

# Albemarle Intersection Bundling A Design-Build Project

Contract ID Number: C00111814DB103

State Project Nos: 0250-002-956, 0029-002-959, 0029-002-955  
0250-002-954, 0020-002-953, 9999-002-941

August 21, 2018



US Route 460/Southgate Drive Roundabout  
& Diverging Diamond Interchange  
Blacksburg, Virginia

Submitted to:



Submitted by:



# Letter of Submittal



3.2 – LETTER OF SUBMITTAL

August 21, 2018

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

RE: **REQUEST FOR QUALIFICATIONS**  
Albemarle Intersection Bundling Design-Build, Albemarle County, VA  
Contract No.: C00111814DB103

Dear Mr. Stevenson,

**W. C. English, Incorporated (English)** has assembled a team of experienced firms and personnel who are focused on providing the Virginia Department of Transportation (VDOT) with not only the best price for this project, but also unsurpassed quality. We have included regional and local firms and personnel who bring Design-Build and intersection experience to the team. All members of the team have worked together in the past and are committed to making this a successful project. I am confident our SOQ presents a team of unmatched experience and accomplishments for which English is long recognized.

As requested in section 3.2 of the RFQ, the English team offers the following information.

- 3.2.1 **Offeror** – The full legal name and address of the Offeror is: W. C. English, Incorporated, 615 Church Street, Lynchburg, VA 24504.
- 3.2.2 **Point of Contact** – The Point of Contact for English, the offerors is: Wilson L. Dickerson, Jr., PE, Senior Vice President, W. C. English, Incorporated, 615 Church Street, Lynchburg, VA 24504, (p) 434-845-0301, (f)434-845-0306, (e) [wdickerson@englishconst.com](mailto:wdickerson@englishconst.com).
- 3.2.3 **Principal Officer** – The Principal Officer for English, the offeror is: Mr. Wilson L. Dickerson, Jr., PE. The address and telephone number are the same as provided above.
- 3.2.4 **Corporate Structure** – W.C. English, Incorporated is structured as a corporation. English will undertake the financial responsibility for this Design-Build project, provide the required bonding, and accept the risks and liabilities for the performance of the work. English has no liability limitations.
- 3.2.5 **Lead Contractor and Lead Designer** – The Lead Contractor for this project is W. C. English, Incorporated and A. Morton Thomas and Associates, Inc. will be the Lead Designer.
- 3.2.6 **Affiliated and/or Subsidiary Companies** – Attachment 3.2.6 is provided in the Appendices.
- 3.2.7 **Certification Regarding Debarment** – Forms 3.2.7(a) and 3.2.7(b) are provided in the Appendices.
- 3.2.8 **VDOT Prequalification** – W. C. English, Incorporated’s certification number is E009 and is an active prequalified contractor to do business with VDOT. A copy of certificate is included in the Appendices.
- 3.2.9 **Bonding Capacity** – Evidence provided in Appendices from Travelers Casualty & Surety Co.
- 3.2.10 **SCC and DPOR Registration** – See Attachment 3.2.10 in the Appendices.
- 3.2.11 **DBE Participation Goal** – W.C. English, Incorporated is committed to achieving or exceeding nine percent (9%) DBE participation goal for the entire value of the contract.

Our team is 100% committed to delivering a successful quality project to VDOT on-time and on-budget. We appreciate the opportunity to submit our qualifications to you and look forward to being selected to pursue this project in greater detail. If you have any questions or need further information, please contact me.

Respectfully submitted,  
**W. C. English, Incorporated**

  
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Wilson L. Dickerson, Jr., P.E.  
Senior Vice President

## **3.3 Team Structure**



**W. C. ENGLISH,  
INCORPORATED**

Design-Builder,  
Construction, & Project  
Management

**A. MORTON THOMAS  
AND ASSOCIATES, INC.**

Lead Designer &  
Construction Quality  
Assurance

**A. Morton Thomas and  
Associates, Inc.**

Roadway, Structures,  
H&H/SWM, Drainage,  
Traffic Engineering, TMP,  
Environmental Permitting,  
E&SC, Utility Design/  
Coordination, Surveying,  
Subsurface Utility Locating,  
Construction QA

**Bowman Consulting  
Group, LTD**

Right of Way Acquisition,  
Utility Design/Coordination

**DMY Engineering  
Consultants, Inc.**

Geotechnical Engineering

**Seventh Point  
Transportation PR**  
Public Relations

**CES Consulting LLC**  
Construction QC

### 3.3 TEAM STRUCTURE

**W.C. English, Incorporated (English)** is pleased to respond to the **Virginia Department of Transportation (VDOT)** RFQ for the Albemarle Intersection Bundling Design-Build Project. The English Team is comprised of highly skilled team members, both firms and individuals, to create an integrated team structure that advantageously utilizes the Design-Build (DB) process and capitalizes on the strongest attributes of each team member's respective capabilities. English's role includes managing the total design and construction of the project and self-performing the major work elements. With our Lead Designer, A. Morton Thomas and Associates, Inc. (AMT), and subconsultant teaming partners, we provide extensive Design-Build transportation expertise, as well as specific VDOT experience, which we will employ to successfully complete these critically important improvements. The English Design-Build (DB) Team assures you will receive the following:

- › A proven contractor with over 60 years of highway construction experience.
- › A proven Design Partner that excels in Design-Build project delivery with several recent successes to their credit.
- › A Design-Builder that recognizes and welcomes stakeholder involvement.
- › A Design-Build Project Manager with the organizational authority to back our commitment to VDOT.

English has the expertise, personnel, equipment, and fiscal strength to successfully manage and construct the Albemarle Intersection Bundling Design-Build Projects. Of key significance and value for VDOT is the partnering approach utilized by English on all Design-Build and PPTA projects. The English DB team employs a positive, proactive and all-inclusive team approach on all of our projects. We are accustomed to an operating standard that fosters integrity, relationships, service, quality, and experience. We enjoy the work we do and take great pride in client satisfaction. We want to be the VDOT's DB Team of choice, and will commit all necessary personnel to ensure satisfaction upon completion of project delivery.

**A. Morton Thomas and Associates, Inc. (AMT)** is a respected provider of transportation design and construction management/inspection in Virginia and the Mid-Atlantic, including for Design-Build projects. Their key personnel have delivered design services on Virginia's busiest interstates and roadways for dozens of projects over the past five years. AMT has demonstrated success on highway widening, interchange and intersection projects for capacity and safety improvements, including major state highways and local roads throughout Virginia, the Culpeper District, and in Albemarle County. The firm's staff has provided services on some of the most visible VDOT projects including the Diverging Diamond Interchange (DDI) on US 460 at Southgate Drive in Blacksburg, which also included two roundabouts. AMT has also designed maintenance of traffic (MOT) phasing and temporary traffic controls to achieve high-level of service (LOS) throughout construction.

We also have included subconsultants with specialized expertise for this project. These include:

**Bowman Consulting Group, LTD (Bowman)** will lead utility coordination efforts and provide right-of-way acquisition services for the Albemarle Intersection Bundling Elements. A VDOT prequalified right-of-way contracting consultant since 1995, the firm has more than 30 offices nationwide with over 300 local professionals in the Commonwealth.

**DMY Engineering Consultants, Inc. (DMY)** a certified VDOT DBE/SWaM firm will provide geotechnical engineering, evaluation and recommendations. DMY’s expertise lies in providing geotechnical site investigation, drilling, instrumentation, geotechnical design and analysis, laboratory testing, construction materials testing/inspection, environmental services, and construction management, as well as, in-house AASHTO-certified soils and concrete laboratories.

**Seventh Point Transportation PR (Seventh Point)** is a certified VDOT SWaM public relations and marketing agency specializing in public involvement and communications for infrastructure and transportation construction projects. Collaborating with VDOT, their team develops and manages results-driven public affairs strategies including community outreach, citizen information meetings/public hearings, education programs, surveys, media relations and key stakeholder engagements for high-profile transportation projects.

**CES Consulting LLC (CES)** a certified VDOT DBE/SWaM firm based in Dulles Virginia, will provide inspection, quality control testing and laboratory services. CES Consulting has extensive experience working on Design Build projects in a, QA or QC role throughout the state. Currently CES has over Eighty (80) employees that are fully certified PE/DBIA/CCM credentials and QCMs with DBIA/CCMs.

### 3.3.1 Design-Build Team Key Personnel

English has assembled highly-qualified experienced individuals and structured the Team for optimal performance. Our key team personnel and design firms come together with a shared history of successful projects and established working relationships. These strengths minimize VDOT’s risks and staffing requirements on this project. Our task leaders and technical staff are responsible for items such as design, public involvement and construction, and everyone plays a role in the total success of the project.

The qualifications and experience of the English DB Team Key Personnel and other team members should provide confidence to VDOT that the project and risks will be effectively and thoroughly managed through proven personal competence and successful experience and accountability. The following table introduces these Key Personnel (with resumes in Appendix 3.3.1). Brief descriptions of their backgrounds and capabilities are provided below.

ROLE	NAME	YEARS EXP.	FIRM
<b>Design-Build Project Manager (DBPM)</b>	Cory Bond	17	English
<b>Quality Assurance Manager (QAM)</b>	Chad McMurray, PE, CCM, PMP	25	AMT
<b>Design Manager (DM)</b>	Laura Mehiel, PE	32	AMT
<b>Construction Manager (CM)</b>	Darrell Sullivan	41	English



**Cory Bond | Design-Build Project Manager** ▶ Mr. Bond has a wealth of relevant management experience. He will be responsible for the success of the project and has the specific, related expertise and experience to control the work, including design, permitting, right-of-way, utility relocation, construction, quality management, contract administration, third-party coordination, and all other services required. He has managed numerous transportation projects—both design-build and bid build—involving intersection improvements, maintenance of traffic, earthwork/rock, structures, asphalt paving, utilities, and storm drainage. Mr. Bond has managed projects in Virginia and he has a complete understanding of the VDOT requirements for Design-Build projects. He will report directly to the VDOT Project Manager and will serve as the single point of contact for VDOT for the duration of the contract. Mr. Bond will have the authority to act for English on all project related matters. In the

past year, he has successfully completed projects for VDOT, two of which were completed early and collected the maximum incentive allowable. These projects are (NFO)0712-055-P71, B618, C501, on Route 712, in Lunenburg County, and (NFO)0049-041-101, C501,B601, on Route 49, in Halifax County.



**Chad McMurray, PE, CCM, PMP, DBIA | Quality Assurance Manager** ▶ Mr. McMurray will ensure work is performed in conformance with contract requirements as well as approved construction plans and specifications. He will be responsible for the development and adherence to the QA Plan, QA inspection and testing of materials used, and associated work performed. He will have the authority to stop construction, enforce compliance with all specifications, and issue and require resolution of all Non-Conformance Reports (NCRs). He will manage all aspects of the QA program including the QA inspector and independent QA testing firm and testing technicians. The QA team will conduct independent and concurrent tests and analysis of the work with the construction quality control team. Mr. McMurray will maintain project quality records, and approve submitted pay estimates. He will visit the project sites, attend all monthly progress meetings, and oversee the full-time on-site QA staff throughout construction.



**Laura Mehiel, PE | Design Manager** ▶ Ms. Mehiel will oversee and manage all aspects of design including roadway, hydraulic, traffic, MOT, structural, environmental, and geotechnical. She will assign design resources as needed, oversee design subconsultants, coordinate design and review schedules, and be responsible for providing a quality product meeting all design milestones. Ms. Mehiel brings 32 years of management and design experience for significant and complex design-build projects in the Commonwealth for VDOT, including the **recently “opened to traffic” diverging diamond** at US 460 and Southgate Drive in Blacksburg, and **multiple recent roundabout design projects** such as Southgate Drive and US 219. She has managed multiple large scale and complex projects with multiple elements, both design-build and traditional, for highway projects in Virginia and throughout the region. This experience has involved intersection improvements for safety and capacity, roadway and interchange alignments, hydraulics design, complex maintenance of traffic design, traffic engineering including TMPs, signing and marking plans, and public meetings support.



**Darrell Sullivan | Construction Manager** ▶ Mr. Sullivan, as Construction Manager, will be responsible for leading the on-site construction team of superintendents, foreman and the Quality Control Manager. Darrell brings over 41 years of experience in roadway construction to this project serving as a senior construction manager on an array of transportation projects. He will have all required certifications prior to the beginning of construction. Mr. Sullivan has managed the construction of complicated projects along, I-95, I-66, I-295, Route 29, Route 3, Route 218 all with high traffic volumes and extensive maintenance of traffic which were both Design Build and Bid Build projects. He directly oversees all construction operations to include self-performing the grading, E&S, storm installation, bridge construction, MOT and manages all subcontractor work. His experience for managing contracts is proven as shown in his resume on the Spotsylvania County Bond project, for which he managed multiple elements concurrently. As well as participating in the design of multiple elements.

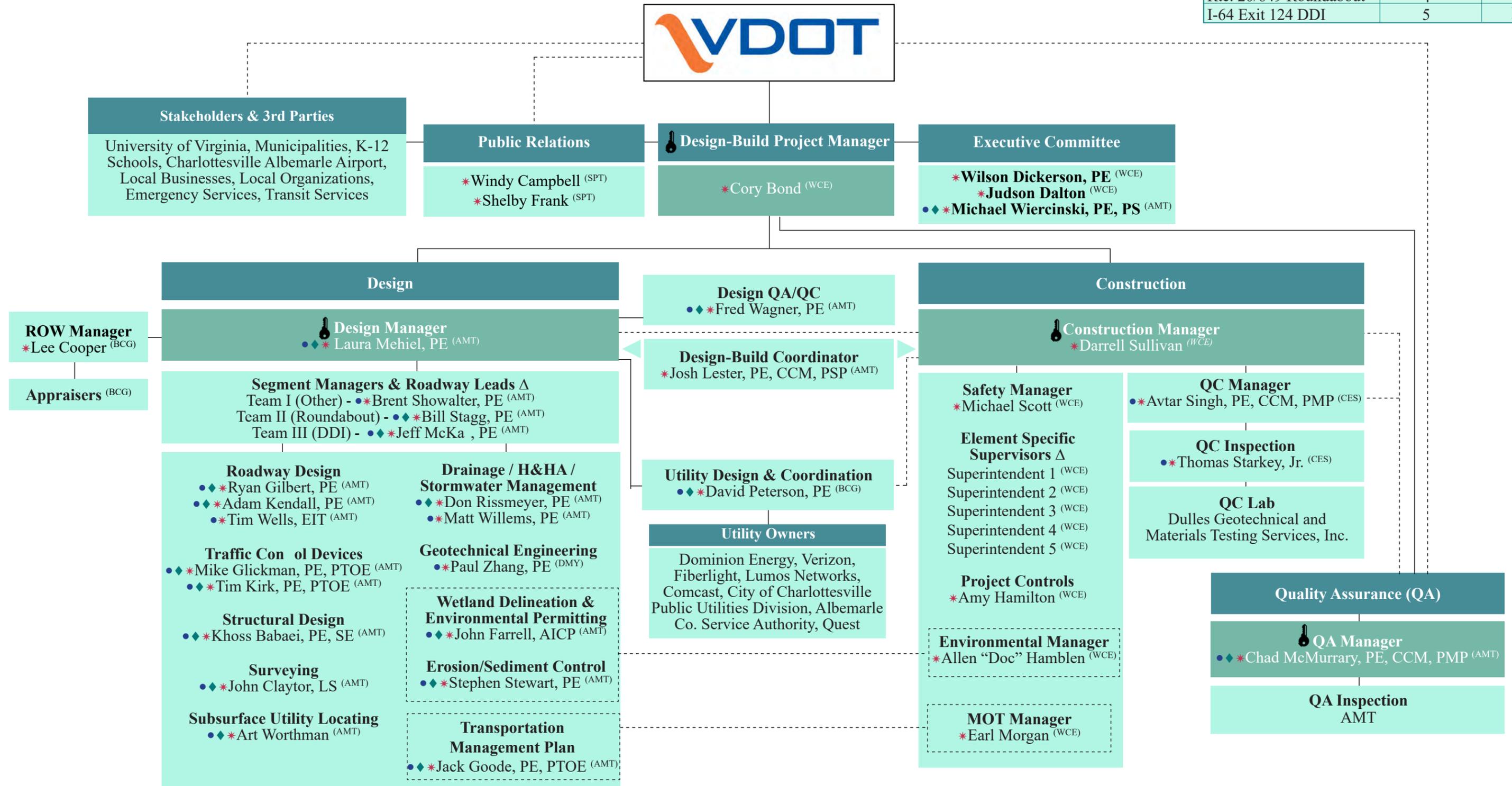
### 3.3.2 Organization Chart

The English DB Team is structured to provide VDOT with a single point of contact, the Design-Build Project Manager (DBPM), Cory Bond, who will be responsible for all design and construction activities and the overall management of this well-integrated team. Our reporting and functional relationships are delineated on the Organizational Chart on the following page and further described subsequently. The English DB Team organization has a straight-forward chain of command, with individual tasks, responsibilities, and functional relationships clearly identified. Further, a distinct separation is shown between construction and QA; including the separation between the respective QA and QC inspection and field/AMRL-certified laboratory testing facilities in accordance with the *Minimum Requirements for Quality Assurance and Quality Control on Design Build and P3 Projects, July 2018*. We are committed to keeping this team intact for the duration of the project.

# Albemarle Intersection Bundling

A Design-Build Project | Contract No. C00111814DB103

Element	Construction Superintendent	Design Team
I-64 Exit 118	1	I
Fontaine Ave. Ramp		
Berkmar Dr./Rio Mills		
Rte. 250/151 Roundabout	3	II
Rte. 20/649 Roundabout		
I-64 Exit 124 DDI	5	III



**LEGEND**  
WCE = W. C. English, Incorporated | AMT = A. Morton Thomas and Associates, Inc. | BCG = Bowman Consulting Group, LTD | CES = CES Consulting LLC | DMY = DMY Engineering Consultants, Inc. | SPT = Seventh Point Transportation PR  
🔑 = Key Personnel, Resume Included — = Reporting Line / Chain of Command - - - = Frequent Interaction/Coordination • = Roundabout Exp. ♦ = Diverging Diamond Interchange Exp. \* = Design Build Exp.

## Organizational Narrative: Functional Relationships and Team Communication

The English DB Team ascribes to the DBIA paradigm that “integrated development of the design and construction program is the cornerstone of Design-Build delivery and this methodology optimizes opportunities for collective excellence.” DB delivery carries with it a united team responsibility to gain a full understanding of the owner’s intentions and the factors that will drive value into the process and outcome. Put into practice, English’s DBPM, CM and construction personnel will interface with design counterparts from AMT and Bowman’s Right-of-Way Manager throughout the entire design and construction phases. DMY Engineering Consultants will work closely with the design team for the duration of design, and with the construction team throughout construction. Paragraphs describing the functional roles of Key Personnel appear herein. (Please also see Attachment 3.3.1 for resumes.)

