

# Request For Qualifications



Original

## I-95 Express Lanes Southern Terminus Extension *Design-Build Project*



Submitted By:



**BranchHighways**



*In Association With:*

Chesapeake Electrical Systems, Inc.  
H&B Surveying & Mapping, LLC (DBE)  
Froehling & Robertson, Inc. (SWaM)  
Engineering & Materials Technology, Inc. (DBE)

State Project No. 0095-969-720  
Contract ID Number: C00T17210DB90  
February 8, 2016

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Mr. Suril R. Shah  
Alternate Project Delivery Office  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

**Re: Design-Build I-95 Express Lanes – Southern Terminus Extension | Stafford County, VA**  
State Project No.: 0095-969-720 | Contract ID Number: C00T17210DB90  
Letter of Submittal – Statement of Qualifications

Dear Mr. Shah,

Branch Highways, Inc. (Branch), as the Offeror, hereby submits to the Virginia Department of Transportation (VDOT) this Letter of Submittal and accompanying Statement of Qualifications in response to the Request for Qualifications dated January 4, 2016 and Addendum dated January 28, 2016 for the above-referenced project. For this pursuit, Branch has partnered with Whitman, Requardt & Associates, LLP (WRA) 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. | 442 Rutherford Ave, NE, Roanoke, VA 24016

**3.2.2 Point of Contact and authorized representative of the Offeror:**

Mr. Pete Kramer, Vice President – NOVA Region  
Address: 10440 Balls Ford Road, Suite 270, Manassas, VA 20109  
Tel: (571) 379-5603 | Fax: (571) 379-5896 | Email: PeteK@branchhighways.com

**3.2.3 Principal Officer of the Offeror:**

Mr. Patrick K. Bartorillo, President  
Address: 442 Rutherford Ave, NE, Roanoke, VA 24016  
Tel: (540) 982-1678 | Fax: (540) 982-4217 | 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:** Whitman, Requardt & Associates, LLP

**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.

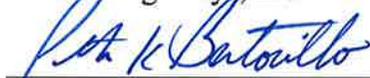
**3.2.10 Full Size Copies of SCC Registration and DPOR Licenses (Attachment 3.2.10)** are in the Appendix.

**3.2.11 DBE Participation Goal:** Branch recognizes and is committed to achieving the fifteen percent (15%) DBE goal for the entire value of the contract.

Branch and WRA are well-versed and respected within the Heavy Civil Construction industry, specifically with regard to Design-Build projects. Our Team eagerly anticipates yet another successful delivery with this endeavor.

Sincerely,

Branch Highways, Inc.



Patrick K. Bartorillo, President

### 3.3 OFFEROR'S TEAM STRUCTURE

**Branch Highways, Inc. (Branch)** will be responsible for managing the project in its entirety, supervising the construction, and performing major elements of the construction work. Additional subcontractors for various specialty items such as tolling systems, ITS, signage, guardrail, and pavement striping will be under direct subcontract to Branch. **Whitman, Requardt & Associates, LLP (WRA)** will lead the design effort for all aspects of the project and will be responsible for the design QA/QC. The Branch | WRA Design-Build Team includes highly qualified subconsultants that bring specific expertise to enhance the Team and ensure a quality project for VDOT. A listing of the Team follows and an organizational chart of the Team is included in Section 3.3.2.

#### **Branch Highways, Inc. (Branch) – Offeror, Legal Entity, Lead Contractor**

Branch is a member of The Branch Group of employee-owned companies, incorporated in 1986. Company headquarters are located in Roanoke, Virginia with a regional office located in the Manassas area of Northern Virginia. Branch is a full service heavy highway contractor with hundreds of successfully delivered projects to numerous public and private clients throughout the Mid-Atlantic region, including completed projects of similar size and scope to the I-95 Express Lanes – Southern Terminus Extension Project. Branch has an impressive record of successful Design-Build/PPTA projects for VDOT and local governments for over \$425 million. Branch has been able to maintain a high level of client satisfaction and is well acquainted with working closely with owners on large and complex projects. **Branch has assigned a Construction Design Coordinator (CDC) that greatly enhances the project structure of the Team by providing additional engineering oversight; similar to the role of Responsible Charge Engineer on other Design-Build projects.**

#### **Whitman, Requardt & Associates, LLP (WRA) – Lead Designer**

WRA is a full service architectural and engineering firm that was founded over 100 years ago primarily serving state and local governments in the Mid-Atlantic region of the United States. WRA will serve as the Lead Designer for this project and will be responsible for the design QA/QC. In the last three years, WRA has worked on seven Design-Build projects in Virginia and as a firm we have been a Design-Build leader in the Mid-Atlantic region working on over 50 Design-Build projects for Federal, State, and Local government entities as well as private Design-Build projects.

Branch and WRA have work together on three Design-Build/PPTA projects over the last three years as shown below:

- **George Mason University (GMU) Campus Connector Design-Build (\$13 million)** – Branch was the Lead Contractor for this project. WRA designed the Route 123 improvements, geotechnical engineering and provided QAM services for all construction in VDOT right-of-way.
- **Route 636 Extension over CSXT Augusta County PPTA (\$14 million)** – WRA designed the Route 636 Bridge over CSXT, geotechnical engineering and provided QAM services for this Branch project.
- **Greenview Drive Design-Build (\$16 million)** WRA is providing QAM services for this Branch project.

The combined Design-Build experience above and our common goal to put the quality and schedule of the project first has proven to be successful on our projects and will be for the I-95 Express Lanes projects. **Branch and WRA have worked closely with Transurban on the I-495 and I-95/395 Express Lanes projects and will leverage those professional working relationships for this project.**

#### **Subconsultants**

The Branch | WRA Design-Build Team is comprised of highly qualified subconsultants extremely knowledgeable in VDOT policies and procedures and experienced with similar VDOT Design-Build projects. The following subconsultants have been carefully selected based on their relevant past experience and established working history of project success with VDOT, Branch, and/or WRA:

**Chesapeake Electrical Systems, Inc. (CES)** was founded in 1993 and has grown to become the Mid-Atlantic Region's electrical contractor of choice working on some of the region's most recognizable landmarks. They bring significant experience with ITS system construction and integration of dynamic tolling infrastructure through their work on the Elizabeth River Crossing project, the I-495 Express Lanes

project and the recently completed I-95 Express Lanes project.

**H&B Surveying and Mapping, LLC (H&B)** a Virginia-Certified, DBE/WBE (Woman-Owned Business) founded in 2009 will provide Surveying and Subsurface Utility Locating for the Branch Team. H&B has teamed with WRA to provide surveying services on over 75 projects throughout Virginia including VDOT Design-Build projects.

**Froehling & Robertson, Inc. (F&R)**, a SWaM-certified firm founded in 1881, will provide a Quality Assurance Lab for the Branch Team. F&R's in-house soil, materials, and asphalt laboratories are accredited by AASHTO (AMRL/CCRL), the US Army Corps of Engineers (USACE), and WACEL.

**Engineering & Materials Technologies, Inc. (E.M. Tech)** is a certified DBE firm and will provide QC Inspectors, Testing and Lab Services for the Branch Team. Their in-house laboratory has been inspected and/or accredited by AASHTO Materials Reference Laboratory (AMRL), the Washington Area Council of Engineering Laboratories (WACEL) and the Cement and Concrete Reference Laboratory (CCRL).

### 3.3.1 KEY PERSONNEL

Key personnel Resume Forms are included in Attachment 3.3.1 located in Appendix C. A summary of key personnel is described below, and more detailed project experience for each are listed on the Resume Forms.

#### **Design-Build Project Manager: Pete Kramer (Branch – 34 years of experience)**

**Pete Kramer (DBPM)** has 34 years of overall experience in the heavy civil/construction industry, 19 of which have been with Branch. He has served as DBPM on numerous high-profile projects in Virginia, including the Prince William County Route 15 PPTA Project (\$52M), 2008 Stafford County Transportation Bond Referendum Projects PPTA/Design-Build (\$20M), and recently completed Prince William County Parkway Improvements project (\$14M). He has been responsible for successful management of overall project design, construction, planning, scheduling, quality, safety, overall contract administration, and procurement of proper resources on projects to which he has been assigned. His responsibilities will be the same for this project. Pete will be the primary point of contact for VDOT and any other stakeholders in the project, and will coordinate all aspects of the project and ensure 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 Design Manager, Construction Design Coordinator, Construction Manager, Safety Manager and the PR Manager will all report directly to Pete Kramer.

#### **Quality Assurance Manager: Lenny Coleman, P.E., CCM, LEED AP (WRA – 11 years of experience)**

**Lenny Coleman (QAM)** will report directly to the DBPM and will have direct, independent access to VDOT. He served in a similar role as Assistant QAM on the Fairfax County Parkway Interchange and Widening Design Build and held the role of QC Manager on the Fall Hill Avenue & Mary Washington Boulevard Extension VDOT Design-Build project in Fredericksburg, VA, and the Walney Road Widening Design Build Project in Fairfax, VA. Lenny's experience includes QA level oversight as Prince William County's Construction Manager for Capital Improvement Program managing projects similar to the I-95 Express Lanes Southern Terminus Extension such as the Route 1 North Improvements PPTA project. Lenny will be responsible for the Quality Assurance program and will coordinate with VDOT, supervise project QA inspection staff, and coordinate with the QA Testing firm, F&R. He will ensure conformance with the Contract Documents including the "approved for construction" plans and specifications. Lenny will have overall responsibility for the development of and adherence to the Design-Build QA/QC Plan including coordination with the *Design QA/QC Manager, Mike Russell, P.E.* Lenny will report to the DBPM but will function independently from the Construction QC Manager, auditing and monitoring Branch's Quality Control Program. He will have the authority to stop construction activities to ensure compliance with the specifications and issue Non-Compliance Reports (NCRs) if necessary. In addition, Lenny will submit monthly written reports on the status of the QA Program to both VDOT and the Branch Design-Build Team.

#### **Design Manager: John Maddox, P.E. (WRA – 30 years of experience)**

**John Maddox (DM)** will also report directly to the DBPM. John has 30 years of experience designing and

managing major transportation projects including over 20 years on VDOT projects. He is currently the Design Manager on VDOT’s Fall Hill Avenue Design-Build project in the City of Fredericksburg and was the Design Manager for the successfully completed VDOT Design-Build Walney Road Bridge Replacement and widening project in Fairfax County. John has also worked with Branch on two Design-Build projects the GMU Campus Connector project (Route 123 Bridge, geotechnical, roadway, drainage) and the Route 636 PPTA project in Augusta, VA (bridge, geotechnical and QAM). He will be responsible for providing a quality product, meeting all design milestones, continual Design-Build Team coordination and ensuring the Design QA/QC Manager’s involvement throughout the design phase. John is responsible for ensuring all design work is performed in accordance with current VDOT Policies, Procedures and Guidelines and the requirements of the VDOT Request for Proposals. He will manage all aspects of design including roadway; hydraulic; ITS, tolling system, traffic engineering; MOT; environmental; and geotechnical. He will assign resources as needed; oversee the design subconsultant for survey; coordinate design and review schedules; develop and implement corrective measures if necessary; and ensure environmental compliance measures are integrated into the design. He will coordinate the design with *CDC, Yieshak Shata* to ensure the timely completion of a quality constructible project. John will maintain involvement in the project once construction begins to oversee any plan modifications and shop drawings, and review construction activities with the CM as work progresses.

**Construction Manager: Steve Morris (Branch – 22 years of experience)**

**Steve Morris (CM)** has over 22 years of industry experience – 15 of which have been with Branch, and has successfully managed over \$100M of Design-Build projects, including Branch’s subcontracted portion of the previous I-95 Express Lanes project. Steve will report to the DBPM and will be assigned solely to this Project for its duration, and will be responsible for planning and execution of both internally performed and subcontracted work activities and ensuring that said activities and associated materials meet contract requirements and “approved for construction” plans and specifications, including Quality Control (QC). He will also be accountable for overall project compliance with ancillary regulations, including, but not limited to, environmental, safety, and MOT. The ITS/Electrical Manager, Construction QC Manager, Grading/Roadway Superintendent, Construction Environmental/MOT Manager, Project Controls Manager and the DBE Compliance Manager will all report directly to Steve Morris.

**ITS/Electrical Manager: Kevin Trippe (CES – 18 years of experience)**

**Kevin Trippe (ITS EM)** has worked for Chesapeake Electrical Systems (CES) since his graduation from his IBEW Apprenticeship Program in 2004. Kevin has served as Project Manager for CES for the installation and integration of the ITS systems for I-95 HOT/HOV Express Lanes, the I-495/Capital Beltway Express Lanes, and the I-495/95/395 Roadside Equipment Maintenance contract, which is on-going. Kevin is very familiar with the systems and work that will be required for the I-95 Express Lanes Southern Terminus Extension, and has proven his capabilities in efficiently handling issues related to ITS/Electrical design and its integration into the project as a whole. Kevin will be responsible for supervision of all designs developed by the ITS Design Team and throughout installation to ensure that the work is done on time and in accordance with a QA/QC Plan similar to the I-495 & 95 Express Lanes. The *Master Electrician, Robert Preston* is a Certified Master Electrician and will report directly to Kevin the ITS/Electrical Manager. Kevin will report directly to the *CM, Steve Morris* and will have a lead role in the ITS Integration Team.

**3.3.2 ORGANIZATIONAL CHART**

The Branch Design-Build Team Organizational Chart on Page 7 identifies key personnel members and depicts the reporting structure of the Team. **Solid lines** identify the direct lines of reporting relationships of our Team members from the DBPM to the Design, Construction and QA leads. **Dashed lines** represent indirect reporting relationships and obligations to the DBPM and the team members. Furthermore, the reporting structure shows a clear separation between the Construction Quality Control duties and the Quality Assurance duties. Each function will have independent materials testing laboratory services. *To further*

*enhance our Team structure and to ensure successful integration with the existing tolling system, specific team members will serve on our ITS Integration Team and are highlighted on the organizational chart.*

As a continuation of the functional relationships for Key Personnel described in section 3.3.1, the following narrative further defines the roles and functional relationships of the additional team members.

**Safety Manager: Danny Minnix (Branch – 20 years of experience)**

**Danny Minnix** will report to the DBPM and has held the position of Director of Safety and Risk at Branch for well over a decade, and has 20+ years of experience overall with large-scale heavy civil safety program development and management.

**Construction Design Coordinator: Yisehak Shata, P.E. (Branch – 15 years of experience)**

**Yisehak Shata, P.E. (CDC)** has 15 years of overall experience in the heavy civil construction industry, 11 of which have been with Branch, and extensive Design-Build project management experience, including the I-95/395 HOT/HOV/Bus Lanes PPTA project (\$47M), Heritage Center Parkway D-B (PWC) (\$6M), Route 15 Improvements Design-Build/PPTA (PWC) (\$52M), and 2008 Stafford County Transportation Bond Referendum Projects D-B/PPTA (\$20M). Yisehak has acted as DBPM on nearly \$30M of D-B projects, where he was responsible for monitoring the design process for constructability and efficiency. Yisehak is able and qualified to make appropriate directives/decisions regarding design modifications when they arise, and is well versed in the process of managing the design-construction process that is exclusive to Design-Build projects. Yisehak will report to the DBPM, and he will work seamlessly with, and assist in directing, the DM, CM, QAM, and VDOT by maintaining and facilitating constant lines of communication.

**Design**

**Roadway Engineer: Mark Vasco, P.E.** will report to the DM and lead the roadway design efforts for the project. Mark has more than 32 years of experience in the design of transportation projects. Mark recently served as the lead designer of the Fairfax County Parkway Interchange at Fair Lakes Parkway in Fairfax County Virginia and the GMU Campus Drive Connector Design-Build with Branch Highways.

**Geotechnical Engineer: Jeff Basford, P.E.** has over 15 years of experience in subsurface explorations, geotechnical analysis, design of pavement sections and shallow and deep foundations, slope stability analysis, concrete and geosynthetic reinforced earth retaining structures, and in-situ testing and verification during construction. He has provided geotechnical expertise on Design-Build projects for WRA in Virginia and Maryland including the Route 636 Extension and the GMU Campus Connector with Branch Highways. Jeff will report to the DM and collaborate extensively with the CM and CDC.

**ITS & Lighting Design: Jeff Cheng, P.E.** will lead the ITS & Lighting Design. He has 11 years of experience and recently led the ITS & Lighting Design for the I-95 Newark Toll Plaza in Delaware for DelDOT. He has extensive experience on VDOT projects including the preliminary plans for the I-495 Shoulder Use project ITS and the Fairfax County Parkway Interchange at Fair Lakes Parkway project. Jeff will be supported by **Dave Newberger, P.E., PTOE**, who has extensive experience on the I-495 and I-95 Express Lanes ITS & Lighting systems through his lead role on the GEC contract reviewing the design. Jeff will report directly to the DM, coordinate directly with ITS/Electrical Manager and be a key person on the ITS Integration Team.

**MOT/Traffic Engineer: Dana Trone, P.E., PTOE** has over 19 years of experience in traffic engineering including development of transportation management plans (TMP) and MOT design. Dana has developed several TMPs for construction on interstates in Virginia, and numerous VDOT Design-Build projects. She also prepared the 30% design for the I-495 North Extension Shoulder Use Lane Design-Build project. Dana will report to the DM and collaborate with the **Construction MOT Manager, Anthony Varrati**.

