88
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
				3.2.9

SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	Appendix 3.2.10
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix 3.2.10.1
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix 3.2.10.2
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix 3.2.10.3
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	N/A
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	Page 1
Offeror's Team Structure				Pages 2-5
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Pages 4-5
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix

ATTACHMENT 3.1.2

Project Nos.: 0220-011-786 & 022-011-788, Contract ID#: C00105543DB88
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
				3.3.1
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix 3.3.1
Key Personnel Resume – Lead Geotechnical Engineer	Attachment 3.3.1	Section 3.3.1.5	no	Appendix 3.3.1
Key Personnel Resume – Acid-Producing Materials Specialist	Attachment 3.3.1	Section 3.3.1.6	no	Appendix 3.3.1
Organizational chart	NA	Section 3.3.2	yes	Page 6
Organizational chart narrative	NA	Section 3.3.2	yes	Pages 7-10
Experience of Offeror's Team				Page 11
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix 3.4.1 (a)
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix 3.4.1 (b)
Project Risk				Pages 12-15
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	Pages 12-15

Appendix 2.10

FORM C-78-RFQ

Form C-78-RFQ

ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C00105543DB88

PROJECT NO.: 0220-011-786 & 0220-011-786

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

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

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

1. Cover letter of RFQ – April 25, 2016 (Date)
2. Cover letter of _____ (Date)
3. Cover letter of _____ (Date)

_____ SIGNATURE

5-11-16 DATE

Patrick K. Bartorillo PRINTED NAME

President TITLE

Appendix 3.2.6

AFFILIATED SUBSIDIARY COMPANIES

ATTACHMENT 3.2.6

State Project Nos. 0220-011-786 & 0220-011-788, Contract ID#: C00105543DB88

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.

☐ **The Offeror does not have any affiliated or subsidiary companies.**
☒ **Affiliated and/ or subsidiary companies of the Offeror are listed below.**

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Affiliate (Parent Company to Branch Highways, Inc.)	The Branch Group, Inc.	P.O. Box 40004, Roanoke, Virginia 24022
Affiliate	Branch and Associates, Inc.	P.O. Box 40051, Roanoke, Virginia 24022
Affiliate	G.J. Hopkins, Inc.	P.O. Box 12467, Roanoke, Virginia 24025
Affiliate	E.V. Williams, Inc.	925 South Military Hwy, Virginia Beach, Virginia 23464

Appendix 3.2.7

DEBARMENT FORMS

ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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
[signature]	5-27-16	President

Branch Highways, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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.

T.O. 5/25/16

Signature Date

Vice President

Title

HNTB Corporation

Name of Firm

ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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.

Brian Herrell 5/25/2016 Vice President

Signature Date Title

Whitman, Requardt & Associates, LLP

Name of Firm

ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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	06/03/2016 Date	BRANCH MANAGER Title

PROEHLING & ROBERTSON, INC.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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
	5/24/16	Principal

Schnabel Engineering, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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 05/27/2016 Date — **President** Title

Artemis Consulting Services, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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

Signature	May 31, 2016 Date	Chief Operating Officer Title

O. R. Colan Associates, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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.

	May 25, 2016	Executive Vice President
Signature	Date	Title

Thompson & Litton, Inc.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project Nos.: 0220-011-786 & 0220-011-788
Contract ID: C00105543DB88

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 form.

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
[signature]	6.3.16	Operations Manager

Wetland Studies and Solutions, Inc.
Name of Firm

Appendix 3.2.8

VDOT PREQUALIFICATION EVIDENCE

COMMONWEALTH OF VIRGINIA

VDOT Virginia Department of Transportation

CERTIFICATE OF QUALIFICATION

BRANCH HIGHWAYS, 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 29, 2016

This Rating and Classification will Expire: February 28, 2017

Suzanne FR Lucas, State Prequalification Officer

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.

Appendix 3.2.9

EVIDENCE OF OBTAINING BONDING

10 Franklin Road, SE
Suite 550
Roanoke, VA 24011
Tel (540) 343-8071
Fax (540) 345-2958

Employee Owned
SCOTT
Benefit Services

Charlotte
Greensboro
Knoxville
Lynchburg
Nashville
Raleigh
Richmond

June 8, 2016

Mr. Joseph A. Clarke, PE, DBIA
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Re: **Branch Highways, Inc.**
A Design-Build Project
Route 220 Corridor Safety Improvements
From: 0.129 mile south of Route 43 (Narrow Passage Road)
To: 0.331 mile north of Route 696 (Buhrman Rd.)
Botetourt County, Virginia
State Project No.: 0220-011-786 and 0220-011-788
Federal Project No.: NH-5128(326) and STP-5128(340)
Contract ID Number: C00105543DB88

Dear Mr. Clarke:

The Hartford, through its operating entities, has issued surety bonds to Branch Highways, 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 Highways, Inc. has been excellent, and we highly recommend them to you.

As surety for Branch Highways, Inc., The Hartford will favorably consider providing a 100% Performance Bond and a 100% Labor and Materials Payment Bond for the referenced project in the estimated project amount of $48,000,000 and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, provided a contract is awarded to, and executed by Branch Highways, Inc.

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

The Hartford expressly reserves the right to review the terms and conditions of the contract, contract amount and bond form, evaluate pertinent underwriting data, and verify the adequacy of project financing prior to the issuance of bonds for the referenced project.

Branch Highways, 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.

This letter will expire one hundred and eighty (180) days from the above date.

Sincerely,

Theresa S. Stump, Attorney-In-Fact

cc: Branch Highways, Inc.
Hartford Fire Insurance Company

POWER OF ATTORNEY

Direct Inquiries/Claims to:
THE HARTFORD
Bond T-4
One Hartford Plaza
Hartford, Connecticut 06155
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**

- [X] **Hartford Fire Insurance Company**, a corporation duly organized under the laws of the State of Connecticut
- [X] **Hartford Casualty Insurance Company**, a corporation duly organized under the laws of the State of Indiana
- [X] **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:***

Tracy L. Carlile, Chris James, Christi Horn of Franklin TN, Robert M. Coon, Susan F. Westbrook, Linda P. Greenway of Greensboro NC, Windy Lovelady of Raleigh NC, Latimer Williams, Tambri Doby of Charlotte NC, E. Bruce Wilsie, Theresa S. Stump, Deanna W. Sparks, Sherrie B. Denison, Matthew D. Kerr III, Vickie H. Bibee, Bethany Murphy of Roanoke VA, R. Hutcheson Mauck Jr., Mike Philhower, Stacey W. Hall, Nancy L. Adams, James J. Roberts III of Richmond VA, William B. San Soucie, Joanna M. Carson, Lindsey M. DeJarnette, Stephen B. Dolin, Cary A. McFadden, Cara Brown of Lynchburg 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 10/1/98, 9/19/00, 7/21/03, 1/22/04, 3/1/07, 8/1/09 or 8/1/12 the Companies have caused these presents to be signed by its 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, Assistant Secretary

Gary W. Stumper, Vice President

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss. Hartford

On this fifteenth day of March, 2013, before me personally came Gary W. Stumper, to me known, who being by me duly sworn, did depose and say; that (s)he resides in the County of Hartford, State of Connecticut; that (s)he is the Vice President of the Companies the corporations described in and which executed the above instrument; that (s)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 (s)he signed his/her name thereto by like authority.

Kathleen T. Maynard
Notary Public
My Commission Expires July 31, 2016

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 June 8, 2016

Signed and sealed at the City of Hartford.

Kevin Heckman, Assistant Vice President

Appendix 3.2.10

SCC & DPOR DOCUMENTATION

ATTACHMENT 3.2.10

State Project Nos. 0220-011-786 & 0220-011-788, Contract ID#: C00105543DB88

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.

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Branch Highways, Inc.	0295618-3	Incorporated	Active/ Good Standing	PO Box 40004 Roanoke, VA 24022-0004	Class A Contractor	2701029434	03/31/2017
HNTB Corporation	F1127234	Foreign Corporation	Active	PO Box 412197 Kansas City, MO 64141	ENG	0411000743	02/28/2018
HNTB Corporation	F1127234	Foreign Corporation	Active	PO Box 412197 Kansas City, MO 64141	ENG	0411000658	02/28/2018
Whitman, Requardt & Associates, LLP	K000382-4	Limited Liability Partnership	Active	1705 Enterprise Drive, Suite 100 Lynchburg, VA 24502	ENG	0411000774	02/28/2018
Whitman, Requardt & Associates, LLP	K000382-4	Limited Liability Partnership	Active	801 South Caroline Street Baltimore, MD 21231	ENG, LS, LA, ARC	0407001676	12/31/2017
Froehling & Robertson, Inc.	0027211-2	Incorporated	Active/ Good Standing	3015 Dumbarton Rd. Richmond, VA 23228	ENG	0407000098	12/31/2017
Froehling & Robertson, Inc.	0027211-2	Incorporated	Active/ Good Standing	1734 Seibel Dr., NE Roanoke, VA 24012	ENG	0411000053	02/28/2018

ATTACHMENT 3.2.10

State Project Nos. 0220-011-786 & 0220-011-788, Contract ID#: C00105543DB88

SCC and DPOR Information

Schnabel Engineering, LLC	S0889123	Limited Liability Company	Active/ Good Standing	1901 South Main St. Suite 11 Blacksburg, VA 24060	ENG	0411000323	02/28/2018
Artemis Consulting Services, LLC	S5440989	Limited Liability Company	Active/ Good Standing	PO Box 1085 Abingdon, VA 24212	ENG	0407006697	12/31/2017
O. R. Colan Associates, LLC	T0309270	Foreign LLC	Active	7005 Shannon Willow Road, Ste. 100 Charlotte, NC 28226	Real Estate Appraisal Board	4008 001545	07/31/2016
Thompson & Litton, Inc.	0131411-1	S Corporation	Active/ Good Standing	726 Auburn Ave. Radford, VA 24141	ARC, ENG, LS	0411000211	02/28/2018
Wetland Studies and Solutions, Inc.	0382622-9	Incorporated	Active/ Good Standing	5300 Wellington Branch Drive, Suite 100, Gainesville, VA, 20155	LS, LA, ENG	0407003355	12/31/2017

ATTACHMENT 3.2.10

State Project Nos. 0220-011-786 & 0220-011-788, Contract ID#: C00105543DB88

SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	**Individual's Name**	**Office Location Where Professional Services will be Provided (City/State)**	**Individual's DPOR Address**	**DPOR Type**	**DPOR Registration Number**	**DPOR Expiration Date**
Whitman, Requardt & Associates, LLP	Brian A. Henschel	Lynchburg, VA	103 Carol Court, Forest, VA 24551	Professional Engineer	0402-035154	01/31/2017
HNTB Corporation	Randy Epperly	Scott Depot, WV	400 Kelly Ave, Oak Hill, WV 25901	Professional Engineer	0402042230	02/28/2018
Schnabel Engineering, LLC	Steven Conner	Blacksburg, VA	4106 Gedeney Park Dr. Blacksburg, VA 24060	Professional Engineer	0402018709	7/31/2016
Artemis Consulting Services, LLC	Timothy Browning	Bristol, VA	P.O. Box 1085 Abingdon, VA 24212	Professional Engineer	0402037701	12/31/2016

Appendix 3.2.10.1

SCC DOCUMENTATION

Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, November 25, 1986

This is to Certify that the certificate of incorporation of

BRANCH HIGHWAYS, 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 the laws of the State applicable to the corporation and its business.

STATE CORPORATION COMMISSION VIRGINIA SIC SEMPER TYRANNIS 1903

State Corporation Commission

George H. Burruss, Jr.

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 BRANCH HIGHWAYS, 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 Com monwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
June 10, 2014

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1406105725

Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL FOR CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office website.

Commonwealth of Virginia
State Corporation Commission

Virginia.gov

05/06/16
CISM0180 CORPORATE DATA INQUIRY 13:36:37

CORP ID: 0295618 - 3 STATUS: 00 ACTIVE STATUS DATE: 11/25/86
CORP NAME: BRANCH HIGHWAYS, INC.