**Design-Build Project Manager (DBPM), Cory Bond**, has complete authority over all project design and construction matters for the team and will report to the Executive Committee. Cory’s 17 years of transportation construction experience, capabilities in team management, and knowledge of VDOT make him an excellent fit for the Albemarle Intersection bundling projects. He will be VDOT's primary point of contact throughout the life of the project. He is responsible for managing the project from start to completion, including all contract management and administration. He has responsibility and authority for coordination, integration and direction of the entire design-build team: design, construction, quality assurance, MOT, utilities, right of way and public relations. He will supervise all personnel throughout the project. Cory will be involved through design, construction and project closeout. He will assist with constructability reviews and safety audits and will oversee the quality management program, purchasing and construction operations. He will also be responsible for third-party communication for the team. Cory will be available up to 100% of the time as required by the project demands.

**Quality Assurance Manager (QAM), Chad McMurray, PE, CCM, PMP, DBIA**, reports to the DBPM and will have direct, independent access to VDOT. He will ensure work is performed in conformance with contract requirements as well as approved construction plans and specifications. He will be responsible for the development and adherence to the QA Plan, QA inspection and testing of materials used, and associated work performed. He will have the authority to stop construction, enforce compliance with all specifications, and issue and require resolution of all Non-Conformance Reports (NCRs). He will manage all aspects of the QA program including the QA inspector and independent QA testing firm and testing technicians. The QA team will conduct independent and concurrent tests and analysis of the work with the construction quality control team. Chad will maintain project quality records and approve and submit pay estimates. In addition, he will submit monthly written reports to both the VDOT project manager and the executive team. He will oversee the full time on-site QA staff throughout construction.

**Design Manager (DM), Laura Mehiel, PE**, will also report to the DBPM. She is responsible for ensuring all design work is performed in accordance with current VDOT standards and specifications. She will manage all aspects of design including roadway, traffic control devices, hydraulics/SWM, utility relocation and design, geotechnical engineering, and surveying/SUE. Laura will be responsible for providing quality product and input into the project schedule, meeting all design milestones, and ensuring that the Design QC Program is followed. She will assign resources as needed, oversee the design subconsultants, coordinate design and review schedules, develop and implement corrective measures following Design QC review, if necessary, and ensure environmental compliance measures are integrated into the design. Laura will maintain involvement during construction to oversee plan revisions, shop drawings, and review construction activities with the Construction Manager. She will be available up to 100% of the time during design, and as the project demands during construction,.

**Construction Manager (CM), Darrell Sullivan**, will report directly to the DBPM. He will manage the efforts of the on-site construction team including the Construction QC Manager, Safety Manager, General and Grading Superintendents, subcontractors/vendors, and all other trades. His duties will include the Environmental, Utility, and MOT management for this project. He will be assigned to the project and on-site full time for the duration of construction. He will play a key role in constructability reviews as well as value engineering for all aspects of the design. Along with his staff, he will focus on ensuring the construction is performed productively and safely.

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He will coordinate with the Design-Build Project Manager, Cory Bond, during construction for the timely issuance and review of RFI's and shop drawings, as well as field visits, preparation of as-builts and plan revisions.

**Multiple Design Teams:** To facilitate concurrent design on multiple project elements we have designated three design team leaders. Each team leader has a minimum of 20 years of highway design experience on VDOT projects. The team leaders will have access to support from all design disciplines from drainage to traffic control devices. Team leaders will report to the DM and will be in constant communication with the team's construction personnel.

**Design – Construction Integration:** The keys to the success of this Design-Build project will be early team integration as well as communication and coordination between all team members, VDOT, review agencies and stakeholders. Our team is structured to facilitate involvement of construction expertise during design and design expertise during construction. Having personnel with roles in both design and construction allows us to quickly adjust priorities, understand and develop appropriate levels of detail, explore value engineering ideas, and streamline project development.

On the English DB Team, construction staff and design staff are integrated into a complete project team, fostering information sharing and knowledge transfer while ensuring consistency and quality in design and construction. Josh Lester, PE, CCM, PSP will act as a liaison between design and construction to interface between field crews and the designers in a timely manner. Most recently and local to this project, Josh provided schedule review and CM services on the Route 29 Solutions Team. Having a dedicated Design-Build Coordinator avoids delays or rework, streamlines reviews, and eliminates potential construction field issues. Other tools to facilitate team and specialty integration include:

- Weekly Task Force (discipline based) meetings between the design team and the Construction Manager to discuss contract requirements, constructability, and value engineering concepts throughout the life of the project. Once construction begins participants will be reduced to the key design personnel and design disciplines leads. Other construction personnel will be added to the meetings as construction is underway.
- Weekly internal design meetings with all disciplines to discuss current priorities, latest updates to design which can impact other disciplines, design/permit status, and action items
- Inter-disciplinary design reviews prior to milestones to ensure design disciplines are coordinated
- English constructability reviews of design prior to submission to VDOT
- A robust project collaboration and Document Control system, giving team members access to the same master files (design, RFI's, etc.), tracking progress, and avoiding duplicate or outdated information
- Construction weekly schedule meetings to review the previous work and develop the two-week look ahead
- Monthly scheduling meetings to review CPM progress and re-prioritize design as needed

**Construction Staff Involvement in Design:** The Construction Manager and Superintendents will provide over the shoulder reviews of design during project design development. Their reviews will focus on phasing, optimizing MOT sequencing, minimizing the construction footprint, constructability, erosion and sediment control, and stream protection. Here our collaboration will result in optimizing personnel, equipment, and material resources to ensure efficient construction activities and the limiting of impacts to residents, the traveling public, and emergency responders. **The continuity of having the Construction Manager engaged with the design team long before construction starts and then in turn have the key design leads involved throughout construction create a true design build approach that will be the key to a successful project.**

**Design Staff Involvement in Construction:** AMT will assist English in addressing field issues, participate in progress meetings, interact with stakeholders, and remain a part of the English DB Team until project completion. This relationship will expedite the RFI process and ensure all parties are informed throughout the process, including shop drawing review, environmental and permit compliance, MOT implementation, and public outreach. During construction, design staff will be heavily involved via regular field visits, continuous communication with construction staff, and regular *Partnering* Meetings.

## **3.4 Team Experience**

### 3.4 TEAM EXPERIENCE

English and AMT staff have successfully partnered together along with VDOT on projects such as the award-winning US 29 Lynchburg/Madison Heights Bypass in Lynchburg and the I-81 Truck Climbing Lanes in Rockbridge County. Additionally, English and AMT have worked with the subconsultants in a variety of configurations on projects in the Commonwealth and throughout the region. The English DB Team members already know each other, and have established trust and working relationships. Key team members include:

**W.C. English, Incorporated (English)**, is a third-generation family-owned business. English is a multi-disciplined construction firm licensed in eight states throughout the Southeast, with its primary work being performed in Virginia, North Carolina and South Carolina. Working under the leadership of 120 tenured personnel, English's staff of 600 employees has sustained as many as 40 concurrent projects. The company supports its field staff and projects with a fleet of equipment that is one of the largest in the Mid-Atlantic region. English has built countless widening and safety improvement projects, with examples such as Route 17 in Essex County, Route 208 in Spotsylvania County, the Piedmont Drive in Danville, North Gayton Road in Henrico County, Lewistown Road Interchange in Hanover County, and the Route 221 widening in Bedford and Roanoke Counties.

**A. Morton Thomas and Associates, Inc. (AMT)**, an *Engineering News-Record* "Top 225 Design Firm", with over 520 employees has been a recognized leader in the transportation industry for over six decades with a transportation design portfolio of over \$2 billion of construction value in the past several years. Operating from eight offices in Virginia, their experience on projects, such as VDOT's FHWA/VDOT's Design-Build Route 1 in Fairfax, I-81 interchange improvements at Exit 114 in Christiansburg, as well as the bid-build US 460/Southgate project at Virginia Tech which includes a **Diverging Diamond Interchange and two roundabouts**, equips our Team with the know-how to deliver the multiple projects under this bundle contract on time and on budget. The firm has received numerous letters of commendation as well as industry awards such as the American Council of Engineering Companies –2018 Honor Award for the Route 1 Design-Build, VDOT's 2015 Best Overall Project of the Year – Staunton District, and the VTCA Excellence Award for the Route 340 Corridor Projects.

**Seventh Point Transportation PR (Seventh Point)** has extensive experience in collaborating with VDOT on transportation public relations, awareness, education and outreach. Specializing in direct community outreach on behalf of VDOT their recent project experience includes Hampton Roads Bridge-Tunnel Expansion, Military Highway Continuous Flow Intersection in Norfolk and the GEC ERT Downtown/Midtown Tunnels/MLK Freeway, Portsmouth in Norfolk, VA.

**Bowman Consulting Group, LTD (Bowman)**, a VDOT prequalified right-of-way contracting consultant since 1995, has more than 30 offices nationwide with over 300 local professionals in the Commonwealth. Intimately familiar with VDOT's Right of Way and Utility Manual of Practice and RUMS, Bowman engages approved appraisers and review appraisers for appraisal work. Bowman has recently worked on VDOT projects such as the I-81 D-B Interchange Improvements at Exit 114 in Christiansburg, Route 3 D-B project in Culpeper County and the Route 29 Berkmar Drive Extension in Albemarle County.

**DMY Engineering Consultants (DMY)** has deep knowledge of the rock, soil and water conditions in the region, having completed countless project in Virginia over many decades including, Route 1 Reconstruction at Woods Edge Road in Chesterfield County, Route 144/Temple Avenue at I-95 Interchange Improvements in Colonial Heights, and a Geotechnical Engineering On-Call Contract in the Western Region of Virginia.

**CES Consulting LLC (CES)** has supported VDOT's Design-Build Program on numerous projects including providing QA services on the Route 29 Solutions project in Albemarle County, and QC services on the I-95 DB Rappahannock River Crossing Southbound in Fredericksburg District, I-95 Route/630 **Diverging Diamond Interchange** in Fredericksburg District and Route 772 Transit Connector bridge over Dulles Greenway.

#### Specific Experience

We have included work history forms for six projects that best represent our relevant work experience, in Appendix 3.4.1.

## **3.5 Project Risks**

### 3.5 PROJECT RISKS

Having reviewed available project information and visited the project site, our design and construction team members discussed the project risks and offer identification of the most critical risks and strategies for mitigation herein.

#### Risk #1 Safe and Effective Maintenance of Traffic During Construction

This Design-Build project bundle will construct various interchange and intersection improvements at six separate locations within Albemarle County. The construction of improvements at I-64 Exit 118, I-64 Exit 124 and Route 29/Fontaine Avenue will affect major corridors in the Charlottesville area with current AADTs ranging from approximately 24,000 to 54,000. In addition to the sheer volume of traffic on these corridors, heavy peak hour traffic and congestion associated with University of Virginia (UVA) and Charlottesville area special events add to the complexity of constructing major roadway improvements under traffic.

Changing traffic patterns, both as a result of construction phasing operations and permanent configuration are another major concern. Five of the six projects in the bundle will result in permanent changes to existing traffic patterns that area drivers are accustomed to. Below is a summary of these five projects:

<b>I-64 Exit 118</b>	Removal of existing loop ramp and replacement with the addition of a signalized left turn onto I-64 Eastbound.
<b>I-64 Exit 124</b>	Convert existing diamond interchange to a diverging diamond interchange (DDI). Constructing this major interchange reconfiguration under heavy traffic will present the most challenges regarding safe MOT operations, access and construction phasing.
<b>Route 29/ Fontaine Avenue</b>	Modify existing exit ramp by adding additional exit lane and converting Route 29 through lane to an option lane
<b>Route 250/151 Roundabout</b>	Convert existing T-intersection to single-lane roundabout
<b>Route 20/649 Roundabout</b>	Convert existing intersection to single-lane roundabout

Several of the operational and safety improvements mentioned above may require the use of lane shifts, travel lanes adjacent to concrete barrier, temporary pavement and signals, access management changes, and other modified/restricted traffic movements during construction.

**Why the Risk is Critical:** Temporary and permanent traffic pattern changes will require advance notification to local residents and businesses, daily commuters, visitors to the area, police/fire/EMS, hospitals, K-12 schools, and major stakeholders such as UVA, so that unexpected situations can be avoided. Changes in traffic patterns and access can be confusing, which increases the probability of accidents on roadways under construction. Traffic shifts and partially constructed improvements to accommodate phased construction can present significant challenges and confusion to motorists, particularly those unfamiliar with current traffic patterns or those who may not drive the corridor regularly. As a result of phasing operations, construction of the DDI at Exit 124 and construction of the two roundabouts will require the

use of temporary traffic patterns that will be different than the permanent configurations. These interim changes are an impact to driver expectations and further increase the risk of accidents, particularly when combined with weather events. The proximity of these projects to Charlottesville, UVA, and other destination spots, coupled with heavy peak hour traffic from daily commuters, makes this a critical project risk.

#### Traffic Conditions Increase Level of Risk

*Heavily congested corridors with significant peak hour and UVA / Charlottesville event traffic can create delays and queues:*

- **Interstate 64:** Interstate, 44,000 to 53,000 AADT (2017), posted 65 MPH
- **US Route 29:** Principal Arterial / Freeway, 52,000 to 54,000 AADT (2017), posted 55 MPH
- **US Route 250:** Principal / Minor Arterial, 24,000 AADT (2017), posted 45 MPH

**Risk Impact:** The sensitivity of traffic operations in the Charlottesville area, particularly during normal workday peak hours, weekends, and associated with UVA special events, is such that even minor changes in traffic patterns can result in significantly increased delays to the mainline and intersecting roadways. These delays often spread onto the surrounding roadway network or “encourage” drivers to use alternative routes that may not be able to handle the volume of diverted traffic.

Increased travel delays and confusing driving patterns are frustrating to motorists and frustrated motorists may not drive as safely or courteous as they normally would, diminishing the safety of other drivers and construction personnel. Other impacts to the project could include:

- › Further delays in driver commutes or travels.
- › Negative impacts to project stakeholders, area businesses, and local events/attractions.
- › Longer travel times for emergency responders to travel through or bypass the work zone.
- › Entering and exiting the work zones could cause accidents or back-ups.
- › Loss of public support should public outreach and education not be conducted properly.

**Mitigation Strategies:** This risk can be effectively managed by first developing a detailed Transportation Management Plan (TMP) based upon VDOT TED-351.4 (IIM-LD-241.6). Our Team will develop the TMP, which includes a Temporary Traffic Control Plan (TTCP) for each of the six projects, a Transportation Operations Plan (which includes an Incident Management Plan), and a Public Communications Plan, with the major focus being on the safe and efficient passage of vehicular traffic through the work zone and maintaining safe access to residences and businesses during each phase of construction. The Team will strongly emphasize public outreach and education and will develop a defined schedule for public outreach activities. Additionally, our Team will systematically implement the TTCP and clearly define all traffic movements for each phase of construction. Below are key strategies that we will use to mitigate risk associated with safety of the traveling public and construction personnel during construction of the six improvement projects.

1. A multi-disciplinary design and construction team will work closely to develop the optimal construction staging at each project location that both maintains safety and allows for efficient construction. AMT TMP Manager, Jack Goode, PE, PTOE will work closely with English’s MOT Manager, Earl Morgan to ensure that construction phasing and means and methods are accurately represented in the TMP. In addition to Mr. Goode and Mr. Morgan, several other team members will be required to implement and maintain a successful TMP. TMP team members will include: construction personnel (to guide the team on access needs and priority construction areas); highway engineers (to assess alignment tie-ins/crossovers for traffic shifts); H&H engineers (to work through temporary grading/drainage); and traffic engineers (to model traffic operations associated with re-routed alignments and temporary traffic patterns, and to ensure compliance with the 2011 Virginia Work Area Protection Manual (Revised April 2015), the 2009 Manual on Uniform Traffic Control Devices and the 2011 Virginia Supplement (Revised 2013).
2. The TTCP for each project will include project-specific details and strategies to allow the project to be constructed in multiple phases. Examples include full-depth shoulders to facilitate the shifting of traffic away from active work-zones, temporary drainage structures/pipes/ditches to ensure adequate pavement drainage during phased construction, temporary pavement markings and signage, and the location of temporary shoring where the new roadway is adjacent to, but higher or lower than the existing roadway. The location of construction entrances will be addressed in the TTCP to ensure safe ingress/egress to and from active work zones. The TMP must be utilized as a working document and revised as needed during construction to accommodate changes in phasing or unforeseen impacts to traffic. Details like these will allow the TMP to function as an effective and complete document.
3. Raising public awareness of traffic pattern changes must occur early-on and continue throughout the duration of construction. Our Team will ensure that affected motorists are made aware of the impending changes and duration of impacts likely to be faced. Technology-based public outreach tools, such as social media sites and

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Jack Goode served as MOT Manager on the Intercounty Connector Section B -- a >\$300M Design-Build project near Washington, DC.

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web-based applications such as Waze and Google Maps, are extremely effective methods of communicating traffic updates. Travelers that use Interstate 64, Route 250, Route 29 and other affected roadway corridors in Albemarle County will need real-time traffic information and information on upcoming traffic pattern changes, delays, temporary traffic stoppages, and emergency operations. Our Team will stay in communication with the Northwest Region Operations (NWRO) Center and VDOT Public Affairs, and will make use of VA511, Public Service Announcements, and local radio, television and print advertisements. Our Team will support efforts to maintain social media sites such as Facebook and Twitter, the project website, or other electronic public outreach tools such as mass email blasts to travelers that have expressed a desire to receive such information.

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AMT prepared an award winning 3D animation video for the new DDI and Roundabouts as part of the Southgate Drive/US 460 project in Blacksburg, VA.

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4. Informational videos and animations can be educational and extremely effective in proper navigation through new traffic patterns, be they permanent changes or temporary conditions. Where relevant and necessary, the English DB team will develop such material for MOT phases, for VDOT’s use on the project website, through social media, or other appropriate website links.
5. Temporary guide signs, advance warning signs with flashing beacons, temporary pavement markings and illuminated night-time work zones (if applicable) will be provided along the corridors per the approved TMP, and checked frequently for effectiveness and proper placement/maintenance. Variable Message Signs and Portable Variable Message Signs specific to the project will be effectively utilized in advance of the work zones to inform the traveling public of upcoming traffic pattern changes and potential travel delays.
6. An Incident Management Plan will be incorporated into the Transportation Operations Plan to provide field personnel with emergency action plans and to decrease response times for first responders accessing an incident within or near an active work zone. The plan will contain guidelines for incident notification, categorized responses based on incident type and expected duration, and mitigation measures such as pre-established lane closures, detours and signing. The plan will recommend specific equipment to have ready onsite for deployment. Detour options for major incidents requiring a total roadway closure will be based on the results of a traffic analyses.
7. Our Team will evaluate each phase of construction against the TTCO to determine if any field adjustments are required. English construction staff will take an active role early-on in the development of the TMP and will work closely with AMT’s roadway and traffic engineers regarding preferred project and construction sequencing, staging and access, and means and methods. Our Team’s design and construction personnel hold Basic, Intermediate and Advanced Level Work Zone Certifications, to design, implement and maintain all temporary traffic control devices and ensure compliance with the MUTCD and Virginia WAPM.

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**US1/Morgantown Road** - As part of an acceleration requested by NCDOT, English developed safe but efficient modifications to the phasing and MOT to achieve the early completion. One phasing change was finishing a right turn lane on NB US1 while also building a left turn lane and concrete island median between NB and SB.