**Drainage/Hydraulics Engineer: David Gertz, P.E.** will report to the DM and lead the design efforts for drainage and SWM. David has over 36 years of experience in roadway drainage design and stormwater management, and has designed numerous projects for VDOT utilizing the new Virginia stormwater regulations that took effect in July 2014. He most recently served as Lead Drainage/Hydraulics Engineer

for three VDOT Design-Build projects.

**Environmental Permitting:** *Taylor Sprenkle, PWD* will report to the DM and secure all environmental permits needed for the project. Taylor has over 12 years of experience with environmental reviews and permitting required for transportation projects and will work closely with the **Construction Environmental Manager, Anthony Varrati**, to ensure all permit requirements are fulfilled.

**Utility Coordination Engineer:** *Paul Martin* has over 27 years of experience in highway and bridge construction including 12 years specializing in utility relocations for VDOT. Paul will report to the DM and will interact closely with the CM.

**Erosion and Sediment Control Reviewer:** *Glenn Wilson* has 18 years of experience in E&S Control design services for transportation projects. He is a certified DCR Combined Administrator (Certificate #684). Glenn will report to the DM and collaborate with the **Construction Environmental Manager, Anthony Varrati**.

**Soundwall Design:** *Kenneth Bauer, P.E.* will report to the DM and has 17 years of experience performing noise analyses and preparing soundwall designs including VDOT Design-Build projects such as Fall Hill Avenue and Route 7 over the Dulles Toll Road.

### Design QA/QC

**Design QA/QC Manager, Mike Russell, P.E.** has over 26 years of progressive experience in the transportation industry including 14 years with VDOT most recently as Bristol District Engineer. He will report to the DM and will ensure compliance with the project's QA/QC Plan. Mike has served as WRA's PM on the Berkmar Drive Extension Design-Build project in Albemarle County. He also served as VDOT's PE Manager for the Route 58 Hillsville Bypass PPTA project constructed by Branch.

### Construction QC

**Construction QC Manager: Tom Franzino** has 5 years of industry experience, 2 of which have been with Branch. Tom will report directly to the Construction Manager and will be responsible for managing all QC work for Branch, including coordinating the EM Tech's QC inspection staff and testing lab. Tom is extensively knowledgeable in all of VDOT Construction requirements, specifications, and testing methods and will coordinate with the QAM and the DBPM on the QC components of the project.

### Construction

**Master Electrician: Robert Preston** is a Master Electrician licensed by the Virginia Department of Professional and Occupational Regulation Board for Contractors and Tradesmen with 39 years of experience performing and supervising ITS & electrical work. A relevant recent project is the I-95 HOT/HOV Express Lanes, I-495 Express Lanes. Robert will report directly to **Kevin Trippe, the ITS/Electrical Manager**. He will be responsible for supervision and coordination of fiber, power, wiring, splicing, ITS and other associated device installation, inspection and testing. Robert is 30-Hour OSHA certified, which included Arc Flash Protection training, and has completed separate Lockout/Tagout training.

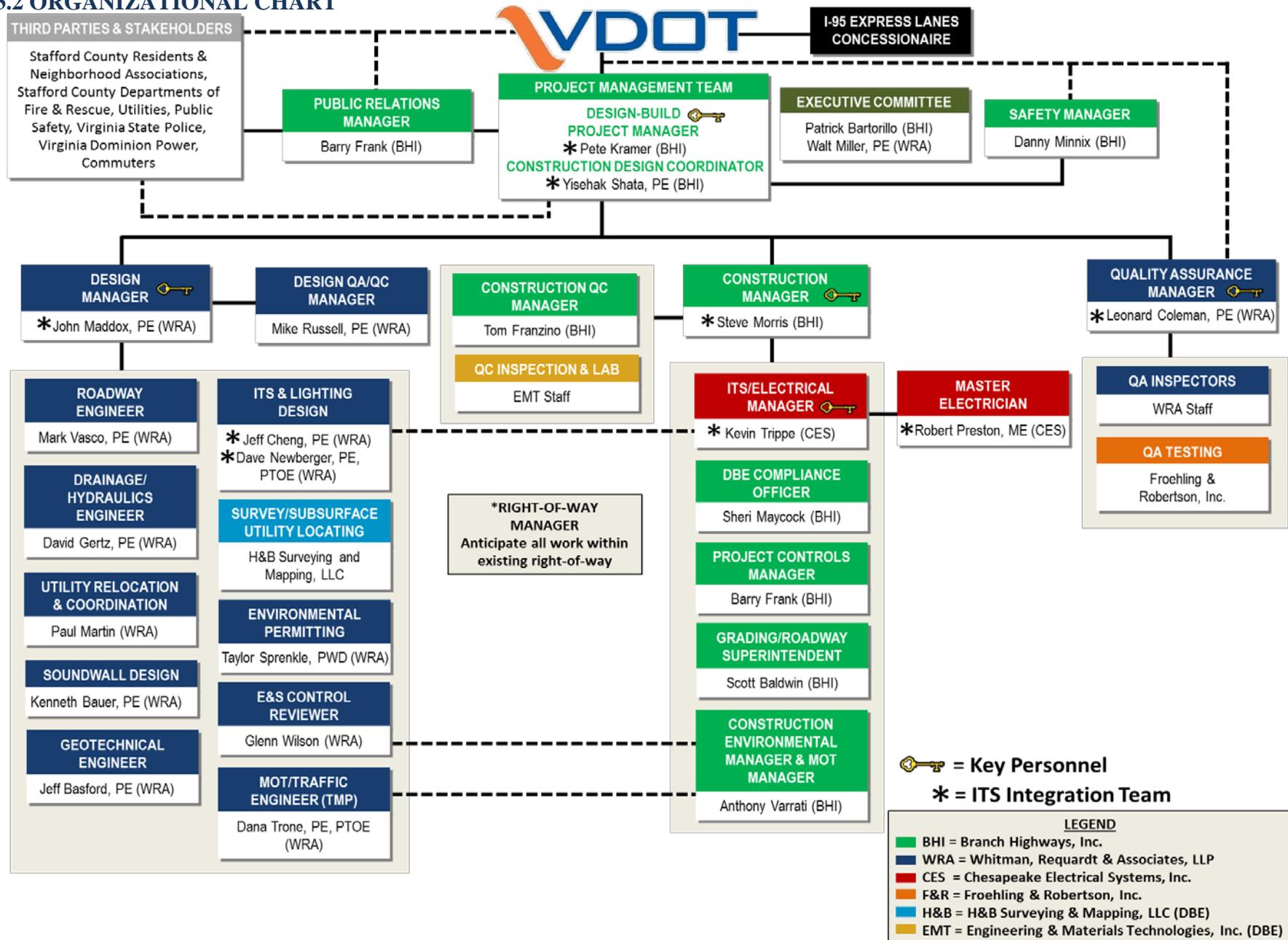
**DBE Compliance Officer: Sheri Maycock** has been with Branch for 24 years and will report to the DBPM. She currently serves as the DBE/EEO Compliance Officer for Branch and will oversee day to day DBE compliance for the project.

**Project Controls and PR Manager: Barry Frank** will report to the DBPM and has 5 years of industry experience, all with Branch.

**Grading/Roadway Superintendent: Scott Baldwin** has 29 years of heavy civil construction experience in the role of superintendent and will report to the CM. He has worked in the capacity of grading/roadway superintendent on numerous large-scale, high-profile interstate projects, including Phases 2-4 of the I-95/I-495/I-395 Springfield Interchange and the Seminary Road Widening.

**Construction Environmental and Construction MOT Manager: Anthony Varrati** will report to the CM and has 2 years of industry experience in the role of safety/environmental controls, and a B.S. in Safety Management.

### 3.3.2 ORGANIZATIONAL CHART



### 3.4 EXPERIENCE OF TEAM

Please refer to Attachment 3.4.1 (a) Lead Contractor Work History Forms and Attachment 3.4.1 (b) Lead Designer Work History Forms, located in the Appendix of the SOQ for detailed relevant project experience.

#### RATIONALE FOR WORK HISTORY PROJECT SELECTION

As Lead Contractor and Offeror, Branch is proud to present the following projects that demonstrate experience and success with scope, magnitude, risks and associated mitigation that are common to the I-95 Express Lanes Southern Terminus Project.

***I-95 HOT/HOV Express Lanes – Section 1:*** Branch’s portion of this project ties directly into the proposed Express Lanes extension. In fact, the northernmost half mile of the proposed Project was actually graded and manipulated as part of our scope. We are familiar with the highly variable soils conditions that will be encountered as part of the Express Lanes Southern Terminus Extension, as well as the challenges that will be faced with soundwalls and ITS design and installation. The knowledge gained on Section 1, gives the Branch | WRA Team the experience necessary to ensure success on the I-95 Express Lanes Southern Terminus Extension project.

***Route 15 PPTA/Design-Build:*** This project was chosen for several reasons. It was a Design-Build of similar overall dollar magnitude. The same three Branch Key Personnel were on this project as will be on the I-95 Express Lanes Southern Terminus Extension, and these individuals were responsible for management of many of the same elements and challenges that are part of the Proposed Project. These includes high public profile, variable geological conditions, connection to existing high-traffic-volume roadway, and coordination with multiple governing departments and agencies.

***Route 58 Hillsville Bypass PPTA/Design-Build:*** Branch constructed nearly 4 miles of new roadway as the primary scope of the Design-Build project. Similar scope components included varying soils conditions that necessitated utilization of varying forms of treatment, environmental permitting, complex construction sequencing, and connections to existing roadways. One of the most impressive facts about this project is that the entire \$83M project was performed without any Branch-requested Change Orders. The continued success of this on-going 36-mile VDOT PPTA/Design-Build project shows Branch Highways’ ability to partner with the Department.

As Lead Designer, WRA is pleased to present the following three projects to showcase definitive experience along I-95 in interstate widening, tolled express lane design and Design-Build expertise.

***I-95 Newark Toll Plaza:*** This highlighted project rehabilitated an existing heavily congested toll plaza on I-95 in New Castle County, Delaware with the addition of highway speed E-ZPass lanes constructed in the median. Many of project features are virtually identical to the I-95 Express Lanes Southern Terminus Extension project. The new E-ZPass lanes in the median of I-95 required very similar roadway, SWM, drainage, MOT and TMP components and more importantly included very similar ITS, electrical, and tolling features to those required for the I-95 Express Lanes Extension project.

***I-95/I-495 at Arena Drive from MD 202 to MD 214 Design-Build:*** This project for the Maryland State Highway Administration highlights WRA’s expertise in successfully delivering Design-Build projects involving improvements on the I-95 corridor in very high traffic volume settings. The project TMP and MOT has similar complexities to the proposed project.

***Fall Hill Avenue Widening and Mary Washington Boulevard Extension Design-Build:*** This project is highlighted because it is a current Design-Build project over I-95 in close proximity to the I-95 Express Lanes Southern Terminus Extension project. As a VDOT Design-Build project, we successfully delivered the design to the Contractor with all of the design constraints and contractual requirements that will be required for the I-95 Express Lanes Southern Terminus Extension project. Additionally, the knowledge gained from developing MOT and TMP components for I-95 and the geotechnical analysis will be invaluable and directly applicable to the I-95 Express Lanes Extension Design-Build project.

### 3.5 PROJECT RISKS

*The combined 150+ years of experience for the Branch | WRA Team in the industry, including over \$575 Million in combined Design-Build projects has enabled each firm to build upon their ability to anticipate risks and determine mitigation strategies to manage/eliminate these risks.* Branch Highways’ risk assessment and mitigation procedure is described briefly in the diagram, below. It is based on concepts presented in the Breakthrough Project Leadership Institute created by two well-known construction management consultants, Mike Casten and Dave Peterson, owners of Construction Concepts and Sage Limited, respectively.



The cycle starts with choosing partners that compliment your strengths and bring different perspectives to the table much like the Branch | WRA Team has proven to do in numerous endeavors. Working as a Team to evaluate the criteria and assess risks leads to effective solutions that are implemented into the project design. This implementation then leads to an evolving process that runs through the project cycle of performing, evaluating, and adjusting.

While risks involved with every Design-Build project are numerous, the Branch | WRA Team has identified the three risks critical to the success of the I-95 Express Lanes Southern Terminus Extension. These three risks, identified below, each require a unique mitigation strategy.

#### RISK #1: INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

This portion of the project scope consists of installation, testing, and integration of ITS devices to provide reversible lane operation for the I-95 Express Lanes Southern Terminus Extension, as well as providing other traffic control, monitoring, and informational systems. ITS devices specific to the I-95 Express Lanes Southern Terminus Extension project include DMS signs, CCTV cameras, automated incident detection cameras, traffic detectors, vehicular gates and the control cabinets, power generators, communications, and electrical power to support these systems. This effort will also require close coordination with VDOT and the I-95 Express Lanes Concessionaire (Transurban) to integrate all new ITS devices and expand the operation of the existing system. The Branch | WRA Team’s ITS/Electrical subconsultant for this project, *Chesapeake Electrical Systems, Inc. (CES)* has extensive experience with managing design, coordination, and installation of these same ITS components. Similarly, WRA is well-versed in designing these same elements and coordinating with Transurban.

**Why Critical:** Our Team has identified key elements of risk associated with ITS on this project and how they are fundamental to the completion and overall success of the project. These elements include:

- **Operation of the Existing Express Lanes:** A functioning ITS system is absolutely necessary for the operation and safety of the I-95 Express Lanes. Therefore, it is necessary to complete construction in a manner that does not impact the existing system and to sequence construction of the proposed ITS system to allow for integration and testing so that the project is completed and opened on time. The system also interfaces with VDOT’s Traffic Operations Centers to provide travel information and with E-ZPass Virginia for toll collection. Any disruption to the existing or proposed ITS systems could inhibit these functions.
- **Design Coordination:** Coordination between the roadway design and the electrical drawings is a critical component to project success and can’t be overlooked, especially on those large-scale projects with many detailed elements that require the work of multiple teams to complete. Minimizing the importance of this

coordination will result in schedule impacts, and also potential re-work to correct conflicts in the field. On a project such as this, schedule delays and public perception of re-work would put unnecessary pressure on all parties involved.

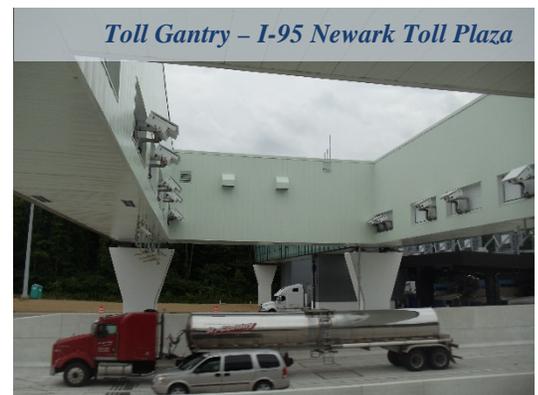
- **Schedule:** Our Team understands that the ITS design, construction, activation, testing and integration schedule is critical to the successful completion and opening of the project. Grading along the corridor creates an issue whereas the Electrical/ITS infrastructure installation could be delayed and easily become part of the critical path of the schedule and in turn be subject to increased costs and constrain the time available for turnover and testing of the ITS system. The proposed devices must be installed and activated early in the overall project schedule to provide ample time for integration and programming so that the roadway extension can be opened when completed.

**Impacts:** Failure to implement the ITS systems will result in the following impacts:

- **Operation of Existing Express Lanes:** While the majority of the proposed ITS devices are constructed south of the existing ITS infrastructure, there are still some areas of overlap and communications tie-ins must be made between the proposed and existing systems. Any unplanned impacts to the existing system during the installation of the proposed system can be costly and possibly halt operation of the existing system. As previously noted, the ITS system is vital for the operation of the reversible lane and any impacts during construction causing the existing system to not operate will potentially result in lost toll revenue to Transurban.
- **Design Coordination:** The design for grading, drainage, and ITS infrastructure must coordinate with one another to avoid conflicts during construction. All of these, and other operations in the same area of the project, will be affected in terms of schedule not only in terms of overall time frame, but also the order in which operations are executed. If these conflicts are not resolved during design there is the potential for significant impacts to cost and schedule.
- **Schedule:** Much publicity has been given to the delay currently experienced by both I-95 Express Lane and General Purpose lane users at the existing Express Lanes terminus. The existing conditions with heavy weaving movements are undesirable and commitments have been made to the public through the I-95 Express Lanes Southern Terminus Extension project to provide relief. It is crucial for this project to be constructed and opened on time to reduce congestion and avoid a negative public perception. Any missteps in the ITS implementation will extend current undesirable conditions, delay the project opening, and will decrease customer satisfaction with the Express Lanes system.

**Mitigation:** Our Team will apply our risk management strategy to evaluate, identify, and determine solutions to manage and monitor ITS risks throughout the project delivery process. Given our past experience with these systems, we will bring innovative solutions to the risks identified above.