DATE OF CERTIFICATE: 11/25/1986 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: MON NO: MON STATUS: MONITOR DTE:
R/A NAME: MELANIE F WHEELER

STREET: 442 RUTHERFORD AVE NE AR RTN MAIL:

CITY: ROANOKE STATE : VA ZIP: 24016-0000
R/A STATUS: 2 OFFICER EFF. DATE: 01/11/08 LOC : 217
ACCEPTED AR#: 215 17 2182 DATE: 11/16/15 ROANOKE CITY
CURRENT AR#: 215 17 2182 DATE: 11/16/15 STATUS: A ASSESSMENT INDICATOR: 0

YEAR	FEES	PENALTY	INTEREST	TAXES	BALANCE	TOTAL SHARES
15	100.00					5,000

(Screen Id:/Corp_Data_Inquiry)

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That HNTB Corporation, a corporation incorporated under the law of Delaware, 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 December 23, 1992; 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 3, 2014

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1409035533

Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL FOR CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office website.

Commonwealth of Virginia
State Corporation Commission

Virginia.gov

05/31/16
16:06:40

CISM0180 CORPORATE DATA INQUIRY

CORP ID: F112723 - 4 STATUS: 00 ACTIVE STATUS DATE: 12/23/92
CORP NAME: HNTB Corporation

DATE OF CERTIFICATE: 12/23/1992 PERIOD OF DURATION: INDUSTRY CODE: 73
STATE OF INCORPORATION: DE DELAWARE STOCK INDICATOR: S STOCK
MERGER IND: S SURVIVOR CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: 2000.00 MON NO: MON STATUS: MONITOR DTE:
R/A NAME: NATIONAL CORPORATE RESEARCH, LTD.

STREET: 250 BROWNS HILL COURT AR RTN MAIL:

CITY: MIDLOTHIAN STATE : VA ZIP: 23114-0000
R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 05/09/12 LOC : 120
ACCEPTED AR#: 215 18 1870 DATE: 12/08/15 CHESTERFIELD CO
CURRENT AR#: 215 18 1870 DATE: 12/08/15 STATUS: A ASSESSMENT INDICATOR: 0

YEAR	FEES	PENALTY	INTEREST	TAXES	BALANCE	TOTAL SHARES
15	130.00					10,000

(Screen Id:/Corp_Data_Inquiry)

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

On August 10, 2000, a statement of registration as a foreign limited liability partnership was filed in the Clerk's Office of the Commission by Whitman, Requardt & Associates, LLP, a Maryland registered limited liability partnership.

As of the date below, this statement of registration is in effect.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
July 15, 2015

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CIS0357

Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, August 10, 2000

This is to Certify that the statement of registration of

Whitman, Requardt & Associates, LLP

a limited liability partnership registered under the laws of MARYLAND; was this day admitted to record in this office and that the partnership is registered to transact business in Virginia as a foreign Registered Limited Liability Partnership, subject to all laws applicable to the partnership and its business.

State Corporation Commission
Attest:

Joel H. Peck

Clerk of the Commission

CIS0436

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

Office of the Clerk

June 19, 2015

CT CORPORATION SYSTEM
4701 COX ROAD, SUITE 285
GLEN ALLEN, VA 23060

RECEIPT

RE: WHITMAN, REQUARDT & ASSOCIATES, LLP

ID: K000382 - 4

DCN: 15-06-19-0574

Dear Customer:

This is your receipt for $50.00 to cover the fee for filing the annual continuation report for the above-referenced registered limited liability partnership.

The annual continuation report was filed on June 19, 2015.

If you have any questions, please call (804) 371-9733 or toll-free in Virginia, 1-866-722-2551.

Sincerely,

Joel H. Peck
Clerk of the Commission

GPACCEPT
CIS0362

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That FROEHLING & ROBERTSON, INCORPORATED is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is October 11, 1924;

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 22, 2016

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1603226181

SCC eFile
FAST. SIMPLE. SECURE.

SCC eFile
Business Entity Details

Help

FROEHLING & ROBERTSON, INCORPORATED

General

SCC ID: 00272112
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 10/11/1924
Status: Active
Shares Authorized: 1100000

Principal Office

3015 DUMBARTON ROAD
HENRICO VA23228

Registered Agent/Registered Office

WILLIAM H HOOFNAGLE III
1900 ONE JAMES CENTER
901 E CARY ST
RICHMOND VA 23219
RICHMOND CITY 216
Status: Active
Effective Date: 9/21/2011

Select an action

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File an annual report
- Pay annual registration fee
- Order a certificate of good standing
- Submit a PDF for processing (What can I submit?)
- View eFile transaction history
- Manage email notifications

New Search | Home

Screen ID: e1000

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

Schnabel Engineering Consultants, Inc., a Virginia corporation, merged into Schnabel Engineering, LLC, a Virginia limited liability company, which is the surviving entity effective as of January 1, 2016.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
January 20, 2016

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CIS0505

Commonwealth of Virginia

State Corporation Commission

I Certify the Following from the Records of the Commission:

Schnabel Engineering Consultants, Inc. is a corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is August 12, 2009.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
November 17, 2009

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CIS0502

Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, August 12, 2009

This is to certify that the certificate of incorporation of

Schnabel Consultants, 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: August 12, 2009

State Corporation Commission
Attest:

Joel H. Peck
Clerk of the Commission

CIS0328

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

AT RICHMOND, NOVEMBER 12, 2009

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

Schnabel Engineering Consultants, Inc. (formerly Schnabel Consultants, Inc.)

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 November 12, 2009.

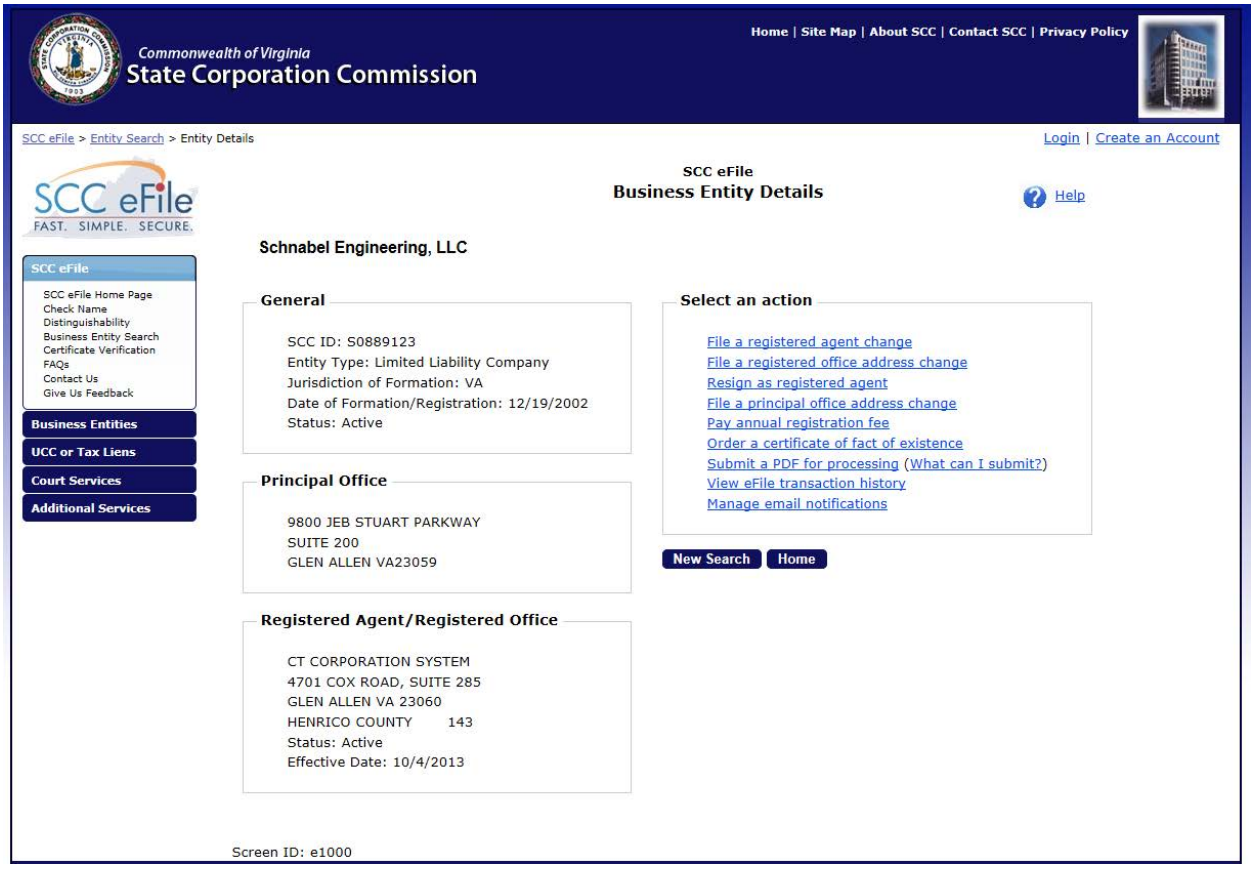
The corporation is granted the authority conferred on it by law in accordance with the articles, subject to the conditions and restrictions imposed by law.

STATE CORPORATION COMMISSION

By Judith Williams Jagdmann

Commissioner

09-10-30-0071
AMENACPT
CIS0436


Commonwealth of Virginia
State Corporation Commission
Home | Site Map | About SCC | Contact SCC | Privacy Policy
SCC eFile > Entity Search > Entity Details
Login | Create an Account
SCC eFile
FAST. SIMPLE. SECURE.
SCC eFile
SCC eFile Home Page
Check Name
Distinguishability
Business Entity Search
Certificate Verification
FAQs
Contact Us
Give Us Feedback
Business Entities
UCC or Tax Liens
Court Services
Additional Services
SCC eFile
Business Entity Details
Help
Schnabel Engineering, LLC
General
SCC ID: S0889123
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 12/19/2002
Status: Active
Principal Office
9800 JEB STUART PARKWAY
SUITE 200
GLEN ALLEN VA23059
Registered Agent/Registered Office
CT CORPORATION SYSTEM
4701 COX ROAD, SUITE 285
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 10/4/2013
Select an action
File a registered agent change
File a registered office address change
Resign as registered agent
File a principal office address change
Pay annual registration fee
Order a certificate of fact of existence
Submit a PDF for processing (What can I submit?)
View eFile transaction history
Manage email notifications
New Search
Home
Screen ID: e1000

Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, February 4, 2015

This is to certify that the certificate of organization of

Artemis Consulting Services, 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: *February 4, 2015*

State Corporation Commission
Attest:

Joel H. Peck
Clerk of the Commission

CISECOM

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

That Artemis Consulting Services, LLC is duly organized as a limited liability company under the law of the Commonwealth of Virginia;

That the date of its organization is February 4, 2015; and

That the limited liability company is in existence 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:
May 13, 2016

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1605135533

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Commonwealth of Virginia
State Corporation Commission

Virginia.gov

06/01/16

LLCM3220 LLC DATA INQUIRY 16:42:50

LLC ID: S544098 - 9 STATUS: 00 ACTIVE STATUS DATE: 04/20/16

LLC NAME: Artemis Consulting Services, LLC

DATE OF FILING: 02/04/2015 PERIOD OF DURATION: INDUSTRY CODE: 00

STATE OF FILING: VA VIRGINIA MERGER INDICATOR:

CONVERSION/DOMESTICATION INDICATOR:

P R I N C I P A L O F F I C E A D D R E S S

STREET: 15571 LEE HWY

CITY: BRISTOL STATE: VA ZIP: 24202-0000

R E G I S T E R E D A G E N T I N F O R M A T I O N

R/A NAME: BRANDI J. S. BROWNING

STREET: 15571 LEE HWY

RTN MAIL: Y

CITY: BRISTOL STATE: VA ZIP: 24202-0000

R/A STATUS: 1 MEMBER/MANAGER EFF DATE: 10/02/15 LOC: 195 WASHINGTON COUN

YEAR	FEES	PENALTY	INTEREST	BALANCE
16	50.00	25.00		

(Screen Id:/LLC_Data_Inquiry)

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

That O.R. COLAN ASSOCIATES, LLC, a limited liability company organized under the law of Florida, obtained a certificate of registration to transact business in Virginia from the Commission on May 9, 2016; and

That it is registered to transact business 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:

June 3, 2016

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1606035701

Alert to corporations regarding unsolicited mailings from VIRGI
CORPORATIONS is available from the Bulletin Archive link of the C

LLCM3220 LLC DATA INQUIRY

LLC ID: T065361 - 0 STATUS: 00 ACTIVE

LLC NAME: **O.R. COLAN ASSOCIATES, LLC**

DATE OF FILING: 05/09/2016 PERIOD OF DURATION: 99/99/99

STATE OF FILING: FL FLORIDA MERGER INDICA

CONVERSION/DOMESTICATION INDICA

P R I N C I P A L O F F I C E A D D R

STREET: 7005 SHANNON WILLOW RD STE 100

CITY: CHARLOTTE STATE: NC ZIP:

R E G I S T E R E D A G E N T I N F O R M

R/A NAME: CORPORATION SERVICE COMPANY

STREET: 1111 E MAIN ST

BANK OF AMERICA CENTER 16TH FL

CITY: RICHMOND STATE: VA ZIP:

R/A STATUS: 5 ENTITY AUTHORIZ EFF DATE: 05/09/16 LOC:

YEAR	FEES	PENALTY	INTEREST
00			

(Screen Id:/LLC_Data_Inquiry)

VIRGINIA
STATE CORPORATION COMMISSION
RICHMOND, VIRGINIA

Commonwealth of Virginia

State Corporation Commission

I, William C. Young, Clerk of the State Corporation Commission, do hereby certify that

Thompson & Litton, Inc.

is a corporation organized and existing under and by virtue of the laws of Virginia and that it is in good standing.