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**Role of VDOT and Other Agencies:** VDOT’s role will consist of typical D-B project responsibilities of reviewing, commenting on and approving the TMP, website updates and public outreach materials.

## Risk #2 Effective Public Outreach & Awareness

The Albemarle Bundle involves six elements that come together into one project to relieve congestion and streamline traffic flow throughout the region. The Bundle includes the following:

- I-64 Exit 124 DDI
- I-64 Exit 118 Interchange
- U.S. Route 29 Exit Ramp to Fontaine
- Route 151/250 Roundabout
- Route 20/649 Roundabout
- Rio Mills Rd./Berkmar Dr. Connector

Transportation projects with multiple elements in close proximity, despite their long-term benefits to a wide array of public and private end users, often pose a myriad of short-term challenges and disruptions for anyone utilizing the roadways. Commuters and institutional concerns are affected equally, but not always by the same issues, and

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not necessarily at the same times. The complex nature of such transportation initiatives involves an ever-changing array of challenges and opportunities for end users and project partners alike. Changes to the physical landscape in the project corridor, new and unfamiliar traffic patterns, disruptions and delays in established routes can pose a negative impact on the public perception of the Albemarle Bundling elements and could be detrimental to its eventual success.

A successful public relations program for the Albemarle Bundling elements will optimize awareness and perception by maintaining a clear and focused exchange of information between the project owner, local key stakeholders, trucking and freight, and the traveling public.

**Why the Risk is Critical:** The bundle encompasses several high-traffic intersections that are critical to the infrastructure and future growth of the County and the Commonwealth. Without a comprehensive public relations and outreach program, the public will not understand the scope and vision of project, improvements, and their benefits. Lacking understanding of the timelines and eventual project goals, some will only see the disruption and inconvenience caused by construction. Such misunderstandings and misperceptions could result in perceived impacts such as public dissatisfaction, safety concerns, lost productivity, delays, or cost overruns.

Initially, motorists may not be aware of lane closures or roadway detours during project construction, potentially posing a risk to safety within work zones. The implementation of new traffic patterns such as the roundabouts, and especially the diverging diamond intersection which are new to Albemarle County will require substantial public education and dynamic outreach efforts. Without education on the new types of intersections, public unfamiliarity may lead to frustration and impatience, posing potential interruptions to maintenance of traffic, and potential safety risks. VDOT has extensive, existing educational materials on roundabouts and DDIs readily available. To save the Department costs, our team plans to utilize the quality educational materials in print, video, and online resources to facilitate public educational efforts.

Crisis communication is a key component of a good public relations program. The establishment of emergency contingencies such as responses to extreme inclement weather, sudden high-density situations resulting from accidents or emergency closures is crucial. The timely transmission of such information to the public in easily-understood formats is essential to maintaining safety in such instances. Situations that arise during the project timespan could escalate without the appropriate protocols in place.

The stakeholder groups encompass not only those groups located within the region, but many groups visiting or passing through due to the activities of the various educational communities, sporting and cultural events, increasing tourism and container trade. Due to the diverse list of stakeholder groups, as represented in our organization chart, a consistent and targeted public information and communications program that addresses the specific needs and concerns of all parties will be key to limiting negative impacts throughout the four-year program. Our goal is to work closely with VDOT to keep the community informed and engaged.

**Risk Impact:** Public perception can often define a project's outcome. A lack of public awareness and support also poses an enormous risk to any large-scale transportation construction project. Keeping the public informed of changes to any established transportation routes is critical to the functioning infrastructure of any transportation environment. Identifying issues such as the basic safety of commuters and construction personnel, maintenance of traffic and defining the project are among the first steps required in preparing a comprehensive communications methodology. Early engagement while insuring the continuous and effective transparent communications that inform the public and key stakeholders of the project scope, schedule, costs, impacts and benefits is critical to the success of the Albemarle Bundling elements. Maintaining an exchange and flow of information between involved parties during all phases of planning, construction and implementation is necessary for the success of the Albemarle project.

**Mitigation Strategies:** The English DB Team will develop a comprehensive strategic communications plan that will keep the public informed and educated on the full scope of the four-year construction project. Key messaging will focus on the benefits and improvements of the elements. We will develop collateral materials to facilitate communications that will include project fact sheets, PowerPoint presentations, navigation simulations, and other

materials as needed. Utilizing a mix of local media, interactive public forums, online social media, Nextdoor, and local canvassing, the PR team will introduce the project, monitor public comments, and respond accordingly. We will communicate new traffic patterns, as well as engage with stakeholders in the community – providing an information conduit between the public and the project team.

1. Proactive Approach - The English DB Team will conduct proactive outreach to promote the project benefits ahead of construction. By engaging with key stakeholder groups early in the project, we can identify individuals within the groups to become potential local project champions. Arguably, the most effective communications tactic is to have the public become advocates for the project.
2. Outreach During Construction for Traffic Management - Through a comprehensive and proactive public relations program, we will manage traffic impacts by ensuring the public is informed throughout the life of the individual projects. We will engage with the key stakeholders before construction begins to emphasize project benefits and manage public perception for the project utilizing consistent messaging across all communications channels. Through targeted marketing tactics, we can reach a broad spectrum of audiences. From traditional public engagement, group or one-on-one meetings, to innovative digital media, we can target specific stakeholder groups whether it is by geography or interest. We can identify impacted groups and target messages specifically to them. Specific considerations will address pedestrians and bicycle communities.
3. Tailored Approach by Location - Because the elements include several high-density intersections, it will be imperative to maintain traffic throughout the duration of the project to minimize impact to residents, businesses, trucking and visitors to and through the region. Community needs change according to specific local and regional events and seasonal fluctuations. On behalf of VDOT, the English DB Team will coordinate with local businesses, universities (specifically UVA), colleges, hospitals, medical facilities, as well as government and municipal organizations to keep them informed on construction and traffic impacts. We will proactively inform the public and motorists about lane closures and detours associated with the project.
4. Specific DDI Outreach - A key element of the project involves a diverging diamond interchange (DDI), which is a traffic feature new to the County. The first DDI in Virginia was constructed in neighboring Louisa County in 2014. However, because this is a new concept to Albemarle County, it will be unfamiliar to many of the residents. The English DB Team understands the importance of gaining community understanding and acceptance of new traffic concepts and can achieve this through public education and continuing stakeholder engagement. In addition, we can highlight the success of the DDI projects (such as in neighboring Louisa County, or at nearby Southgate Drive in Blacksburg, designed by AMT) allowing us to provide a real-world example of how a pioneering traffic solution can benefit the region.
5. Educational Video – AMT’s graphic artists recently created renderings and an accurate 3D video of the DDI at Southgate Drive and US 460 at Virginia Tech. The aesthetics and preservation of a rural gateway experience were critical to this large and complex project. Because of this, our client VDOT asked AMT to create a 3D digital model to ensure that all interests were appropriately accommodated. The model is geometrically and visually accurate, and was used to demonstrate the project to the University and introduce it to the community. A similar approach can be used for the DDI and/or roundabouts in the Bundle project.
6. Enhanced Risk Mitigation through Compressive Project Website Strategy: Additional risk mitigation can include a comprehensive website strategy. Currently the six Albemarle Bundle elements exist on standard individual VDOT website pages. We would like to propose utilizing the existing VDOT microsite web format to combine all six elements in a central online location to provide a single source of information. VDOT has established a series of project-specific microsites for the High Rise Bridge ([www.64highrise.org](http://www.64highrise.org)), I-64 Widening ([i64widening.org](http://i64widening.org)), Transform 66 ([www.transform66.org](http://www.transform66.org)), and others that comprehensively address specific components of major VDOT projects.

We suggest utilizing the existing VDOT microsite format to deliver a single site that contains the specific components of the entire suite of the Albemarle Bundling that contains pertinent information for each element. The single microsite for the bundle can be maintained and updated in real time, providing current traffic alerts, lane closures, and can be utilized as a platform for project updates, meeting notices, education, or virtual

public meetings that address project progress and provides a channel for community engagement. Seventh Point is proficient and well-versed in VDOT website content development, updates, and maintenance.

**Role of VDOT and Other Agencies:** We understand that VDOT is the project owner and will coordinate accordingly with the agency to ensure consistency of messaging. In developing a comprehensive public relations plan, we will be able to proactively address and plan for impacts throughout the project on behalf of VDOT. All communications and public engagements will include consistent messaging, approved by VDOT, and adhere to VDOT communications protocols.

**Risk #3 Effective Project Scheduling/Sequencing of Work**

**Risk Identification:** With a final completion date for the six elements in this contract of March 30, 2023, and an anticipated award in June 2019, our team has estimated an actual available construction duration of 36 months, with additional winter shutdowns for paving for any given calendar year. Therefore, the English DB Team has identified project scheduling/ sequencing of work as a unique risk since a well-conceived and coordinated project schedule based on a sequence of construction that is successfully synced with the progression of design, obtaining required permits/approvals, and other project constraints to include resource loading and allocations (e.g., work restriction periods, right-of-way clearances, etc.) is critical to completing the project within the established Total Contract Time.

**Why this Risk is Critical:** While on the surface it might appear that nearly 3 years and 9 months for the contract would be more than sufficient, there are multiple elements that must be balanced and well-coordinated in order to prevent schedule slip from occurring. In our initial review of the project, we have roughly allocated the contract time as follows:

Design for Early Construction (including survey, geotechnical & scope validation)	6/20/2019 thru 9/30/2019
Constr. Package A, Element 1 (I-64 Exit 118 ParClo Mod)	11/1/2019 thru 5/1/2020
Constr. Package A, Element 2 (Fontaine Ave Ramp)	4/1/2020 thru 7/15/2021
Constr. Package B (I-64 Exit 124 DDI)	5/1/2020 thru 8/15/2022
Constr. Package C (Berkmar Drive/Rio Mills Connection)	6/15/2020 thru 6/15/2022
Constr. Package D (Rte 250/151 Roundabout)	4/1/2021 thru 9/1/2022
Constr. Package E (Rte 20/649 Roundabout)	9/15/2021 thru 11/15/2022
Final Punch-out	Prior to 3/30/2023

Related design for all project elements to proceed to right of way acquisition, permitting, and utility coordination/relocation must be overlapped and properly sequenced. Cold weather will impact asphalt work, pavement markings, and sufficiently final design packages must be available to construct particular areas. Due to these complexities and other sequencing intricacies (utility companies, etc.) this item has been deemed a critical risk to schedule and design excellence. Management and monitoring of the schedule and work progress will be imperative to meeting and/or exceeding the project schedule with design excellence.

**Risk Impact to Project:** Problems with planning, scheduling, managing, resource loading and/or sequencing work activities will have a cascading negative effect in meeting and/or exceeding the project schedule goals.

**Mitigation Strategies:** Led by our Design-Build Project Manager, Cory Bond, and our project scheduler, and in collaboration with our Construction Manager, Darrell Sullivan, our Design Manager, Laura Mehiel, PE, the English DB Team will develop a project schedule and sequence of work that includes all design, permitting/approvals, construction, work restriction periods, weather allowances, and other project activities (utility relocations, required VDOT approvals, materials procurement, etc.), specifically including activities on the critical path or requiring third party actions. Our schedule and sequence of work will provide a detailed plan

for how each of the six project elements/locations will be designed, permitted/approved, and constructed in the most efficient manner starting from NTP to final clean-up. The English management team will proactively monitor and adjust the schedule and sequence of work activities, and allocate project resources, to gain efficiency where possible and recover from unforeseen issues when needed. Impacts to the schedule may include but are not limited to: delays in obtaining permits/approvals, unforeseen site conditions, weather delays, unavailable right of way, or delays from third party utility relocations. Any impacts will be immediately communicated to VDOT and project stakeholders for development of a resolution.

1. Preparatory Efforts – Upon notification of selection, our team will immediately initiate advanced coordination efforts with VDOT and project stakeholders, supplemental data collection activities, and project design activities. These early efforts will include, but are not limited to: attend and facilitate the utility conference and utility coordination meetings between the English DB Team, VDOT, and utility owners; identify critical path permitting items and attend a pre-permitting meetings; develop and submit our QA/QC Plan; develop and submit the public outreach plan; develop and submit the Right of Way Acquisition Plan; develop and submit the TMP; perform tree and wetland surveys and prepare and submit minimization and avoidance reports; develop and submit the geotechnical planning report; perform supplemental field survey, utility test pitting, and soil borings and testing.
2. Work Packages with Multiple Design Teams and Construction Supervisors – Understanding the importance of schedule, the English DB Team will develop an approach to get shovels in the ground as soon as possible. To this end, we will design and submit for review and approval phased construction work packages, with multiple teams to allow for concurrent services (See Organizational Chart). It is our initial plan to subdivide only Package A and Package B into phased plan sets. The framework for the work packages is as follows:
  - 1) Package A Signal;
  - 2) Package A Clearing/Grubbing/Grading & ESC;
  - 3) Package A Roadway, Drainage, SWM, ESC, TMP/MOT, Signing/Marking;
  - 4) Package B Clearing/Grubbing/Grading and ESC;
  - 5) Package B Roadway, Drainage, SWM, ESC, TMP/MOT;
  - 6) Package B Signals, Signing/Marking;
  - 7) Package C;
  - 8) Package D;
  - 9) Package E.

Package A is the site with the least amount of Right-of-Way and permitting issues, this it is identified as an early package for construction. We have targeted an early, and separate, signal package for the Exit 118 project in recognition of the potential review time for developing an approved package, which will facilitate ordering the signal equipment for this package. Package B is the DDI, with the longest construction time, and is phased into packages as well to facilitate the initiation of early construction.

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School session dates are an important consideration for transportation projects that impact school routes. Our team will consider school operations to the extent possible in planning or construction timeframes – both starts and finishes.

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3. Anticipated Construction Phasing – Our initial plan for the construction phasing is to focus on what we believe to drive the critical path, which is the design and construction of the DDI at Exit 124. The construction of this retrofit interchange will likely require 800+ days, approximately 27 months. In addition to the grading and paving crew, we anticipate two other separate operations to complete this interchange by Fall of 2022: a signal crew and a box culvert crew. Specifics of our tentative sequencing plan that will form the framework of our schedule of the DDI are:
  - Start E&S controls and implement phases of MOT Plan
  - Begin grading and drainage improvements
  - Start installing signals and pavement
  - Finalize surface paving, strip, activate signals and turn traffic

Other significant milestones as we develop the final schedule will be the completion of the remaining project elements (i.e. sites), including interstate/ramp paving and roundabout construction. We anticipate that the final 1 to 2 months for each element (site) will be spent on traffic shifts, tie-ins and punch out.

	Design	ROW & Utilities	Permits	Construction
<b>PACKAGE A</b> I-64 Ex 118 & Fontaine Ave Ramp	WP 1: 6/20/19 to 8/15/19 WP 2: 7/01/19 to 10/01/19 WP 3: 7/15/19 to 11/01/19	7/15/19 to 10/1/19	7/15/19 to 10/1/19	11/1/19 to 7/15/21
<b>PACKAGE B</b> I-64 Ex 124 DDI	WP 4: 8/01/19 to 11/15/19 WP 5: 9/01/19 to 12/31/19 WP 6: 11/15/19 to 3/15/20	11/1/19 to 4/1/20	12/1/19 to 4/15/20	5/1/20 to 8/15/22
<b>PACKAGE C</b> Berkmar Dr /Rio Mills	WP 7: 11/01/19 to 3/15/20	1/15/20 to 5/30/20	3/15/20 to 5/30/20	6/15/20 to 6/15/22
<b>PACKAGE D</b> Rte 250/Rte 151 Roundabout	WP 8: 7/01/19 to 2/30/20	2/30/20 to 9/30/20	3/30/20 to 10/30/20	4/1/21 to 9/1/22
<b>PACKAGE E</b> Rte 20/Rte 649 Roundabout	WP 9: 2/30/20 to 10/15/20	10/15/20 to 6/1/21	11/15/20 to 8/1/21	9/15/21 to 11/15/22

4. **Collaborative Design** – In support of our design efforts, we will complete all necessary data collection and we will develop and submit for review and approval all necessary geotechnical and pavement submittals, required permits and permit modifications, project documentation, studies, reports, source of supply/material clearances, shop drawings, etc. These efforts will be coordinated with all other work activities to ensure approvals are synced with the overall project sequencing. To facilitate interdisciplinary coordination of the design submittal packages and design support efforts for each construction phase, the English DB Team, including our subconsultants and subcontractors, will actively communicate and coordinate internally and externally through phone calls, email, and frequent meetings, including video conferences. All design and construction activities will be coordinated to ensure the seamless integration of all design components and the coordinated progression of construction. Staff from construction, quality control, and quality assurance will be engaged throughout the design process and will provide over-the-shoulder reviews to avoid unnecessary delays during compliance reviews/approvals and during construction. Meetings will include weekly team meetings, weekly task force/discipline specific meetings, monthly Partnering meetings, design quality control/quality assurance meetings, constructability review meetings, and other meetings to address specific issues.
5. **Utility Coordination** – We understand the utilities present in the project area include overhead and underground utilities including, but not limited to: Dominion Energy, Verizon, Fiberlight, Lumos Networks, Comcast, City of Charlottesville Public Utilities Division, Albemarle Co. Service Authority, Quest. Our Utility Coordinator, David Peterson, will focus his full attention toward coordinating utilities and resolving conflicts throughout design and construction. We understand our responsibility to coordinate with the utility owners on the design, scheduling, and relocation of their facilities, and to help resolve conflicts throughout design and construction. We also understand that available utility information is not always accurate or complete and schedules may change due to unforeseen reasons resulting in unexpected conflict; however, the English DB Team is prepared to address these challenges through active and ongoing engagement and partnering with VDOT and utility owners. We will leverage the combined experience of our design and construction staff to develop creative and innovative solutions to avoid or address conflicts and accelerate construction activities when possible.

**VDOT and/or Other Agency Role:** We anticipate VDOT providing timely appraisal review and offer approvals for right of way acquisition. We will partner with utility owners and anticipate that they will complete their relocation designs and construction within their prescribed duration. The English DB Team will partner with VDOT, regulatory/resource agencies, and other project stakeholders for the timely review and approval of drawings and permitting.

## **3.6 Approach to Executing Work on Multiple Segments**

## 3.6 Executing Work on Multiple Elements

English has had experience with managing multiple project elements within one construction contract concurrently, and successfully implemented an array of strategies to deliver successful design-build projects to our client, Spotsylvania County. Our contract included seven standalone elements that were all design-build projects. The contract managed all of the elements collectively, designing and constructing them concurrently. Ultimately only four of the seven elements were built as part of this contract, due to County funding issues. The County selected which elements were to move forward, and which ones were shelved. Our Construction Manager Darrell Sullivan was also the Construction Manager for the Spotsylvania County contract, and was engaged in the project from the very beginning. He participated in all design and constructability reviews, schedule creation and analysis, budget reviews, and controlled all construction related resources throughout the project for all elements. The Albemarle Bundle contract will allow him to similarly manage construction of all six elements concurrently, as necessary, due to their close proximity.