- **Operation of the Existing Express Lanes:** Our ITS/Electrical Manager has an excellent understanding of the existing ITS systems on the Express Lanes from working on previous projects in the same corridor. Our Team will review in detail the ITS architecture and concept of operations of the existing system so that we have a complete understanding of all channels of communication and the functional requirements of the proposed ITS system. This information and system understanding will allow us to work seamlessly during the integration process. Our ITS subconsultant, CES has assigned both an ITS/Electrical Manager, and a master electrician, who were essential personnel in virtually the same roles on previous Transurban Express Lanes projects. These same individuals are also currently assigned to the maintenance contracts that CES has for both the I-495 Capital Beltway & I-95 Express Lanes. In order to minimize any construction impacts to existing ITS



Toll Gantry – I-95 Newark Toll Plaza

systems and infrastructure, a thorough review of all available as-built information and field verification will be completed to ensure the location of all existing ITS equipment is known. In addition to spatial considerations, other strategies that will be considered are the use of temporary services, back-up generators and redundant communication systems when tie-ins or disruptions to the existing systems must occur.

- **Design Coordination:** Branch, WRA, and CES all have recent first-hand experience in coordinating design of ITS/Electrical components with site grading. From all previous experiences, the ITS portion has to be installed as early as possible in the construction sequence in order to ensure a successful project. In order to mitigate this issue, portions of fiber lines may need to be installed using “non-traditional” boring techniques as opposed to traditional ductbank. This “boring” method of installation will allow the majority of the conduit systems to be installed concurrently with grading activities. Once grading activities are completed from north to south, boxes, fiber, wire and cabinet foundations can be installed closely behind. To the greatest extent possible, junction boxes and cabinet foundations will be located where there is minimal cut/fill. Along the same lines, equipment cabinets will not be mounted on sign structures and junction boxes will not be located in the shoulders of any roads. Both of these design elements typically delay installation and expose the boxes and wire/fibers to impacts.
- **Schedule:** The Branch | WRA Design-Build Team will develop a detailed schedule to plan the construction, inspection, activation, integration, testing and implementation of the proposed ITS devices. This schedule will be coordinated among all aspects of work so that other elements are completed as required for ITS construction (e.g., ensuring the roadway is completed so that testing of vehicular gates and automated incident detection cameras can occur). CES will work with Branch’s Team to ensure the coordination of work activities of all disciplines is done efficiently and in such a way that critical path for the project is unaffected.

**Role of VDOT and other Agencies:** VDOT’s role will be to provide all available as-built plans during the bidding and design phases, to provide review and approval of the ITS design (along with Transurban), and to facilitate coordination with Transurban during design, activation and integration of the new ITS systems.

**RISK #2: GEOTECHNICAL**

The Branch | WRA Team has reviewed the project information provided with the RFQ including the conceptual plans and typical sections. In addition, we have considered our recent experience on VDOT projects in the area on Route 1, Fall Hill Avenue, and the I-95 HOT/HOV Express Lanes project immediately to the north where coastal plain soils were encountered. The site is underlain by artificial fill materials and sedimentary soils of the Potomac formation. The Potomac formation may include high-plasticity clay strata that can exhibit very low effective residual friction angles. In addition, acidic soils may also be present at the project site. While the southernmost Express Lane grading already performed by Branch, indicated less probability at that point for in situ acidic soils, our other projects in the area such as Fall Hill Avenue and others in the region provides enough evidence that these soils cannot be discounted.

In considering the geotechnical risks associated with this project the most significant factor that we identified is that the subsurface conditions in the project area have not been well defined to a site level. Although we can speculate the conditions of the fill placed as part of the highway based on our knowledge of historic VDOT practices as well as what we have unearthed first hand on the adjacent I-95 Express Lanes project, the actual project site conditions are unknown and therefore are a significant risk to the project.

**Why Critical:** The majority of the project site is within the median area of I-95. The project site has been disturbed by earthwork operations for the original I-95 roadway construction and includes areas of embankment fill and stockpiled materials. It is likely that unsuitable materials from the original roadway construction have been placed in the median area or in side slope fills and will be encountered during

construction. Unsuitable materials can pose a problem with subgrade preparation, and may present slope stability issues with cut slopes and fill slopes in areas of embankment widening. Historic VDOT practice was to dispose of unsuitable materials such as organic soils, stumps, roots, construction debris, asphalt, concrete, and other waste materials in side hill fills and in median areas.

It is possible that portions of the site are underlain by soft or loose soils rather than the heavily over consolidated soils of the Potomac formation. Without subsurface information and laboratory testing the magnitude of settlement induced by the new embankment loading is uncertain. Additional concern related to settlement is the time duration that it takes for the settlement to occur. A 20-foot thick soft clay layer could take more than a year to consolidate without remediation measures. This could have a significant impact on the construction schedule and sequencing.

The overall stability of the proposed cut and fill slopes at maximum slope ratios of 2(H):1(V) must be carefully evaluated. High-plasticity cohesive soils of the Potomac formation (Potomac clay) can be problematic for cut slopes at slope ratios as flat as 4(H):1(V). Unsuitable fill materials at new embankment subgrade and along embankment side slopes may result in sloughing, sliding, or global stability failures. If flattening of the side slopes is required, retaining walls may need to be incorporated into the project. Additionally, the design and construction of the overhead signage, ITS features, and drainage elements may require special considerations to account for the aforementioned geotechnical conditions.

**Impact:** Based on our Team's review of the data, we identified these major geotechnical issues to be considered during design and construction:

- Earthwork impacts due to the possibility of unsuitable fill materials.
- Settlement of embankment fill.
- Stability of cut and fill slopes.
- Acidic soils.

Each has the potential to impact the cost, schedule, constructability, and future maintenance cost and must be managed throughout design and construction.

**Mitigation:** Based on the Branch | WRA Team's past experience mitigating geotechnical risk, a thorough field investigation based on a detailed geotechnical boring and testing program is Step One. In order to properly assess the geotechnical risks associated with the proposed construction, we will develop a comprehensive geotechnical investigation to define the subsurface conditions including soil, rock, groundwater, and uncontrolled fill within the project limits. WRA will perform a site reconnaissance walk to identify areas of concern, prior to planning and developing the scope of the geotechnical investigation. The geotechnical investigation will include laboratory testing to develop the appropriate design soil parameters for evaluation of embankment settlement and for slope stability. Additionally, geotechnical evaluation and recommendations for compacted embankment fill, pavement subgrade preparation, pavement thickness design, noise barrier walls, sign structures, light structures, and ITS components will be provided as required.

**Unsuitable Materials:** Due to the previous roadway construction it is likely that we will encounter unsuitable materials within areas of subgrade cut for the new road alignment, subgrade fill for new roadway embankment, or side slope fills for widening existing embankments. The extent and impact of the unsuitable materials will need to be evaluated. If unsuitable materials are encountered they may require undercutting and replacement with select borrow material, as needed to provide stable slopes, to prepare pavement subgrades, and prior to placement of embankment fill for the roadway or widening. If the extent of unsuitable subgrade conditions are not identified early in the project design, additional material and hauling costs could be realized.

**Settlement:** We anticipate placing fills up to 35 feet in height to accommodate the proposed I-95 Express Lanes roadway grade. We will consider the results of SPT sampling, undisturbed tube sampling, and laboratory consolidation testing, to estimate the magnitude of settlement and time of consolidation under the proposed embankment loads. To mitigate the effects of settlement on the roadway embankment fill a waiting period can be established with periodic monitoring of settlements to determine when most of the estimated settlement has occurred. The scheduling of the final pavement will take into account the settlement and monitoring period to ensure the RFP requirements are met. If calculations show that the settlement period is beyond the construction timeline, surcharging may be necessary to speed the time of settlement. Estimation and monitoring of embankment settlement are key to effective and economical roadway design and construction phasing. Properly evaluating the settlement will allow our Team to avoid:

- Excessive settlement due to underestimating consolidation time.
- Embankment subgrade failure.
- Schedule delays for installing final pavement, if consolidation time is underestimated.

**Slope Stability:** Our Team is familiar with the site geology consisting of Potomac formation soils, and we understand the potential slope stability issues related to unsuitable soils left along shoulder and median areas from previous construction projects. During the geotechnical investigation we can identify the presence of unsuitable soils and problematic Potomac clay soils. Where unsuitable soils or weak Potomac clay soils are encountered, slope stability issues are generally addressed in design and construction by:

- Removal and replacement with suitable borrow material.
- Reducing the slope ratio to flatten the slope.
- Benching the slope.
- Construction of retaining walls.

**Acidic Soils in Design and Construction:** Our Team has extensive experience with the geology in the region and the prevalence of acidic soils in the area. We can identify the presence of these soils through pH, and acid-base accounting tests. Issues associated with acidic soils are generally addressed in design and construction by:

- Reuse of Soil from Cut Area.
- Use proper long-term vegetative cover.
- Run-off Control from Acidic Soils during Construction.
- Foundation and SWM Facility Element Selection for Acidic Soils.



**Role of VDOT and other Agencies:** VDOT’s role will be to provide all existing geotechnical data during the RFP stage to allow full evaluation of the project risk and to review the final geotechnical report for the project.

**RISK #3: SOUNDWALLS**

The soundwall construction on the I-95 Express Lanes Southern Terminus Extension Project poses a host of potential impacts with the requirement for soundwalls to be incorporated. Not only does this feature require work outside of the general purpose lanes of existing I-95, it also introduces potential right-of-way, utility, and access concerns, and significant schedule impacts to the Project. Branch Highways’ role in the construction of soundwalls on the previous I-95 Express Lanes project was to provide initial grading for

access and foundation installations and to complete the final drainage, grading, and stabilization in coordination with the soundwall installation, which was performed and managed by others. Soundwall installation actually extended the project completion date by 7 months. This recent experience offers several “Lessons Learned” that will enable the Branch | WRA Design-Build Team to anticipate critical steps to ensure on-time delivery of the I-95 Express Lanes Southern Terminus Extension Project in its entirety.

**Why Critical:** Our Team has identified three main areas of risk associated with the soundwall component of this project:

**Fabrication Schedule:** While there were multiple causes for the schedule impacts with regard to soundwalls on the previous I-95/395 Express Lanes project, fabrication time ultimately had the biggest impact on schedule – plants could simply not keep up with the demand of the project. If the fabrication lead time is not addressed the I-95 Express Lanes Southern Terminus Extension project could realize these same schedule delays.

**Location:** As with the previous segment of the I-95 Express Lanes, these soundwalls will be on the side slopes of I-95 tight to the right-of-way line or at the edge of an existing embankment. Consequently, there will be several grading and drainage considerations put into question the ability to keep the wall and associated drainage features within the current right-of-way. The conceptual drawings indicate at least eight areas where drainage will need to be accommodated through the wall location and push the line of the wall tight against the existing right-of-way. If adequate right-of-way is not available additional time and expense will be incurred while easements are purchased. Additionally, the proposed soundwalls positioned on top of the embankments present numerous constructability and design concerns to ensure stability of the existing fill slope with protection and drainage in front of the soundwall.



**Construction Access Points:** Careful selection of ingress/egress points for soundwall construction will be critical to the TMP design and soundwall execution of this portion of the project. Since the walls run adjacent to construction on the interior side of the southbound GP lanes, it will be paramount that ingress/egress is provided at points carefully scrutinized and effectively handled in the Maintenance of Traffic Plan. The delivery of concrete and reinforcing steel for foundations, more than 200 posts, and an estimated 100,000 sq. ft. of panels, all must be done without affecting the existing traffic flow, while also providing adequate space for construction activities.

### Impacts:

**Fabrication Schedule:** While soundwall construction itself does not directly impact the Express Lanes’ functionality, it does affect public opinion regarding the perceived successful completion of the work. Despite the fact that soundwall activities will take place outside of the existing GP lanes, there is always a degree of disruption to the flow of traffic created by the visual distraction of work being performed on the side of the road. Additionally, the old adage of “Time is Money” rings absolutely true: the longer a specific work zone is active, the higher the costs that will be incurred.

**Location:** It is possible that the final design of the soundwalls on this Project could require acquisition of construction and/or permanent easements to allow for associated grading and drainage. Additionally, at the Dominion power lines located at the southern end of the soundwall may need to be adjusted to provide adequate clearance above the soundwall. As highlighted in our Geotechnical Risk narrative, the likelihood of varying subsoil conditions may warrant additional foundation design efforts and slope stability analysis. These conditions will dictate in large measure the needed right-of-way clearances and allowances for foundation and drainage features. Both of these issues could have a significant effect on cost and schedule. Therefore, it is essential that they be addressed early on in the Design-Build process, and are monitored to ensure that all possible exposures are mitigated.

**Construction Access Points:** While the width of existing ROW throughout the I-95 corridor for this project are relatively consistent, the slope and grade of existing ground outside of the roadway itself are not. This creates the potential for a safety concern, not only for the public traveling on the GP lanes adjacent to these points, but also in our work areas. The combination of limited work/maneuvering space, crews working, large trucks and equipment, and employees on the ground present risk to both the project and our people.

**Mitigation:**

**Fabrication Schedule:** In an effort to mitigate these impacts, the Branch | WRA Design-Build Team has entered into an agreement in principal with the *Smith-Midland Corporation (SMC)* to set aside precious fabrication and storage assets in order to facilitate the delivery of the estimated 100,000 SF of panels and 200 posts. As a long-time partner of Branch Highways with a proven track record of meeting VDOT quality requirements, SMC has a proven track record and we have full faith in their ability to manufacture and deliver all of the posts and panels required for this soundwall within the tight time constraints that this Project includes. In fact, SMC has recently upgraded its capacity to hold in ready panels and posts fabricated for this Project in an effort to play a role in assuring Success for the Branch | WRA Design-Build Team.

**Location:** The Branch | WRA Team will analyze the location limitations and closely coordinate the alignment to consider foundation and drainage designs in coordination with grading and existing soils conditions in order to eliminate the need for additional right-of-way to the fullest extent possible and minimize overall cost. In areas where the ground line sinks below the existing roadway elevations, innovative design considerations will be employed to provide the best long-term solution for each specific location.

**Construction Access Points:** Access points must be carefully considered and located in areas where there will be sufficient room to allow for materials and equipment deliveries to be safely executed. Factors that our Team will consider to ensure that this risk is minimized or eliminated include existing traffic pattern, width and evaluation of existing ROW, existing profile and horizontal alignment of the GP lanes, and the location of existing and proposed ITS/Electrical appurtenances that may create spatial obstacles. The number of access points will be kept to an absolute minimum. At its northernmost point, the wall starts adjacent to the Route 610 on-ramp to I-95 South. In order to best accommodate access so as not to interfere with traffic merging onto I-95, the Branch | WRA Team will incorporate access points at or near the northern end of the soundwall prior to the acceleration lane. Additional access points will be incorporated past the southern end of the acceleration lanes.

**Role of VDOT and Other Agencies:** The Branch | WRA Design-Build Team requires little from the Department in order to effectively manage the risk associated with soundwall construction on this project. Assistance with our public outreach in terms of simple participation in public meetings, coupled with timely turn-around of submittals satisfies the initial need to expedite reviews and approvals. Beyond that, the Branch | WRA Team will request the Department's further cooperation by allowing us to manufacture standard panels prior to final design approvals. Of course, we would proceed at our own risk so long as we could receive preliminary approvals of materials and standard panel details.

**ATTACHMENT 3.1.2**

**Project: 0095-969-720**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
<b>Statement of Qualifications Checklist and Contents</b>	Attachment 3.1.2	Section 3.1.2	no	Appendix
<b>Acknowledgement of RFQ, Revision and/or Addenda</b>	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Appendix
<b>Letter of Submittal (on Offeror's letterhead)</b>				
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
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appendix
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Appendix
Evidence of obtaining bonding	NA	Section 3.2.9	no	Appendix

**ATTACHMENT 3.1.2**

**Project: 0095-969-720**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
Full size copies of SCC and DPOR registration documentation (appendix)	NA	Section 3.2.10	no	Appendix
SCC Registration	3.2.10	Section 3.2.10.1	no	Appendix
DPOR Registration (Offices)	3.2.10	Section 3.2.10.2	no	Appendix
DPOR Registration (Key Personnel)	3.2.10	Section 3.2.10.3	no	Appendix
DPOR Registration (Non-APELSCIDLA)	3.2.10	Section 3.2.10.4	no	Appendix
<b>DBE statement within Letter of Submittal</b> confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	Page 1
<b>Offeror's Team Structure</b>				Pages 2-7
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Pages 2-4
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix
Key Personnel Resume – Lead Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.5	no	Appendix
Organizational chart	NA	Section 3.3.2	yes	Page 7
Organizational chart narrative	NA	Section 3.3.2	yes	Pages 4-6

**ATTACHMENT 3.1.2**

**Project: 0095-969-720**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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

**ATTACHMENT 2.10**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**

RFQ NO. C00T17210DB90  
PROJECT NO.: 0095-969-720

**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 – January 4, 2016  
(Date)
2. Cover letter of RFQ Addendum#1 – January 28, 2016  
(Date)
3. Cover letter of \_\_\_\_\_  
(Date)

 _____ SIGNATURE	<u>1/28/16</u> _____ DATE
<u>Patrick K. Bartorillo</u> _____ PRINTED NAME	<u>President</u> _____ TITLE



**ATTACHMENT NO. 3.2.7(a)**

**CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS**

**Project No.: 0095-969-720**

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.

	1/28/16	President
Signature	Date	Title

Branch Highways, Inc.  
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0095-969-720**

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.