In Testimony Whereof I hereunto set my hand and affix the Official Seal of the State Corporation Commission, at Richmond this 15th *day of* October *A. D. 19* 74

William C. Young
Clerk of the Commission.

Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL FOR CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office website.

Commonwealth of Virginia
State Corporation Commission

Virginia.gov

06/02/16
CISM0180 CORPORATE DATA INQUIRY 09:33:29

CORP ID: 0131411 - 1 STATUS: 00 ACTIVE STATUS DATE: 05/27/08
CORP NAME: THOMPSON & LITTON, INC.

DATE OF CERTIFICATE: 04/08/1971 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: 250.00 MON NO: MON STATUS: MONITOR DTE:
R/A NAME: LEONARD D ROGERS

STREET: 401 BIRCHFIELD RD AR RTN MAIL:
PO BOX 1097
CITY: WISE STATE : VA ZIP: 24293-0000
R/A STATUS: 4 ATTORNEY EFF. DATE: 02/04/11 LOC : 197
ACCEPTED AR#: 216 07 2595 DATE: 04/25/16 WISE COUNTY
CURRENT AR#: 216 07 2595 DATE: 04/25/16 STATUS: A ASSESSMENT INDICATOR: 0

YEAR	FEES	PENALTY	INTEREST	TAXES	BALANCE	TOTAL SHARES
16	820.00					125,000

(Screen Id:/Corp_Data_Inquiry)

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That WETLAND STUDIES AND SOLUTIONS, INC. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is October 18, 1991;

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:
May 19, 2016

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1605196031

Commonwealth of Virginia
State Corporation Commission

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06/02/16
CISM0180 CORPORATE DATA INQUIRY 09:44:47

CORP ID: 0382622 - 9 STATUS: 00 ACTIVE STATUS DATE: 12/09/15
CORP NAME: WETLAND STUDIES AND SOLUTIONS, INC.

DATE OF CERTIFICATE: 10/18/1991 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: 50.00 MON NO: MON STATUS: MONITOR DTE:
R/A NAME: C T CORPORATION SYSTEM

STREET: 4701 COX ROAD AR RTN MAIL:
SUITE 285
CITY: GLEN ALLEN STATE : VA ZIP: 23060-0000
R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 05/06/14 LOC : 143
ACCEPTED AR#: 215 19 3518 DATE: 04/15/16 HENRICO COUNTY
CURRENT AR#: 215 19 3518 DATE: 04/15/16 STATUS: A ASSESSMENT INDICATOR: 0

YEAR	FEES	PENALTY	INTEREST	TAXES	BALANCE	TOTAL SHARES
15	100.00	10.00				5,000

Appendix 3.2.10.2

OFFICE DPOR DOCUMENTATION

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
03-31-2017

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

NUMBER
2701029434

BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
CLASSIFICATIONS H/H

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

Jay W. DeBoer, Director

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(POCKET CARD)

COMMONWEALTH OF VIRGINIA
CLASS A BOARD FOR CONTRACTORS
CONTRACTOR

CLASSIFICATIONS H/H
NUMBER: 2701029434 EXPIRES: 03-31-2017

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

(FOLD)

(DETACH HERE)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400, Richmond, VA 23233
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EXPIRES ON
02-28-2018

NUMBER
0411000743

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

PROFESSIONS: ENG

HNTB CORPORATION
PO BOX 412197
KANSAS CITY, MO 64141

DPOR

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

Jay W. DeBoer, Director

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Department of Professional and Occupational Regulation

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BUSINESS ENTITY BRANCH OFFICE REGISTRATION
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PROFESSIONS: ENG
HNTB CORPORATION
PO BOX 412197
KANSAS CITY, MO 64141

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

EXPIRES ON
02-28-2018

NUMBER
0411000658

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

PROFESSIONS: ENG

HNTB CORPORATION
PO BOX 412197
KANSAS CITY, MO 64141

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BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000658 EXPIRES: 02-28-2018
PROFESSIONS: ENG
HNTB CORPORATION
PO BOX 412197
KANSAS CITY, MO 64141

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9960 Mayland Drive, Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
02-28-2018

NUMBER
0411000774

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

PROFESSIONS: ENG

WHITMAN REQUARDT AND ASSOCIATES LLP
1705 ENTERPRISE DR STE 100
LYNCHBURG, VA 24502

DPOR

Jay W. DeBoer, Director

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BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000774 EXPIRES: 02-28-2018
PROFESSIONS: ENG
WHITMAN REQUARDT AND ASSOCIATES LLP
1705 ENTERPRISE DR STE 100
LYNCHBURG, VA 24502

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12-31-2017

NUMBER
0407001676

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BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG, LS, LA, ARC

WHITMAN, REQUARDT AND ASSOCIATES LLP
801 SOUTH CAROLINE STREET
BALTIMORE, MD 21231

DPOR

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BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407001676 EXPIRES: 12-31-2017
PROFESSIONS: ENG, LS, LA, ARC
WHITMAN, REQUARDT AND ASSOCIATES LLP
801 SOUTH CAROLINE STREET
BALTIMORE, MD 21231

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9960 Mayland Drive, Suite 400, Richmond, VA 23233
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EXPIRES ON
12-31-2017

NUMBER
0407000098

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

PROFESSIONS: ENG

FROEHLING & ROBERTSON, INC
3015 DUMBARTON ROAD
RICHMOND, VA 23228

DPOR

Jay W. DeBoer, Director

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BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407000098 EXPIRES: 12-31-2017
PROFESSIONS: ENG
FROEHLING & ROBERTSON, INC
3015 DUMBARTON ROAD
RICHMOND, VA 23228

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0411000053

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

PROFESSIONS: ENG

FROEHLING ROBERTSON INC
1734 SEIBEL DR N E
ROANOKE, VA 24012

DPOR

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BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000053 EXPIRES: 02-28-2018
PROFESSIONS: ENG
FROEHLING ROBERTSON INC
1734 SEIBEL DR N E
ROANOKE, VA 24012

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Telephone: (804) 367-8500

EXPIRES ON
02-28-2018

NUMBER
0411000323

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

PROFESSIONS: ENG

SCHNABEL ENGINEERING, LLC
1901 SOUTH MAIN ST STE 11
BLACKSBURG, VA 24060

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Jay W. DeBoer, Director

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Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000323 EXPIRES: 02-28-2018
PROFESSIONS: ENG
SCHNABEL ENGINEERING, LLC
1901 SOUTH MAIN ST STE 11
BLACKSBURG, VA 24060

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BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG

ARTEMIS CONSULTING SERVICES LLC
PO BOX 1085
ABINGDON, VA 24212

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ARTEMIS CONSULTING SERVICES LLC
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ABINGDON, VA 24212

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0411000211

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

PROFESSIONS: ARC, ENG, LS

THOMPSON & LITTON INC
726 AUBURN AVE
RADFORD, VA 24141

DPOR

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NUMBER
0407003355

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

PROFESSIONS: LS, LA, ENG

WETLAND STUDIES AND SOLUTIONS INC
5300 WELLINGTON BRANCH DR
STE 100
GAINESVILLE, VA 20155

DPOR

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BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407003355 EXPIRES: 12-31-2017
PROFESSIONS: LS, LA, ENG
WETLAND STUDIES AND SOLUTIONS INC
5300 WELLINGTON BRANCH DR
STE 100
GAINESVILLE, VA 20155

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DPOR-PC (05/2015)

Appendix 3.2.10.3

KEY PERSONNEL DPOR DOCUMENTATION

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
01-31-2017

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

NUMBER
0402035154

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

BRIAN ANDREW HENSCHEL
103 CAROL CT
FOREST, VA 24551

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

EXPIRES ON
04-30-2018

NUMBER
0402042230

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

RANDOLPH THOMAS EPPERLY JR
400 KELLY AVE
OAK HILL, WV 25901

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

Jay W. DeBoer, Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402042230 EXPIRES: 04-30-2018

RANDOLPH THOMAS EPPERLY JR
400 KELLY AVE
OAK HILL, WV 25901

(FOLD)

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DPOR-PC (05/2015)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
07-31-2016

NUMBER
0402018709

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

STEVEN EARL CONNER
4106 GEDENEY PARK DR.
BLACKSBURG, VA 24060

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

EXPIRES ON
12-31-2016

NUMBER
0402037701

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

TIMOTHY RUSSELL BROWNING
PO BOX 1085
ABINGDON, VA 24212

DPOR

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Jay W. DeBoer, Director

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DPOR-LIC (05/2015)

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Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402037701 EXPIRES: 12-31-2016

TIMOTHY RUSSELL BROWNING
PO BOX 1085
ABINGDON, VA 24212

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DPOR-PC (05/2015)

Appendix 3.3.1

KEY PERSONNEL RESUME FORMS

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Jason Hoyle, Director of Procurement

b. Project Assignment:
Design-Build Project Manager

c. Name of Firm with which you are now associated:
Branch Highways, Inc.

d. Employment History: With this Firm 1 Years With Other Firms 20 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):

Name of Firm: Branch Highways, Inc. **Start Date:** 02/2016 **End Date:** Present
Position: Director of Procurement

Managing large, complex construction projects, as well as providing oversight and direction of the company's design-build procurement/construction process and operations. Responsibilities include development of company's procurement process for design-build projects, developing and overseeing management practices and reporting for company's ongoing design-build projects. 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 right-of-way acquisitions, environmental permitting and mitigation, as well as utility relocations both in-house and those associated with third-party utility owners.

Name of Firm: Blythe Development Company **Start Date:** 06/2010 **End Date:** 02/2016
Position: Division Manager

Responsible for all aspects of heavy highway and civil improvement projects in the Greensboro, NC and Virginia area. Oversaw the safety program, pursuit and construction of all Blythe Development projects for this region. Responsible for all design-build projects for the company including selecting design-build projects to pursue, developing responses to RFQs, preparing technical and price proposals and managing construction operations from award to acceptance.

Name of Firm: Blythe Development Company **Start Date:** 04/2003 **End Date:** 06/2010
Position: Project Manager

Project Manager for multiple NCDOT heavy highway projects. These projects include new location, improving existing infrastructure and replacing existing structures. Design-Build Project Manager for two NCDOT design-build projects: NC73 and Macy Grove Road. BDC is a joint venture partner on the I-73/PTI project for NCDOT and he has fulfilled the role of Assistant Design-Build Project Manager.

Name of Firm: Blythe Construction **Start Date:** 06/1995 **End Date:** 04/2003
Position: Project Manager

Project Manager for several NCDOT projects near 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:
University of North Carolina at Charlotte / BS / 1997 / Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
None

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.)