From English's experience on the Spotsylvania contract in addition to other Design-Build and multi-faceted construction projects, combined with AMT's design experience working on multiple design projects on a daily basis, we have defined a number of tools and strategies for effectively executing work on multiple projects:

**CPM Schedule:** The first tool to manage all aspects of each element concurrently will be to build a detailed CPM schedule. The schedule will be constructed to include all elements within one schedule. However, considerable efforts will be spent on creating an appropriate work breakdown structure so that each project can be broken down and reviewed separately. The work breakdown structure will also include the ability to review each discipline collectively across all elements so that they can be analyzed individually. The discipline breakdown will include but not limited to design, construction, survey, environmental, right-of-way, utilities, as well as quality control and quality assurance. The work breakdown structure by discipline will also include the ability to review activities by firm. The ability to review each project individually will allow the team to work through the planning and sequencing of each element in a typical project management fashion.

Preparing the schedule to include all six elements collectively will allow the team to see and work through the interconnectivity and overlap of the elements collectively, proactively harvesting any efficiencies that present themselves, while also showing the constraints that will have to be overcome by resequencing or changes in resource loading. Resource management will be the key to managing six separate elements collectively under one contract. Providing a schedule with a work breakdown structure that will allow each discipline and firm to see, identify, and anticipate the resource loading required of each of them throughout the entire contract.

**Advance Planning and Optimized Sequencing:** Our Construction Manager, Darrell Sullivan, will be engaged in the contract from the very beginning to include all design and constructability reviews prior to actual construction. He will work with the DBPM and the design team to create the best possible sequence of construction activities to best utilize all available resources. Appropriate advanced sequencing of the collective six elements will focus on not only the completion of each element on time but the proper management of all construction resources to eliminate overloading, but importantly to anticipate all that will be needed and when. In coordination with this advanced planning of sequencing the six elements collectively, then sequencing the disciplines or scopes across all six projects, it will allow us to properly assign and resource load all required equipment and personnel to include quality assurance and quality control. We will be able to see all concurrent activities at various locations indicating to us the inspection and oversight personnel load required at any one point and time as well as the duration of that resource load.

**Multiple Design Teams:** While Laura Mehiel, Design Manager will oversee the design on a global basis, she will have three "Team Leaders", experts in highway design with roundabout and DDI experience, who will manage the technical design of the various project elements. Each team leader will also have a senior project roadway engineer for design and plan preparation, and will have a pool of designers and engineers in other disciplines such as hydraulics, traffic, survey, structures and utility design. This approach has been developed based on our initial assessment of the six elements under this bundle contract, as summarized on the following matrix.

Issue	Design Team I			Design Team II		Design Team III
	I-64 Ex. 118 Ramp Mod	Fontaine Ramp	Bekmar/Rio Mills Conn.	250/151 Roundabout	20/649 Roundabout	I-64 Ex. 124 DDI
ROW/Easement Required			Proffers	✓	✓	✓
Wetlands/Stream Impact				Minor	~800 LF	Minor
SWM Facility Req'd		✓	✓	✓	✓	✓
Utility Reloc. or Coord.	✓			✓	✓	✓
Stakeholder Coord.	U Va	U Va				
Materials Lead time	Signal pole					
High Crash History	✓				✓	
High Truck Traffic %			✓	✓		
High Traffic Volume	✓	✓				
Relative Rating of Scope/Complexity	Low (L)	L	L to M	Medium (M)	M	High
Unfamiliar Traffic Pattern - Outreach	✓			✓	✓	✓
Time of Year Restrictions			✓ (Bats)	✓ (Bats)	✓ (Bats)	✓ (Fish, Bats)
Special Note	Same interchange – combine as one package		Coord. with 29 Solutions	Flooding Problem		
FEMA				✓		

### Project Assessment and Design Staffing Matrix

The development of team staffing and grouping of project sites as shown above is based on the rationale such as:

- Design on projects with higher complexity and scope will require a dedicated team without diverted focus.
- Projects requiring ROW, utility relocations, or special permitting will need early design completed sufficient to begin ROW process, utility relocation process, and permitting process.
- Project of similar type/scope will be designed by the same team for maximum efficiency. Similarly, sites with the same stakeholders should be handled by the same personnel.
- Long lead items for construction require special focus and possible advance design.
- Sites with higher safety issue should be prioritized for construction, if possible.

**Depth of Design Staff:** The design team includes a staff of 38 engineers, surveyors, designers, technicians and support personnel who are available and specifically assigned to this contract. This pool of talent and capacity is considered appropriate for the scope and schedule, but can also be expanded as needed during periods of peak design activity form the more than 400 design personnel available firm-wide across the firms on our design team.

**Multiple Construction Superintendents:** Darrell will have capable on site supervision on each element site during construction to deal with an issue that arise allowing him to act as more of a regional Construction Manager getting to each site as frequently as required. He will visit the site every day to ensure that work was progressing and share resources between the elements or bring in additional resources as needed to satisfy the schedule.

**Inspection:** Our QC Manager and Construction Manager will work together reviewing the schedule to properly cover all the inspection and testing resources needed at multiple sites concurrently. The QAM will interface with the construction and QC teams to ensure that he has an understanding of the schedule and the work load so the he to can have appropriate resources for proper and independent oversight of the quality program.

# SOQ Checklist

**ATTACHMENT 3.1.2**

**Project: 0250-002-956**

**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: 0250-002-956**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
<b>SCC and DPOR registration documentation (Appendix)</b>	Attachment 3.2.10	Section 3.2.10	no	Appendix
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	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>				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Pages 3-4
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
<del>Key Personnel Resume – Utility Coordination Manager</del>	<del>Attachment 3.3.1</del>	<del>Section 3.3.1.5</del>	<del>no</del>	n/a
<del>Key Personnel Resume – Right of Way Manager</del>	<del>Attachment 3.3.1</del>	<del>Section 3.3.1.6</del>	<del>no</del>	n/a
<del>Key Personnel Resume – Lead Roadway Engineer</del>	<del>Attachment 3.3.1</del>	<del>Section 3.3.1.7</del>	<del>no</del>	n/a

**ATTACHMENT 3.1.2**

**Project: 0250-002-956**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
Organizational chart	NA	Section 3.3.2	yes	Page 5
Organizational chart narrative	NA	Section 3.3.2	yes	Page 4 & 6
<b>Experience of Offeror's Team</b>				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix
<b>Project Risk</b>				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	Pages 9-16
<b>Executing Work on Multiple Projects</b>	NA	Section 3.6	yes	Pages 17-18

# Form C-78-RFQ

**ATTACHMENT 2.10**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**

RFQ NO. C00111814DB103  
PROJECT NO.: 0250-002-956

**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 – July 11, 2018  
(Date)
- 2. Cover letter of RFQ Addendum #1- August 2, 2018  
(Date)
- 3. Cover letter of \_\_\_\_\_  
(Date)

W. C. English, Incorporated

  
\_\_\_\_\_  
SIGNATURE

August 21, 2018  
DATE

Wilson L. Dickerson, Jr., P.E.  
PRINTED NAME

Senior Vice President  
TITLE

# **List of Affiliated and Subsidiary Companies**

**ATTACHMENT 3.2.6**

**State Project No. 0250-002-956**

**Affiliated and Subsidiary Companies of the Offeror**

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

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

<b>Relationship with Offeror (Affiliate or Subsidiary)</b>	<b>Full Legal Name</b>	<b>Address</b>
Shared Management & Related Ownership	English Construction Company, Inc.	PO Box P-7000, Lynchburg, VA 24505
Shared Management & Related Ownership	Counts & Dobyns	37 Leland Rd, Rustburg, VA 24588
100% Ownership	Lee Construction Company of the Carolinas, Inc.	PO Box 7667, Charlotte, NC 28241
100% Ownership	MCC Acquisition, LC	PO Box 568, South Boston, VA 24592
Beverley E. Dalton (Sole stockholder of W. C. English, Incorporated) and A. Douglas Dalton, Jr., (stockholder of English Construction Company) own 99.15%	Adams Construction Company	PO Box 12627, Roanoke, VA 24027

# Debarments Forms

ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS

**Project No.: 0250-002-956**

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

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

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

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

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

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

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

 _____ Signature	August 21, 2018 _____ Date	Wilson L. Dickerson, Jr., P.E. Senior Vice President _____ Title
---	----------------------------------	---

W. C. English, Incorporated  
\_\_\_\_\_  
Name of Firm

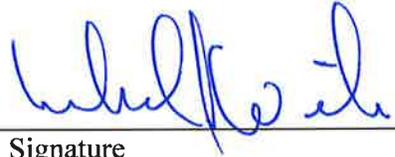
**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0250-002-956**

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

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

  
\_\_\_\_\_  
Signature

8/8/19  
\_\_\_\_\_  
Date

Principal  
\_\_\_\_\_  
Title

A. Morton Thomas and Associates, Inc.

\_\_\_\_\_  
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0250-002-956**

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

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

 _____ Signature	<u>8/10/18</u> _____ Date	<u>Vice President/Branch Manager</u> _____ Title
--	---------------------------------	--

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

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

Project No.: 0250-002-956

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

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

  
\_\_\_\_\_  
Signature

8/3/2018  
\_\_\_\_\_  
Date

President  
\_\_\_\_\_  
Title

CES CONSULTING LLC  
\_\_\_\_\_  
Name of Firm

**ATTACHMENT 3.2.7(b)**

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

**Project No.: 0250-002-956**

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

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



\_\_\_\_\_  
Signature

\_\_\_\_\_  
August 10, 2018

Date

\_\_\_\_\_  
Vice President

Title

\_\_\_\_\_  
DMY Engineering Consultants Inc.

Name of Firm

**ATTACHMENT 3.2.7(b)**

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

**Project No.: 0250-002-956**

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

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



8.8.18

President

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

Seventh Point, Inc.

\_\_\_\_\_  
Name of Firm

**Offeror's VDOT  
Prequalification  
Certificate**



Department's List of Prequalified Vendors  
Includes All Qualified Levels As Of 7/6/2018

- E -

Vendor ID: E008  
Vendor Name: ENGLISH CONSTRUCTION COMPANY, INCORPORATED  
Prequal Level: Prequalified  
Prequal Exp: 04/30/2019

-- PREQ Address --

Work Classes (Listed But Not Limited To)

P. O. BOX P-7000  
LYNCHBURG, VA 24505-7000  
Phone: (434)845-0301  
Fax: (434)845-0306

002 - GRADING  
003 - MAJOR STRUCTURES  
007 - MINOR STRUCTURES

Bus. Contact: JORDAN, JR., JOHN MINOR  
Email: JJORDAN@ENGLISHCONST.COM

-- DBE Information --

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

Vendor ID: E009  
Vendor Name: W. C. ENGLISH, INCORPORATED  
Prequal Level: Prequalified  
Prequal Exp: 04/30/2019

-- PREQ Address --

Work Classes (Listed But Not Limited To)

P. O. BOX P-7000  
LYNCHBURG, VA 24505-7000  
Phone: (434)845-0301  
Fax: (434)845-0306

002 - GRADING  
003 - MAJOR STRUCTURES  
007 - MINOR STRUCTURES

Bus. Contact: DICKERSON, JR., WILSON LAMBERT  
Email: WDICKERSON@ENGLISHCONST.COM

-- DBE Information --

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

# Surety Letter



Travelers Bond & Financial Products  
Construction Services  
9954 Mayland Drive, Suite 6100  
Richmond, VA 23233  
(804)965-9284 (office)

August 21, 2018

*Commonwealth of Virginia  
Department of Transportation  
Central Office Mail Center  
Loading Dock Entrance  
1401 E. Broad Street  
Richmond, VA 23219  
Attention: Bryan W. Stevenson, P.E. (APD Division)*

Re: **Letter of Submittal – Albemarle Intersection Bundling, Albemarle Co., VA**  
**UPC (State Project Nos.; Federal Project Nos.) Contract ID Number: C00111814DB103**  
UPC 111814 (0250-002-956, P101, R201, C501; NHPP-002-7(051));  
UPC 111727 (0029-002-959, P101, C501; HSIP-5104(269));  
UPC 111813 (0029-002-955, P101, R201, C501; NHPP-002-7(050));  
UPC 111730 (0250-002-954, P101, R201, C501; HSIP-002-7(049));  
UPC 111733 (0020-002-953, P101, R201, C501; STP-5104(267));  
UPC 109397 (9999-002-941, P101, R201, C501)

Dear Mr. Stevenson,

W. C. English, Incorporated has been a valued client of Travelers Casualty and Surety Company of America for over sixty years. During that time, we have maintained a working line of surety credit and have supported single bond requests up to the \$150,000,000. range and aggregate programs up to the \$500,000,000. range. These levels reflect our history with this client; however, they are not to be construed as limits. Given English's extensive experience and financial strength, we are certainly prepared to consider requests well in excess of these levels.

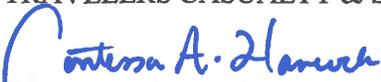
W. C. English, Incorporated is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the current anticipated cost of construction (\$22,000,000.) and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this project.

Travelers Casualty and Surety Company of America is licensed to transact surety business in all 50 states and is listed on the United States Department of Treasury list of acceptable surety companies. Travelers Casualty and Surety Company of America carries an A.M. Best rating of A++ and has a Financial Size Category of XV. The information contained in this letter is valid for a period of three (3) months from date of this letter.

Please feel free to contact us if you have any questions.

Sincerely,

TRAVELERS CASUALTY & SURETY COMPANY OF AMERICA

  
Contessa A. Hancock  
Attorney-in-Fact

*Power of Attorney Attached*



POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 231754

Certificate No. 007438521

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Whitney D. Melton, Contessa A. Hancock, Kim VandeBogart, and William G. Lawrence

of the City of Lynchburg, State of Virginia, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory 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, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 9th day of January, 2018.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: [Signature]
Robert L. Raney, Senior Vice President

On this the 9th day of January, 2018, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal. My Commission expires the 30th day of June, 2021.



[Signature]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

**RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

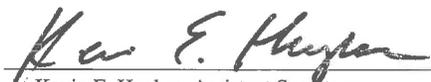
**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

**FURTHER RESOLVED**, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

**FURTHER RESOLVED**, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 21<sup>st</sup> day of August, 2018.

  
Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at [www.travelersbond.com](http://www.travelersbond.com). Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

**SCC & DPOR  
Information  
Tables**

## ATTACHMENT 3.2.10

### State Project No. 0250-002-956

#### 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>CC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
W. C. English, Incorporated	00689448	Corporation	Active	615 Church Street Lynchburg, VA 24504	Contractor Class A	2701003331	04-30-2020
A. Morton Thomas and Associates, Inc.	F049431-2	Corporation	Active	One Jadip Lane Suite 111 Fredericksburg, VA 22405	ENG	0411000758	02-29-2020
A. Morton Thomas and Associates, Inc.	F049431-2	Corporation	Active	113 Mill Place Parkway, Unit 107 Verona, VA 24482	ENG	0411000589	02-29-2020
A. Morton Thomas and Associates, Inc.	F049431-2	Corporation	Active	105 Arbor Drive, Suite 200 Christiansburg, VA 24073	ENG	0411001223	02-29-2020
A. Morton Thomas and Associates, Inc.	F049431-2	Corporation	Active	125 Deadmore St SE Abingdon, VA 24210	ENG	0411001044	02-29-2020
A. Morton Thomas and Associates, Inc.	F049431-2	Corporation	Active	100 Gateway Centre Parkway, Suite 200 Richmond, VA 23235	ENG, LS	0411000587	02-29-2020
A. Morton Thomas and Associates, Inc.	F049431-2	Corporation	Active	14555 Avion Parkway, Suite 150 Chantilly, VA 20151	ENG, LS	0411000586	02-29-2020
A. Morton Thomas and Associates, Inc.	F049431-2	Corporation	Active	800 King Farm Blvd, 4 <sup>th</sup> Floor Rockville, MD 20850	ENG, LA	0407003077	12-31-2019

**ATTACHMENT 3.2.10**  
**State Project No. 0250-002-956**  
**SCC and DPOR Information**

Bowman Consulting Group, LTD	0448198-2	Corporation	Active	3951 Westerre Parkway Suite 150 Richmond, VA 23233	ENG, LS	0411000610	02-29-2020
Bowman Consulting Group, LTD	0448198-2	Corporation	Active	14020 Thunderbolt Place Suite 300 Chantilly, VA 20151	ENG, LA, LS	0407003896	12-31-2019
CES Consulting, LLC	S341600-7	Limited Liability	Active	23475 Rock Haven Way Suite 255 Dulles, VA 20166	ENG	0407005783	12-31-2019
DMY Engineering Consultants, Inc.	0768895-5	Corporation	Active	45662 Terminal Drive Suite 110 Dulles, VA 20166	ENG	0407005631	12-31-2019
Seventh Point, Inc.	0267541-1	Corporation	Active	N/A	N/A	N/A	N/A

**ATTACHMENT 3.2.10**

**State Project No. 0250-002-956**

**SCC and DPOR Information**

<b>INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)</b>						
<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>
A. Morton Thomas and Associates, Inc.	Laura Mehiel	Chantilly	901 Dulaney Valley Road Suite 710 Towson, MD 21204	ENG	0402034707	04-30-2019
A. Morton Thomas and Associates, Inc.	Chadwick McMurray	Abingdon	328 Golf Ridge Drive Kingsport, TN 37664	ENG	0402039985	01-31-2020

**Full Size SCC and DPOR  
Supporting Registration/  
License Information**

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF THE  
STATE CORPORATION COMMISSION

CITY OF RICHMOND

April 6, 1954

NOTICE OF ISSUING AND CERTIFICATION OF  
charter of W. C. English, Incorporated

to be recorded in the office of the State Corporation Commission  
and where necessary certified to the clerk of the proper court  
for recording in his office.

Papers covering the above specified application having  
been duly considered by the Commission, and it being found that  
all the requirements of law have been complied with, the  
Commission has this day ordered the same to be admitted to record  
in this office.

Enclosed herewith you will find receipt of the  
State Corporation Commission for charter fee (if any required on  
this application), \$5.00 for costs in this office, and recording  
fee. Where necessary to be recorded by a court clerk, such  
clerk will receipt to you direct for his fee.

Your attention is called to blanks and circulars pre-  
pared by the Commission and enclosed herewith for the use of  
the corporation, as specified below in paragraphs against which  
is marked upon the margin the typewritten letter "X":

X { A blank prepared under the provisions of Section  
167 of the Constitution of Virginia and Section  
13-97, Code of Virginia, 1950, upon which a state-  
ment of the financial plan of stock to be issued  
should be made and lodged with the Commission, and  
acknowledgment thereof received by the corporation  
from the Commission, before any stock is actually  
issued.

X { A blank for report pursuant to Sections 13-9, and  
13-32 Code of Virginia, 1950, with the law printed  
upon the back of the blank, requiring same to be  
made to the Commission upon the organization of the  
corporation, and within thirty days after the time  
appointed for the election of officers and direc-  
tors, annually thereafter. This report must be filed  
as soon as the corporation is organized, whether the  
officers or directors, as shown in the charter, are  
changed or not.