 2/3/16  
Signature                      Date

Senior Vice President  
Title

Whitman, Requardt & Associates, LLP  
Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

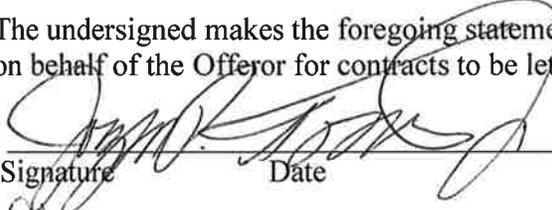
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0095-969-720**

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	<i>President</i> Title
<i>Chesapeake Electrical Systems Inc.</i> Name of Firm		

ATTACHMENT NO. 3.2.7(b)

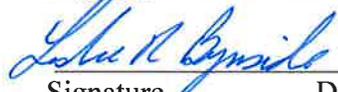
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0095-969-720**

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.

 January 18, 2016      Vice President  
Signature                      Date                      Title

H&B Surveying and Mapping, LLC  
Name of Firm



**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0095-969-720**

- 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.

hm 1.18.16 Principal Engineer  
Signature                      Date                      Title

Engineering & Materials Technologies, Inc (EM Tech)  
Name of Firm



COMMONWEALTH OF VIRGINIA



## 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 28, 2015

**This Rating and Classification will Expire:** February 29, 2016

  
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.

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



Charlotte  
Greensboro  
Knoxville  
Lynchburg  
Nashville  
Raleigh  
Richmond

February 8, 2016

Mr. Suril R. Shah  
Alternate Project Delivery Office  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

Re: **Branch Highways, Inc.**  
Request for Qualifications for the Design/Build  
I-95 Express Lanes – Southern Terminus Extension  
From: 0.9 mi. South of the Garrisonville Road Overpass  
To: 1.3 mi. North of the Garrisonville Road Overpass (Current  
Terminus of the Express Lanes)  
Stafford County, Virginia  
State Project No.: 0095-969-720  
Contract ID Number: C00T17210DB90

Dear Mr. Shah:

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 \$40,000,000 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

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

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

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*  
John Gray, Assistant Secretary

*Gary W. Stumper*  
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.



CERTIFICATE

*Kathleen T. Maynard*  
Kathleen T. Maynard  
Notary Public

My Commission Expires July 31, 2016

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

Signed and sealed at the City of Hartford.

*February 8, 2016*



*Kevin Heckman*  
Kevin Heckman, Assistant Vice President

## ATTACHMENT 3.2.10

### State Project No. 0606-088-653, C501 & 0606-088-622, C501, B634

#### SCC and DPOR Information

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

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
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	Corporation	Active	P.O. Box 40004 Roanoke, VA 24022-0004	Class A Contractor	2701029434	03/31/2017
Whitman, Requardt & Associates, LLP (Baltimore, MD)	K000382-4	Limited Liability Partnership	Active	801 South Caroline Street Baltimore, MD 21231	ARC, ENG, LS, LA	0407001676	12/31/2017
Whitman, Requardt & Associates, LLP (Richmond, VA)	K000382-4	Limited Liability Partnership	Active	9030 Stony Point Parkway, Suite 220 Richmond, VA 23235	ENG	0411000133	02/29/2016
Whitman, Requardt & Associates, LLP (Fairfax, VA)	K000382-4	Limited Liability Partnership	Active	3701 Pender Drive, Suite 450 Fairfax, VA 22030	ENG	0411000134	02/29/2016
Whitman, Requardt & Associates, LLP (Bristol, TN)	K000382-4	Limited Liability Partnership	Active	100 5 <sup>th</sup> Street, Suite L-2000 Bristol, TN 37620	ENG	0411001228	02/29/2016
Chesapeake Electrical Systems, Inc.	F124990-5	Corporation	Active	9381 Davis Avenue Laurel, MD 20723	Class A Contractor	2705033850	05/31/2016
H&B Surveying and Mapping, LLC	S290560-4	Limited Liability Company	Active	612 Hull Street, Suite 101B Richmond, VA 23224	LS	0407005432	12/31/2017
Froehling & Robertson, Inc.	0027211-2	Corporation	Active	22923 Quicksilver Drive, Suite 111 Sterling, VA 20166	ENG	0411000051	02/28/2016
Engineering & Materials Technologies, Inc.	0478633-1	Corporation	Active	7857 Coppermine Drive Manassas, VA 20109	ENG	0407005994	12/31/2017

**ATTACHMENT 3.2.10**

**State Project No. 0606-088-653, C501 & 0606-088-622, C501, B634**

**SCC and DPOR Information**

**DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)**

<b>Business Name</b>	<b>Individual's Name</b>	<b>Office Location Where Professional Services will be Provided (City/State)</b>	<b>Individual's DPOR Address</b>	<b>DPOR Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
<b>Whitman, Requardt &amp; Associates, LLP</b>	<b>John Maddox</b>	<b>Richmond, Virginia</b>	<b>2825 Willbrook Drive Richmond, VA 23233</b>	<b>Professional Engineer</b>	<b>0402026613</b>	<b>01/31/2018</b>
<b>Chesapeake Electrical Systems, Inc.</b>	<b>Robert Preston</b>	<b>Laurel, Maryland</b>				

# 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*

*George M. Bynum*  
Clerk of the Commission

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

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Commonwealth of Virginia  
**State Corporation Commission**

Vir

02/04/16

CISM0180

CORPORATE DATA INQUIRY

18:16:51

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

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(Screen Id:/Corp\_Data\_Inquiry)

**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*  
Jay W. DeBoer, Director

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

(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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# 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. Beck*

*Clerk of the Commission*

# 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*



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

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA**

**EXPIRES ON  
02-29-2016**

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

**NUMBER  
0411000133**

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

**PROFESSIONS: ENG**

**WHITMAN REQUARDT AND ASSOCIATES  
9030 STONY POINT PKWY STE 220  
RICHMOND, VA 23235**



*Gordon N. Dixon*  
Gordon N. Dixon, Director

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**(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)**

(POCKET CARD)

(DETACH HERE)

**COMMONWEALTH OF VIRGINIA  
BOARD FOR APELSCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000133 EXPIRES: 02-29-2016  
PROFESSIONS: ENG  
WHITMAN REQUARDT AND ASSOCIATES  
9030 STONY POINT PKWY STE 220  
RICHMOND, VA 23235**



(FOLD)

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

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2017

NUMBER

0407001676

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

PROFESSIONS: ENG, LS, LA, ARC



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



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

*Jay W. DeBoer*  
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 AP/ELSC/DLA  
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



(FOLD)

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

DPOR-PG (05/2015)

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA**

EXPIRES ON  
02-29-2016

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

NUMBER  
0411000134

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

PROFESSIONS: ENG

WHITMAN REQUARDT AND ASSOCIATES  
3701 PENDER DRIVE  
SUITE 450  
FAIRFAX, VA 22030-6045



*Nick A. Christner*  
Nick A. Christner, Interim Director

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

# DPOR License Lookup License Number 0411001228

## License Details

<b>Name</b>	WHITMAN, REQUARDT AND ASSOCIATES LLP
<b>License Number</b>	0411001228
<b>License Description</b>	Business Entity Branch Office Registration
<b>Rank</b>	Business Entity Branch Office
<b>Address</b>	100 5TH ST STE L2000, BRISTOL, TN 37620
<b>Initial Certification Date</b>	2015-11-06
<b>Expiration Date</b>	2016-02-29

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402024814	RUSSELL, MICHAEL A	Professional Engineer License	Engineering	2016-02-29

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

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DPOR License Lookup build 1,172 (built 2016-01-27 11:52:07).

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

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

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

That it obtained a certificate of authority to transact business in Virginia from the Commission on October 16, 2000; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:*

*January 28, 2016*

*Joel H. Peck*

*Joel H. Peck, Clerk of the Commission*

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Commonwealth of Virginia  
**State Corporation Commission**

Vir

CISM0180

CORPORATE DATA INQUIRY

02/04/16

18:19:25

CORP ID: F124990 - 5 STATUS: 00 ACTIVE STATUS DATE: 12/03/13  
CORP NAME: CHESAPEAKE ELECTRICAL SYSTEMS, INC.

DATE OF CERTIFICATE: 10/16/2000 PERIOD OF DURATION: INDUSTRY CODE: 00  
STATE OF INCORPORATION: MD MARYLAND 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: CT CORPORATION SYSTEM

STREET: 4701 COX ROAD, SUITE 285 AR RTN MAIL:

CITY: GLEN ALLEN STATE : VA ZIP: 23060-0000  
R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 10/04/13 LOC : 143  
ACCEPTED AR#: 215 13 8777 DATE: 09/04/15 HENRICO COUNTY  
CURRENT AR#: 215 13 8777 DATE: 09/04/15 STATUS: A ASSESSMENT INDICATOR: 0  
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES  
15 100.00 1,000

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(Screen Id:/Corp\_Data\_Inquiry)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA

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

EXPIRES ON  
05-31-2016

NUMBER  
2705033850

BOARD FOR CONTRACTORS  
CLASS A CONTRACTOR  
\*CLASSIFICATIONS\* ELE

CHESAPEAKE ELECTRICAL SYSTEMS INC  
9381 DAVIS AVE  
LAUREL, MD 20723



*James W. DeRosier*  
James W. DeRosier, Director

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

(POCKET CARD)

COMMONWEALTH OF VIRGINIA  
CLASS A BOARD FOR CONTRACTORS  
CONTRACTOR

\*CLASSIFICATIONS\* ELE  
NUMBER: 2705033850 EXPIRES: 05-31-2016

CHESAPEAKE ELECTRICAL SYSTEMS INC  
9381 DAVIS AVE  
LAUREL, MD 20723



(FOLD)

(DETACH HERE)

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

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10010 (7/11) 107028-3

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, April 27, 2009*

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

**H & B Surveying and Mapping, 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: April 27, 2009*



*State Corporation Commission*

*Attest:*

*Joel H. Beck*  
Clerk of the Commission

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Commonwealth of Virginia  
**State Corporation Commission**

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02/04/16

LLCM3220

LLC DATA INQUIRY

18:20:05

LLC ID: S290560 - 4 STATUS: 00 ACTIVE STATUS DATE: 04/27/09  
 LLC NAME: H & B Surveying and Mapping, LLC

DATE OF FILING: 04/27/2009 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: 612 HULL STREET STE 101B

CITY: RICHMOND STATE: VA ZIP: 23224-0000

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: TIMOTHY H GUARE

STREET: TIMOTHY H GUARE PLC  
 6802 PARAGON PL STE 100

RTN MAIL:

CITY: HENRICO STATE: VA ZIP: 23230-0000

R/A STATUS: 4 MEMBER OF VSB EFF DATE: 07/02/09 LOC: 143 HENRICO COUNTY

YEAR FEES PENALTY INTEREST BALANCE

15 50.00

(Screen Id:/LLC\_Data\_Inquiry)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2017

NUMBER

0407005432

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

PROFESSIONS: LS



H & B SURVEYING & MAPPING LLC  
612 HULL ST  
SUITE 101B  
RICHMOND, VA 23224



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)

# 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 12, 2015*

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

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

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Commonwealth of Virginia  
**State Corporation Commission**

Vir

CISM0180

CORPORATE DATA INQUIRY

02/04/16

18:20:36

CORP ID: 0027211 - 2 STATUS: 00 ACTIVE STATUS DATE: 11/13/09  
CORP NAME: FROEHLING & ROBERTSON, INCORPORATED

DATE OF CERTIFICATE: 10/11/1924 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: 2480.00 MON NO: MON STATUS: MONITOR DTE:  
R/A NAME: WILLIAM H HOOFNAGLE III

STREET: 1900 ONE JAMES CENTER AR RTN MAIL:  
901 E CARY ST  
CITY: RICHMOND STATE : VA ZIP: 23219-0000  
R/A STATUS: 4 ATTORNEY EFF. DATE: 09/21/11 LOC : 216  
ACCEPTED AR#: 215 14 1079 DATE: 09/10/15 RICHMOND CITY  
CURRENT AR#: 215 14 1079 DATE: 09/10/15 STATUS: A ASSESSMENT INDICATOR: 0  
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES  
15 1,700.00 1,100,000

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(Screen Id:/Corp\_Data\_Inquiry)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA

EXPIRES ON  
02-29-2016

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

NUMBER  
0411000051

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

PROFESSIONS: ENG

FROEHLING & ROBERTSON, INC  
22923 QUICKSILVER DR STE 111  
STERLING, VA 20166



*Nick A. Christner*  
Nick A. Christner, Interim Director

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COMMONWEALTH OF VIRGINIA

BOARD FOR APELSCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000051 EXPIRES: 02-29-2016  
PROFESSIONS: ENG  
FROEHLING & ROBERTSON, INC  
22923 QUICKSILVER DR STE 111  
STERLING, VA 20166



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

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10010 (7/11) 107026-3

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond,* January 29, 1997

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

ENGINEERING & MATERIALS TECHNOLOGIES, 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:*

January 29, 1997



*State Corporation Commission*

*William J. Bridge*  
Clerk of the Commission

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

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CORPORATE DATA INQUIRY

02/04/16

18:21:16

CORP ID: 0478633 - 1 STATUS: 00 ACTIVE STATUS DATE: 01/29/97  
 CORP NAME: ENGINEERING & MATERIALS TECHNOLOGIES, INC.

DATE OF CERTIFICATE: 01/29/1997 PERIOD OF DURATION: INDUSTRY CODE: 70  
 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: SHAHZAD S MOOSA

STREET: 7857 COPPERMINE DR

AR RTN MAIL:

CITY: MANASSAS STATE : VA ZIP: 20109-0000  
 R/A STATUS: 2 OFFICER EFF. DATE: 07/20/06 LOC : 176  
 ACCEPTED AR#: 216 01 5764 DATE: 12/30/15 PRINCE WILLIAM  
 CURRENT AR#: 216 01 5764 DATE: 12/30/15 STATUS: A ASSESSMENT INDICATOR: 0  
 YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES  
 16 100.00 5,000

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(Screen Id:/Corp\_Data\_Inquiry)

COMMONWEALTH of VIRGINIA

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

EXPIRES ON  
12-31-2017

NUMBER  
0407005994

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

PROFESSIONS: ENG



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



*July W. DeBoer*  
July W. DeBoer, Director

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

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

**DPOR** COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR AP/ELSCIDLA  
BUSINESS ENTITY REGISTRATION  
NUMBER: 0407005994 EXPIRES: 12-31-2017  
PROFESSIONS: ENG  
ENGINEERING & MATERIALS TECHNOLOGIES, INC  
7857 COPPERMINE DR  
MANASSAS, VA 20109



(FOLD)

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

DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

01-31-2018

NUMBER

0402026613

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



JOHN PATRICK MADDOX  
2825 WILLBROOK DRIVE  
RICHMOND, VA 23233



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

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

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DPOR-LIC (05/2015)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR AP/ELSC/DLA  
PROFESSIONAL ENGINEER LICENSE

NUMBER: 0402026613 EXPIRES: 01-31-2018

JOHN PATRICK MADDOX  
2825 WILLBROOK DRIVE  
RICHMOND, VA 23233



(FOLD)

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

DPOR-PC (05/2015)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA

EXPIRES ON  
12-31-2016

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

NUMBER  
2710051621

BOARD FOR CONTRACTORS  
TRADESMAN

ROBERT EDWARD PRESTON  
3536 TENLEY PLACE  
OWINGS, MD 20736



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

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COMMONWEALTH OF VIRGINIA  
BOARD FOR CONTRACTORS  
TRADESMAN  
NUMBER: 2710051621 EXPIRES: 12-31-2016

ROBERT EDWARD PRESTON  
3536 TENLEY PLACE  
OWINGS, MD 20736



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

TRADE DESIGNATIONS  
MASTER ELECTRICIAN

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## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>Pete Kramer – Vice President, NOVA Region</b>
b. Project Assignment:	<b>Design-Build Project Manager</b>
c. Name of Firm with which you are now associated:	<b>Branch Highways, Inc.</b> 
d. Employment History: With this Firm <u>19</u> Years With Other Firms <u>15</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	<p><b>Vice President</b> <b>Branch Highways, Inc.</b> <b>March 2014 – Present</b> Pete oversees and ensures the successful operation of all components of Branch’s business that are managed out of the Northern Virginia regional office in Manassas, including Design-Build and PPTA Project oversight, resource assignment, contract execution and monitoring, client relations, employee staffing, scheduling, production management, quality control, training, safety compliance, and project close-out. To date, Pete has played a critical role in over \$200 Million of Design-Build work, the majority of which his primary role was either Design-Build Project Manager or Design-Build Construction Manager.</p> <p><b>Senior Project Manager/Area Manager</b> <b>Branch Highways, Inc.</b> <b>March 2009 – February 2014</b> Responsibilities included oversight of all northern Virginia projects including both public and private sectors. Clients consisted of state and local departments of transportation, federal government agencies and private corporations. Typical projects incorporated one or more of the following: interstate widening, primary and secondary road widening/relocation, and interchange work. While serving as the Area Manager for Northern Virginia, duties included field operations and production management, as well as Value-Engineering Proposal development and administration. On several Design-Build projects during this time, Pete was responsible for contract administration, owner relations, internal reporting and overall project monitoring along with oversight authority for design, utility relocation, environmental permitting, ROW procurement, and all construction activities. These efforts required interfacing directly with landowners regarding specific proffer terms and conditions, as well as acting as the point person for specific project-related property owner interactions for the Owner.</p> <p><b>Project Manager</b> <b>Branch Highways, Inc.</b> <b>January 1996 – February 2009</b> In this role, Pete was responsible for managing the construction process, including Quality Control (QC) and executing the work in accordance with “approved for construction” plans and specifications. He was also accountable for compliance with all material and construction requirements. Additional responsibilities included planning, scheduling, and allocation of manpower and equipment resources. Management of Owner/subcontractor/supplier contracts also fell under Pete’s direct charge. He supported EEO compliance, enforcement &amp; compliance with corporate safety regulations &amp; associated training. During this time, Pete also served as the Bridge Construction Manager concurrently with other project management duties for approximately three dozen bridge structures throughout North Carolina and Virginia. Duties included all scheduling, requests for information, and submittal preparations/monitoring, along with crew and equipment scheduling for all bridge crews, as well as overall contract management and oversight including correspondence, owner and subcontractor notifications, and compliance issues.</p>
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>Virginia Military Institute – Lexington, VA   BS   1988   Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>2009   Certified LEED AP – United States Green Building Council   #10444816</b> <b>2007   VDOT Erosion and Sediment Control Contractor Certification (ESCCC)   #3156C</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b> <b>Design-Build/PPTA I-95 HOT/HOV Express Lanes</b> <b>Dates: August 2011 – May 2015</b> <b>Segment 1 – Prince William and Stafford Counties, VA</b> <b>Project Role: Area Manager</b> <b>With Current Firm? Yes</b>	

**Responsibility/Specific Job Duties:** As *Area Manager*, Pete directed Branch Highways' efforts as a key subcontractor for this project, ensuring that design, construction, quality management, contract administration, and client communications were valuable and efficient. The ~9 miles of new I-95 HOT Lanes within Branch's scope of work adjoins the I-95 Express Lanes Southern Terminus Project. Consequently, Pete supported, directed, and provided guidance to Branch's Project Team in order to ensure that similar Geotechnical, Safety, and Scheduling challenges as can be expected on the I-95 Express Lanes Southern Terminus Project were mitigated and/or eliminated. Other specific duties that required Pete's focus entailed oversight of the coordination of Branch's work with the concessionaire, contractors, sub-tier specialty contractors, and QA/QC staff to accommodate a very aggressive construction schedule combined with extensive and project-specific standards of quality and safety for this multifaceted project. His diligent communication, effective staffing, and global awareness of the project and its needs created an environment where resources were allocated as needed to maximize efficiency of operation.