Project Name:	Route 3 Widening, Culpeper, Virginia	**Dates:**	03/2016 – Present
Project Role:	Design-Build Project Manager	**With Current Firm?**	Yes
Client:	VDOT	**Cost:**	$24M

Responsibility/Specific Job Duties: Design-Build Project Manager responsible for coordination and oversight for overall project management. This includes serving as the authorized representative for contractor, construction quality, management and contract administration. Responsible for planning and scheduling of all project activities, design coordination, ROW acquisitions, utility relocation activities, permitting and environmental monitoring, QA/QC procedure and implementation and construction management. Similar to the Route 220 Corridor Safety Improvements, this project will improve the serviceability and safety of the Route 3 Corridor for the traveling publicly widening the existing roadway, as well as adding new travel lanes. Leads the Branch Team in partnering with VDOT and third-party stakeholders and will additionally be responsible for subcontractor and vendor procurement, project tracking and reporting. Working with Construction Manager Greg Suttle on this Route 3 project.

Relevancy: VDOT Design-Build, FHWA guidelines and requirements, secondary road alignment/widening, ROW acquisition, utility relocations, wetland and stream mitigation, geotechnical challenges/mitigation including rock excavation, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

Project Name:	Greenview Drive Widening, Lynchburg, VA	**Dates:**	03/2016 – Present
Project Role:	Design-Build Project Manager	**With Current Firm?**	Yes
Client:	VDOT	**Cost:**	$10M

Responsibility/Specific Job Duties: Responsible for the overall contract administration for this project. Managing and integrating the individual design-build disciplines, including design, permitting, ROW acquisition, utility relocations and construction to deliver constructability, safety and mobility for this Project. Involved with developing and implementing a detailed MOT plan to improve capacity, as well as sight distances. With 20,000 vpd using the roadway, working closely with all stakeholders involved for an efficient and safe MOT plan that is critical for the success of this project. Working with the construction team to develop the CPM schedule and monitoring project controls. The experience and lessons learned from overcoming MOT challenges and interacting with stakeholders on this project will be carried forward and used on the Route 220 Corridor Safety Improvements project.

Relevancy: VDOT Design-Build, FHWA guidelines and requirements, secondary road alignment/widening, ROW acquisition, utility relocations, wetland and stream mitigation, environmental monitoring, geotechnical challenges/mitigation, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

Project Name:	I-73/PTI Design-Build, Greensboro, NC	**Dates:**	03/2013 – 01/2016
Project Role:	Assistant Design-Build Project Manager	**With Current Firm?**	No
Client:	NCDOT	**Cost:**	$181M

Responsibility/Specific Job Duties: As Blythe Development's representative in the JV led the company's interest in pursuing the project, responding to the RFQ, preparing the technical and price proposals and overseeing the project as the Assistant Design-Build Project Manager. Responsibilities included administering the contract, communicating with the Owner, document control, ensuring adequate resources for the project and monitoring the project schedule. Project consists of widening 1.5 miles of existing NC 68 (phased construction and in-depth MOT) and 9.4 miles of new location construction of I-73. The project was phased based on permitting, which allowed construction to begin 6 months after award. Total construction duration was 32 months. Approximately 4.8 million cubic yards of material moved and 15 structures constructed. Structures included a $12M taxiway bridge for the Greensboro/PTI airport and dual 7-span bridges over Reedy Fork.

Relevancy: DOT Design-Build, FHWA guidelines and requirements, interstate and secondary road alignment/widening, bridge construction, ROW acquisition, utility relocations, wetland and stream mitigation, environmental monitoring, geotechnical challenges/mitigation including rock excavation, Traffic Management Plan 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.

Not Applicable

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Brian A. Henschel, PE, CCM, PMP, Vice President for Construction Management Services

b. Project Assignment:
Quality Assurance Manager

c. Name of Firm with which you are now associated:
Whitman, Requardt & Associates, LLP

d. Employment History: With this Firm 5.5 Years With Other Firms 15 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):

Name of Firm: Whitman, Requardt & Associates, LLP **Start Date:** 08/2010 **End Date:** Present
Position: Vice President for Construction Management Services

Responsible for serving as Quality Assurance Manager (QAM), Quality Control (QC) Manager, Project Manager, Responsible Engineer, and Engineering Support on major transportation and utility contracts in Virginia. As QAM writes and implements QA/QC Plans on DB and PPTA projects in accordance with VDOT's Minimum Guidelines for QA and QC; and manages QA inspection / engineering staff assigned to VDOT and municipality/locality DB, design-bid-build and related construction management contracts, providing QA inspection and monitoring Contractor's QC program. Issues non-compliance reports and oversees the AR process and corrective measures. Provides scheduling, constructability and specification interpretation support to VDOT and other clients, manages and supports construction projects to ensure compliance with contract requirements including materials testing and sampling, facilitates progress meetings, performs site visits to monitor progress and recommends field changes, resolves disputes, performs cost and schedule analysis for work orders and changes. Provides pay application/estimate review and certification, makes staffing decisions, and inspects work for compliance with plans and specifications. Performs final inspections, creates project punch lists, and oversees project close-out. Resolves disputes and negotiates changes. He has served in QA and QC roles on eight DB/PPTA projects, with five being VDOT projects.

Name of Firm: VDOT Lynchburg District **Start Date:** 04/2004 **End Date:** 08/2010
Position: DB Project Manager / Area Construction Engineer / Project Controls Engineer

As DBPM, he managed all phases of the contract for five VDOT DB contracts. He assisted in writing technical specifications for RFP; led the QA/QC Plan review; administered the contract and all specifications; assigned and managed processes and testing frequencies of IA/IV program; accepted proposed corrections for non-compliances; and oversaw reporting and sampling. He also reviewed and approved pay applications, and reviewed/signed-off on completed plans. As ACE, he completed more than 90 projects, including three Route 29 Madison Heights Bypass projects, each between $35M and $40M in value. He exceeded on-time, on-budget and CQIP goals; ensured compliance with plans and specs; assigned staffing on project; ensured QA testing and inspection met quality and specification requirements; monitored contractor's QC program; and coordinated with IA/IV testing and sampling. Brian analyzed and approved work orders; reviewed and responded to NOIs and claims; and coordinated with all project stakeholders. As Project Controls Engineer, he performed constructability and bidability reviews, developed CEI budgets, and performed CTDRs and CPM schedules for more than 100 projects.

Name of Firm: McDonough Bolyard Peck, Inc. **Start Date:** 05/1994 **End Date:** 04/2004
Position: Senior Engineer / Project Controls Engineer / Project Inspector

Office Engineer/Claims Analyst/Project Inspector for VDOT and other public clients. He assigned inspection activities, performed project documentation, analyzed work orders, coordinated with FHWA, led partnering meetings, reviewed/approved schedules, resolved field disputes and negotiated changes and work orders with the Contractor. Lead Project Inspector and Office Engineer on $32M VDOT Madison Heights Bypass Sweet Briar Interchange. He oversaw field inspection, performed materials testing and managed QA materials testing and reporting, performed constructability reviews, analyzed NOIs and claims, and provided detailed reports for use in negotiations and litigation.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
Virginia Polytechnic Institute and State University, Virginia/MS/2007/Civil Engineering
Virginia Polytechnic Institute and State University, Virginia/BS/1997/Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
2001 | Professional Engineer | VA #035154; 2010 | Certified Construction Manager (CCM)

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 <u>ONLY</u> 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.)

Project Name:	Greenview Drive Widening, Lynchburg, VA	**Dates:**	02/2014 – Present
Project Role:	Quality Assurance Manager	**With Current Firm?**	Yes
Client:	VDOT/Branch Highways	**Cost:**	$10M

Responsibility/Specific Job Duties: Brian serves as the QAM responsible for ensuring project quality on the $10.8 million VDOT DB project for the Lynchburg District, including multiple MOT phases, widened and reconstructed roadway with horizontal and vertical alignment improvements, a signalized and realigned intersection with added turn lanes, and environmental permits. The project is being delivered according to VDOT DB requirements and Brian was responsible for providing all QA functions for construction, including developing and implementing the QA/QC Plan, documentation and reporting, material sampling and testing, inspection and approval of the work, diaries and checklists in accordance with the VDOT Minimum Guidelines, issuing non-conformance reports and overseeing correction of the non-compliances and the AR Plan, monitoring the QC program and ensuring compliance with testing and inspection frequencies, certification of pay applications and ensuring the project was built according to plans, specifications and all VDOT requirements. He is responsible for the Materials Book, including issuing DBT certifications and VDOT review and coordinates IA/IV inspections with VDOT. **No NCRs issued to date on the project.**

Relevancy: QAM role, VDOT DB, FHWA guidelines and requirements, VDOT Standards and Minimum Guideline requirements, roadway widening/reconstruction/realignment, intersection construction, utilities, QA/QC Plan development and implementation; Branch Highways DB project.

Project Name:	Route 636 Relocation PPTA, Augusta County, VA	**Dates:**	01/2013– 05/2015
Project Role:	Quality Assurance Manager	**With Current Firm?**	Yes
Client:	Augusta County/Branch Highways	**Cost:**	$14M

Responsibility/Specific Job Duties: Brian was responsible for ensuring project quality, including 200,000 CY of grading, new and widened roadway, a signalized intersection, and a bridge over the Buckingham Branch Railroad. The project was delivered according to VDOT DB requirements and Brian was responsible for providing all QA functions for construction, including developing and implementing the QA/QC Plan, documentation and reporting, material sampling and testing, inspection and approval of the work, diaries and checklists in accordance with the VDOT Minimum Guidelines, issuing non-conformance reports and overseeing correction of the non-compliances and the AR Plan, monitoring the QC program and ensuring compliance with testing and inspection frequencies, certification of pay applications and ensuring the project was built according to plans, specifications and all VDOT requirements. He managed the QA staff and all QA team assignments. He was responsible for the project Materials Book, including issuing LT/DBT certifications and VDOT review. He coordinated IA/IV inspections with VDOT and the County. **Project won VDOT Statewide Overall Outstanding Pavement Award for 2014. Only 1 NCR issued on project.**

Relevancy: QAM role, DB to VDOT Standards and Minimum Guideline requirements, roadway construction/reconstruction, bridge construction, utility relocations, QA/QC Plan development and implementation; Branch Highways DB project.

Project Name:	George Mason University Cross Campus Connector, Fairfax, VA	**Dates:**	04/2013– 10/2015
Project Role:	Quality Assurance Manager	**With Current Firm?**	Yes
Client:	George Mason University (GMU)/Branch Highways	**Cost:**	$14M

Responsibility/Specific Job Duties: Brian was responsible for ensuring project quality on the project for work within VDOT Right-of-Way, the intersection of Campus Drive and Braddock Road, and the new Route 123 Bridges over Campus Drive. Included realigned signalized intersections and turn lanes. The project was delivered according to VDOT DB requirements and Brian was responsible for providing all QA functions for construction, including developing and implementing the QA/QC Plan, documentation/reporting, material sampling/testing, inspection and approval of the work, monitoring the QC program and ensuring compliance with testing and inspection frequencies, issuing non-compliance reports for defective and non-conforming work and overseeing corrections of non-compliances and the AR Plan, and ensuring compliance with the plans and specifications and all VDOT requirements.

Relevancy: QAM role, DB to VDOT Standards and Minimum Guideline requirements, roadway construction/reconstruction, bridge construction, utility relocations, complex MOT, QA/QC Plan development and implementation; Branch Highways DB project

* 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**

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Randy Epperly, PE, PS, Vice President/Director of Engineering

b. Project Assignment:
Design Manager

c. Name of Firm with which you are now associated:
HNTB Corporation

d. Employment History: With this Firm 11 Years With Other Firms 35 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):

Name of Firm: HNTB Corporation **Start Date:** 2005 **End Date:** Present
Position: Vice President/Director of Engineering

Randy currently serves as the Design-Build Design Manager on US 58 Laurel Fork, where he coordinates individual design disciplines, oversees the design quality process and leads collaboration with the contractor. He is also responsible for overseeing work on various VDOT projects, which included the Route 58 Meadows of Dan and Hillsville Bypass projects previously completed with Branch Highways. This experience with VDOT and Branch Highways gives him an understanding of VDOT processes as well as the unique terrain issues along the Route 58 alignment. In addition, Randy serves as project director for HNTB's projects with West Virginia Division of Highways (WVDOH), which includes overseeing HNTB's contract as General Engineer Consultant on the West Virginia Turnpike. As project director, he manages client relationships and satisfaction, assures projects are delivered with quality, on time and within budget.