{ There is also enclosed Circular No. 5, giving in  
full Section 13-12, Code of Virginia, 1950, and where  
all officers and directors of the corporation, as  
shown in the charter, are non-residents of the city  
or county in which the principal office of the cor-  
poration is to be located, blanks in duplicate are  
also enclosed for the written power of attorney re-  
quired to be executed and filed in accordance with  
the above mentioned section before the corporation  
commences business.

Mr. W. Barney Arthur  
Attorney at Law  
Altavista, Virginia



Clerk of the Commission.

CERTIFICATE OF INCORPORATION

OF

W. C. ENGLISH, INCORPORATED

To The State Corporation Commission  
Commonwealth of Virginia

This is to certify that we, the undersigned, desire to, and hereby do associate to establish a corporation, under the provisions and subject to the requirements of the law for such cases made and provided, and we, by this our certificate of incorporation set forth as follows:

(a) The name of the corporation is to be W. C. English, Incorporated.

(b) The principal office in this State is to be in Altavista, Campbell County.

(c) The purposes for which it is formed are as follows:

(1) To make, enter into, perform and carry out contracts for building, erecting, improving, constructing, altering, repairing, decorating, finishing and furnishing houses, buildings, warehouses, store-rooms, edifices, works, roads, tenements and structures of every kind and description; to carry on in all their respective branches the businesses of builders, contractors, decorators and such other trades and businesses as pertain or are connected with the general business of building and construction.

(2) To take over, acquire, purchase, own, sell, lease, hire, hold, control, manage, maintain and operate quarries, brick-yards, lime-kilns, refineries, asphalt, cement and plaster mills, lumber yards, timber lands, saw mills, glass, metal and woodworking plants, pulp and paper mills, furnaces, factories and establishments for the manufacture, preparation and production of building supplies, material, furnishings, decorations and furniture; and to buy, sell and generally deal in and with all such articles and materials.

(3) To buy, sell, exchange, mortgage, lease, improve, farm, manage, operate, build, construct, maintain, or otherwise dispose of any property, real or personal, of all kinds and descriptions; to make and obtain loans upon real estate, improved and unimproved, and to take mortgages and assignments of mortgages upon the same, and to supervise, manage, and protect such property and loans, and all interests and claims affecting the same.

(4) To carry on and conduct a general contracting business, including the constructing, enlarging, repairing, remodeling or otherwise engaging in any work upon buildings, roads, side walks, water lines, power lines, highways, bridges, or manufacturing plants; and to engage in iron, steel, wood, brick, concrete, stone, cement, masonry and earth construction, and to execute contracts or to receive assignments of contracts therefor, or relating thereto; also to manufacture and furnish the building materials and supplies connected herewith.

(5) To do all and everything necessary, suitable and proper for the accomplishment of any of the purposes or attainment of any of the objects or the furtherance of any of the powers hereinbefore mentioned, either alone or in association with any other corporations, firms or individuals, and to do every other act or acts, thing or things, incidental or appurtenant to or growing out of or connected with the aforesaid business or powers or any part or parts thereof, provided the same be not inconsistent with the laws under which this corporation is organized.

(d) The capital stock of the corporation is to consist of no par value shares, the maximum number of shares to be issued is to be one hundred and fifty (150), and the minimum number of shares to be issued is to be fifty (50).

(e) The period for the duration of the corporation is unlimited.

(f) The names and residences of the officers and directors who unless sooner changed by the stockholders, are for the first year to manage the affairs of the corporation, are as follows:

OFFICERS

W. Curtis English  
Louise T. English  
Helen F. Myers

OFFICES

President  
Vice-President  
Secretary-Treasurer

RESIDENCES

Altavista, Va.  
Altavista, Va.  
Altavista, Va.

DIRECTORS

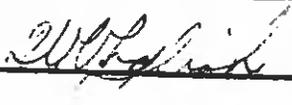
W. Curtis English  
Louise T. English  
Helen F. Myers

RESIDENCES

Altavista, Va.  
Altavista, Va.  
Altavista, Va.

(g) The amount of real estate to which its holdings at any time are to be limited is 1000 acres.

Given under our hands this \_\_\_ day of \_\_\_\_\_, 1954.

  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STATE OF VIRGINIA,

COUNTY OF CAMPBELL, to-wit:

I, \_\_\_\_\_, a Notary Public of and for the County and State aforesaid, do certify that W. CURTIS ENGLISH, LOUISE T. ENGLISH and HELEN F. MYERS, whose names are signed to the writing above, bearing date on the \_\_\_ day of \_\_\_\_\_, 1954, have acknowledged the same before me in Campbell County.

Given under my hand this \_\_\_ day of \_\_\_\_\_, 1954.

My commission expires \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

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

That A. MORTON THOMAS & ASSOCIATES, 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 November 26, 1997; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:*

*September 26, 2013*

*Joel H. Peck*

*Joel H. Peck, Clerk of the Commission*

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

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

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

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

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:  
July 21, 2017*

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

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, October 14, 2010*

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

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

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



*State Corporation Commission*

*Attest:*

*Joel H. Pesh*  
Clerk of the Commission



**COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION**

**LLC-1018.1  
(04/10)**

**STATEMENT OF CHANGE OF THE PRINCIPAL OFFICE ADDRESS  
OF A LIMITED LIABILITY COMPANY**

**1. Limited Liability Company's Name:**

**SCC ID #: S341600-7**

**CES CONSULTING, LLC**

**2. Current principal office address on record:**

**13991 VIRGINIA CEDAR COURT  
GAINESVILLE, VA 20155**

**3. The limited liability company's principal office address, including the street and number, is changed to:**

**23475 ROCK HAVEN WAY  
SUITE 255  
DULLES, VA 20166**

Executed in the name of the limited liability company by:

Signed on October 18, 2016, on behalf of CES Consulting, LLC

By: Avtar Singh, Member

/s/ Avtar Singh

The statement must be executed in the name of the limited liability company by any manager or other person who has been delegated the right and power to manage the business and affairs of the limited liability company, or if no manager or such other person has been selected, by any member of the limited liability company.

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

AT RICHMOND, OCTOBER 26, 2010

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

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

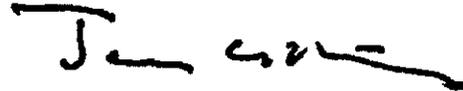
to comply with the requirements of law, and confirms payment of all required fees. Therefore, it  
is ORDERED that this

CERTIFICATE OF AMENDMENT

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

STATE CORPORATION COMMISSION

By



James C. Dimitri  
Commissioner

10-10-26-1101  
LLAACPT  
CIS0368



COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

LLC-1014N  
(04/10)

ARTICLES OF AMENDMENT  
CHANGING THE NAME OF A VIRGINIA LIMITED LIABILITY COMPANY  
By the Members

The undersigned, on behalf of the limited liability company set forth below, pursuant to § 13.1-1014 of the Code of Virginia, states as follows:

1. The current name of the limited liability company, as it appears on the records of the State Corporation Commission, is

Construction Engineering & Scheduling Consulting Engineers, PLC

2. The name of the limited liability company is changed to

CES Consulting, LLC

The LLC is now a general business LLC

(The name must contain the words limited company or limited liability company or the abbreviation L.C., LC, L.L.C., or LLC)

3. (See "Approval" Instructions for requisite vote.) The foregoing amendment was adopted by a vote of the members in accordance with the provisions of the Virginia Limited Liability Company Act on 10/25/2010  
(date)

Executed in the name of the limited liability company by:

  
(signature)

Avtar Singh  
(printed name)

S341600-7  
(limited liability company's SCC ID no. (optional))

10/25/2010  
(date)

Member  
(title (e.g., manager or member))

(571) 722-9824  
(telephone number (optional))

CHECK IF APPLICABLE (see instructions):

The person signing this document on behalf of the limited liability company has been delegated the right and power to manage the company's business and affairs.

(The articles must be executed in the name of the limited liability company by any manager or other person who has been delegated the right and power to manage the business and affairs of the limited liability company, or if no managers or such other person has been selected, by any member of the limited liability company.)

PRIVACY ADVISORY: Information such as social security number, date of birth, maiden name, or financial institution account numbers is NOT required to be included in business entity documents filed with the Office of the Clerk of the Commission. Any information provided on these documents is subject to public viewing.

SEE INSTRUCTIONS ON THE REVERSE

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

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

That DMY ENGINEERING CONSULTANTS INC. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is September 6, 2013;

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:  
October 23, 2017*

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

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond,* March 4, 1935

*This is to Certify that the certificate of incorporation of*  
HAMBRIGHT, CALCAGNO & DOWNING, 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 W. Bennett,*  
Clerk of the Commission

**ARTICLES OF AMENDMENT  
FOR THE ARTICLES OF INCORPORATION OF  
HAMBRIGHT, CALCAGNO & DOWNING, INC.**

**I.**

The name of the corporation is Hambright, Calcagno & Downing, Inc.

**II.**

The Amendment adopted is to change Article I of the Articles of Incorporation to change the corporation's name such that Article I, as amended, will read that: The name of the corporation is Seventh Point, Inc.

**III.**

The foregoing amendment was adopted on January 24, 2008.

**IV.**

The amendment was adopted by the unanimous consent of the shareholders and directors.

**V.**

This Certificate of Amendment shall become effective at the time such Certificate is issued by the State Corporation Commission.

The undersigned President declares that the facts herein stated are true as of the 24th day of January, 2008.

HAMBRIGHT, CALCAGNO & DOWNING, INC.

By: \_\_\_\_\_

Christopher A. Calcagno, President

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

AT RICHMOND, FEBRUARY 1, 2008

The State Corporation Commission has found the accompanying articles submitted on behalf of  
Seventh Point, Inc. (formerly HAMBRIGHT, CALCAGNO & DOWNING,  
INC. )

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

CERTIFICATE OF AMENDMENT

be issued and admitted to record with the articles of amendment in the Office of the Clerk of the  
Commission, effective February 1, 2008.

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

STATE CORPORATION COMMISSION

By



Commissioner

# COMMONWEALTH of VIRGINIA

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

Telephone: (804) 367-8500

EXPIRES ON  
04-30-2020

NUMBER

2701003331

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

W C ENGLISH INC  
PO BOX P-7000  
LYNCHBURG, VA 24505



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

# COMMONWEALTH of VIRGINIA

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

EXPIRES ON

02-29-2020

NUMBER

0411000758

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

PROFESSIONS: ENG



A MORTON THOMAS AND ASSOCIATES INC  
ONE JADIP LANE  
SUITE 111  
FREDERICKSBURG, VA 22405



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

# COMMONWEALTH of VIRGINIA

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

EXPIRES ON

02-29-2020

NUMBER

0411000589

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

PROFESSIONS: ENG



A MORTON THOMAS AND ASSOCIATES INC  
113 MILL PLACE PKWY  
UNIT 107  
VERONA, VA 24482



*James W. DeBorja*  
James W. DeBorja - Director

# COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411001223

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



PROFESSIONS: ENG

A MORTON THOMAS AND ASSOCIATES INC  
105 ARBOR DR STE 200  
CHRISTIANSBURG, VA 24073



*Jung W. DeBorja*  
Director

# COMMONWEALTH of VIRGINIA

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

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411001044

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

PROFESSIONS ENG



A MORTON THOMAS AND ASSOCIATES INC  
125 DEADMORE ST SE  
ABINGDON, VA 24210



*Jay W. DeBoer*  
Jay W. DeBoer Director

# COMMONWEALTH of VIRGINIA

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

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411000587

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

PROFESSIONS: ENG, LS



A MORTON THOMAS AND ASSOCIATES INC  
100 GATEWAY CENTRE PKWY  
SUITE 200  
RICHMOND, VA 23235



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

# COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411000586

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

PROFESSIONS: LS, ENG



A MORTON THOMAS AND ASSOCIATES INC  
14555 AVION PKWY STE 150  
CHANTILLY, VA 20151

# COMMONWEALTH of VIRGINIA

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

EXPIRES ON

12-31-2019

NUMBER

0407003077

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

PROFESSIONS: ENG, LA



A MORTON THOMAS AND ASSOCIATES INC  
800 KING FARM BLVD, 4TH FLOOR  
ROCKVILLE, MD 20850



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

# COMMONWEALTH of VIRGINIA

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

EXPIRES ON

02-29-2020

NUMBER

0411000610

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

PROFESSIONS - ENG, LS



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



*Jay W. DeBoet*  
Jay W. DeBoet, Director

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

DPOR-LIC (02/2017)

# COMMONWEALTH of VIRGINIA

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

Telephone: (804) 367-8500

EXPIRES ON

12-31-2019

NUMBER

0407003896

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

PROFESSIONS: ENG, LA, LS



BOWMAN CONSULTING GROUP LTD  
14020 THUNDERBOLT PLACE  
SUITE 300  
CHANTILLY, VA 20151



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

# COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2019

NUMBER

0407005783

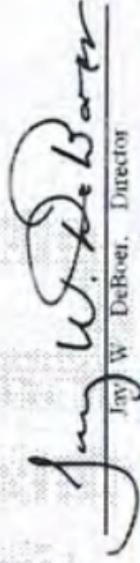
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG



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



  
Jay W. DeBoer, Director

# COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2019

NUMBER

0407005631

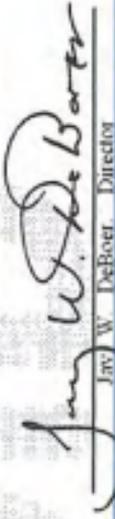
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG



DMY ENGINEERING CONSULTANTS INC  
45662 TERMINAL DRIVE  
SUITE 110  
DULLES, VA 20166



  
Jay W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

# COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

04-30-2019

NUMBER

0402034707

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



LAURA MICHELLE MEHIEL  
901 DULANEY VALLEY ROAD  
SUITE 710  
TOWSON, MD 21204



*Jay W. DeBoer*  
Jay W. DeBoer  
Director

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

# COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

01-31-2020

NUMBER

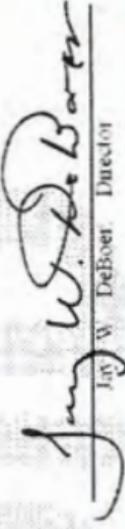
0402039985

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



CHADWICK RYAN MCMURRAY  
644 SAINT ANDREWS DR  
KINGSPORT, TN 37664



  
Jay W. DeBoer Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

# **Key Personnel Resume Forms**

**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>			
a. Name & Title: <b>Cory M. Bond Project Manager</b>			
b. Project Assignment: <b>Design Build Project Manager</b>			
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : <b>W. C. English, Incorporated (Full Time)</b>			
d. Years experience: With this Firm <u>17</u> Year With Other Firms <u>0</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. Bond, has over 17 years of experience with transportation projects in Virginia, North Carolina, and South Carolina delivering both design build and bid build projects. His experience includes managing interchange improvement, intersection improvement, realignment, and reconstruction projects, to include extensive experience with heavily traveled roadways with continuous maintenance of traffic issues and phasing.  <b>Design Build Project Manager / Estimator   W. C. English, Incorporated..... 2006 - Present</b> Project Manager duties include: Management of all design and construction as applicable, quality management, contract administration, cost control & analysis, labor & equipment allocations, overall project scheduling, resource scheduling, all production goals, subcontractor/vendor scheduling and management, DBE compliance, risk management and mitigation, stakeholder management, and project safety. Cory is experienced in managing multiple projects and project elements concurrently with a current work load that includes five separate projects.  Estimating duties include: all takeoff, project analysis, risk analysis, subcontractor/vendor quote solicitations, DBE participation, review all quotes and scopes, price all self-perform work, analysis of production capabilities, and compile/submit all relevant bidding information.  <b>Field Engineer/Foreman   W. C. English, Incorporated. .... 2001 – 2006</b> Duties include: Managing labor & equipment for all self-performance of Traffic Control, Erosion Control, Grading Operations, Bridge Operations, coordinating with onsite subcontracts, coordinating the delivery of all necessary materials.			
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: <b>Virginia Military Institute, Lexington Virginia / BS / 2001 / Civil Engineering</b>			
f. Active Registration: Year First Registered/ Discipline/VA Registration #: Competent Person Training-Trench & Excav; Confined Space - Coble Trench; CPR / First Aid 7/15/13; E & S - Responsible Land Disturber (DCR),/RLD0411-5/10/16; OSHA 10 Hour-2764141; OSHA 30 Hour, 12-601218577; Roadway Worker Protection Contractor Safety Certification 1/11/16,Underground Utility Damage Prevention Training			
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 assignment; projects older than fifteen (15) years will not be considered for evaluation.</i> <b>(List ONLY three (3) relevant projects* for which you have performed similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</b>			
Project Name:	Contract C202886 Intersection of SR-1309 and US-1 in Pinehurst – Moore County, NC	Start Date:	<b>2012</b>
Project Role:	Project Manager	End Date:	<b>2014</b>
Client/Owner:	NCDOT	With Current Firm?	<b>Yes</b>

As **Project Manager**, Mr. Bond was responsible for all construction, quality, contract administration, DBE compliance, project schedule, cost control, subcontract management, vendor management, resource management, and all other services for this \$10 million project consisting of approx. 1 mile of roadway improvements on US 1 to include 4 intersection improvements in Southern Pines. A new 2-span bridge span bridge on Morganton Road, constructed in three phases is one of these intersections. This project also had multiple permanent shoring walls to allow for roadway widening. Pipe Lines needed to be added along and across US 1 and US 1 Bus, both open to traffic, and had to be constructed at night with detours. Aesthetics were added to the contract during construction creating a need to work with the NCDOT and suppliers to achieve the desired final project. The project also had extensive stakeholder involvement with multiple existing retail and service businesses within the project footprint. NCDOT, after a year of construction, requested that the project be accelerated to have the majority of work completed six months early to accommodate the US Open Golf tournament at Pinehurst #2. The project was able to meet this acceleration request by resequencing some of the work, increasing resources for all self-performed operations, as well as necessary resources from all subcontractors on the project. The buy in from the required subcontractors and the resources provided by English were the keys to delivering this the majority of the project early as requested. Mr. Bond was instrumental in requesting and managing the additional resource load need by English and working with the subcontractors to facilitate the success of the project. Ultimately the requested portion of the project was finished ahead of schedule. *Total Project Cost: \$10M.*

**Project Similarities:** Grading, Phased Construction, Retaining Walls (perm & temp), Extensive New Drainage under open heavily traveled roadway, Maintenance of Traffic, 3rd party stakeholder management

Project Name:	<b>Contract C202596 NC-49 from East of SR-2630 (Cline Road) to East of NC-73 – Cabarrus County, NC</b>	Start Date:	<b>2011</b>
		End Date:	<b>2014</b>
Project Role:	<b>Project Manager</b>		
Client/Owner:	<b>NCDOT</b>	With Current Firm?	<b>Yes</b>

As **Project Manager**, Mr. Bond was responsible for all construction, quality, contract administration, DBE compliance, project schedule, subcontract management, vendor management, resource management, cost control, and all other services for this \$19.4 million project which consisted of adding two lanes (approx. 2.5 miles) and improvements (Widening) to existing Route NC-49 from East of Sr-2630 to East of NC -73, to include a new two span 95' wide bridge, approaches, and entry/exit ramps on NC-73 over NC-49. All elements of the project were impacted by the phased MOT plan that also included temporary retaining walls. Intersection improvements included new signal and upgrades at the intersection of NC 49 & Empire Dr, Pine Crest Drive & Empire Dr, NC 73 & Duchess, NC 73 & Radcliff Rd., NC 49 and Skland Dr. as well as North Dr. The Project also included the construction of 5 new box culverts. All box culvert construction consisted of multiple phases with live traffic to be maintained at all times. The excavation included 247,000 cubic meters of excavation with 74,000 cubic meters being rock. Blasting activities needed to be coordinated with live traffic, adjacent property owners, and businesses. The project also included extensive amounts of unsuitable material that had to be placed into appropriate portions of fills or off site to an appropriate waste site. *Total Project Cost: \$19.4M.*

**Project Similarities:** Grading, Culverts, Rock Excavation, Retaining Walls(temp.), Phased Construction, Extensive Maintenance of Traffic, New Drainage under open heavily traveled roadway, 3rd party stakeholder management.