**Client: Fluor-Lane I-95, LLC (VDOT) | Total Branch Cost: \$47 Million**

**Relevancy:** Same I-95 Corridor Location/Traffic Volume, VDOT Design-Build/PPTA, FHWA guidelines and requirements, interstate alignment/widening, ROW acquisition, utility relocations, environmental monitoring, geotechnical challenges/mitigation, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

**Stafford County PPTA – Heritage Center Parkway and Garrisonville Road Improvements – Stafford County, VA**  
**Project Role: Design-Build Project Manager**

**Dates: February 2013 – May 2017**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** As *Design-Build Project Manager*, Pete played an essential role in the procurement process for this PPTA one of the first for Stafford County, and remains ultimately responsible for all DBPM duties on this project including, overall design, construction, quality management, contract administration, procurement, ROW acquisition, development of Traffic Management Plans, environmental permitting and monitoring, and communication/coordination with the Owner and the affected public. These two projects have the same critical factors have been faced: multiple challenging soils conditions that require various methods of mitigation, effective Maintenance of Traffic, particularly on the Heritage Parkway portion at the tie-in with Route 1, and expedited schedule. Pete's leadership abilities and extensive knowledge and experience in Design-Build work is evidenced by the ongoing success of this project. **Client: Stafford County | Total Cost: \$20 Million**

**Relevancy:** Design-Build, roadway alignment/widening, ROW acquisition, extensive utility relocations, environmental permitting and monitoring, geotechnical challenges, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

**Design-Build Route 15 James Madison Highway Haymarket, VA**

**Dates: February 2007 – December 2009**

**Project Role: Design-Build Project Manager**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** As *Design-Build Project Manager* Pete directed Branch's project team for this 22 lane miles project, including a Construction Manager, 3 area superintendents, project engineers and staff. In addition to managing actual construction activities onsite, Pete's duties included constructability reviews during the design phases for the 5 distinct and separate roadway segments adjacent to the I-66/US-15 Interchange, including 5 bridge structures, which comprised this project. He also led the development and enforcement of Quality Control Program prior to and during construction, much as he will do for the I-95 Express Lanes Southern Terminus Project. Coordinating with DEQ and USACE, Pete played a crucial role in developing Construction Sequencing Plans that allowed for early starts to construction activities in each segment of the project. These plans included Maintenance of Traffic coordination with VDOT and Prince William County. Another similar and significant feature of this project to the I-95 Express Lanes Southern Terminus Project involves Geotechnical challenges and associated remedies. There were intermittent segments of highly plastic, light, and/or saturated soils and rock in all 5 segments and each required a unique approach for mitigation. These approaches included removal and replacement, mechanical manipulation, and chemical stabilization. Pete'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.

**Client: Prince William County | Total Cost: \$55 Million**

**Relevancy:** Design-Build, roadway alignment/widening, ROW acquisition, utility relocations, environmental permitting and monitoring, 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. *N/A*

**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>Leonard Coleman, PE, CCM, LEED AP – Senior Construction Manager</b>
b. Project Assignment:	<b>Quality Assurance Manager</b>
c. Name of Firm with which you are now associated:	<b>Whitman, Requardt &amp; Associates, LLP</b> 
d. Employment History: With this Firm <u>1</u> Years With Other Firms <u>10</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Coleman has over 11 years of progressive experience in construction management and project management of major infrastructure projects in Virginia, managing the quality program for teams of Quality Assurance and Quality Control inspectors on roadway, bridge and utility, including federally and state funded VDOT and locally administered Design-Build and Design-Bid-Build projects, ensuring compliance with plans and specifications.	<p><b>Senior Construction Manger      Whitman, Requardt &amp; Associates, LLP      October 2014 – Present</b> Manages Quality Assurance and Quality Control staff, leading quality management teams on Design-Build and Design-Bid-Build projects implementing QA plans. Serves as Quality Control Manager on over \$40 million worth of VDOT Design-Build projects, and manages QA inspection staff on over \$80M worth of construction and maintenance.</p> <p><b>Construction Manager      Prince William County DOT      March 2012 – October 2014</b> Served as County’s Project Construction Manager for the Capital Improvement Division on two PPTA projects valued at over \$90 million and two design-bid build projects valued at over \$75M. In an Independent Assurance role, oversaw QA staff and the quality program, and ensured testing and inspection frequencies in accordance with QA/QC Plan.</p> <p><b>Lead Engineer      McDonough Bolyard Peck, Inc.      January 2006 – March 2012</b> Assistant Quality Assurance Manager on \$150M VDOT Design-Build project, assisting in developing and implementing the quality management program, including overseeing QA staff and testing and inspection frequencies. Also served as Project Controls Engineer on multiple projects, including constructability review, cost estimating, CPM schedule review, claim analysis, material testing review and overseeing project record keeping systems.</p> <p><b>Engineer-in-Training      The Engineering Groupe      May 2005 – August 2005</b></p>
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>George Mason University – Fairfax County, Virginia   B.S.   2009   Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>2013   Professional Engineer   VA Registration #0402051494; Certified Construction Manager (#3392); LEED AP; VDOT Certifications: Int. WZ Traffic Control w/ LEO (6/2017), Soil/Aggr. Field Compaction (12/2018), Asphalt Field Level I &amp; II (12/2018), Hyd. Cement Concrete Field (12/2017), Pavement Marking (12/2018), GRIT Inspector (4/2016), Slurry Seal (12/2018), Surface Treatment (12/2018); ACI Grade I Testing Tech (8/2017); DEQ E&amp;SC Inspector (5/2016); Nuclear Gauge Safety Training; OSHA 10-Hour Safety; NASSCO PACP (12/2017)</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<ol style="list-style-type: none"> <li><i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li> <li><i>Note whether experience is with current firm or with other firm.</i></li> <li><i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li> </ol> <p><b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b></p> <p><b>Fairfax County Parkway Interchange and Widening      Dates: August 2009 – March 2012</b> <b>Design-Build – Fairfax County, VA</b> <b>Project Role: Assistant Quality Assurance Manager      With Current Firm? No</b> <b>Responsibility/Specific Job Duties: Assistant Quality Assurance Manager</b> providing Quality Assurance oversight on an Eastern Federal Lands (EFLHD) Design-Build project to VDOT standards for 2 miles of new roadway, including six new bridges, widening of an existing bridge and three limited access interchanges. The project also included the construction of gravity retaining walls, overhead sign structures, roadway lighting, soundwalls, stormwater management facilities, pedestrian facilities, major excavation and filling of embankment, subgrade stabilization, in-plan utility relocations, rock blasting, and earthwork for the future Saratoga Park and Ride Lot. Responsibilities included assisting the Quality Assurance Manager oversee the quality assurance and quality control program for the project by ensuring that all work and materials, testing, and sampling were performed in conformance with the contract requirements, the</p>

QA/QC Plan, and the "approved for construction" plans and specifications. He verified QC and QA staff frequencies of inspection and material testing were performed accordance to the approved project QA/QC Manual. He conducted hold-point and preconstruction meetings, reviewed Contractor submittals, identified and created non-conformance reports (NCR) for deficiencies, and maintained Issue and NCR Logs. He maintained all project documentation records including a Materials Book to VDOT standards, issuing Design-Build Tracking (DBT) numbers, as-built project records, and material test result data. He was responsible for reviewing and approving contractor C-25s, monitoring site activities on a daily basis, review and initial approval of all inspector daily diaries, creating and maintaining a project punchlist, reviewing contractor quantities for owner's review of monthly pay applications, and coordination with FHWA, EFLHD, VDOT, and the Contractor. **Client: FHWA EFLHD/VDOT | Construction Cost: \$150 million**

**Relevancy:** VDOT Design-Build project, major project with extensive traffic control, Quality Assurance Manager duties, implementing QA/QC Plan, Non-compliance reports and resolving quality issues, managing staff; coordination with Design-Builder, Quality Control and VDOT; Materials Book certification and oversight.

**Design-Build Fall Hill Avenue Widening and**

**Dates: November 2014 – Present**

**Mary Washington Boulevard Extension – Fredericksburg, VA**

**Project Role: Quality Control Manager**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** *Quality Control Manager* on this VDOT Design-Build project to widen Fall Hill Avenue and extend Mary Washington Blvd. Includes a 5-span bridge over I-95, bridge support of excavation, MSE walls, soil nail walls, stream diversions, soundwalls, a precast double cell box culvert, earthwork, shared use path, sidewalk, storm drainage and a multi-phase MOT plan. Responsibilities included coordinating with Design-Build Project Manager and Quality Assurance Manager to ensure Quality Control services are in compliance with the approved QA/QC Plan, coordinating all inspections and testing to frequencies required by the Plan, managing and assigning QC inspection staff and the QC laboratory, facilitating meetings, review and acceptance of material testing reports, and reviewing field issues and recommending solutions. He is also responsible for revising and updating the QA/QC Manual for the project, overseeing the compliance of the VDOT Materials Book, maintaining an electronic project documentation system, reviewing and approving contractor material submittals, reviewing work for compliance with plans and specifications, and VDOT coordination. **Client: VDOT | Total Cost: \$31 million**

**Relevancy:** VDOT Design-Build, large project with traffic control on I-95, Quality Management duties, implementing QA/QC Plan, Non-compliance reports and resolving quality issues, managing staff; coordination with Design-Builder, Quality Team and VDOT; Materials Book certification and oversight. Similar project features include sound walls, geology in the project area, roadway alignment/widening, new connector road, utility relocations, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC.

**Walney Road Widening Design-Build – Fairfax County, VA**

**Dates: December 2014 – February 2016**

**Project Role: Quality Control Manager**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** *Quality Control Manager* for this VDOT Design-Build project to widen Walney Road from Westfields Blvd to Willard Road, including the replacement of a bridge over Flatlick Branch, construction of a shared use path, sidewalk, utility relocation, grading, asphalt paving and modification of two signalized intersections. Mr. Coleman's responsibilities included overseeing QC inspection services and staff, ensuring inspections, sampling, and testing of all work and materials are performed in accordance with the contract requirements and the QA/QC Plan. He coordinated with the design teams to resolve plan discrepancies and recommended solutions. Attended progress meetings, maintained project documentation, coordinated Punchlist inspections, and coordinated with the Quality Assurance team to document and resolve non-compliant work. **Client: VDOT | Construction Cost: \$12.2 million**

**Relevancy:** VDOT Design-Build project, Quality Management duties, implementing QA/QC Plan, resolving Non-compliance reports, managing staff; coordination with Design-Builder, the Quality Team and VDOT; Materials Book certification and oversight. Critical utility relocations, multiple stakeholders, environmentally sensitive areas.

**Route 1 North Improvements PPTA – Prince William County, VA**

**Dates: August 2013 – October 2014**

**Project Role: Construction Manager**

**With Current Firm? No**

**Responsibility/Specific Job Duties:** *Construction Manager* for Prince William County on a 2-mile long road widening project to expand the existing four-lane roadway to a six-lane divided roadway. Construction included retaining walls, embankment widening, paving, subsurface slope stabilization, major in plan and out of plan utility relocations, six traffic signal modifications, multiple traffic shifts, major drainage improvements, a quadruple box culvert, environmental impact mitigation and a shared use path. Responsibilities included overseeing the Design-Builder's quality assurance program for compliance with testing and inspection requirements, ensuring the County's compliance with VDOT's LAP program and coordinating County/IA inspection staff. Facilitated project meetings, cost and budget controls and progress reporting, pay application approval, material price adjustments, change order analysis and negotiation, utility company coordination and relocation, serving as point of contact for the community, right-of-way acquisition assistance, and contractor submittal review and approval. He coordinated construction and shop drawing plan review and approvals with VDOT and other state/local agencies, coordinated with adjoining construction projects, ensured project environmental compliance, managed staff, reviewed and approved the CPM Schedule, and coordinated directly with VDOT TOC for major traffic control operations. **Client: Prince William County, Virginia | Total Cost: \$58 million**

**Relevancy:** Major Design-Build project built to VDOT standards, Quality Management program oversight; coordination with Design-Builder, the Quality Team, and VDOT; manage staff, ensure resolution to quality issues.

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

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

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>John Maddox, P.E. – Senior Vice President</b>
b. Project Assignment:	<b>Design Manager</b>
c. Name of Firm with which you are now associated:	<b>Whitman, Requardt &amp; Associates, LLP</b> 
d. Employment History: With this Firm <u>20</u> Years With Other Firms <u>10</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	<b>Senior Vice President/Design Manager      Whitman, Requardt &amp; Associates, LLP      June 1995 – Present</b> John has served as a <b>Project Manager</b> for major VDOT design projects continuously since August 1997 and recently as the <b>Design Manager</b> on two VDOT Design-Build projects, including the Fall Hill Avenue Design-Build project in the VDOT Fredericksburg District. He routinely manages the design of major transportation interchange projects ranging in construction value from \$30 million to \$100 million, including interstate widening and other capacity improvement projects on heavily traveled Virginia highways. He specializes in the design of complex projects requiring a multi-discipline design team. As Design Manager, John is responsible for the complete design efforts, including interchange, roadway, bridge, retaining walls, H&H, traffic engineering, utility relocation, environmental compliance, ROW coordination and QA.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>West Virginia Institute of Technology (is now a division of West Virginia University) – Montgomery, West Virginia   B.S.   1985   Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>1996   Professional Engineer   VA Registration #0402026613</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b>	<b>Fairfax County Parkway Interchange at Fair Lakes Parkway      Dates: October 2001 – October 2013</b> <b>Fairfax County, VA</b> <b>Project Role: Design Manager      With Current Firm? Yes</b> <b>Responsibility/Specific Job Duties:</b> As <i>Design Manager</i> , John was responsible for the design, which widened Fairfax County Parkway (FCP) from four to six lanes for 2.3 miles, and provided an innovative split diamond interchange at Fair Lakes Parkway and Monument Drive. The interchange included two new bridges and over 43,000 SF of retaining walls. There were also minor modifications to the interchanges at I-66 and Route 50. John oversaw and coordinated all design elements, including interchange roadway, hydraulic, river mechanics, SWM, structural, utility relocation, ITS, traffic engineering, environmental permits, traffic forecast and analysis, public involvement, geotechnical engineering for retaining walls and bridge foundations, and Quality Assurance. He provided a leadership role in stakeholder outreach to the Homeowners' Associations, Fair Lakes League and the Fairfax County Park Authority to minimize ROW impacts. Extensive coordination with FHWA for the traffic forecasting and analysis due to the potential for operational impacts to the I-66 interchange. During construction, John attended progress and partnering meetings with the construction team, shop drawing review and technical support. <b>Client: VDOT   Construction Cost: \$44 Million</b> <b>Relevancy:</b> Design of freeway improvements on a heavily traveled corridor in Northern Virginia allowing traffic operations to be maintained during all construction phases, developed a complex TMP, designed roadway and over 70,000 SF of sound barriers along the 2.3-mile corridor, roadway widening, ROW, utility design, permit sketch, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, and construction engineering.
<b>I-81 Widening and Bridge Replacements over Buffalo Creek and Maury River – Rockbridge County, VA</b>	<b>Dates: August 1999 – December 2007</b>
<b>Project Role: Design Manager</b>	<b>With Current Firm? Yes</b>

**Responsibility/Specific Job Duties:** Mr. Maddox was the *Design Manager* responsible for the design of both projects under a single design contract. The project construction included **widening 2 miles of I-81 from four to six lanes**. The project included the replacement of the I-81 Bridge over Buffalo Creek with an approximate length of 600 feet and the bridge over Maury River with an approximate length of 800 feet. The design included a complex maintenance of traffic plan to maintain two lanes of traffic in each direction during all phases of construction. Mr. Maddox provided oversight and coordination for all elements of the design, including roadway, hydraulic, SWM, structural, geotechnical, environmental permits, public involvement, and Quality Assurance. Duties included coordination of the design with FHWA and VDOT staff. During construction provided shop drawing reviews and coordinated with the Construction Team. The projects received the 2008 ACEC Grand Award and the Buffalo Creek was awarded the “VDOT Virginia Statewide Construction Quality Award” and NPHQ Award “Breaking the Mold”.  
**Client: VDOT | Construction Cost: \$45 million**

**Relevancy:** The I-81 widening added one additional lane primarily in the median in each direction and total replacement of the existing pavement required a complex maintenance of traffic plan that carefully evaluated access points to the work zone. Similar elements of design include; roadway alignment/widening, ROW, survey, permit sketches, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction and engineering.