Name of Firm: West Virginia Division of Highways **Start Date:** 1970 **End Date:** 2005
Position: Deputy State Highway Engineer

Positions held at WVDOH included: Project Engineer, Section Head of In-house Design, Section Head of Consultant Services, Director of Roadway Design Division, Deputy State Highway Engineer – Development and Deputy State Highway Engineer – Construction. He was responsible for all phases of highway project development within the state of West Virginia. This included roadway design, structure design, environmental, right-of-way acquisition, traffic engineering, construction and materials control and testing. These activities resulted in the development and delivery of more than $500M in construction per year.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
West Virginia Institute of Technology, Montgomery, WV / B.S. / 1970 / Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
2006 | Professional Engineer | VA #0402042230 (1974 | Professional Engineer | WV #006585)

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.)

Project Name: Route 58 Corridor Hillsville Bypass DB **Dates:** 2012-2014
Project Role: Design Manager **With Current Firm?** Yes
Client: VDOT **Cost:** $83M

Responsibility/Specific Job Duties – As design manager, Randy was responsible for all roadway and bridge design activities on this new alignment project through hilly terrain that required significant cut and fill. He coordinated all phases of design, including highway, eight bridges, three interchanges, drainage, erosion and sediment control plans, signing and lighting and the development of all plans and specifications for the project. Randy was also responsible for development of the Design QA/QC plan, which included review of all design phases, constructability reviews with Branch Highways and review of all plans and specifications. He

coordinated all environmental activities including mitigation sites including wetlands and stream mitigation. He was also responsible for development of MOT plans, which included construction sequencing, property access during and after construction and signing to safely move vehicles through construction zones.

Relevancy: VDOT Design-Build, FHWA guidelines and requirements, interstate and secondary road alignment/widening, bridge construction, ROW acquisition, utility relocations, wetland and stream mitigation, environmental monitoring, geotechnical challenges/mitigation including rock excavation, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

Project Name:	VDOT Coalfields Expressway	**Dates:**	2007-2010
Project Role:	Project Manager	**With Current Firm?**	Yes
Client:	VDOT	**Cost:**	$1B

Responsibility/Specific Job Duties: As project manager, Randy was responsible for developing Design-Build and PPP agreements between VDOT and Alpha Coal/Pioneer Coal Companies. He was also responsible for design oversight under HNTB's contract with VDOT for initial design of the 50-mile Virginia Coalfields Expressway and its connection to US 460 in Kentucky, involving vertical and horizontal alignments, permitting requirements and cost estimates. He helped develop avoidance plans for environmentally sensitive sites and potential acid-producing materials associated with mining operations. Randy completed constructability reviews of the design-build project for the US 460 Bridge located at the Virginia and Kentucky border. This project involved VDOT, FHWA, Alpha Coal and Pioneer Coal in a 59-mile PPTA and design-build project located in southwest Virginia. Scope also included environmental, design, right-of- way, permitting, mitigation and construction phases of work.

Relevancy: VDOT Design-Build, FHWA guidelines and requirements, interstate and secondary road alignment/widening, bridge construction, ROW acquisition, utility relocations, wetland and stream mitigation, environmental monitoring, geotechnical challenges/mitigation including rock excavation, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

Project Name:	Appalachian Corridor H (Elkins to Kerens)	**Dates:**	1995-2003
Project Role:	Design Director	**With Current Firm?**	No
Client:	WVDOH	**Cost:**	$200M

Responsibility/Specific Job Duties: Randy was responsible for roadway and bridge design, as well as obtaining all construction permits and environmental coordination between WVDOH, FHWA and federal and state resource agencies. His duties involved coordinating all phases of design including highway, bridge, drainage, maintenance of traffic, erosion and sediment control, signing and lighting and development of all plans and specifications for the project. He was also responsible for the acquisition of all right of way, utility relocations and railroad coordination. This region had extensive areas of acid producing materials and streams that had been impaired by acidic runoff. During design and construction of this project, Randy led the effort to avoid, or minimize these materials. When avoidance or minimization could not occur, Randy led the design of encapsulating these materials, development of monitoring programs and treatment of acidic runoff.

Relevancy: Designed to meet current state and federal requirements for primary and secondary roads, right-of-way acquisition, utility relocations, wetland and stream mitigation, mitigation plans for acid producing materials, monitoring plans for runoff in the areas of acid runoff, MOT plans and constructability reviews.

* 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

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Greg Suttle, Project Manager

b. Project Assignment:
Construction Manager

c. Name of Firm with which you are now associated:
Branch Highways, Inc.

d. Employment History: With this Firm 26 Years With Other Firms 2 Years

Please list chronologically (most recent first) your employment history, position, general responsibilities and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):

Name of Firm: Branch Highways, Inc. **Start Date:** 05/2010 **End Date:** Present
Position: Construction Manager / Project Manager

Greg is responsible for managing the construction process, including Quality Control (QC) and executing the work in accordance with "approved for construction" plans and specifications. He also is accountable for compliance with all material and construction requirements. Additional responsibilities include planning, scheduling and allocation of manpower and equipment resources. Management of Owner/subcontractor/supplier contracts also fall under Greg's direct charge. He supports EEO compliance, enforcement and compliance with corporate safety regulations & associated training. Clients consist of state and local departments of transportation, federal government agencies and private corporations. Typical projects incorporate one or more of the following: interstate widening, primary and secondary road widening/relocation and interchange work. Greg is well versed in both design-bid-build and design-build projects. These have given Greg extensive experience and expertise dealing with the identified risks of geotechnical challenges, maintenance of traffic and utility relocations.

Name of Firm: Branch Highways, Inc**.** **Start Date:** 06/1998 **End Date:** 04/2010
Position: Construction Manager / General Superintendent

Greg was jointly responsible with the Project Manager for project success. He was accountable for meeting schedule, controlling costs, Quality Control (QC) and hands-on management of manpower, equipment and subcontractors on assigned projects. He placed emphasis on workplace safety and training while meeting or exceeding owner expectations. Greg's direct involvement with the work on a daily basis created a solid foundation for his understanding and working knowledge of the impacts associated with geotechnical challenges, maintenance of traffic and utility relocation issues.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
West Virginia Institute of Technology / BS / 1987 / Mining Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
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

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.)

Project Name: Route 3 Widening, Culpeper, VA **Dates:** 10/2013-Present
Project Role: Construction Manager **With Current Firm?** Yes
Client: VDOT **Cost:** $83M

Responsibility/Specific Job Duties: Greg is the Construction Manager for this five-mile section of road widening from a two to four-lane divided highway on Route 3 in Culpeper. He and his staff have worked closely with VDOT and its project staff to coordinate scheduling and work flow as various stages of the project become accessible for construction activities. One critical responsibility is the coordination of extensive utility relocations throughout the entire corridor. Service providers include Verizon, AT&T, Level 3, Qwest, Century Link, Dominion Virginia Power, Transco/Williams

Gas and Columbia Gas. Greg's continuing responsibility and participation in the environmental permitting and compliance process from its inception have been essential. Remediation of substantial geotechnical issues resulting from unsuitable soils, rock and highly plastic clays have been also been one of Greg's primary foci throughout the project. Maintaining effective communication with residents and several local commercial, agricultural and industrial businesses has been an important consideration in Greg's overall strategy to effectively mitigate impacts to these shareholders. We anticipate Greg's Construction Manager duties on the Route 220 Corridor Safety Improvement Project will include interfacing with the same categories of shareholders and utility providers, as well as dealing with similar geotechnical challenges.

Relevancy: VDOT Design-Build, FHWA guidelines and requirements, primary roadway widening and relocation, ROW acquisition, utility relocations, environmental permitting and monitoring, geotechnical challenges/mitigation including unsuitable materials, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

Project Name:	95 Express Lanes, DB, Prince William/Stafford Counties, VA	**Dates:**	08/2011-05/2015
Project Role:	Construction Manager	**With Current Firm?**	Yes
Client:	VDOT	**Cost:**	$46M

Responsibility/Specific Job Duties: As Construction Manager, Greg directed Branch Highways' efforts as a key subcontractor for this project. Greg and the Branch Project Team, including project designer, HNTB, successfully mitigated similar geotechnical challenges with acid-producing material. MOT challenges were dealt with effectively on a daily basis. Other specific duties that required Greg's focus entailed coordinating Branch's work with the concessionaire, contractors and sub-tier specialty contractors to accommodate a very aggressive construction schedule for this multifaceted project. His diligent communication, effective planning and global awareness of the project and its needs created an environment where resources were allocated as needed to maximize efficiency of operation. As evidence of Greg's effectiveness, there were no significant Quality Control deficiencies and absolutely **ZERO OSHA RECORDABLE INCIDENTS IN 246,141 MAN-HOURS** on this Project.

Relevancy: VDOT Design-Build, FHWA guidelines and requirements, roadway alignment/widening, bridge construction, ROW acquisition, utility relocations, environmental monitoring, geotechnical challenges/mitigation including acid producing materials, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

Project Name:	Route 15, James Madison Highway DB, Haymarket, VA	**Dates:**	02/2007-12/2009
Project Role:	Construction Manager	**With Current Firm?**	Yes
Client:	Prince William County	**Cost:**	$55M

Responsibility/Specific Job Duties: As Construction Manager/Project Superintendent for this project, Greg directed the project team, including three area superintendents along with foremen, project engineers and staff. Greg's 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, which comprised this project. He was also instrumental in developing and enforcing the Quality Control Program prior to and during construction, much as he will do for the Route 220 Corridor Safety Improvements Project. Coordinating with DEQ and USACE, Greg created and executed Construction Sequencing Plans that allowed for early starts to construction activities in each segment of the project. These plans included MOT coordination with VDOT and Prince William County. This 22 lane-mile project had utility relocations throughout. Greg scheduled Branch crews and clearing to expedite initial critical relocation activities, such as pole installations and underground conduits/trenching. Another similar and significant feature of this project to the Route 220 Corridor Safety Improvement project involves geotechnical challenges and associated remedies. There were intermittent segments of highly plastic, light and/or saturated soils and rock in all five segments and each required a unique approach for mitigation. These approaches included removal and replacement, mechanical manipulation and chemical stabilization. Greg's duties also required him to meet with local businesses, communities and developers through public outreach and simple face-to-face communications to address concerns and create a team atmosphere with shareholders.

Relevancy: Design-Build, roadway alignment/widening, bridge construction, ROW acquisition, utility relocations, environmental permitting and monitoring, stream mitigation, geotechnical challenges, Traffic Management Plan 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 Widening, Construction Manager (Current – 03/2017*) *Construction of Route 220 to start Fall 2017

I81 Exit 150 Interchange, Project Manager (Current – 04/2017)

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Steven Conner, PE, Principal Engineer

b. Project Assignment:
Lead Geotechnical Engineer

c. Name of Firm with which you are now associated:
Schnabel Engineering, LLC

d. Employment History: With this Firm 30 Years With Other Firms 2 Years

Please list chronologically (most recent first) your employment history, position, general responsibilities and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):

Name of Firm: Schnabel Engineering, LLC **Start Date:** 08/1986 **End Date:** Present
Position: Principal Engineer

Steve Conner has been the principal geotechnical investigator for a wide variety of projects, including: highway and street widening's, new roadways, bridge foundations, embankments, soil and rock cut slopes, drainage structures and pavements. He is branch leader, senior project manager and technical reviewer for Schnabel's Blacksburg, Virginia, office. He is Schnabel's Project Manager for the VDOT On-Call Limited Services Geotechnical Design Contract for the Western Region. In his role as project manager under this multi-million dollar per year contract, he is intimately familiar with VDOT's Geotechnical Manual of Instructions (MOI). Much of the geotechnical exploration work will require field operations in and along the existing roadway under heavy traffic. Steve is intimately familiar with VDOT's most recent Work Area Protection Manual and our field inspectors are certified by the American Traffic Safety Service Association (ATSSA). Working on this contract has also required extensive coordination and effort to access difficult site by constructing access roads, use of specialized drilling equipment and river barges to access very steep and wooded terrain. Steve's role at Schnabel has taken him to varied geologic conditions throughout the Valley and Ridge province where he has dealt with the associated shales, siltstones and sandstone materials extensively. Some of this work included serving as an expert witness on many deep fill projects that involved non-durable shale materials like the ones present at the Route 220 project site. In addition, much of the rock stability and slope stability work in his career at Schnabel also involved these also involved non-durable shale materials. Along the current Route 220 corridor, it is anticipated that fill and cut slope stability (of both soil and rock) will be a challenge. His work on the I-81, Exit 150 project also involved extensive slope analyses in a complicated geologic setting.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
Virginia Polytechnic Institute and State University / MCE / 1987 / Civil Engineering
Virginia Polytechnic Institute and State University / BS / 1983 / Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
1988 / Professional Engineer 18709

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.)