Project Name:	<b>Design Build on US 158 over Yadkin River – Davie/Forsyth Counties, NC</b>	Start Date:	<b>2007</b>
		End Date:	<b>2011</b>
Project Role:	<b>Project Manager</b>		
Client/Owner:	<b>NCDOT</b>	With Current Firm?	<b>Yes</b>

As **Project Manager**, Mr. Bond was responsible for all design, construction, quality assurance, contract administration, DBE compliance, project schedule, subcontract management, vendor management, resource management, cost control, right-of-way, utility relocations, and all other services for this \$15 million Design Build project constructing a new 1,150', four lane replacement bridge carrying US 158 over the Yadkin River. Approaches included widening US 158 on each end of the bridge from two lanes to four, plus turning lanes. The project also included the 3 intersection improvements at Beremuda Run Dr/US 158, Riverside Dr/US 158, and Thoroughbred Ln/US158, All construction activities had to be coordinated with existing traffic, adjacent property owners and maintaining access to a major well used soccer complex. *Total Project Cost: \$15M.*

**Project Similarities:** Design Build, Phased Construction, Extensive Maintenance of Traffic, New Drainage under open heavily traveled roadway, 3rd party stakeholder management.

h. For Key Personnel required to be on-site full-time for the duration of construction and for the QAM, 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>Chad McMurray, PE, PMP, CCM, DBIA Associate</b>
b. Project Assignment: <b>Quality Assurance Manager</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): <b>A. Morton Thomas and Associates, Inc. (Full Time)</b>
d. Years experience: With this Firm <u>6</u> Years With Other Firms <u>19</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):  <i>Associate   A. Morton Thomas and Associates, Inc ..... 2011 - Present</i> Responsible Charge Engineer for Abingdon Office with direct control and supervision of all engineering services provided out of this office of 40 employees. General duties include management of contracts, supervision of project staff, performance of contract duties including acting as the owner's representative on projects, providing QA/QC services on Design Build and Design Bid Build projects, development of project reports, and meeting client and company performance requirements.  <i>Senior Principal Engineer   AMEC E&amp;I, Inc. (formerly MACTEC). ..... 2008 – 2011</i> QA/QC duties included documentation including RFI's, NCR's, DWR's, schedule review and monitoring, providing/overseeing QA/QC testing and inspecting, oversight of QA/QC inspection/testing staff. Duties included management of contracts, supervision of project staff, performance of contract duties including acting as the owner's representative on projects, providing QA/QC services on Design Build and Design Bid Build projects development of project reports, and meeting client and company performance requirements.  <i>Area Construction Engineer   Virginia Department of Transportation ..... 2004 – 2008</i> Coordinate and supervise field inspection staff responsible for construction oversight and QA/QC on VDOT projects in the Bristol District. Responsible for ensuring the Department met on-time, on-budget, quality, and environmental compliance goals for assigned geographic area. Assign QA Inspection staff and oversee inspection and testing program in area.  <i>Project Manager   Avisco, Inc. .... 2000 – 2004</i> Responsible for supervision and coordination of all field activities from start to completion of complex civil construction projects and assistance with managing overall Oak Ridge Operations. Responsible for project Quality Control testing and inspection.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: <b>University of Tennessee, Knoxville / BS / 1993 / Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2004 / Professional Engineer / #39985 Certified Construction Manager (CCM) # A2397 Project Management Professional (PMP) # 1405995 Design-Build Professional (DBIA), SMW and ESC Certification, Intermediate Work Zone Traffic Control Workzone Training for Law Enforcement Officers (LEO)
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 assignment; projects older than fifteen (15) years will not be considered for evaluation.</i>  <b>(List <u>ONLY</u> three (3) relevant projects* for which you have performed similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</b>

Project Name:	<b>I-81 over Halls Bottom Design Build, Washington County, VA</b>	Start Date:	<b>2016</b>
Project Role:	<b>Quality Assurance Manager</b>	End Date:	<b>2018</b>
Client/Owner:	<b>Virginia Department of Transportation</b>	With Current Firm?	<b>Yes</b>
<p><b>Quality Assurance Manager and QA Geotechnical Engineer</b> for this \$13M Design-Build highway/bridge project in Washington County. His responsibilities included the development, updating, and implementing of a Quality Assurance plan. The design-build project includes replacement of two bridges on Interstate 81. Mr. McMurray's responsibilities also included coordination of QA/QC testing of embankment, drainage structures, subgrade, asphalt and incidental items. As the QAM, he is responsible for the acceptance testing and documentation of all materials used on the Contract as well as the generation of the VDOT Materials Book and constructability reviews. He verifies that the QC staff is following the QC Inspection Plan/Materials Testing Requirements in the approved QA/QC Manual for this Contract. He is also responsible for ensuring environmental compliance is met and performing environmental reviews on the project. Duties include oversight of all construction activities and analysis and interpretation of project plans and specifications to insure constructability as well as providing oversight and management of inspection and testing staff. Sharepoint software was used to keep project documentation and materials information.</p>			
Project Name:	<b>Design-Build Exit 114 Interchange Improvements, Christiansburg, VA</b>	Start Date:	<b>2018</b>
Project Role:	<b>Quality Assurance Manager</b>	End Date:	<b>2019 (design)</b>
Client/Owner:	<b>Virginia Department of Transportation</b>	With Current Firm?	<b>2022 (construction)</b>
<p><b>Quality Assurance Manager</b>, Mr. McMurray is currently overseeing the design-build of I-81 interchange improvements in Christiansburg, in close proximity to both Virginia Tech and Radford University. The project will provide critical capacity and operational improvements, in addition to bridge replacement of an aging structure, including the safety improvements of enhanced clear zones on Route 8 and correction of deficient vertical clearance. The project also includes two new traffic signals for operational improvements (preventing spillback along the ramps onto the interstate), modified I-81 and ramp alignments to offset the new SB bridge into the median area, in order to construction the replacement bridge while maintaining traffic. His responsibilities include the development, updating, and implementing of a Quality Assurance plan. Mr. McMurray's responsibilities also included coordination of QA/QC testing. As the QAM, he is responsible for the acceptance testing and documentation of all materials used on the generation of the VDOT Materials Book. He verifies that the QC staff is following the QC Inspection and Testing Plans in the approved QA/QC Manual for this Contract. He is also responsible for ensuring environmental compliance is met and performing environmental reviews on the project. <i>Total Project Cost: \$22M.</i></p>			
Project Name:	<b>U.S. Route 460 Connector Phase I Design Build, Breaks, VA</b>	Start Date:	<b>2011</b>
Project Role:	<b>Quality Assurance Manager</b>	End Date:	<b>2015</b>
Client/Owner:	<b>Virginia Department of Transportation</b>	With Current Firm?	<b>Yes</b>
<p><b>Quality Assurance Manager and QA Geotechnical Engineer</b> for this \$113M Design-Build highway/bridge project in Buchanan County. His responsibilities included the development, updating, and implementing of a Quality Assurance plan, review of geotechnical design and issues, and coordination design revisions. Responsible for coordination of QA/QC testing of embankment, drainage structures, subgrade, asphalt and incidental items. As the QAM, he is responsible for the acceptance testing and documentation of all materials used on the Contract as well as the generation of the VDOT Materials Book and constructability reviews. He verifies that the QC staff is following the QC Inspection Plan/Materials Testing Requirements in the approved QA/QC Manual for this Contract. He is also responsible for ensuring environmental compliance is met and performing environmental reviews on the project. Duties include oversight of all construction activities and analysis and interpretation of project plans and specifications to insure constructability as well as providing oversight and management of inspection and testing staff. Sharepoint software was used to keep project documentation and materials information.</p>			
<p>h. For Key Personnel required to be on-site full-time for the duration of construction and for the QAM, provide a current list of assignments, role, and the anticipated duration of each assignment.</p>			
<p>VDOT Exit 114 DB, QAM, July 2021; VDOT I-81 over Halls Bottom DB QAM, September 2018; Luray Main Street Bridge Replacement LAP DB, QAM, April 2019</p>			

**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<b>Brief Resume of Key Personnel anticipated for the Project.</b>			
a. Name & Title: <b>Laura Mehiel, PE Associate</b>			
b. Project Assignment: <b>Design Manager</b>			
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): <b>A. Morton Thomas and Associates, Inc. (Full Time)</b>			
d. Years experience: With this Firm <u>7</u> Year With Other Firms <u>25</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):  <i>Associate   A. Morton Thomas and Associates, Inc ..... 2011 - Present</i> Senior Project Manager and Associate in Charge of mega projects and innovative delivery projects. Oversees highway development/design teams for transportation projects throughout the Commonwealth of Virginia, including design QC responsibilities. DPM for design-build and other innovative contracting techniques.  <i>Senior Project Manager / Operations Manager   HNTB Corporation..... 1998 – 2011</i> Senior Project Manager who oversaw highway development/design teams for transportation projects including design/build throughout VA, MD, and DC, including QC role. Engineer in Charge of the Columbia, MD office, supervising a staff of highway, hydraulics, traffic, and construction professionals. Held operational, business development, and technical oversight roles.			
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Delaware, Newark Delaware / BCE / 1986 / Civil Engineering			
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1992 / Professional Engineer / Virginia #34707; Also registerd in DC, DE, MD, & PA			
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 assignment; projects older than fifteen (15) years will not be considered for evaluation.</i>  <b>(List <u>ONLY</u> three (3) relevant projects* for which you have performed similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</b>			
Project Name:	<b>Design-Build Route 1 at Fort Belvoir Fairfax County, VA</b>	Start Date:	<b>06/2013</b>
Project Role:	<b>Design Manager</b>	End Date:	<b>05/2015 (design) 2017 (construction)</b>
Client/Owner:	<b>FHWA – Eastern Federal Lands/VDOT</b>	With Current Firm?	<b>Yes</b>
<b>Design Manager</b> responsible for managing a multi-disciplinary team for widening/new alignment of 3.6 miles of US Route 1 from 4 lanes undivided to a 6 lane divided facility. The project includes roadway widening/new alignment, safety and capacity improvements, bridges and culverts, new trail and sidewalk, retaining walls, and pile-stabilized slopes. Two intersections of the project carry on average more than 62,000 vehicles per day during construction, requiring well planned maintenace of traffic design to keep traffic safely moving through the work zone.  Ms. Mehiel and her team designed the project in 3 stages with 7 sub-phases, generally by widening to the west, shifting traffic to the new pavement, then completing the reconstruction of the existing lanes to serve as northbound. Extensive temporary drainage measures were required to carry storm flows across the existing roadway while carrying traffic.			

Ms. Mehiel managed all design and ensured that the QA/QC procedures were followed, for geometric alignments, intersection improvements, traffic analysis, bridge and wall design, MOT plans/TMP, drainage and SWM design, wetland/stream permits, topographic and utility surveys, geotechnical explorations, and utility coordination. She ran the Design Public Hearing, and conducted stakeholder design workshops. She also managed the right of way acquisition process, with her direct team preparing all Right of Way Plans, and her subconsultant providing appraisals, negotiations, COT's and relocations. A total of 24 separate "release for construction packages" were prepared, including two advance grading packages to initiate grading early and to facilitate utility relocations. Laura has been involved in the construction phase, providing design support such as refined MOT sequencing, shop drawing reviews, RFI's, and partnering. *Total Project Cost: \$80M.*

Project Name:	<b>Southgate Drive / US 460 Bypass Interchange Blacksburg, VA</b>	Start Date:	<b>03/2013</b>
Project Role:	<b>Design Project Manager</b>	End Date:	<b>11/2014 (design) 2018 (construction)</b>
Client/Owner:	<b>Virginia Department of Transportation</b>	With Current Firm?	<b>Yes</b>

As **Design Project Manager**, Ms. Mehiel oversaw an cutting edge design project that incorporated multiple innovative intersections including two **roundabouts**, and a **diverging diamond interchange**. Ranked as the #1 priority project for the Salem District, it is adjacent to Virginia Tech and will eliminate the existing signalized at-grade T-intersection to relieve a source of major congestion and improve safety on US 460 Bypass.

Laura and her team provided extensive alternatives analyses, and public hearing through 100% plans, specifications and estimates following VDOT standards, in a period of 20 months. She provided technical leadership for the design of highway, interchange, and shared-use path geometrics, roundabout design, stormwater management, and drainage facilities, and managed the production team performing traffic modeling of multiple intersection and interchange alternatives, bridge and retaining wall design, geotechnical investigations, TMP/SOC, right of way plans, design waivers, and environmental permit support. Laura organized and facilitated a stakeholder outreach plan which included alternative workshops, design charrettes, graphics, simulations and renderings for the Design Public Hearing. Laura also ensured that the QA/QC program was followed. A first for the VDOT Salem District, Laura and her team also provided "turn-key" project management support as an extension of VDOT staff. *Total Construction Cost: \$47M.*

Project Name:	<b>Design-Build I-81 Exit 114 Interchange Improvements, Christiansburg, VA</b>	Start Date:	<b>05/2018</b>
Project Role:	<b>Design Manager</b>	End Date:	<b>04/2019 (design) 2022 (construction)</b>
Client/Owner:	<b>Virginia Department of Transportation</b>	With Current Firm?	<b>Yes</b>

As **Design Manager**, Ms. Mehiel is currently overseeing the design of the design-build of I-81 interchange improvements in Christiansburg, in close proximity to both Virginia Tech and Radford University. The project will provide critical capacity and operational improvements, in addition to replacement of aging bridge structures, incorporating the safety improvements of enhanced clear zones on Route 8 and correction of deficient vertical clearance. The project also includes two new traffic signals for operational improvements (preventing spillback along the ramps onto the interstate), modified I-81 and ramp alignments to offset the new SB bridge into the median area, in order to construction the replacement bridge while maintaining traffic. A three-phase MOT sequence is being implemented. Also included is drainage, SWM analysis, erosion and sediment control; signing, marking and ITS; bridge and retaining wall design; geotechnical engineering; utility coordination and relocation; ROW acquisition for permanent easements; and public outreach.

Ms. Mehiel is managing all design and ensuring compliance with the QA/QC plan for design, including geometric alignments, intersection improvements, traffic analysis, bridge and wall design, MOT plans/TMP, drainage and SWM design, wetland/stream permits, topographic and utility surveys, geotechnical explorations, utility coordination and relocation plans. She also is managing the right of way acquisition process, with her direct team preparing all Right of Way Plans, and her subconsultant providing appraisals, negotiations, and COT's. Under her leadership, a total of 9 separate "release for construction packages" are being prepared, including two advance grading packages to initiate grading in the median and early construction of an MOT crossover. Laura is also involved in the construction phase, providing design support such as refined MOT sequencing, shop drawing reviews, RFI's, and partnering. *Total Project Cost: \$22M.*

h. For Key Personnel required to be on-site full-time for the duration of construction and for the QAM, 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>Darrell Sullivan</b> <b>Project Superintendent/Construction Manager</b>
b. Project Assignment: <b>Construction Manager</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): <b>W. C. English, Incorporated (Full Time)</b>
d. Years experience: With this Firm <u>41</u> Year With Other Firms <u>0</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>Construction Manager   W. C. English, Incorporated ..... 1985 - Present</b></p> <p>Mr. Sullivan is presently a Construction Manager with English in the Road and Bridge Division. His overall responsibility is to ensure the projects he manages are successfully completed on time and within budget. To meet this obligation he works with field personnel and subcontractors to determine the best means and methods of construction, and manages all design work as applicable. Mr. Sullivan is experienced in contract administration, scheduling, ensuring appropriate and adequate resources including labor, material, equipment, and subcontractors are available when needed. He manages schedule, productivity, quality, and safety of both the site personnel and the general public. Mr. Sullivan has extensive understanding of resolving issues that come up during construction and working with all the team members to minimize their impact to the project and is a veteran at managing multiple construction projects/elements simultaneously. Mr. Sullivan offers 41 years of experience in the construction industry with extensive knowledge as a Construction Manager in the Heavy Civil Construction Field. This includes road and bridge projects from a \$50 million dollar to under a million dollars. He has successfully completed projects that include interstates, intersection improvements, interchange improvements, roadway widening, rivers/streams, railroads, primary and secondary roads, rock excavation, challenging schedules, extensive traffic control and site constraints. He is experienced with phased construction roadway construction projects with complex maintenance of traffic.</p> <p>Mr. Sullivan has served as a senior construction manager on an array of transportation projects and has managed the construction of complicated projects along, I-95, I-66, I-295, Route 29, Route 3, Route 218 all with high traffic volumes and extensive maintenance of traffic for both Design Build and Bid Build projects. He directly oversees all construction operations to include self-performing the grading, E&amp;S, storm installation, structure construction, MOT and manages all subcontractor work.</p>
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: <b>Virginia Tech, Blacksburg Virginia / No Degree / 1975-1977 / Architectural &amp; Construction Engineering</b> <b>New River Valley Community College, Dublin Virginia / No Degree / 1973 – 1975</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #: Competent Person Training-Trench & Excav; Confined Space - Coble Trench; CPR / First Aid 7/15/13; E & S - Competent Person Training-Trenching & Excavation; Confined Space-Coble Trench; Responsible Land Disturber (DCR) Cert #RLD04482 exp: 06/30/19; OSHA-10 Hour Cert # 36-004313005 All required Certifications will be obtained prior to construction.
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 assignment; projects older than fifteen (15) years will not be considered for evaluation.</i> <b>(List ONLY three (3) relevant projects* for which you have performed similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</b>