**Design-Build Fall Hill Avenue Widening and  
Mary Washington Boulevard Extension – Fredericksburg, VA**  
**Project Role: Design Manager**

**Dates: March 2014 – January 2017**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** As *Design Manager*, John is responsible for WRA’s design and construction inspection roles for this widening and reconstruction project of 2.2 miles of Fall Hill Avenue (FHA) and Mary Washington Blvd. (MWB), including a roundabout at the intersection with FHA and MWB. There is a five span, 419-foot long bridge over I-95 and future CD lanes. The proposed roadway is a four-lane divided curb and gutter section with a sidewalk on the south side and a shared-use path on the north side. The project has significant 4(f) coordination requirements and includes relocating/reconstructing Snowden Park with baseball fields and basketball courts. John is overseeing design elements, including roadway, hydraulic, SWM, bridge, retaining walls, sound barriers, utility relocation and coordination, traffic engineering, lighting, environmental coordination of permits, public involvement, ROW acquisition, park design, quality assurance and coordination during construction. **Design is completed on this Design-Build project.**

**Client: VDOT | Total Cost: \$30.8 million**

**Relevancy:** VDOT Design-Build, design of 3 sound barriers, maintenance of traffic on I-95, geology in the project area is similar to the I-95 Express Lane Extension requiring the evaluation of retaining walls and slopes in Potomac clays, roadway alignment/widening, utility relocations, survey, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction engineering and inspection.

**Route 123 Interchange at Route 1  
Prince William County, VA**  
**Project Role: Design Manager**

**Dates: Dec. 2007 – Construction Plans:  
Phase I – Sept. 2015; Phase II: June 2018  
With Current Firm? Yes**

**Responsibility/Specific Job Duties:** As *Design Manager*, John is responsible for the design of this tight urban interchange project at Route 123 and Route 1 and the widening from four to six lanes for 1.7 miles of Route 1 and Route 123 with sidewalks and shared-use path. The project requires three new bridges; Route 123 over Route 1, Route 123/Belmont Bay Drive over CSXT, and Route 1 over Marumsc Creek. The geotechnical analysis and design required careful consideration of settlement of the elevated MSE approaches to the bridges over Route 1 and CSXT tracks. The extensive improvements along the Route 1 corridor carefully considered access management for numerous commercial entrances in the vicinity of proposed signalized intersections. John oversees and coordinates all design elements, including surveys, interchange, roadway, hydraulics, river mechanics, SWM, structural, sound barriers, geotechnical, traffic engineering, utility design/coordination, ITS, TMP, traffic forecasting/analysis, permitting, public involvement and Quality Assurance. **Client: VDOT | Construction Cost: \$83 Million (Utility Undergrounding, Phase I Widening & Phase II Interchange)**

**Relevancy:** Geotechnical analysis carefully considered the poor soils (Potomac Clays) along the project, roadway alignment/widening, ROW, utility undergrounding/relocations, survey, permit sketches, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction & engineering.

\* 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. *N/A*

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>Steve Morris – Construction Manager</b>
b. Project Assignment:	<b>Construction Manager</b>
c. Name of Firm with which you are now associated:	<b>Branch Highways, Inc.</b> 
d. Employment History: With this Firm <u>15</u> Years With Other Firms <u>22</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	
<b>Construction Manager</b>	<b>Branch Highways, Inc. 2011 – Present</b>
Steve supervises trade and project superintendents to ensure that manpower, equipment, and subcontracted needs are being met and shared amongst multiple operations as needed so that schedules for projects are being met and the overall flow of the project is consistent. As part of that, he is responsible for communicating with his superintendents and foremen to assess operational labor and equipment needs, and ensuring that those resources are utilized effectively and efficiently. He promotes field employee development in all levels, and ensures that all work performed meets the highest of safety, quality, and environmental standards. Steve has a thorough understanding of project contracts, design plans/means and methods, company resources and assets, schedule, and budget. Steve will also lead the process of identification, communication, and implementation of best practices to ensure that all operations on the project are able to perform efficiently and safely, and that the order in which operations move through any specific area complement one another.	
<b>Superintendent</b>	<b>Branch Highways, Inc. 2007 – 2011</b>
As a project-level superintendent, Steve was jointly responsible with the Project Manager for project success. He was responsible for developing and executing operational schedules that fulfill overall schedule requirements, controlling costs and maximizing production of all operations, as well as managing manpower, equipment, Quality Control, and environmental quality on assigned projects. Steve provided hands-on field supervision of construction operations, including subcontractors and other construction-related personnel by directing them in the planning, scheduling, execution of work on time, within budget, and with high standards of workmanship. Steve understands the necessity of and facilitates workplace safety while meeting or exceeding owner's expectations.	
<b>Superintendent</b>	<b>Angler Construction Company, Inc. 2002 – 2007</b>
Steve was responsible for supervision of all construction activities onsite, manpower, equipment, materials, and QC management as a superintendent at Angler. He was responsible for long-and short-term planning and scheduling of projects to ensure timely delivery of critical milestones.	
<b>Superintendent</b>	<b>Ryan Incorporated Eastern 2000 – 2002</b>
Steve was responsible for supervision of all construction activities onsite, manpower, equipment, materials, and QC management as a superintendent at Ryan. He was responsible for long-and short-term planning and scheduling of projects to ensure timely delivery of critical milestones.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>North Harford High School – Pylesville, MD   1981</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>11/2008   VDOT Erosion Sediment Control Contractor Certification (ESCCC)   #1-04468</b> <b>01/2016   Virginia Responsible Land Disturber   #RLD003353</b> <b>11/2008   VDOT Intermediate Work Zone Traffic Control   #112014010</b> <b>01/2011   OSHA 30-Hour</b> <b>02/2009   MSHA General Mineral Miner   # 0010694</b> <b>1981   First Aid/CPR   GPB0P0</b> <b>03/2013   ACI Concrete Field Testing Certification   # 1210168</b> <b>2009   Competent Person – Excavation</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project.	
1. Note your role, responsibility, and specific job duties for each project, not those of the firm.	
2. Note whether experience is with current firm or with other firm.	
3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.	
<b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b>	

**Design-Build/PPTA I-95 HOT/HOV Express Lanes  
Segment 1 – Prince William and Stafford Counties, VA  
Project Role: Construction Manager**

**Dates: August 2011 – May 2015**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** Branch Highways was a key subcontractor for this project consisting of constructing 9 miles of new I-95 HOT Lanes in one of the most congested regional corridors in the US, from Dumfries to Stafford, at the current terminus of the Express Lanes. As *Construction Manager*, Steve managed and/or coordinated all construction for the entire length of Branch's portion of the project. Major items of work in this corridor were clearing, erosion and sediment control in highly sensitive areas, earthwork, extensive drainage improvements, MSE & soundwall construction, 2 new flyover bridges with interchange improvements, three sets of merge lanes with widened shoulders to provide ingress and egress to the newly constructed HOT/Express lanes, and installation of ITS & electrical devices. Steve was also responsible for initiating several Field Change Orders (FCO), which helped to mitigate issues arising from unforeseen field conditions and coordination of different sets of drawings. These FCO's improved coordination among all contractors onsite, resulting in an overall smoother project flow.

**Client: Fluor-Lane 95, LLC (VDOT) | Total Branch Cost: \$47 Million**

**Relevancy:** VDOT Design-Build, Express Lane construction, roadway alignment/widening, ROW acquisition, utility relocations, survey, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction engineering & inspection.

**Design-Build Route 15 James Madison Highway  
Haymarket, VA**

**Dates: February 2007 – December 2009**

**Project Role: Construction Superintendent**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** Steve was *Construction Superintendent* for this Design-Build/PPTA project for Prince William County that consisted of the widening of 22 lane miles of Route 15 from a two-lane roadway to a four-lane median divided facility along with improvements to adjacent secondary roadways. MOT during construction was a major component as this portion of Route 15 provides access to several large developments in the area and a multi-purpose recreational facility. There were three bridge structures spanning environmentally-sensitive areas, including live streams. Utility relocations included water and sanitary sewer public utilities and the electric, telephone, cable, fiber optic, and communication utilities servicing the area. There were five separate phases/roadways, which were delivered within a 3-year timeframe. Steve managed all construction, including QC activities to ensure materials used and work performed met the contract requirements, managed relationships and continuously coordinated with stakeholders that included two major developers, Prince William County Supervisors, local businesses, and VDOT, during construction.

**Client: Prince William County | Total Cost: \$55 Million**

**Relevancy:** VDOT Design-Build, roadway alignment/widening, new connector road, ROW acquisition, utility relocations, survey, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction engineering & inspection.

**Lorton Road Improvements  
Fairfax County, VA**

**Dates: May 2014 – August 2016 (projected)**

**Project Role: Construction Manager**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** Steve serves as the *Construction Manager* for this project that consists of widening/new construction of approx. 3 miles of existing Lorton Road & Furnace Road from 2 lanes to 4 lanes between Ox Road & Silverbrook Road in Lorton, VA. Steve's responsibilities on this project include sequencing and management of all activities on-site, ensuring Quality Control requirements are fulfilled, and communication/coordination with the client. Scope of work includes over 400,000 CY of onsite and borrow excavation, 15,000 LF of storm sewer, 8,000 LF of sanitary sewer and force main, 9,000 LF of large (>30") and 3,500 LF of small (8-12") water main, three retaining walls, two vehicular crossings over existing waterways, a precast pedestrian arch, and extensive Low Impact Development structure work. Working with Fairfax County, Steve and his project team have thus far been able to improve constructability and lessen impact on existing traffic flow by re-sequencing the project from its depiction on the plans. To date, multiple unforeseen site conditions and delays caused by others have impacted the critical path throughout this project; however, Steve's team has identified as many potential issues as possible ahead of these delays, and has successfully managed these challenges to minimize impact on projected completion date.

**Client: Fairfax County | Total Cost: \$29 Million**

**Relevancy:** Roadway alignment/widening, new connector road, ROW acquisition, utility relocation coordination, survey, environmental, geotechnical, and hydraulics analyses, TMP, public involvement/communications, QA/QC, construction engineering & inspection.

\* 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.

**Current Project Assignment:** Lorton Road Improvements, Fairfax County, VA

**Current Project Role:** Construction Manager

**Anticipated Duration of Current Role:** Summer 2016

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. Name & Title:	<b>Kevin Trippe – Project Manager</b>
b. Project Assignment:	<b>ITS/Electrical Manager</b>
c. Name of Firm with which you are now associated:	<b>Chesapeake Electrical Systems, Inc.</b> 
d. Employment History: With this Firm <u>4</u> Years With Other Firms <u>14</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	<p><b>Project Manager Chesapeake Electrical Systems January 2012 – Present</b> Kevin is responsible for management of multiple ongoing multimillion-dollar projects for well-known clientele such as Transurban, VDOT, and local airport authorities. As Project Manager, Kevin oversees superintendents on projects to ensure that proper planning and foresight are being applied that will result in a successful project for both the company and the client during design and construction. Typical duties include assignment and distribution of manpower resources, promoting a safe and productive work environment, ensuring quality standards are upheld, management of financial tracking and reporting, and contract and subcontract management.</p> <p><b>General Foreman/Superintendent Chesapeake Electrical Systems January 2004 – January 2012</b> In this role Kevin was responsible for materials management and procurement, review of drawings for potential conflicts, submitting RFIs, and fulfilling manpower needs on ITS/Tolling projects. He was also responsible for the installation and coordination of complex ITS, electrical, and security/communications systems on several major HOT/Express Lanes projects in the region.</p> <p><b>Apprentice Truland Systems Corporation, J.E. Richards Electric, Inc., Freestate Electrical Construction Company January 2001 – December 2004</b> In this role Kevin was responsible for materials management and procurement, review of drawings for potential conflicts, submitting RFIs, and fulfilling manpower needs on the projects to which he was assigned. He was also responsible for the installation and coordination of complex ITS, electrical, and security/communications systems on several major projects similar to those that will be involved with the I-95 Express Lanes Southern Terminus Extension.</p>
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	<b>NECA Project Management for Electrical Contractors   24.8 CEUs (48 Hours)   2012; NECA Electrical Project Supervision Levels I, II, &amp; III   2.0 CEUs (20 Hours)   2006; International Brotherhood of Electrical Workers   Apprenticeship Program   2001-2005   NEC Code; Associated Builders and Contractors Electrical Trade School   1998-2001; University of Maryland, College Park, MD   1996-1997   School of Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #:	<b>2003   OSHA 30-Hour Certification   #600037504; 2013   IMSA Fiber Level II   # FP_104764; 2013   IMSA Fiber Level I   #FO_104764; 2012   VDOT Intermediate Traffic Control Technician   #120812027 2012   First Aid &amp; CPR Certification   #99501; 2011   USCOE Construction Quality Management for Contractors; 2011   NECA Comprehensive Aerial &amp; Scissor Lift Training Program; 2010   OSHA Lockout/Tagout; 2010   OSHA Worker Fall Prevention</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b>	<p><b>Design-Build/PPTA I-495 Capital Beltway Express Lanes Dates: June 2009 – June 2013</b> <b>Fairfax County, VA</b> <b>Project Role: Project Manager With Current Firm? Yes</b></p> <p><b>Responsibility/Specific Job Duties:</b> Kevin combined his strong knowledge of code with his ability to lead, plan, clearly communicate and follow up in the execution of the work on this complex ITS/Tolling project. His supervision and control of the work resulted in the <i>early installation and turnover</i> of over 180 Roadside Equipment Cabinets, 80 Electronic messaging signs, 100 PTZ cameras, 97 Microwave detectors, 59 electrical services, 10 Tech shelters including 9 generators with UPS systems and 56 reversible HOV Gates, over 600 light poles, 113 miles of new electrical conduit</p>

systems, and over 216 miles of electrical, fiber optic, and communication cables throughout the construction of this 14-mile project – all in the midst of the building/re-routing of over fifty bridges and overpasses on the project. Kevin’s specific responsibilities included providing design input, planning, directing, coordinating, and executing the ITS and electrical work for the project. **Client: Fluor-Lane, LLC | Construction Cost: \$42 Million**

**Relevancy:** The ITS/Electrical work and infrastructure components for the I-495 Capital Beltway Express Lanes is the same as what will be required for the I-95 Express Lanes Southern Terminus Extension project including installation of power, fiber optic, communication cables, generators, and all associated tolling equipment.

**Design-Build/PPTA I-95 HOT/HOV Express Lanes  
Prince William and Stafford Counties, VA  
Project Role: Project Manager**

**Dates: May 2014 – July 2015**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** Kevin was responsible for allocation and assignment of over sixty (60) employees on this 28-mile project, with the specific goal of completing portions of the ITS (Intelligent Transportation System). In addition to manpower, Kevin also managed, supervised and coordinated installation of the majority of the ITS/Electrical components of the project including Dynamic Message Signs and Reversible Lane Signals, as well as large sections of communication power, and lighting for the project. Kevin’s leadership, planning skills, and careful review of drawings for potential conflicts and subsequent proposed solutions were essential to the success of the ITS/Electrical components of this project’s scope, as they will be to the I-95 Express Lanes Southern Terminus Extension Project.

**Client: Fluor-Lane 95, LLC | Construction Cost: \$2.8 Million**

**Relevancy:** The ITS/Electrical work and infrastructure performed for the I-95 HOT/HOV Lanes is identical to that required for the I-95 Express Lanes Southern Terminus Extension Project, as the two projects will actually tie into one another. Major components of work included installation of power, fiber optic, communication cables, reversible lane signals, generators, and all associated tolling equipment.