Project Name: Givens Lane and Progress Street Improvements, Blacksburg, VA **Dates:** 2009 - 2011
Project Role: Principal Engineer/ Senior Reviewer **With Current Firm?** Yes
Client: VDOT (Subconsultant to RK&K) **Cost:** $3.8M

Responsibility/Specific Job Duties: Principal Engineer during the design phase of a roadway widening and extension project. Responsible for coordinating and managing staff during field exploration and preparing a geotechnical engineering report, including design recommendations regarding site grading, subdrainage, storm water management basins, pavements and retaining walls. The project included a new bridge with fully integral, pile supported abutments designed in accordance with FHWA LRFD requirements. Project challenges included constructing roadways and large diameter culverts across soft ground conditions, constructing retaining wall foundations in areas with existing fill soils and new bridge foundations in variable limestone rock. Soft residual soils complicated design and construction of

roadways and foundations in some areas. Steve designed and recommended stabilization methods consisting of geosynthetics to enhance the soft subgrades.

Relevancy: VDOT, FHWA guidelines and requirements, bridge construction, geotechnical challenges/mitigation.

Project Name:	Route 11, 220, 220A Access Management at I-81 Exit 150, Botetourt County, VA	**Dates:**	2011- 2016
Project Role:	Principal Engineer	**With Current Firm?**	Yes
Client:	VDOT (Subconsultant to AECOM)	**Cost:**	$18M

Responsibility/Specific Job Duties: Geotechnical Reviewer for the design of the proposed Gateway Crossing to connect Route 11 with Route 220A, as part of the alterations to the traffic patterns at Route 11/220/220A intersection to improve access off and onto Interstate I-81 North at Exit 150. For this project currently under construction by Branch, Schnabel performed all necessary subsurface exploration, provided foundation recommendations for retaining walls and box culverts and performed slope stability analyses for excavation and embankment slopes. Work involved extensive coordination with existing property owners, businesses and VDOT. Due to congestion in the area, much of the field exploration was performed at night. New pavement design, as well as evaluation of existing pavements for reuse was necessary to complete the project.

Gateway Crossing included significant cut slopes up to 55 feet high through residual soils that required extensive slope stability analysis. Stability work was further complicated by the unique site specific geology along Gateway Crossing. Various faults (thrust and fault gouge) along the alignment added to the complexity of the stability models. Existing evidence of downhill slope creep indicated potential past instability. Undisturbed tube samples were subjected to both undrained and drained shear strength testing to aid in modeling the short-term and long-term stability of the slopes in accordance with the VDOT MOI.

In addition, new embankment fills up to 30 feet high over soft residual and alluvial soils were required. Steve performed careful analyses of the existing subgrades to support the new fills. The subgrades for new culverts and culvert extensions over numerous drainage crosses and streams were evaluated. He evaluated and recommended stabilization measures where required.

Relevancy: VDOT, FHWA guidelines and requirements, relocation/reconstruction of an interchange, interstate alignment/widening, geotechnical challenges/mitigation

Project Name:	Durant Road Improvements Alleghany County, VA	**Dates:**	2014
Project Role:	Principal Engineer	**With Current Firm?**	Yes
Client:	VDOT (Subconsultant to AECOM)	**Cost:**	N/A

Responsibility/Specific Job Duties: Project Manager of the geotechnical engineering data report for planned improvements to Durant Road. The project consisted of roadway widening and improvements along a very steep, shale rock cut slope. The improvements included storm water management facilities and new drainage structures. Significant access challenges for the exploration had to be careful planned to safety collect the subsurface data. As project manager, he designed and planned an access road consisting of trails and benches on top of a nearly 100-foot tall rock slope. Significant logistical challenges were met through extensive coordination with existing landowners and to ensure safety of the drilling crew as well as the traveling public below.

Relevancy: VDOT, FHWA guidelines and requirements, bridge construction, geotechnical challenges/mitigation

* 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

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Timothy R. Browning, PE, Principal Engineer

b. Project Assignment:
Acid-Producing Materials Specialist

c. Name of Firm with which you are now associated:
Artemis Consulting Services, LLC

d. Employment History: With this Firm 1 Years With Other Firms 16 Years

Please list chronologically (most recent first) your employment history, position, general responsibilities and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):

Name of Firm: Artemis Consulting Services, LLC **Start Date:** 03/2015 **End Date:** Present
Position: Principal Engineer

Tim is involved in all aspects of the services provided by Artemis for both public and private-sector clients. His prior experience managing all aspects of large land-disturbing projects as a consultant and regulating the surface coal mining industry of southwest Virginia as a state employee provide Tim with a unique perspective related to handling acid-producing materials that he continues to use in his role at Artemis. A working knowledge of design principles, environmental permitting and construction, in addition to extensive experience with state and federal regulations reinforce that Tim is able to communicate design or plan changes necessary to effectively mitigate any identified acid-producing materials.

Name of Firm: VA Division of Mined Land Reclamation **Start Date:** 03/2013 **End Date:** 03/2015
Position: Chief Engineer

Tim managed the engineers of both the Technical and Abandoned Mine Lands (AML) sections. He provided the engineers with feedback related to permitting decisions, design, general policy, construction management and technical investigations to ensure agency decisions were consistent with applicable regulations and good engineering practice. Tim directly managed or provided input on projects and policy development relating to abandoned and active coal mine reclamation including, but not limited to, acid-mine drainage treatment, design and bonding of stream mitigation, blasting complaints and sediment/drainage control measures.

Name of Firm: D. R. Allen & Associates, P.C. **Start Date:** 09/2004 **End Date:** 03/2013
Position: Senior Project Engineer / Partner

Tim was in charge of day-to-day management of the entire staff, which included engineers, geologists, environmental scientists, field technicians and administrative personnel. Responsible for the management of complex projects involving a wide range of issues such as environmental permitting, material handling plans, mitigation design, NEPA evaluations, threatened and endangered species, water chemistry assessments, mine planning and reserve studies. Tim was responsible for maintaining open communication with both the client and numerous state and federal agencies including, among others, the US Army Corps of Engineers, USFWS, State Historic Preservation Offices and the EPA.

Name of Firm: D. R. Allen & Associates, P.C. **Start Date:** 07/1999 **End Date:** 09/2004
Position: Project Engineer

Tim supported the responsible engineer with various aspects of design. During this time, he became experienced in natural stream channel design (Level IV Rosgen), hydrologic modeling and hydraulic design, construction management, erosion and sediment control planning and earthwork design.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
Virginia Tech / BS / 1999 / Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
2002 / Professional Engineer / VA License 0402037701

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.)

Project Name:	Laurel Branch Surface Mine	**Dates:**	03/2015 - Present 06/2005 - 03/2013
Project Role:	Permitting Consultant	**With Current Firm?**	Yes
Client:	Clintwood Elkhorn Mining LLC	**Cost:**	$200M+

Responsibility/Specific Job Duties: Tim has been intimately involved in all aspects of the operation from the preliminary engineering and mine planning stage through near completion of active operations in present day. The project involved the excavation and handling of approximately 132 million bank cy of shale and sandstone overburden in order to recover more than 6 million tons of bituminous coal reserves located in a watershed with an approved Total Maximum Daily Load (TMDL). Permitting of the site included addressing a number of environmental challenges including, among others, protection of surface and ground water from the impacts of acid-producing material through baseline monitoring of surface and ground waters and physical/chemical analysis of geologic strata. By developing the acid-base accounting program, Tim was able to identify a number of strata (primarily shales) as potentially acid-producing material. Neutralization deficiencies ranging from -1.8 to -109.9 tons /1,000 tons of $CaCO_3$ were identified. The minimum paste pH identified was 4.66. Tim was responsible for working with both Clintwood Elkhorn and the regulating agencies to compose a materials handling plan that would provide adequate protection against a permanent acidic discharge and limit impacts to surface and ground waters from these materials. No acidic or iron laden discharges from the mine site were identified as of the last regulatory required mid-term permit review in 2014.

Relevancy: Identification and evaluation of acid-producing materials, appropriate laboratory tests, technical support to engineering design, understanding of impacts to surface and ground waters, knowledge of TMDLs, acid-producing materials handling plans and management, coordination with regulating agencies.

Project Name:	Penhook AMD Project	**Dates:**	10/2013 – 03/2015
Project Role:	Project Manager	**With Current Firm?**	No
Client:	VA Dept. of Mines, Minerals and Energy (DMLR) – Abandoned Mine Lands	**Cost:**	$483,000

Responsibility/Specific Job Duties: During his tenure as Chief Engineer of DMLR, Tim reviewed or managed a number of Abandoned Mine Lands (AML) projects involving treatment of existing acid-mine discharges. Located adjacent to Straight Creek in St. Charles, the project involved passive treatment of an acid-mine discharge. Tim was responsible for the final design of the treatment system and its associated facilities. The size of the final treatment facility was limited by right of entry issues and the project's proximity to State Route 636 and Straight Creek. Tim used a combination of an anoxic limestone drain, an aerobic wetland and clean water diversions to minimize the introduction of surface runoff into the system and maximize the system's efficiency. As the project was jointly funded by AML, the Department of Conservation and Recreation's Water Quality Improvement Fund, it was necessary to coordinate review of the design with all funding agencies to address project goals versus budgetary requirements. During construction, a previously unidentified acid seep was discovered. Tim worked with the contractor and other agency personnel to modify the design elevation of two of the wetland cells and ensure the seep was captured by the treatment facility.

*Relevancy: Mitigation of acid-producing discharges, Design of treatment systems, Coordination with regulating / funding agencies, Environmental monitoring, Construction management***.**

Project Name:	Moss 1 Coal Slurry Impoundment Fines Recovery Plan	**Dates:**	08/2001 - 03/2002
Project Role:	Project Engineer	**With Current Firm?**	No
Client:	Clinchfield Coal Company	**Cost:**	$4.5M

Responsibility/Specific Job Duties: Tim was responsible for addressing agency comments related to the plan to recover fine coal refuse developed by Geo/Environmental Associates, Inc., now Schnabel Engineering, Inc. Specifically, reviewing agencies initially refused to approve the plan based on concerns that the fine coal refuse being re-disturbed was acid-producing material. While the plan developed by Schnabel involved removing the largest portion of the fines from the impoundment (for re-processing) during final reclamation, the material that was retained required a plan to address its potential impact on surface and ground waters. Tim worked closely with all parties including the supervising engineer to develop a plan that used a combination of clean-water diversions, alkaline additives and control of existing ground water sources to address the agencies concerns.