Project Name:	<b>State Route 208 – Spotsylvania County, VA</b>	Start Date:	<b>2010</b>
Project Role:	<b>Construction Manager</b>	End Date:	<b>2013</b>
Client/Owner:	<b>VDOT</b>	With Current Firm?	<b>Yes</b>
<p>As Construction Manager, Mr. Sullivan was tasked with overseeing all aspects of construction work on this \$14 million VDOT project consisting of relocating existing State Route 208 with new alignment that included the addition of travel lanes as well as two new bridges over the Ta and Po rivers and the widening of existing facilities. The project included intersection improvements on Route 208 and Courthouse Road. The intersection improvements included the installation of new traffic signals. The project in conjunction with the phased MOT included the phasing and installation of culverts and culvert extensions.</p> <p><b>Responsibilities included:</b> Provided overall construction management of all phases including schedule and directing crews for self-performed grading and bridge operations including the stormwater management facilities construction; Executed the traffic management plan for the installation of all temporary and permanent traffic control devices, including all necessary traffic switches for the phased construction; Scheduled subcontractors; Reviewed cost and productions and evaluated resources on a daily basis; Coordinated directly with VDOT and QA/QC staff access to assist in implementing the quality program; and Coordinated with property owners to maintain access to their property.</p>			
Project Name:	<b>Route 218 – Stafford County, VA</b>	Start Date:	<b>2000</b>
Project Role:	<b>Construction Manager</b>	End Date:	<b>2004</b>
Client/Owner:	<b>VDOT</b>	With Current Firm?	<b>Yes</b>
<p>Mr. Sullivan provided construction oversight and management of the entire construction team for this \$16 million project consisting of building and relocating Route 218, 212, and 607 with new alignment and upgrade to existing facilities which also included two bridges (712 feet and 190 feet). This project also included intersection improvements with 212 and 607 and associated installation.</p> <p><b>Responsibilities included:</b> Provided overall construction and schedule management; Coordinated self-performed grading and bridge crews; Coordinated public relations concerning interruptions and adjusted the schedule accordingly; Worked with VDOT on maintenance of traffic issues; Supervised the installation and maintenance of erosion and sediment control; Executed the traffic management including the installation of temporary and permanent traffic control devices to ensure a safe project; Worked with VDOT and their QA/QC team to ensure project quality and efficiency for the construction and quality control program; and Coordinated the installation of utilities.</p>			
Project Name:	<b>Bond Project – Spotsylvania County, VA</b>	Start Date:	<b>2007</b>
Project Role:	<b>Construction Manager</b>	End Date:	<b>2010</b>
Client/Owner:	<b>Spotsylvania County</b>	With Current Firm?	<b>Yes</b>
<p>This project consisted of a Design Build contract with Spotsylvania County in which they had planned to build 16 projects in two Phases. The first phase consisted of seven (7) projects worth \$14 million which included design, ROW, permits, roadway, utilities, private utility relocations, intersection improvements and signals. Mr. Sullivan was the Construction Manager responsible to review designs and build the projects. He worked with the designs and reviewed the plans for constructability and cost savings. When the plans were approved, and permits obtained, he scheduled and coordinated all resources on the projects. He managed each of the projects from beginning to completion with as many as three projects concurrently. Mr. Sullivan’s responsibilities included managing all construction related activities regardless of being self-performed or subcontracted, material procurement and scheduling, to include all grading, structure, walls, culverts, traffic control and signage, survey, utility adjustments, storm systems, water and sewer relocations, signals, erosion control, paving, and stripping operations. He also coordinated all quality control activities to coincide with all construction operations to ensure the project met all required specifications.</p> <p><b>Responsibilities included:</b> Provided overall construction and schedule management; Coordinated self-performed grading and bridge crews; Coordinated public relations concerning interruptions and adjusted the schedule accordingly; Worked with VDOT on maintenance of traffic issues; Supervised the installation and maintenance of erosion and sediment control; Executed the traffic management including the installation of temporary and permanent traffic control devices to ensure a safe project; Worked with VDOT and their QA/QC team to ensure project quality and efficiency for the construction and quality control program; and Coordinated the installation of utilities.</p>			
<p>h. For Key Personnel required to be on-site full-time for the duration of construction and for the QAM, provide a current list of assignments, role, and the anticipated duration of each assignment.</p> <p>Mr. Sullivan is currently the Construction Manager for a NCDOT project Contract C203941 Hertford Co., NC. His role is to manage and schedule the construction of changing two “at grade intersections” on US 13/NC11 to two “Grade separated interchanges” near Ahoski. Darrell’s duties will end next year when he is needed on this Design Build project to work with designers to develop plans for the six elements of work. He will remain on the Albemarle Project until completed and accepted by VDOT.</p>			

# **Lead Contractor Work History Forms**

**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client 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>Bedford Route 221</b> Location: Bedford, VA	Name: Virginia Department of Transportation	Name of Client: Virginia Department of Transportation Phone: 804-633-5091 Project Manager: Jeff Echols, PE Phone: 540-387-5491 Email: <a href="mailto:jeff.echols@VDOT.Virginia.gov">jeff.echols@VDOT.Virginia.gov</a>	07/2009	11/2010	\$15,000	\$15,000	\$10,500

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<b><u>SIMILARITY ELEMENTS</u></b>		<b><u>PROJECT NARRATIVE</u></b>		<b><u>LESSONS LEARNED</u></b>		
<b>Complexity</b>	<ul style="list-style-type: none"> <li>- Widen Existing Facility</li> <li>- Grading Operations Adjacent To Live Traffic</li> <li>- Intersection Improvements</li> <li>- Extensive and Complicated MOT with Detours, Phasing, and Temporary Construction</li> <li>- Significant Public Utility Conflicts and Relocation Coordination</li> <li>- Culvert Construction</li> <li>- Retaining Walls</li> <li>- Extensive Storm Drainage</li> <li>- Traffic Signals (modifications &amp; new)</li> <li>- Urban Setting</li> <li>- Rock Excavation</li> </ul>			<p>English completed the widening and improvements for Route 221 in Bedford, VA for approximately 2.6 miles. The project widened a divided two-lane highway to four lanes with bi-directional center turn lane. The construction also included the upgrade of two very congested intersection at both Rte. 221 / Rte. 811 (Thomas Jefferson Road) and Rte. 221 / Rte. 663 (Perrowville Road) as well as intersection improvements at both Rte. 221 / Rte. 609 (Rustic Village Road) and Rte. 221 / Rte. 666 (Elkton Farm Road) The intersection improvements at the Elkton Farm Road location also included a permanent retaining wall parallel to the alignment with an aesthetic treatment. The intersection improvements at Thomas Jefferson Road required the need for temporary pavement to be installed to facilitate the phased maintenance of traffic and the permanent construction. Three new signals were also installed with this project. The project also included box culvert construction with temporary shoring to accommodate the existing traffic and elevation changes, curb and gutter, stormwater management, public utility relocation and coordination (water &amp; sewer). The project entailed approximately 3.5 miles of piping and more than 130 drainage structures. Elevation changes between the phases created challenges with construction and maintenance of traffic.</p>	<p>Included an issue with the retaining wall and box culvert replacement. English learned a valuable lesson by working together with VDOT to resolve the conflicts to make them workable. This will be shared on other projects.</p>	
<b>Context</b>	<ul style="list-style-type: none"> <li>- Primary Urban Route</li> <li>- Congestion Relief &amp; Safety Improvements</li> <li>- Improved Entrances and Exits to Businesses</li> <li>- Improved Drainage</li> <li>- Improved Intersections with Signals</li> <li>- VDOT Roadway/Standards/Specs</li> <li>- Compliance with Wetland Permits</li> </ul>				<p><b><u>CONTRACTOR-INITIATED DESIGN</u></b> The retaining wall on this project was designed such that it was almost impossible to build. English initiated a new design with a shoring system that not only allowed the wall to be built minimizing the impact to the business and accelerating the schedule.</p>	
<b>Locale</b>	<ul style="list-style-type: none"> <li>- VDOT</li> <li>- Urban</li> <li>- Adjacent Business &amp; Residential</li> </ul>				<p><b><u>PERSONNEL INVOLVED</u></b> Judson Dalton as Project Manager on this project will share all experience and lessons with the entire staff assigned to the Albemarle County projects.</p>	
<b>Scope</b>	<ul style="list-style-type: none"> <li>- Roadway/Asphalt Pavement</li> <li>- Structures (Box culvert replacement under traffic)</li> <li>- Grading/Earthwork</li> <li>- Rock Excavation</li> <li>- Water/Sewer Relocation</li> <li>- Retaining Walls</li> <li>- Curb &amp; Gutter</li> <li>- Drainage/Storm Drain Systems</li> <li>- MOT/Phasing</li> <li>- Environmental Controls</li> </ul>				<p>The phased MOT plan included both temporary and permanent phased widening to accommodate the existing traffic to include countless private, business, residential and church entrances as well as two large Bedford County Schools. Coordination and construction of public utility relocations. All aspects of the project were affected by the phased approach to MOT to include the storm drain, box culvert construction, and the public utility work (water &amp; sewer). Shutdowns and tie-ins for the both the water and sewer had to be scheduled in a manner as to not impact the active use of the local businesses and residents resulting in a great deal of night work to accomplish these tasks. Special considerations had to be given to a large natural gas line that paralleled the project which feeds the fuel needs of a large Frito-Lay food factory that operates 24 hours a day all year.</p>	
<b>Delivery</b>	<ul style="list-style-type: none"> <li>- On Time Delivery with an Incentive Earned</li> </ul>	<p><b><u>EVIDENCE OF GOOD PERFORMANCE</u></b> The project was completed on time with no claims and an incentive was awarded to English.</p>				



**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

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					Original Contract Value	Final or Estimated Contract Value	
Name: <b>I-64/North Gayton Road Design-Build</b>  Location: Henrico County, VA	Name: AECOM	Name of Client: County of Henrico Phone: 804-501-5985 Project Manager: Rob Tieman Phone: 804-501-5985 Email: tie@co.henrico.va.us	04/2012	12/2012	\$38,600	\$38,300	\$21,700

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<b>SIMILARITY ELEMENTS</b>		<b>SUMMARY OF IMPROVEMENTS</b>	<p>The use and management of a detailed CMP schedule, that included activities for each parcel, was key to the success and delivery of the project. The majority of the time difference between the original date and the actual date was due to Henrico County's reluctance to utilize eminent domain / condemnation during the right-of-way acquisition. The English Team partnered with the County to allow their preference by resequencing portions of the construction to allow the County more time on certain parcels. The County, in turn, partnered with English to allow more time for the work in the locations where more acquisition time could not be allowed. English participated in all public hearings for the project and met with each individual property owner throughout the duration of the project; on site staff knew the local residents by name, and vice versa, which created a great since of partnering with our local 3rd parties.</p> <p><b>LESSONS LEARNED</b> ROW Acquisition was a major element of the contract and required regular, as much as weekly communications with the DB Team and County ROW staff to prioritize the parcels needed for construction to keep the project on schedule. We had to re-prioritize both the construction and ROW acquisition to make sure construction could continue. This experience will help us greatly on the Albemarle Project.</p> <p><b>CONTRACTOR-INITIATED DESIGN</b> Since this project was a design build, we were tasked with designing and building a project that met the county's needs. Our Team worked closely with the county to meet and exceed these goals.</p> <p><b>PERSONNEL INVOLVED</b> Jud Dalton was the Design Build Project Manager and worked very closely with the County, the Design Engineers, and the Project Supervisors. He understands the design build process and shares his knowledge with Cory Bond and other project managers.</p> <p><b>EVIDENCE OF GOOD PERFORMANCE</b> The project was completed on time with no claims and the county was completely satisfied with the process and quality of the project.</p>
<b>Complexity</b>	<ul style="list-style-type: none"> <li>- Design-Build</li> <li>- Utility Relocations</li> <li>- ROW Acquisition</li> <li>- QA/QC</li> <li>- Intersection Improvements</li> <li>- Complex Phased MOT Operations on and Adjacent to Interstate Traffic</li> <li>- Poor Soil Conditions</li> <li>- Retaining Walls</li> <li>- Culvert Construction</li> <li>- Temporary Shoring</li> <li>- Night Operations</li> </ul>	<ul style="list-style-type: none"> <li>• Extended North Gayton Road from Rt. 250 across Pouncey Track and improving Shady Grove Road to Twin Hickory Lake Drive.</li> <li>• Constructed 1 Bridge across I-64 with MSE and retaining walls</li> <li>• Constructed a con-span to avoid interfering with a creek</li> <li>• Constructed 5 intersections with signalization</li> </ul>	
<b>Context</b>	<ul style="list-style-type: none"> <li>- Urban Connector</li> <li>- VDOT Roadway/Standards/Specs</li> <li>- Compliance with Permits</li> <li>- Educating the Public through Community Meetings</li> </ul>	<p><b>PROJECT NARRATIVE</b></p>  <p>The extension of North Gayton Road begins at the intersection of West Broad Street and existing Gayton Road, crosses I-64 and proceeds on new alignment to the intersection of Pouncey Tract Road and Shady Grove Road. Extending nearly 2.10 miles, the project continues across Pouncey Tract Road, where it terminates at the intersection of Shady Grove Road (north end) and Twin Hickory Drive (south end). The project involved bridge construction over I-64 with MSE walls and the widening of the existing two-lane facility to four lanes at both ends of the project. Also, as part of this project North Gayton Road intersections with Route 250, Bacova Road, Kain Road, Pouncey Tract Road, and Twins Hickory Road all had to be improved and widened under live traffic with phased MOT. The four-lane divided typical section and called for shared use paths to provide means for cyclists and pedestrian transportation. In conjunction with utility relocations, two arch culverts allowed the relocation of Bacova Road to accommodate phasing of the bridge construction. The geotechnical investigations discovered poor soil conditions at the southern bridge abutment. Undercutting then became a major operation, particularly the extensive undercutting for the foundation of the MSE walls. The bridge structure also included various aesthetic treatments, which included lighting, stone form liners on all parapet walls, and staining of all stoned pattern walls to match the color of the stone to the colors of the clients choosing. Traffic control along I-64, Route 250, Pouncey Tract Road, and Shady Grove Road took daily attention to ensure that traffic was not impacting any more than necessary and that all field operations were in accordance with the approve MOT plan. Highlights and challenges to this project included a detailed MOT plan to accommodate construction and provide a plan for ongoing use of existing business and residential entrances throughout the project footprint. Private utility relocations presented a variety of challenges, as relocation of nearly a mile of overhead Dominion power lines, Comcast and Verizon lines, and City of Richmond Gas necessitated synchronization with construction and scheduling, totaling in value of over \$1M. With over 70 parcels of right-of-way acquisition required, the design-build team's involvement to include both design and construction staff was critical. The scheduling and prioritization of both utility relocations and right-of-way acquisition was one of the biggest upfront challenges to the team for scheduling the project and setting the table for an on time completions; throughout the life of the project, certainly for the duration of the ROW acquisition and the utility relocation, constant collaboration and adjustments were needed and key to the success of the project. Erosion control presented its own challenge with limited right-of-way for inclusion of traps and basins, which were often engineered to accommodate the constrained footprint to properly treat all out falling storm drains and retain overflow. English's greatest challenge was prioritizing acquisition to coincide with construction phasing.</p>	
<b>Locale</b>	<ul style="list-style-type: none"> <li>- Urban</li> <li>- Adjacent Residential Development</li> </ul>		
<b>Scope</b>	<ul style="list-style-type: none"> <li>- Design-Build</li> <li>- ROW Acquisition</li> <li>- Culvert Construction</li> <li>- Grading/Earthwork</li> <li>- Rock Excavation</li> <li>- Drainage/SWM</li> <li>- TMP/MOT</li> <li>- Signals</li> <li>- Signage</li> <li>- Environmental Controls</li> <li>- Utility Relocation</li> </ul>		
<b>Delivery</b>	Design Build Project On Time Deliveries		



**ATTACHMENT 3.4.1(a)**

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					Original Contract Value	Final or Estimated Contract Value	
Name: <b>Intersection of SR 1309 and US-1</b>  Location: Moore County, NC	Name: NCDOT	Name of Client: North Carolina Department of Transportation Phone: 919-776-9623 Project Manager: M. Gary Phillips, PE Phone: 919-776-9623 Email: mgphillips@ncdot.gov	06/2015	08/2014	\$9,993	\$10,417	\$5,596

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<b><u>SIMILARITY ELEMENTS</u></b>		<b><u>SUMMARY OF IMPROVEMENTS</u></b>		<b><u>PERSONNEL INVOLVED</u></b>	
<b>Complexity</b>	<ul style="list-style-type: none"> <li>- High Traffic</li> <li>- Phased Constr. Under Traffic</li> <li>- Complex MOT with Temp. Detours</li> <li>- Maintain Mainline Traffic Capacity</li> <li>- Modify Several Intersection - Simultaneously</li> <li>- Multiple Existing Utilities</li> <li>- Minimize Property Impacts</li> </ul>	<ul style="list-style-type: none"> <li>• One mile of roadway widening and safety improvements along US 1 to include four (4) intersection in Southern Pines</li> <li>• New two-span bridge on Morganton Rd and was built utilizing this three phased MOT over live traffic</li> <li>• Multiple permanent retaining walls constructed by utilizing temporary shoring</li> <li>• Aesthetics and landscaping were added to the contract during construction creating a need to work with the NCDOT and suppliers to achieve desired final project within existing budget and schedule requirements</li> <li>• Public utility relocation and installation</li> </ul>	<p><b><u>PROJECT NARRATIVE</u></b></p> <p>This \$10 Million project included the widening and upgrade of US 1 and reconstruction of four (4) intersections on a very busy section of roadway. Pipe Lines were added along and across US 1 and US 1 Bus, both open to traffic, and had to be constructed at night with detours as part of this project. Also, pedestrian accommodations were part of the this project scope and had to be maintained during the entire project. The intersection of US 1, Murray Hill Rd. and Saunders Blvd. consisted of widening US 1 to the outside and adding two new turn lanes to Murray Hill, as well as new alignment for Saunders Blvd. The traffic light was relocated south at the realigned intersection. The intersection of US 1, Rothney Rd. and Luther Way was improved by adding new right turn lanes on US 1 and widening both Rothney Rd. and Luther Way. The improvements along US 1 and Old US 1 included widening for the new typical section. The interchange of US 1 and Morganton Road added new ramps and loops, adjusting alignment and elevations of the interchange, as well as adding two new signals. The intersection improvements of Mechanic St. and Morganton Road included new pavement and pavement markings.</p> <p>The project also had extensive stakeholder involvement with multiple existing retail, service businesses, and churches within the project footprint. All 3<sup>rd</sup> party property had access that was required to be maintained throughout the project duration. Construction activities had to be coordinated not to interfere with access and hours of operation.</p> <p><b><u>LESSONS LEARNED</u></b></p> <p>Include the unique goals and priorities toward which good DOTs strive on major highway projects such as this and how to meet and exceed DOT expectations. English gained valuable experience working in and adjacent to high volume roadways that will assist in the successful planning and construction of the Albemarle Intersections.</p>		
<b>Context</b>	<ul style="list-style-type: none"> <li>- National Highway System</li> <li>- Interchange and Intersection Improvements</li> <li>- DOT Roadway/Standards/Specs</li> <li>- Congestion Relief &amp; Safety - Improvements</li> <li>- Relocated Ramps</li> </ul>				
<b>Locale</b>	<ul style="list-style-type: none"> <li>- DOT Project</li> <li>- Adjacent Commercial Development</li> </ul>				
<b>Scope</b>	<ul style="list-style-type: none"> <li>- Roadway/Asphalt Pavement</li> <li>- Interchange Ramps</li> <li>- Grading/Earthwork</li> <li>- Intersection Improvements Adjacent to Live Traffic</li> <li>- Drainage/SWM</li> <li>- TMP/MOT</li> <li>- Signal Installation</li> <li>- Environmental Controls</li> <li>- Retaining Walls (Temp &amp; Perm)</li> </ul>				
<b>Deliver-y</b>	<ul style="list-style-type: none"> <li>- Owner/Contractor Collaboration</li> <li>- Early Delivery</li> <li>- On Budget</li> <li>- Project Manager – Cory Bond</li> <li>- 3<sup>rd</sup> Party Stakeholder Management</li> </ul>				
				<p><b><u>EVIDENCE OF GOOD PERFORMANCE</u></b></p> <p>After a year of construction, NCDOT requested that the project be accelerated to have the majority of work completed six months early to accommodate the US Open Golf tournament at Pinehurst #2. The project was able to meet this acceleration request by resequencing some of the work, increasing resources for all self-performed operations, as well as necessary resources from all subcontractors on the project. The buy in from the required subcontractors and the resources provided by English were the keys to delivering the majority of the project early as requested. Mr. Bond was instrumental in requesting and managing the additional resource load need by English and working with the subcontractors to facilitate the success of the project, as well as working hand in hand with the DOT to accomplish all project priorities. Ultimately the requested portion of the project was finished ahead of schedule and the remainder of the project finished on time as required.</p> 	