**Elizabeth River Crossing Tolling Infrastructure  
City of Portsmouth, VA  
Project Role: Project Manager**

**Dates: March 2012 – July 2015**

**With Current Firm? Yes**

**Responsibility/Specific Job Duties:** Kevin led a team providing communications, electrical, ITS, and associated underground and overhead infrastructure for toll locations along the Mid-Town and Down-Town Tunnels, as well as the MLK extension in Portsmouth, VA. He was responsible for management, procurement, installation, and quality of typical scope items, such as corridor lighting, generators, roadside ITS cabinets, and 143 traffic loops to support the ITS. In addition to these items that are fairly typical for a toll road project, Kevin also managed and developed a complex MOT/TMP plan for this project for the erection of several large, overhead gantries that spanned well of 160’ of active roadway to ensure that minimal traffic impacts were induced on the two tunnels. After months of planning and coordination, the operations Kevin developed was executed successfully. Kevin’s understanding of and ability to minimize traffic impacts, especially in highly congested areas will serve VDOT and its shareholders well on the I-95 Express Lanes Southern Terminus Extension.

**Client: 3M | Construction Cost: \$2.5 Million**

**Relevancy:** The ITS/Electrical work performed for the Elizabeth River Crossing is very similar to that required for the I-95 Express Lanes Southern Terminus Extension project including installation of power, fiber optic, communication cables, reversible lane signals, generators, and all associated tolling equipment.

\* 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. *N/A*

**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>I-95 HOT/HOV Express Lanes Segment 1 Design-Build/PPTA</b> Location: <b>Prince William and Stafford Counties, VA</b>	Name: <b>HDR, Inc.</b>	Name of Client/ Owner: <b>Fluor-Lane 95</b> Phone: <b>(703) 839-7248</b> Project Manager: <b>Jeff Taylor, P.E.</b> Phone: <b>(703) 244-6685</b> Email: <b>jeff.taylor@fluorlane95.com</b>	<b>12/2014</b>	<b>07/2015</b> <i>*Soundwall issues beyond Branch's control</i>	<b>\$46,999</b>	<b>\$46,847</b>	<b>\$46,847</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

**Verifiable Evidence of Performance**

- ✓ Completion Under Budget
- ✓ Completion On Time of ~9 Miles of I-95 Express Lanes & Widening
- ✓ Several Field Design Changes to Mitigate Geotechnical Challenges
- ✓ Coordination with Bridge, ITS, MSE/Retaining/Soundwall throughout the Corridor
- ✓ No Significant Quality Control Deficiencies
- ✓ No Employee Ingress/Egress Accidents

**Scope & Complexity Similarities**

- ✓ Identical I-95 Corridor Location/Traffic Volume
- ✓ VDOT Design-Build
- ✓ FHWA Guidelines and Requirements
- ✓ Interstate Construction/Widening
- ✓ Complex Construction Sequencing/Coordination
- ✓ Soundwall Construction
- ✓ ITS and Lighting Facilities
- ✓ ROW Acquisition
- ✓ Utility Relocations
- ✓ Median Crossovers
- ✓ Environmental Permitting and Monitoring
- ✓ Geotechnical Challenges and Treatments
- ✓ Traffic Management Plan/MOT
- ✓ Public Involvement/Communications
- ✓ QA/QC Coordination

As a key contractor for this project, Branch was the primary constructor/coordinator of the 9 new miles of roadway (Segment 1), which extended the I-95 HOT/Express Lanes from just south of Exit 152 in Dumfries to Exit 143 in Garrisonville. Similar to the work on the I-95 Express Lanes – Southern Terminus Extension project, Segment 1 included construction of new Express Lanes in the median between existing general purpose lanes and general purpose lane widening in three locations totaling over 7,500 LF, to provide ingress and egress to the newly constructed HOT/Express lanes. Major items of work in this corridor were clearing, erosion and sediment control in highly sensitive areas, nearly 1,000,000 CY of earthwork, extensive drainage improvements, box culverts, sound wall construction for nearly the entire length of the project, 2 new flyover bridges with interchange improvements, MSE & retaining walls, and installation of ITS & electrical components. Extensive coordination was necessary with other trades and contractors on the project to ensure that all work was performed in the most cost effective, efficient way possible.

One of the first contractors to join the project, Branch participated in working design review meetings, providing constructability analysis before and during construction. The schedule for this project was critical, requiring precise coordination between all major work types in order to bring the project to a successful completion in such a short amount of time. Through careful planning and extensive coordination, Branch was able to accelerate the schedule for their contractual work, which included:

- All Earthwork including access and final grading
- MSE Retaining Walls/Bridge Approaches
- Subbase
- Soil Nail Retaining Wall
- RW3 Retaining Walls
- Storm Drainage, Retention Ponds, Water Quality Structures
- Paved Ditches
- E&S Control, Wetland Protection
- MOT
- Demolition

Branch also coordinated with and provided additional access grading for the following activities performed by other subcontractors, such that all phases of work could achieve their respective milestones: Bridges & Abutments, Soundwalls, Permanent Barrier Wall, ITS & VDOT Utilities, Paving, Signage, Guardrail, and Pavement Markings.

Branch played an active role in mitigating various conflicts and challenges throughout the project. Numerous Field Design Changes (FDC) were initiated to resolve design conflicts and make efficient use of onsite material. These FDC's resulted in reductions to both cost and schedule. One of the first priorities was designing safe ingress/egress throughout the project. Construction entrances were designed to minimize impacts to the traveling public and reduce cost by utilizing existing guardrail and shoulder facilities wherever possible. Diligent maintenance to these entrances ensured that minimal repairs were needed at the conclusion of the project.

High plasticity clay, highly weathered acidic rock, and saturated materials each posed its own set of geotechnical concerns, and were dealt with on a case-by-case basis. Although offsite disposal was employed for the worst material encountered, thorough analysis of in-situ materials presented the opportunity to utilize mechanical and chemical manipulation to generate suitable roadway fill. These methods accelerated schedule, and in some cases reduced cost. It is likely that similar conditions will be encountered on the proposed I-95 Express Lanes – Southern Terminus Extension project, and Branch has the proven knowledge and experience to mitigate them efficiently and effectively.

The extensive soundwall requirements on this project placed an enormous demand on available design and fabrication resources. While Branch did not control the processes associated with those activities on this project, our grading and final backfilling operations were impacted by associated delays, as was overall project completion. These and other experiences with soundwall construction will assist us with better and earlier coordination efforts

for the I-95 Express Lanes – Southern Terminus Extension project, as discussed in 3.5: Project Risks of this SOQ. ITS and electrical work was another key component that this project shares with the I-95 Express Lanes – Southern Terminus Extension project; coordination with the design and construction of the roadway prism was critical to allow for ample time for installation and testing of ITS & electrical facilities.

\*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.



**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>James Madison Highway (Route 15) Design-Build/PPTA</b>  Location: <b>Haymarket, VA</b>	Name: <b>Rinker Design Associates, P.C.</b>	Name of Client/ Owner: <b>Prince William County DOT</b> Phone: <b>(703) 792-6825</b> Project Manager: <b>Mr. Thomas Blaser</b> Phone: <b>(703) 792-6825</b> Email: <b>tblaser@pwcgov.org</b>	<b>12/2009</b>	<b>12/2009</b>	<b>\$52,139</b>	<b>\$54,126</b> <i>*Owner Requested Changes to Scope</i>	<b>\$54,126</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

- Verifiable Evidence of Performance**
- ✓ Completed Ahead of Schedule
  - ✓ Completed on Budget
  - ✓ Cooperation and Communication with PWC, VDOT, Utility Owners, and the Public
  - ✓ No Significant Quality Control Deficiencies
  - ✓ Sequencing of Work to Accommodate Permitting, ROW, and Utility Relocation with Minimal/No Significant Delays
  - ✓ Superior Safety Record

- Scope & Complexity Similarities**
- ✓ Overall Size of Project
  - ✓ Environmental Permitting
  - ✓ Wetlands Mitigation
  - ✓ Politically Visible
  - ✓ Coordination with VDOT & Others
  - ✓ Geotechnical Issues
  - ✓ Extensive MOT
  - ✓ Overhead Utility Protection
  - ✓ Earthwork, Grading, and Drainage Components

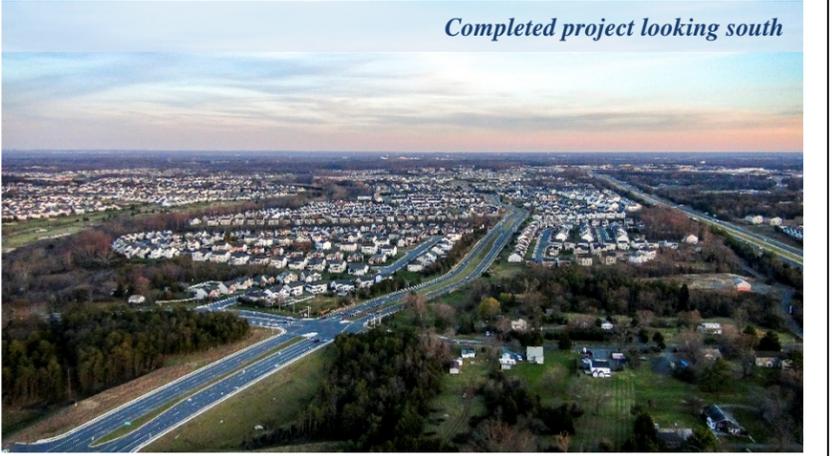
A Branch Highways was the PPTA/Design-Build Contractor providing design, construction, right of way, utility relocation for the \$54M Route 15 (James Madison Highway) Improvements for Prince William County (PWC) in Haymarket, VA. Beginning just north of the I-66/US-15 interchange, the project consisted of 22 lane miles of road widening that entailed the same major scope items to the I-95 Express Lanes Southern Terminus Extension, such as mass earthwork and grading, drainage, structural concrete work, stone base, and paving. On any major project, but particularly on a Design-Build, a strong leadership team is the fundamental building block to a successful endeavor. Three of Branch's key players proposed on the I-95 Express Lanes Southern Terminus Extension played significant leadership roles on the Route 15 Project: **Pete Kramer, Steve Morris, and Yisehak Shata**. These three individuals led the Design-Build team through the complex design, permitting, construction processes throughout the course of this project. 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. In order 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 all involved in the planning, design, and scheduling of the work.

Several potential problems were encountered and resolved throughout the life of the project that will likely be faced on the I-95 Express Lanes Southern Terminus Extension. 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 were each handled in multiple locations along the project.

The Northern Virginia area is known for its high traffic density, and the effects of road improvement construction on already overcrowded roadways. This was no different for the Route 15 Design-Build/PPTA Project. Spanning between two major commuter intersections, one an interstate interchange, Branch's team knew that special attention to Maintenance of Traffic 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 as 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 I-95 Express Lanes Southern Terminus Extension so that its specific needs with regards to traffic

influence and safety can be adequately addressed.

Comparable to the I-95 Express Lanes Southern Terminus Extension, this complex project 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 I-95 Express Lanes Southern Terminus Extension.



\*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: <b>Route 58 Hillsville Bypass Design-Build/PPTA</b> Location: <b>Carroll County, VA</b>	Name: <b>HNTB Corporation</b>	Name of Client/ Owner: <b>VDOT</b> Phone: <b>(540) 387-5360</b> Project Manager: <b>Robert Williams</b> Phone: <b>(540) 387-5345</b> Email: <b>Robbie.Williams@VDOT.Virginia.gov</b>	<b>11/2011</b>	<b>11/2011</b>	<b>\$83,000</b>	<b>\$83,197</b> <i>*Owner requested changes to scope</i>	<b>\$83,197</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

**Verifiable Evidence of Performance**

- ✓ Completed ahead of schedule
- ✓ Completed on budget
- ✓ No Change Orders Initiated by Branch
- ✓ Superior Safety Record
- ✓ Delivered required DBE goal
- ✓ VDOT elected to proceed with subsequent phases for additional sections of roadway

**Scope & Complexity Similarities**

- ✓ VDOT Design-Build
- ✓ New Roadway Construction
- ✓ Median crossovers
- ✓ Geotechnical Challenges
- ✓ Environmental Permitting
- ✓ Traffic Management Plan
- ✓ Public involvement/communications
- ✓ QA/QC
- ✓ FHWA/NPS
- ✓ Complex Construction Sequencing
- ✓ Adjacent Project/Stakeholder Coordination

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 acquisition, utility relocation, permitting, wetlands/environmental mitigation, and quality control involved with building this 3.7-mile stretch of new 4-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 8 bridges and 3 full interchanges – one of which ties into I-77 southwest of Hillsville, VA. This 3-year, \$83M project was completed by the Branch Team *ahead of schedule* and *within original budget*, with *no change orders requested, and no major quality or safety issues*.

Post-award additions of environmental surveys by the FHWA threatened to delay the Hillsville Bypass project by a full construction season. Working together, VDOT, FHWA, and the Branch Project Team revised the design and construction schedules to mitigate these impacts resulting in no additional costs to VDOT (besides the actual surveys) and no delay to the project. Branch recognizes that the permitting process that will be a part of the I-95 Express Lanes Southern Terminus Project may pose similar risks, and based on experience on this project and others, will incorporate realistic time frames into the plan and schedule for the permitting process for this project.

After construction had begun, VDOT received multiple requests by local elected officials for changes to the lighting at the interchanges on the project. The Project Team, VDOT, and the local officials found common ground through frank and open discussions. While Branch had to perform additional work under previously unnecessary “live traffic conditions,” the overall schedule was maintained and no extra costs were incurred by VDOT, despite the late-date changes. While it is unlikely that lighting specifically will be a politically driven issue that requires similar attention on the I-95 Express Lanes Southern Terminus Extension, there is a potential that environmental concerns, particularly with regard to soundwall location and design, may arise. The organizational structure Branch has developed for the I-95 Express Lanes Southern Terminus Extension positions the team to address these concerns as they come up. Together with VDOT and other stakeholders, the Branch/WRA Team will find solutions that fit the best interests of all involved.

Over the 3.2 miles of this project, Branch Highways encountered numerous differing soils types, including those typically deemed to be unsuitable in-situ. Working with geotechnical engineers and the Quality Assurance team, strategies were developed to handle these materials that had minimal impacts to cost and schedule, while still meeting all required specifications. A significant portion of subgrade material was treated with 11% soil cement. In other areas, undercut and replacement, mechanical drying, lime drying, and lime stabilization methods were used to treat unacceptable materials. It should be anticipated that similarly varying soils types will be encountered on the I-95 Express Lanes Southern Terminus Extension, and Branch is experienced at choosing the best method of treatment that maximizes the benefit to all invested parties.

The Route 58 Hillsville Bypass project was a highly visible, complex project that attracted significant public attention and frequent questions. The organizational structure for this project, which created a balanced, clear and effective communication model among Key Personnel and VDOT was essential for handling these issues in an efficient, professional manner. The success of Branch's on-going management of this project is evidenced by the continued award of subsequent phases of the massive Route 58 Corridor Improvements PPTA Project.