Relevancy: Mitigation and remediation of acid-producing material, Handling plan, Monitoring plan development, Understanding of impacts to surface and ground waters, Technical support to engineering design

* 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**

Appendix 3.4.1 (a)

LEAD CONTRACTOR 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: **US Route 58 Hillsville Bypass** Location: **Carroll County, VA**	Name: **HNTB Corporation**	Name of Client.: **VDOT** Phone: **540-387-5360** Project Manager: **Robert Williams** Phone: **540-387-5345** Email: **Robbie.Williams@VDOT.Virginia.gov**	**11/2011**	**11/2011**	**$83,000**	**$83,197** ***Owner requested changes to scope***	**$83,197**

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 with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

Project Scope

As the Design-Build Contractor for this second phase of the Route 58 PPTA Corridor Improvements project, Branch was responsible for design, construction, right-of-way (ROW) acquisition, utility relocation, permitting, wetlands/environmental mitigation and quality control involved with building this 3.7-mile stretch of new four-lane divided highway in Hillsville, VA. In addition to mass cut-to-fill operations in excess of 1 Million CY, drainage, roadway construction, construction of 17 acres of wetlands and extensive stream mitigation, the project included eight bridges and three full interchanges – one of which ties into I-77 southwest of Hillsville, VA. This project was completed by the Branch/HNTB Team ***ahead of schedule*** and ***within original budget***, with ***no change orders requested and no major quality or safety issues***.

Over the 3.7 miles of this project, Branch Highways encountered clay (CL), silty sands (SM), silt (MH), high plasticity elastic silt (ML) and mass rock excavation. This experience with varying soil types is important to the Route 220 Corridor Safety Improvements project because Branch expects varying soil types will be encountered over the length of Route 220. Our team is experienced at adapting to varying soil types.

During the process of moving in excess of 1 million CY of material, Branch encountered numerous areas requiring cuts and/or fills in excess of 20 feet with maximum fills reaching 65 feet. Our experience working with these fills has positioned our team to handle the geotechnical risks associated with the fills anticipated on this project, especially as it relates to slope stability and settlements.

The Hillsville Bypass also stabilized unsuitable subgrade material with soil cement. Given the anticipation of lime or cement stabilization as a tool to handle a portion of the geotechnical risk on the Route 220 Corridor Safety Improvements project, this proves our team has the experience to overcome the geotechnical challenges anticipated.

At both ends of this project, Branch converted a two-lane highway into a four-lane divided highway, as well as softened some of the sharper curves. The Hillsville Bypass improved sight distance, corrected super elevations, increased stopping distances, improved lane width and existing shoulders and replaced narrow structures. The proposed improvements to Route 220 will address these same concerns including improving the roadway to meet current standards.

Melissa Sowers, Design Build Coordinator and Raymond Bruce, Roadway Superintendent, both worked on this Hillsville Bypass project.

Branch/HNTB Personnel Involved in the Project

- Melissa Sowers
- Raymond Bruce
- Randy Epperly, PE
- Nick Antonucci, PE
- Danny Donlin Jr., PE
- Brandon Stewart, PE
- John Huddleston, PE

Project Highlights

- Completed on ahead of schedule
- Completed on budget
- No Change Orders initiated by Branch
- Superior safety record
- Delivered required DBE Goal

The Route 58 Hillsville Bypass project was a successful collaboration between the Branch/HNTB design-build team and VDOT.

Relevancies to the Route 220 Project

- ✓ VDOT DB/PPTA
- ✓ Survey
- ✓ Traffic control devices
- ✓ Potable water installation
- ✓ Roadway alignment/widening
- ✓ Environmental
- ✓ MOT
- ✓ Public involvement
- ✓ Construction of bridges
- ✓ TMP
- ✓ Subgrade stabilization
- ✓ QA/QC
- ✓ ROW acquisition
- ✓ Geotechnical
- ✓ Sanitary sewer relocation/installation
- ✓ Complex construction sequencing
- ✓ Utility relocations
- ✓ Hydraulics
- ✓ Storm sewer installation
- ✓ Adjacent project/stakeholder coordination

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: **US Route 58 Meadows of Dan Bypass** Location: **Meadows of Dan, VA**	Name: **HNTB Corporation**	Name of Client.: **VDOT** Phone: **540-387-5360** Project Manager: **Robert Williams** Phone: **540-387-5345** Email: **Robbie.Williams@VDOT.Virginia.gov**	**12/2005**	**12/2005**	**$19,972**	**$19,972**	**$19,972**

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 with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

Project Scope

Branch was the design-build contractor providing design, construction, right-of-way (ROW) acquisition, utility relocation, permitting and wetlands/environmental mitigation for the development, for the first Public Private Transportation Act (PPTA) project in the VDOT Salem District. The teaming relationship between Branch and HNTB originated with this project. With this ongoing relationship, it ultimately eliminates learning curves, as well as provides VDOT with a contractor/engineering team of individuals that are familiar with constructing widening projects in the Salem District. The project is a new two-mile section of four-lane divided highway built on new location in Patrick County around the Community of Meadows of Dan. Similar to the Route 220 Corridor Safety Improvements Project, the Meadows of Dan Bypass project required a series of environmental permits and mitigation action for streams and wetlands, all of which were managed by Branch. This work included construction of over five acres of a wetlands compensation site to offset for the impacts resulting from the roadway construction. This Project required 860,000 CY of excavation including rock and earth, construction of a double barrel box culvert, installation of an underground cattle crossing, as well as the Blue Ridge Crossing bridge. With lessons learned during this Project, Branch team will apply our expertise with earth work management for differing subsurface conditions, managing construction of structures and environmental mitigation while minimizing the impact to the traveling public. In compliance with new standards, during this Project (MS-19), Branch constructed a stormwater management pond to ensure storm water quality on this project.

The bypass was partially relocated through an existing dairy farm, which required extensive meetings with property owners and negotiations to acquire the ROW. Once all agreements were in place, Branch was able to accommodate the farmer with cattle crossings under the new US Route 58. Branch also improved other areas of pasture for the farmer which were not usable prior to construction. The Route 220 Corridor Safety Improvements Project will involve similar instances where our project team will work directly with adjacent property owners and other stake holders to ensure public needs are addressed expeditiously.

Branch/HNTB Personnel Involved in the Project

- Greg Suttle
- Randy Epperly, PE

Project Highlights

- Completed on schedule
- Completed on budget
- Partnering with VDOT and local stakeholders
- Successful mitigation

The Route 58 Meadows of Dan Bypass project was a successful collaboration between the Branch/HNTB design-build team and VDOT.

Relevancies to the Route 220 Project

- ✓ VDOT DB/PPTA
- ✓ ROW acquisition
- ✓ Environmental permitting
- ✓ Politically visible
- ✓ Wetland mitigation
- ✓ Utility relocations
- ✓ Earthwork, grading and drainage
- ✓ Coordination with VDOT and others
- ✓ Geotechnical challenges and treatments

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: **James Madison Highway (Route 15) Design-Build/PPTA** Location: **Haymarket, VA**	Name: **Rinker Design Associates, P.C.**	Name of Client.: **Prince William County DOT** Phone: **703-792-6825** Project Manager: **Thomas Blaser** Phone: **703-792-6825** Email: **tblaser@pwcgov.org**	**12/2009**	**12/2009**	**$52,139**	**$54,126** ***Owner Requested Changes to Scope**	**$54,126**

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 with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

Project Scope

Branch provided the design, construction, right of way and utility relocation for the $54M Route 15 (James Madison Highway) Improvements for Prince William County (PWC) in Haymarket, VA. Beginning just north of the I-66/US-15 interchange, the project consisted of 22 lane miles of road widening that entailed the same major scope of work items associated with the Route 220 Corridor Safety Improvements, such as mass earthwork and grading, drainage, structural concrete work, stone base and paving. This project was highly politically visible in Prince William County. Both the functionality of the finished product and the time during which the public would be impacted by construction were extremely important. To manage these concerns, Branch's team made a concerted effort to keep all concerned parties informed of project progress. This was accomplished through daily meetings onsite, weekly team progress meetings and public outreach. VDOT, Prince William County, private utility owners and affected adjacent home owners were involved in the planning, design and scheduling of the work. This same partnering process will be used by Branch/HNTB on the Project.

Several potential problems were encountered and resolved throughout the life of the project that will likely be faced on the Route 220 project. In the design phase, it was determined that wetlands would be impacted as a result of the proposed work and therefore environmental permitting (and associated coordination with multiple governing agencies) and wetlands mitigation strategies had to be developed to address those impacts, while minimizing impact on cost and schedule. There were also similar geotechnical challenges encountered; wet soils, highly plastic clays and the presence of rock, which were each handled in multiple locations along the project.

Spanning between two major commuter intersections, one an interstate interchange, Branch's team knew that special attention to MOT would be essential to not only ensure the safety of workers on-site, but to also a provide safe, well communicated TMP for the public that would have minimal impact on this highly congested corridor. Signage, temporary pavement markings and carefully planned ingress/egress locations were a few major elements of this plan. A similar analysis will be performed for the Route 220 Corridor Safety Improvements Project so that its specific needs with regards to traffic influence and safety can be adequately addressed.

Comparable to the Project, Route 15 had many unique elements that had to be properly understood, planned and coordinated with one another. The exceptional coordination, cooperation and communication skills demonstrated by Branch's team for this project are a testament to the successful execution and delivery of the Route 15 PPTA, as they will be on the Project.

Greg Suttle was the Construction Manager on this project. Greg's expertise and lessons learned will be applied to the Project which includes dealing with similar geotechnical, MOT and stakeholder coordination.

Branch/HNTB Personnel Involved in the Project

- Greg Suttle

Project Highlights

- Completed on ahead of schedule
- Completed on budget
- Cooperation and communication with PWC, VDOT, utility owners and the public
- Sequencing of work to accommodate permitting, ROW and utility relocation with minimal/no significant delays

Route 15 construction required special attention to MOT to maintain safety of the traveling public and our work crews.

Relevancies to the Route 220 Project

- ✓ VDOT DB/PPTA
- ✓ Survey
- ✓ Traffic control devices
- ✓ Potable water installation
- ✓ Roadway alignment/widening
- ✓ Environmental
- ✓ MOT
- ✓ Public involvement
- ✓ Construction of bridges
- ✓ TMP
- ✓ Subgrade stabilization
- ✓ QA/QC
- ✓ ROW acquisition
- ✓ Geotechnical
- ✓ Sanitary sewer relocation/installation
- ✓ Complex construction sequencing
- ✓ Utility relocations
- ✓ Hydraulics
- ✓ Storm sewer installation
- ✓ Adjacent project/stakeholder coordination

Appendix 3.4.1 (b)

LEAD DESIGNER WORK HISTORY FORMS

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: **US Route 58 Laurel Fork Design-Build/PPTA** Location: **Carroll, Floyd and Patrick Counties, VA**	Name: **Branch Highways, Inc.**	Name of Client.: **VDOT** Phone: **540-387-5360** Project Manager: **Robert Williams** Phone: **540-387-5345** Email: **Robbie.Williams@VDOT.Virginia.gov**	**06/2012**	**09/2016**	**$120,000**	**$120,000**	**$7,825** **($1,250 subs)**
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 with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.							

Project Description

The Laurel Fork segment is the third phase of the Route 58 corridor project being built under a Comprehensive Agreement between VDOT and Branch Highways, with HNTB as lead designer, to widen the 36 miles from Stuart to Hillsville through Carroll, Floyd and Patrick counties. The first segment, a three-mile Blue Ridge Parkway crossing at Meadows of Dan, was completed in 2006. The second segment, the 5.2-mile Hillsville Bypass, was finished in 2011.

This third phase encompasses 8.2 miles and includes the five-mile Laurel Fork section and the 3.2-mile Tri-County section. Commonly known as Laurel Fork, this phase involves widening Route 58 by reconstructing the original two lanes and adding an additional two lanes along the original alignment to provide a four-lane divided facility. It ties into the previously completed four-lane section in Meadows of Dan.

Overall the goal of the project is to eliminate safety hazards along Route 58, including addressing intersections with 14 secondary roads and 120 property driveways. The end result will be a complete Route 58 from Virginia Beach to I-77 and I-81, providing the southern region of Virginia with a seamless east-west transportation corridor to Hampton Roads.

HNTB's Scope

HNTB served as the lead designer (prime) on this project.

Engineering: Right-of-way (ROW) acquisition, roadway design, drainage engineering, construction permit acquisition and monitoring, utility administration and relocations, traffic sequencing and construction phasing, signing and pavement markings and risk and change proposal costs.

Quality Management: Developed QA/QC documents for design and construction, provided construction quality control inspection and quality assurance testing. Subconsultants and subcontractors were required to adhere to the project QA/QC plan.

Schedule: On time, design packages sequenced to fit within cold weather restricted construction schedule

Work Locations: HNTB Charleston, WV

Innovative Approaches

- There is new roadway alignment as well as widening and resurfacing of existing roadway. While this requires various traffic shifts, HNTB's MOT plan and sequencing plan minimized these shifts to reduce confusion for the traveling public. MOT also required maintaining driveway access for numerous adjacent property owners during construction.
- Weather conditions restrict construction to May through October, so project sequencing addressed the most efficient way to complete the project within those construction windows.
- The hilly terrain required careful design of major side hill cuts and steep embankments.
- Tory Creek was rerouted to allow for the new four-lane alignment, which involved sensitive wetland and stream environment permitting.
- Drainage designs were modified to meet standards and field conditions.
- Seamless partnership between Branch Highways and HNTB resulted in successful project delivery.
- Use of electronic plan submittals reduced review time, lessened amount of paperwork and enhanced the revision process.
- Weekly design meetings provided opportunity to review progress updates of QA/QC reviews, which improved overall efficiency.

Branch/HNTB Personnel Involved in the Project

- ✓ John Huddleston, Project Manager
- ✓ Randy Epperly, Design Manager
- ✓ Brandon Stewart, Project Engineer
- ✓ Danny Donlin, Construction Manager

Laurel Fork involved widening and new roadway alignment through hilly terrain while maintaining access to 120 driveways and improving intersections with 14 secondary roads.

Project Highlights

- ✓ Construction will be completed on time and in budget
- ✓ Third phase of project follows two successfully completed phases
- ✓ Access has been maintained for 120 driveways

Relevancies to the Route 220 Project

- ✓ VDOT DB/PPTA
- ✓ Survey
- ✓ Environmental permitting and monitoring
- ✓ Extensive MOT
- ✓ Hydraulics and drainage improvements
- ✓ Geotechnical challenges and treatments
- ✓ Subgrade stabilization
- ✓ ROW acquisition
- ✓ Traffic control devices/TMP
- ✓ Roadway alignment and widening
- ✓ Utility relocations
- ✓ Storm sewer installation
- ✓ Complex construction sequencing/coordination
- ✓ Public involvement/communications
- ✓ QA/QC

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**: I-95 Express Lanes PPTA** Location: **Northern Virginia**	Name: **Fluor-Lane 95 LLC**	Name of Client.: **VDOT** Phone: **703-259-1779** Project Manager: **Charlie Warraich, PE** Phone: **703-691-6740** Email: **HS.Warraich@VDOT.Virginia.gov**	**06/2012**	**12/2014**	**$800,000**	**$800,000**	**$50,000**

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 with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

Project Description

The 95 Express Lanes is the second Public-Private-Transportation Act (PPTA) project in Virginia. The 29-mile segment of new express lanes connects with the existing 495 Express Lanes to enable faster, more predictable commutes between Northern Virginia and Washington, DC.

The project retrofits the existing two-lane HOV cross-section to three lanes and adds HOT technology for a 14-mile segment. The roadway continues to operate with a two-lane reversible section while allowing for future expansion to three lanes. The project also included operational improvements for additional miles, two new flyover bridges and modifications to 18 minor bridges.

HNTB's Scope

HNTB served as lead designer (prime) to the construction joint-venture team in a design-build capacity, responsible for all planning and engineering during project development and preliminary design along with three of the four project segments (Segments 2, 3 and 4) during final design.

Engineering: geometric layout; roadway design; drainage and flood plain analysis; bridge and retaining wall design; traffic modeling and analysis; Interchange Justification Reports; signage; development of all design exceptions and waivers; post-design engineering support services. HNTB also provided survey services to support design activities and worked closely with the concessionaire on unique geotechnical conditions to address these challenges and develop treatment plans.

Construction Quality Assurance: developed a construction quality management system manual to guide all construction quality processes including subcontractor selection, reporting procedures, internal audit process, daily inspection, document control, material control, construction checklists to project closeout. VDOT later used HNTB's manual as the basis for QA/QC guidelines on future projects.

Transportation Planning: comprehensive transportation planning assessment led to a Finding of No Significant Impact (FONSI). HNTB collected geometric and traffic data to evaluate corridor; developed initial corridor options; compiled micro-simulation model to evaluate performance of specific roadway elements; and assessed operations of the configuration. The MOT plan specifically addressed lane shifts associated with construction sequencing.

Schedule: "Build 29 miles in just 29 months." HNTB's design schedule allowed the contractor to begin work early and stage work efficiently. A majority of the design was completed within 12 months by a core group of 40 personnel. Construction began within six months of notice to proceed. The team's approach to MOT and phasing enabled the traffic shift to occur two months ahead of schedule and the project to open to traffic early, with an impeccable safety record.

Work Locations: The team co-located in HNTB's Arlington office for the first seven months of design.

Innovative Approaches

- The project area was limited to the existing HOV footprint of two 12-foot lanes with shoulders separated from the general purpose lanes by a traffic barrier. HNTB used mobile and aerial LiDAR technology to thoroughly and quickly evaluate existing conditions, such as flow lines adjacent to the barrier and bridge clearances to optimize the design and preserve most of the barrier wall along the retrofitted segment, saving time and cost.
- To minimize the amount of pavement overlay while meeting VDOT's cross-slope criteria, the team designed in 25-foot increments for the northern 14-mile segment.
- The project was phased to allow completion of drainage improvements, foundations work and new barrier placement on the west side, before switching to the east side. The work zone was established along the west barrier by shifting traffic closer to the east barrier. Once work was completed on the west barrier, a major traffic shift moved the work zone to the east side to complete the remainder of the corridor. The approach saved time, reduced cost and lessened the impact by reducing number of temporary lane closures to replace the barrier.
- An innovative trench drain system lessened required drainage pipe and inlets, reduced effects on the existing barrier and minimized schedule impacts. The project included 4.5 miles of drainage pipe and 440 inlets. The 2.6 miles of trench drain eliminated an additional 2.5 miles of storm sewer pipe and nearly 150 inlets.
- HNTB used joint-less/integral bridge designs to provide the concessionaire and VDOT with structures that require less maintenance over the life-span of the bridges, enhancing durability and longevity as well.
- The design avoided impacts to the existing sound walls near the Overlook Community in Alexandria and installed new sound walls with an aesthetically appealing finish chosen by the community.

Branch/HNTB Personnel Involved in the Project

- ✓ Nick Antonucci, Project Manager
- ✓ Brandon Stewart, Project Engineer
- ✓ John Huddleston, Project Engineer

95 Express Lanes retrofitted a two-lane section to three lanes, preserved miles of existing barrier and reduced drainage impacts.

Project Highlights

- ✓ Completed in 29 months, open to traffic two weeks early
- ✓ Completed within budget
- ✓ Existing fully reversible HOV system remained available during normal rush-hour periods

Relevancies to the Route 220 Project

- ✓ VDOT DB/PPTA
- ✓ Environmental permitting and monitoring
- ✓ Extensive MOT
- ✓ Drainage improvements
- ✓ FHWA guidelines and requirements
- ✓ ROW acquisition
- ✓ Geotechnical challenges and treatment
- ✓ Utility relocations
- ✓ Complex construction sequencing/coordination
- ✓ QA/QC

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: **495 Express Lanes PPTA** Location: **Fairfax County, VA**	Name: **Fluor Corporation**	Name of Client.: **VDOT** Phone: **703-691-6740** Project Manager: **John Lynch** Phone: **571-483-2600** Email: **John.Lynch@VDOT.virginia.gov**	**07/2008**	**11/2012**	**$1,700,000**	**$1,590,000**	**$100,000**

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 with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

Project Description

This 14-mile segment is part of the Capital Beltway corridor multi-lane circumferential freeway serving the Washington, DC area. It passes through environmentally sensitive and economically vital areas, connecting major interstate highways, limited access roadways and primary and secondary routes.

The 495 Express Lanes design-build project included 12 lanes configured in 4-2-2-4 typical section, which involved completely reconstructing eight lanes and providing four new tolled express lanes in the median. The project fully reconstructed 12 interchanges and included 80,000 linear feet of sound wall, 900,000 square feet of retaining wall structures and thousands of associated signs, toll structures and drainage structures. In addition, there were 58 new or replacement bridges involving 22,000 linear feet of bridge, 1.3 million square feet of bridge area and 54 million pounds of structural steel.

HNTB's Scope

HNTB served as lead designer (prime) responsible for conceptual, preliminary and final engineering design stages. HNTB also provided construction oversight and quality control services as part of the design-build team.

Engineering: geometric layout; roadway design; drainage and flood plain analysis; bridge and retaining wall design; traffic modeling and analysis; interchange justification reports; toll system design; signage, signals, ITS and lighting design; development of design exceptions and waivers.

Construction Oversight: post-design and construction quality oversight, quality control, inspection and materials testing. HNTB's project quality control team of 59 engineers, inspectors and technicians addressed bridge, roadway, maintenance of traffic, geotechnical, electrical and ITS inspection, materials testing, discrepancy resolution, contractor audits, records management and project punch listing and substantial completion. HNTB inspected hundreds of drilled shaft and pile foundations and monitored construction of retaining walls, including reinforced earth, soldier pile, secant pile, crib, soil nail and gravity walls.

Quality Control: established the Quality Management System for the project. The HNTB construction services team wrote the Project Quality and Construction Quality Plans in coordination with VDOT, the concessionaire and the design-build contractor.

Schedule: Final design began in January 2008 and was completed 24 months later. This project required coordination of more than 250 engineers and 20 subconsultants that delivered multiple design packages on an accelerated schedule. HNTB performed more than 90 percent of the design work. Construction began in July 2008 and was completed in November 2012.

Work Locations: Project IPO, HNTB Arlington, VA; HNTB Kansas City, MO

Innovative Approaches

- Value engineering considered existing roadways and maintenance-of-traffic requirements, existing utilities and right-of-way restrictions, resulting in composite steel plate girder and prestressed beam bridge designs.
- Steel bridge structures range in size and complexity from single-span skewed ramp/water crossings to long-span curved multi-span ramp flyover structures. Flyover bridges often employed integral pier construction to minimize approach quantities and mitigate vertical clearance issues, while improving girder efficiency and aesthetics.
- Value engineering of substructure foundation designs avoided quality issues and delays associated with shaft construction in high groundwater and weak overburden soil conditions and allowed aggressive construction on early foundation designs using driven H and pipe piles.
- All new construction was geometrically aligned to minimize impacts to the traveling public. Improvements were designed and constructed under traffic, maintaining the existing eight-lane facility open during peak hours, as the team built two new lanes on the highway perimeters to make room for the Express Lanes that run in the middle of the current interstate corridor. Lane closures were limited to non-peak hours.
- HNTB's approach to configuring the 12 lanes into a 4-2-2-4 typical section affected only 8 homes in contrast to the original expansion which would have affected 350 homes and businesses. The project also reduced noise impacts by installing more than 80,000 linear feet of sound walls along the 14-mile corridor.

Branch/HNTB Personnel Involved in the Project

- ✓ Nick Antonucci, Technical Adviser (Traffic)
- ✓ Brandon Stewart, Project Engineer MOT
- ✓ John Huddleston, Project Manager Civil

495 Express Lanes involved reconstruction and new construction of highway, roadway, intersections, interchanges and numerous bridges in urban and rural areas requiring attention to soils and maintenance of traffic.

Project Highlights

- ✓ Selected as Engineering News-Record (ENR) Mid-Atlantic Project of the Year in 2009.
- ✓ Completed one month early and under budget due to HNTB's design and construction quality management process.

Relevancies to the Route 220 Project

- ✓ Reconstruction of Roadway and Intersections
- ✓ Soundwall construction
- ✓ Environmental permitting and monitoring
- ✓ VDOT DB/PPTA
- ✓ ITS
- ✓ Geotechnical challenges and treatments
- ✓ FHWA Guidelines and Requirements
- ✓ ROW acquisition
- ✓ Traffic Management Plan/MOT
- ✓ Interstate Construction/Widening
- ✓ Utility relocations
- ✓ Public involvement/communications
- ✓ Complex construction sequencing/coordination
- ✓ QA/QC

BranchHighways

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