\*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>I-95 Newark Toll Plaza</b>  Location: <b>New Castle County, Delaware</b>	Name: <b>A-DEL Construction Company</b>	Name of Client.: <b>Delaware DOT</b> Phone: <b>(302) 760-2274</b> Project Manager: <b>Mr. Darren O'Neill</b> Phone: <b>(302) 760-2274</b> Email: <b>Darren.ONeill@state.de.us</b>	<b>04/2010</b>	<b>07/2011</b>	<b>\$32,000</b>	<b>\$32,000</b>	<b>\$3,623</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. \*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

 <p align="center"><i>Visualization of new open road tolling at Delaware's Newark Plaza</i></p> <p align="center"><b>New E-ZPass Lanes</b></p>	<p><b>WRA's Role</b> – WRA's Baltimore, MD Office led the design of two highway-speed E-ZPass toll collection lanes in each direction along with seven north and southbound cash toll lanes in less than 9 months. The approximately 2 miles of interstate E-ZPass lanes constructed in the median of I-95 and their associated tie-ins to the mainline function very much like the I-95 Express Lanes in Virginia. Included in the roadway design for the median E-ZPass Lanes were concrete barriers, impact attenuators, roadway signing, pavement markings and lighting to help drivers pass safely through the toll plaza at highway speeds. A series of 10 Wavetronix Radar sensors and one 75 foot CCTV camera were installed on the toll approaches that communicated through over 11,000 linear feet of fiber optic cable to provide traffic monitoring and incident detection capabilities. WRA designed a storm drainage system and wet pond stormwater management facilities. The tolling design incorporated an enclosed open road tolling gantry system, consisting of two parallel, 98-foot long structural steel trusses which span over four highway-speed lanes and adjoining shoulders. The enclosed gantry system keeps maintenance workers safe while eliminating the need to close travel lanes for maintenance. The new overhead walkway to the gantry and northbound cash toll lanes is temperature-controlled, ventilated, access-controlled, and camera-equipped to ensure maintenance workers can safely access the tolling equipment, ensures safe and secure toll collector access, and ensures that toll revenues are protected. WRA and our specialty subconsultant designed and specified the toll collection system, which utilized RF antennas, IR cameras, and laser sensors and supported E-ZPass Interagency Group electronic toll collection technology. In construction, we reviewed all levels of installation and testing completed by the contractor before the system was integrated into DelDOT's overall network. In addition to the open road tolling upgrades, many of the 11 remaining cash booths were replaced with new booths. A new walk-up E-ZPass customer service vestibule at the Main Administration Building was added to provide better service to E-ZPass users. Aside from the cash tolling lanes, the improvements for this project are very similar to the I-95 Express Lane Extension project.</p> <p><b>Efficient Design</b> – The design included a variety of construction techniques and unique materials, many of which would not be found on ten individual projects, let alone one project in order to minimize disruption to the traveling public. Four low-cover microtunnels and one standard-cover jack/bore were pushed under the interstate and existing buildings in an effort to maintain traffic while constructing storm sewer outfalls to/from the SWM-ponds and a primary electrical duct-bank for the new toll-gantry. Caissons and micro-piles were used in order to minimize the footprint of structural foundations. The steel trusses for the walkways and tolling gantry were designed to be shop fabricated, field spliced and lifted into place under short duration lane closures.</p> <p><b>TMP and MOT</b> – The toll plaza is a 24/7/365 day facility with traffic volumes that peak at 100,000 vehicles per day. Minimizing revenue loss throughout construction was a requirement. Maintaining adequate traffic flow required keeping as many toll booths open as possible. The Transportation Management Plan (TMP) developed by WRA incorporated many facets that allowed us to maintain the Toll Collection system and the transportation network during the project. Alternative routes were evaluated and upgraded through signal timings changes, additional turn lanes, and paving improvements. Public communications programs were developed, designed and circulated throughout the immediate area as well as along the regional Mid-Atlantic cities along I-95. Technology was utilized through cameras and detection to create real time website information that users could access remotely to know of increasing congestion long before they reached the back-ups. Finally the project construction phasing components were coordinated to provide efficient work areas for the contractor while maintaining the flow of traffic through the toll facilities. Incorporating all these components of the TMP allowed the State of Delaware to maintain the transportation system and the localized toll collections systems. Through the effective implementation of our plan, we were able to get the Highway Speed E-ZPass lanes open <b>a month ahead of schedule</b> and prior to the summer holidays. The project was funded with ARRA Stimulus funds and delivered for \$14 million below the initial construction budget of \$46 million – a testament to the efficiencies of design plan quality delivered by the WRA design team.</p> <p><b>Teamwork</b> – Coordination and teamwork were paramount throughout design. The fast paced design of the I-95 Newark Toll Plaza project involved 18 different disciplines and over 120 professionals. Survey crews, soil borings crews, utility designation and test pitting teams, geotechnical engineers, environmental scientists, highway engineers, water resource engineers, structural bridge engineers, structural building engineers, traffic engineers, architects, mechanical engineers, electrical engineers, civil engineers, security specialists, and tolling specialists all played significant roles in the successful completion of the project. <b><i>This project received the 2013 ACEC National Recognition Award for Engineering Excellence.</i></b></p>	<p><b>Scope &amp; Complexity Similarities</b></p> <ul style="list-style-type: none"> <li>✓ Interstate Median Improvements</li> <li>✓ New E-ZPass Lanes</li> <li>✓ ITS &amp; Tolling Integration</li> <li>✓ Survey</li> <li>✓ Environmental</li> <li>✓ Geotechnical</li> <li>✓ Hydraulics and SWM</li> <li>✓ Traffic Control Devices</li> <li>✓ TMP</li> <li>✓ MOT and Interstate Lane Closures</li> <li>✓ Public Involvement/Communications</li> <li>✓ QA/QC</li> <li>✓ Construction Engineering Support</li> </ul>
<p>structural foundations. The steel trusses for the walkways and tolling gantry were designed to be shop fabricated, field spliced and lifted into place under short duration lane closures.</p> <p><b>TMP and MOT</b> – The toll plaza is a 24/7/365 day facility with traffic volumes that peak at 100,000 vehicles per day. Minimizing revenue loss throughout construction was a requirement. Maintaining adequate traffic flow required keeping as many toll booths open as possible. The Transportation Management Plan (TMP) developed by WRA incorporated many facets that allowed us to maintain the Toll Collection system and the transportation network during the project. Alternative routes were evaluated and upgraded through signal timings changes, additional turn lanes, and paving improvements. Public communications programs were developed, designed and circulated throughout the immediate area as well as along the regional Mid-Atlantic cities along I-95. Technology was utilized through cameras and detection to create real time website information that users could access remotely to know of increasing congestion long before they reached the back-ups. Finally the project construction phasing components were coordinated to provide efficient work areas for the contractor while maintaining the flow of traffic through the toll facilities. Incorporating all these components of the TMP allowed the State of Delaware to maintain the transportation system and the localized toll collections systems. Through the effective implementation of our plan, we were able to get the Highway Speed E-ZPass lanes open <b>a month ahead of schedule</b> and prior to the summer holidays. The project was funded with ARRA Stimulus funds and delivered for \$14 million below the initial construction budget of \$46 million – a testament to the efficiencies of design plan quality delivered by the WRA design team.</p> <p><b>Teamwork</b> – Coordination and teamwork were paramount throughout design. The fast paced design of the I-95 Newark Toll Plaza project involved 18 different disciplines and over 120 professionals. Survey crews, soil borings crews, utility designation and test pitting teams, geotechnical engineers, environmental scientists, highway engineers, water resource engineers, structural bridge engineers, structural building engineers, traffic engineers, architects, mechanical engineers, electrical engineers, civil engineers, security specialists, and tolling specialists all played significant roles in the successful completion of the project. <b><i>This project received the 2013 ACEC National Recognition Award for Engineering Excellence.</i></b></p>	 <p align="right"><i>Completed I-95 Newark Toll Plaza</i></p>	

**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>I-95/I-495 at Arena Drive from MD 202 to MD 214 Design-Build</b> Location: <b>Prince George's County, MD</b>	Name: <b>Lane Construction Corporation</b>	Name of Client.: <b>Maryland State Highway Administration (MSHA)</b> Phone: <b>(410)-545-8770</b> Project Manager: <b>Mr. Eric Marabello</b> Phone: <b>(410)545-8770</b> Email: <b>emarabello@sha.state.md.us</b>	<b>06/2007</b>	<b>12/2009</b>	<b>\$26,600</b>	<b>\$29,500</b>	<b>\$1,700</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. \*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

**Scope & Complexity Similarities**

- ✓ Design-Build
- ✓ Interstate Widening
- ✓ Survey
- ✓ Environmental
- ✓ Geotechnical
- ✓ Hydraulics and SWM
- ✓ Traffic Control Devices/ITS
- ✓ TMP
- ✓ MOT and Interstate Lane Closures
- ✓ Public Involvement/Communications
- ✓ QA/QC
- ✓ Construction Engineering & Inspection

**WRA's Role** – WRA was the prime design firm for this Design-Build project responsible for preparing final engineering design documents and approvals for improvements to I-95/I-495 at Arena Drive. The project was designed in our Baltimore, Maryland office. The project enabled the Arena Drive interchange with I-95/I-495 (Capital Beltway) to operate as a full-time interchange instead of only during special events. I-95/I-495 was widened for an additional lane and incorporated two collector-distributor lanes. The project features include:

**Roadway Rehabilitation and Widening** – 1.9 miles of median widening on the I-95/I-495 for additional lanes in each direction. Additionally, the I-95/I-495 typical section was reconfigured from four through-lanes only to three through-lanes with two collector-distributor lanes. The collector-distributor lanes provide access to/from three interchanges: MD 214, Arena Drive, and MD 202.

**Interchange Reconstruction** – Ramps at two interchanges were reconfigured to eliminate inadequate weaving lengths on I-95/I-495. The northeast and northwest loop ramp at MD 214 and northwest ramp at MD 202 were eliminated. Existing quadrant ramps were widened to accommodate additional traffic with new connections to MD 214 and MD 202. As a result of traffic analyses performed during final design, a ramp from MD 202 to I-95/I-495 was identified as needing to be widened to address congestion along MD 202. As a modification to the contract, an Interstate Modification Report (IMR) was completed and ramp widening was designed and constructed, including additional NEPA approval and environmental permitting.

**Hydraulic Analysis and Stormwater Management (SWM)** – WRA re-evaluated the conceptual SWM plan provided by MSHA and determined that only one of two proposed SWM facilities was required to meet the project's SWM needs. By eliminating the second facility, to be constructed in a loop ramp, over five (5) acres of existing forest was saved. For the remaining proposed SWM facility, a 48" RCP was jacked and bored under SB I-95/I-495 while traffic was maintained.

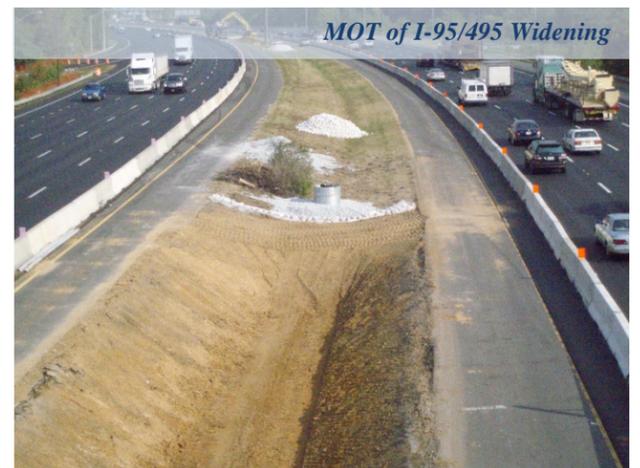
**Geotechnical and Pavement Analysis/Design** – Geotechnical services included jacking and boring a 48" RCP under I-95/I-495, a reinforced slope, and subgrade and pavement design for full-depth pavement and the rehabilitation of existing concrete pavement. Also, the existing shoulders along I-95/I-495 were analyzed for traffic bearing capacity during construction and it was determined that the shoulders were adequate for temporary use and did not required full-depth replacement.

**Maintenance of Traffic** – Extensive multi-phase maintenance of traffic plans were required on I-95/I-495, MD 214 and MD 202 to maintain traffic throughout the interchanges since over 190,000 vehicles per day traveled on I-95/I-495 at that time. To maintain adequate levels of service for traffic during construction, all lanes were required to remain open during peak hours of 6 to 9 AM and 3 to 7 PM. Limited lane closures were permitted from 9 AM to 3 PM, while multiple lane closures were permitted from 10 PM to 5 AM. As a result, a majority of the pavement resurfacing for the project was performed during nighttime hours.

**Traffic Control Devices** – This project re-used six (6) existing sign structures, including two cantilever, two overhead, and two overhead dynamic message systems. These sign structures were relatively new and were relocated onto new foundations and fitted with new or modified sign panels. Additionally, four new cantilever structures were installed and all ground-mounted signing throughout the three interchanges was upgraded. Partial interchange roadway lighting was completed consisting of 80 new light fixtures. Also, four new traffic signals were installed with modifications to another existing traffic signal.

**Public Involvement** – Public information materials and advanced notification of traffic impacts were provided to MSHA to keep the public informed.

**Partnering During Design and Construction** – WRA participated in partnering agreement, which set goals and objectives during the early stages of work. Subsequent monthly meetings were held to ensure goals and objectives were being met by discussing the project progress, quality, resolve issues, and current/future schedule.



**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>Fall Hill Avenue Widening and Mary Washington Boulevard Extension <i>Design-Build</i></b> Location: <b>Fredericksburg, VA</b>	Name: <b>Corman Construction, Inc.</b>	Name of Client.: <b>VDOT</b> Phone: <b>(540) 899-4214</b> Project Manager: <b>Michael Coffey, P.E.</b> Phone: <b>(540) 899-4214</b> Email: <b>michaelt.coffey@ vdot.virginia.gov</b>	<b>04/2014</b>	<b>Estimated 01/2017 (Design Completed: 02/2015)</b>	<b>\$30,784</b>	<b>\$30,784 (Estimated)</b>	<b>\$1,815</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. \*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

**Scope & Complexity Similarities**

- ✓ Design-Build
- ✓ Roadway Realignment/Widening
- ✓ New Connector Road
- ✓ Survey
- ✓ Environmental & Geotechnical
- ✓ Hydraulics and SWM
- ✓ Noise analysis and Soundwall design
- ✓ Traffic Control Devices
- ✓ TMP
- ✓ MOT and Interstate Lane Closures
- ✓ Public Involvement/Communications
- ✓ QA/QC
- ✓ Construction Engineering & Inspection

**WRA's Role:** Prime design firm responsible for the final engineering design documents and approvals for major improvements to the existing Fall Hill Avenue corridor and extension of Mary Washington Boulevard. Existing Fall Hill Avenue is largely a two-lane roadway with no bike facilities and limited pedestrian facilities. Along the project alignment are the Snowden Park, Rappahannock Canal Park, and several historic resources that are impacted by the project construction requiring strict adherence to all commitments in the environmental document. The project was led from the WRA Richmond, VA office and additional design support was performed from the Baltimore, MD office. Services included highway design, hydrologic and hydraulic design, stormwater management (SWM) design, erosion and sediment control design, geotechnical engineering, pavement evaluation and design, noise analysis and soundwall design, maintenance of traffic, signing, lighting, pavement markings, traffic signalization, bridge, retaining walls, park design, utility relocation/coordination, public involvement, permitting and coordination with project stakeholders. Also, WRA is providing quality control and construction inspection related services.

**Roadway** – The proposed improvements provide for a four-lane divided curb and gutter urban typical section with a 10-foot shared-use path on the north side and a 5-foot sidewalk on the south for a length of 1.5 miles on Fall Hill Avenue. Mary Washington Boulevard is extended on new location for 0.3 miles with an urban section including a sidewalk on the west side and the existing Rappahannock Canal trail network providing for bike and pedestrians to the east and intersects with the roundabout with Fall Hill Avenue. The remaining portion of Mary Washington Boulevard 0.4 miles is widened to a four-lane divided urban section with sidewalks and the intersection with Route 1 is improved for 0.2 miles to provide additional turn lanes at Mary Washington Boulevard. A key element of the project is the roundabout at the Fall Hill Avenue and Mary Washington Boulevard.

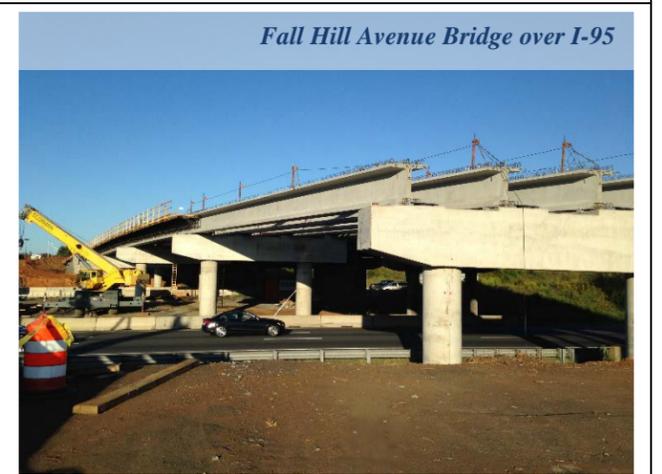
**Hydraulic Analysis and Stormwater Management** – The project includes the design and analysis of a tributary to the Rappahannock Canal, which required a 10'x 8' box culvert to ensure the 100-year storm event would have no impact on private property. A complete new storm drainage system was provide for the length of Fall Hill Avenue. WRA's design was able to eliminate one SWM facility on the frontage of a commercial property saving VDOT approximately \$300,000 in right-of-way cost.

**Geotechnical Engineering** – The project is located in diverse and changing geology. The western portion of the project is located over relatively shallow residual soils of the Piedmont Province, while the eastern portion is more typical of the Coastal Plain Province with over-consolidated Potomac Clays. It is expected that these same formations and their associated risks will be encountered on the I-95 Express Lanes Southern Terminus Extension project. The bridge over I-95 is supported on driven steel H-piles with MSE wall abutments and were designed to mitigate downdrag forces induced by settlement. The design in the Potomac Clays included 20-foot cuts below the location of the historic civil war trenches. To avoid impacts to the trenches WRA designed a soil nail retaining wall.

**TMP and MOT Plans** – The two major elements of the TMP were the phased construction of the bridge over I-95 and the three-phase reconstruction of Fall Hill Avenue. The TMP carefully evaluated the impacts to traffic operations on I-95 for placement of concrete barrier, beams and removal of the existing bridge. Similar to what is anticipated on the I-95 Express Lanes Extension project, work requiring lanes closures on the heavily traveled I-95 was limited to nights and carefully coordinated with the regional traffic operations center and emergency responders.

**Traffic Engineering** – The project includes the design of three traffic signals and three pedestrian crossing using Rectangular Rapid Flash Beacons (RRFBs). A major focus of WRA efforts was to carefully evaluate the high pedestrian movements along the corridor to provide opportunities for residents to access the transit stops along the corridor and access the extensive system of trails in the City.

**Public Involvement** – A key element of the success of the project is communicating the goals of the project and how the project affects the public. The project included significant access management controls restricting movements to and from developments, which was a major discussion item at the "Pardon Our Dust" public meeting and the public's concern with the traffic operations at the proposed roundabout. Being able to address these concerns quickly and effectively with the VDOT Team resulted in the project moving forward with minimal redesign efforts.



# I-95 Express Lanes Southern Terminus Extension *Design-Build Project*



Submitted By:

**BranchHighways**



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