**Lead Designer**  
**Work History Forms**

**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

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					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>Southgate Drive and US 460 Bypass – Diverging Diamond and Roundabouts</b> Location: Blacksburg, VA	Name: Branch Civil, Inc.	Name of Client: VDOT Salem District Phone: 540-387-5320 Project Manager: Phillip Hammack, PE Phone: 540-378-5041 Email: Phillip.Hammack@VDOT.Virginia.gov	04/2015	10/2018 (Estimated)	\$46,700	\$47,000 (Estimated)	\$4,916

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

SIMILARITY ELEMENTS		SCOPE SUMMARY:		<p><b>PROJECT NARRATIVE:</b> AMT provided complete design services on this critical roadway improvement and interchange design project in the Salem District, adjacent to and within Virginia Tech campus in Blacksburg. The purpose was to eliminate the existing signalized at-grade T-intersection at the heaviest used, primary entrance to Virginia Tech campus. A major component of the project is a new diverging diamond grade separated interchange, in a location southeast of the existing intersection to accommodate current and planned traffic movements. The pre-construction intersection experienced significant backups during the morning and evening peak hours as well as during major/special events, which hampered through movements along the US 460, also creating a safety concern due to rear-end collisions. The project is a heavily traveled NHS highway with more than 40,000 vehicles per day passing through the project. Also included were realignment of Southgate Drive from US 460 to Duck Pond Drive, introducing two new roundabout intersections along the realignment. Key challenges included an aggressive schedule of 19 months from the start of the alternatives phase to 100% design, managing consensus from the many diverse stakeholders (particularly Virginia Tech), preparing alternative foundation design concepts to respond to site specific geologic conditions; and minimizing impacts to: wetlands; old-growth tree stands; and environmentally sensitive area.</p> <p><b>OFFICE LOCATION:</b> Design services were provided from AMT's Chantilly, Richmond and Suffolk offices.</p> <p><b>VERIFIABLE EVIDENCE OF GOOD PERFORMANCE:</b></p> <ul style="list-style-type: none"> <li>Conducted successful public involvement with positive feedback from Virginia Tech, Blacksburg and Salem District Administrator</li> <li>Completed PAC milestone within 20 months of NTP</li> <li>Award-winning (2016 Merit Award from ASLA, VA Chapter)</li> </ul>
<b>Complexity</b>	<ul style="list-style-type: none"> <li>- High Traffic (&gt;40,000 ADT)</li> <li>- Crash History</li> <li>- Phased Construction "under traffic"</li> <li>- Multiple Existing Utilities</li> <li>- Major Stakeholder Interest</li> </ul>	<ul style="list-style-type: none"> <li>Design of a new <b>Diverging Diamond Interchange</b>, and two <b>new roundabout intersections</b> which replace existing stop sign controlled intersections.</li> <li>Traffic Analysis, including traffic/crash data collection and analysis, traffic operation analysis, no-build and build forecasts, origin/destination study, safety analysis, and travel time study.</li> <li>Interchange Alternatives which included an IJR for alternative interchange configurations to assess: purpose and need, geometrics, traffic operations (LOS), safety, right of way impacts, environmental impacts, construction cost, hydraulics, bridge and structure options, utilities, and constructability.</li> <li>Roadway, Interchange, Intersection and Trail Design, for a total of 3.6 miles of roadway alignment and two new roundabouts, one mile of "off-line" trail with two grade separated trail crossings, and "trail roundabouts".</li> <li>Public and Stakeholder Outreach including development of a tailored communication plan for each stakeholder.</li> <li>Geotechnical Engineering to support bridge foundation design, wall design, and pavement design. Prepared alternative foundation designs as "bid options" due to presence of shallow rock found at some boring locations. Options included drilled shafts and driven piles in combination with socketed piles.</li> <li>Bridge and Structures Design for dual bridges over US 460, 1,100 feet of retaining walls, and box culverts (to serve as trail underpasses)</li> <li>Traffic Engineering, including signing plans with overhead sign structures, signal design, lighting, CCTV Traffic Camera, maintenance of traffic plans, Transportation Management Plan, and pavement markings.</li> <li>Hydraulic Design including drainage, erosion and sediment control, and stormwater management following VDOT and DEQ requirements.</li> <li>Landscape Architecture/ Aesthetic Design to provide a gateway design for the entrance to the University</li> <li>Right of Way plans per VDOT requirements.</li> <li>Utility relocation design per Municipality/Owner Requirements.</li> </ul>	 <p align="center"><b>New Southgate Drive Diverging Diamond at US 460</b></p>	
<b>Context</b>	<ul style="list-style-type: none"> <li>- Arterial Roadway</li> <li>- Collector Roadway</li> <li>- Innovative/Unfamiliar Traffic Pattern</li> <li>- Interchange</li> <li>- Safety Improvement</li> <li>- Capacity Improvements</li> <li>- Nearby State University</li> <li>- Adjacent Wetland/WOUS</li> <li>- Wooded Area</li> </ul>			
<b>Locale</b>	<ul style="list-style-type: none"> <li>- Rural/Urban Mix</li> <li>- Virginia</li> </ul>			
<b>Scope</b>	<ul style="list-style-type: none"> <li>- Diverging Diamond Design</li> <li>- Roundabout Design</li> <li>- Roadway Widening</li> <li>- Intersection/Interchange Improvements</li> <li>- Structures/Bridge</li> <li>- Geotechnical</li> <li>- Drainage/SWM</li> <li>- TMP/MOT</li> <li>- Signing/Marking</li> <li>- ITS</li> <li>- Signal &amp; Lighting</li> <li>- ROW Acquisition</li> <li>- Survey/SUE</li> <li>- Utility Design</li> <li>- Public/Stakeholder Involvement</li> </ul>			
<b>Delivery</b>	<ul style="list-style-type: none"> <li>- Concurrent, Interdisciplinary Design</li> <li>- Accelerated Schedule</li> </ul>	<p><b>AMT'S ROLE:</b> As the Engineer of Record, AMT was responsible for management and oversight of all aspects of engineering design including roadway, bridges, traffic engineering and maintenance of traffic, hydraulics, utility coordination, and public relations.</p>		<p><b>PROPOSED PERSONNEL INVOLVED:</b></p> <ul style="list-style-type: none"> <li>Laura Mehiel, P.E.</li> <li>Don Rissmeyer, P.E.</li> <li>William Stagg, P.E.</li> <li>Stephen Stewart, P.E.</li> <li>Jeff McKay, P.E.</li> <li>Tim Wells, EIT</li> <li>Ryan Gilbert, P.E.</li> <li>John Farrell, AICP</li> <li>Khoss Babaei, P.E.</li> <li>Adam Kendall, P.E.</li> <li>Jack Goode, P.E., PTOE</li> <li>Art Worthman</li> </ul>

**ATTACHMENT 3.4.1(b)**

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					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: <b>Design-Build US 219 &amp; Roundabouts, I-68 to Old Salisbury Road</b>  Location: Garrett County, Maryland	Name: Triton Construction, Inc.	Name of Client: Maryland Department of Transportation, State Highway Administration Project Manager: Michael Baird Phone: 410-545-8913 Email: mbaird@sha.state.md.us	03/2018	02/2021 (Estimated)	\$44,696	\$44,696 (Estimated)	\$4,310

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<b>SIMILARITY ELEMENTS</b>		<b>SCOPE SUMMARY:</b>		
<b>Complexity</b>	<ul style="list-style-type: none"> <li>- High Traffic (&gt;40,000 ADT)</li> <li>- Phased Construction "under traffic"</li> <li>- Multiple Existing Utilities</li> <li>- Major Stakeholder Interest</li> </ul>	<ul style="list-style-type: none"> <li>• Design and construction of <b>two new roundabouts</b> at interstate ramp termini, to replace existing stop-controlled intersections</li> <li>• Design and construction of 1.4 miles of relocated US 219 from I-68 to Old Salisbury Road for capacity improvements</li> <li>• Twin single span bridges for new US 219 over US 40 Alt, with aesthetic treatments to meet programmatic agreement in the historic district, and 3 retaining walls which were designed to avoid utility and property impacts</li> <li>• Four SWM ponds, new storm drainage systems and ditches, and multi-phased E/S control to meet Contractor schedule</li> <li>• Extensive TMP with 3 major phases to provide safe and efficient traffic during construction</li> <li>• Utility relocation/coordination, including relocating utility poles along entire alignment</li> <li>• Permits for multiple impacts to stream channels and wetlands. Design of a stream and wetland site for compensatory mitigation.</li> <li>• Traffic operations analysis, signage, markings, and roadway lighting</li> </ul> <p><b>AMT'S ROLE:</b> AMT is the Lead Designer, responsible for management and oversight of all aspects of engineering design (roadway, structures, geotechnical, drainage, phasing/traffic control, signing, signals, ITS, lighting, stormwater management, erosion and sediment control, ROW and utilities). AMT is obtaining all permits, and provided the Construction Scheduling support for the project.</p> <p><b>PROJECT NARRATIVE:</b> MDOT-SHA, in cooperation with the Federal Highway Administration (FHWA), sought improvements to US 219 (Chestnut Ridge Road), from I-68 to Old Salisbury Road in Garrett County, Maryland. This project was identified as a stand-alone project in the US 219: I-68 (MD) to Meyersdale (PA) Planning and Environment Linkages (PEL) study. When completed, this will be the initial 1.4-mile segment of corridor N, part of the Appalachian Development Highway System (ADHS) which is the cornerstone of Appalachian Regional Commission's transportation efforts. The primary purpose of the US 219 Improvement Project is to provide transportation improvements that are responsive to planned economic development. The corridor runs from the intersection of US 40 Alternate, and New Germany Road, east along US 40 Alternate to the intersection of US 40 Alternate and US 219, north along US 219 to the intersection with Old Salisbury Road, and south along US 219 to a point south of I-68.</p> <p>MDOT-SHA had developed a conceptual design for the project that included a 1 mile long deceleration lane on I-68, relocation of 2 ramps, and the conversion of the two stop-controlled ramp termini to roundabouts. AMT, led by Design Manager Laura Mehiel, developed an alternative solution through the Alternative Technical Concept (ATC) process. The revised design pulled a significant amount of WB-68 to northbound US 219 traffic out prior to the roundabout allowing for a single lane roundabout.</p>	<p>vs. the two-lane proposed by MDOT-SHA. The complication was that the new configuration required a five-legged roundabout vs. the more typical four-legged roundabout as was proposed. This required several iterations to meet all the requirement for entrance/exit speeds, angles of entrance/exit, and distance between as well as grade issues and conflict point. The ATC increases efficiency and safety of the intersection and eliminated all the I-68 work which thereby reduced the amount of the environmental impacts. AMT's ATC dramatically reduced the stream impacts from 3,351 linear feet to 362 linear feet. Wetland and forest impacts were also reduced by nearly half and a third, respectively. AMT is currently coordinating the joint wetland permit application process with SHA, the US Army Corps of Engineers and Maryland Department of the Environment (MDE) with a final permit approval expected in October, 2018.</p> <p><b>OFFICE LOCATION:</b> Rockville, Maryland and Towson, Maryland</p>	
<b>Context</b>	<ul style="list-style-type: none"> <li>- Arterial &amp; Interstate Roadways</li> <li>- New Roundabouts (2)</li> <li>- Innovative/Unfamiliar Traffic Pattern</li> <li>- Interchange Ramp Modifications</li> <li>- Safety Improvements</li> <li>- Capacity Improvements</li> <li>- Impacts to Wetlands/Waters of US</li> <li>- Wooded Areas</li> <li>- T&amp;E Species (Bats)</li> </ul>			
<b>Locate</b>	<ul style="list-style-type: none"> <li>- Rural/Urban Mix</li> <li>- Flood Prone Area</li> <li>- Agricultural Area</li> </ul>			
<b>Scope</b>	<ul style="list-style-type: none"> <li>- Roadway Widening</li> <li>- Roundabout Design</li> <li>- Intersection/Interchange Improvements</li> <li>- Structures/Bridge</li> <li>- Geotechnical</li> <li>- Drainage/SWM</li> <li>- TMP/MOT</li> <li>- Signing/Marking</li> <li>- Signal &amp; Lighting</li> <li>- Environmental Permitting</li> <li>- Survey/SUE</li> <li>- Utility Design</li> <li>- Public/Stakeholder Involvement</li> </ul>			
<b>Delivery</b>	<ul style="list-style-type: none"> <li>- Design Build</li> <li>- Accelerated Schedule</li> <li>- Multiple Design Teams/Project Segments</li> <li>- Concurrent, Interdisciplinary Design</li> </ul>			



**MDOT's Original Roundabout Interchange Configuration**



**AMT's Roundabout Interchange Configuration (Selected for Design)**

**VERIFIABLE EVIDENCE OF GOOD PERFORMANCE:**

- During an ATC "one on one" meeting, MDOT remarked that the AMT design for the interchange using the 5-leg roundabout was superior to their own.
- Initial Construction Package was prepared and approved within 3 months of NTP, in order to meet stringent time of year restrictions for tree clearing, which prohibits the cutting of any tree between April 1 and November 15 of any year.

**PROPOSED PERSONNEL INVOLVED**

- Laura Mehiel, P.E.
- Fred Wagner, P.E.
- Khoss Babaei, P.E.
- Brent Showalter, PE
- Matt Willems, P.E.
- Tim Wells, EIT

**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>Design-Build US Route 1 Improvements at Fort Belvoir</b>  Location: Fairfax County, VA	Name: Corman Construction, Inc. / Wagman, Inc. Joint Venture	Name of Client: FHWA-Eastern Federal Lands Highway Div./VDOT NOVA (secondary) Phone: 800-367-7623 VDOT Project Manager: Timothy Hartzell Phone: 703-259-2749 Email: Timothy.Hartzell@VDOT.Virginia.gov	06/2013 (Design Build NTP)	06/2017 (Substantial Completion)	\$69,300	\$82,000 (due to Owner directed changes)	\$5,981 (Excludes Real Estate & Construction QC Fees)

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

<b>SIMILARITY ELEMENTS</b>		<b>SCOPE SUMMARY:</b>	
<b>Complexity</b>	<ul style="list-style-type: none"> <li>- High Traffic (&gt;40,000 ADT)</li> <li>- Crash History</li> <li>- Phased Construction "under traffic"</li> <li>- Multiple Existing Utilities</li> <li>- Major Stakeholder Interest</li> <li>- ROW During Construction</li> </ul>	<ul style="list-style-type: none"> <li>• An improved 3.68-mile six-lane divided NHS highway, adding a 32' median to accommodate future transit.</li> <li>• Six (6) reconstructed and improved major intersections, with both capacity and traffic signal improvements</li> <li>• Twin, 2-span bridges (260 feet long), raised from the existing Rte 1 profile to eliminating flooding problem of Route 1 and Route 286 intersection, frequently flooded by adjacent Accotink Creek</li> <li>• Five SWM ponds, 200+ drainage structures, five miles of storm drain pipe, and E/S control phased with MOT</li> <li>• Extensive TMP with 3 major phases and 5 sub-phases to provide safe and efficient traffic during construction</li> <li>• New Retaining Walls (MSE, VDOT RW-1) and New Noise Walls adjacent to Inlet Cove community.</li> <li>• Utility relocation/coordination, including relocating utility poles along entire alignment</li> <li>• A precast slab bridge supported on helical piles for a new shared use path</li> <li>• Permits for multiple impacts to stream channels (3,500 LF) and wetlands (approximately 2.3 acre), with jurisdiction by VMRC, Army COE Norfolk, and DEQ. In-stream time of year restrictions applied to 2 streams.</li> <li>• Extensive right-of-way acquisitions, including more than 100 tenant relocations</li> </ul>	<p>removal of an existing military railroad crossing. Improvements along Route 286 and Route 610 included shifts in the horizontal alignment, addition of auxiliary lanes, storm drainage, signals, and extension of a trail along NB 286 which required two retaining walls and a slab bridge supported on helical piles to avoid impacts to environmental resources (wetlands, trees).</p> <p>Common Sense Engineering was applied during design. Through the use of milling, overlay, and build-up in area where allowable, proposed maintenance of traffic was simplified requiring smaller shifts in traffic to address grade changes at the curb line, providing pavement widening as needed. In areas of complete reconstruction, AMT established a bifurcated roadway profile to balance earthwork and limit impacts on the adjacent Fort Belvoir and historic properties.</p> <p>AMT also provided phased drainage/culvert construction plans, creative stormwater management approach to minimize the number of facilities (using the "1 percent rule" and nutrient banking), and advance grading packages to facilitate early utility pole relocations. The project is coordinated with several concurrent and/or adjacent projects administered by others - North Post Access Control Point (Fort Belvoir), Lyndam Hills Phase 2 Development, and Jeff Todd Way. Twenty-five parcels required either partial or total acquisition, and more than 100 tenants were provided relocation as part of the design-build contract, under the management of AMT. Demolition of existing buildings prior too roadway construction required abatement activities due to the presence of asbestos containing materials.</p>
<b>Context</b>	<ul style="list-style-type: none"> <li>- Arterial Roadway</li> <li>- Safety Improvement</li> <li>- Capacity Improvements</li> <li>- Adjacent Wetland/WOUS</li> <li>- Wooded Area</li> <li>- T&amp;E Species (Bats)</li> </ul>		
<b>Locate</b>	<ul style="list-style-type: none"> <li>- Rural/Urban Mix</li> <li>- Virginia</li> <li>- Flood Prone Area</li> </ul>	<p><b>AMT'S ROLE:</b> AMT is the Engineer of Record, responsible for management and oversight of all aspects of engineering design (roadway, structures, geotechnical, drainage, phasing/traffic control, signing, signals, ITS, lighting, stormwater management, erosion and sediment control, ROW and utilities). AMT obtained all permits, and provided the Construction Quality Control Manager for the project. This includes managing/providing quality control inspection and testing services.</p>	
<b>Scope</b>	<ul style="list-style-type: none"> <li>- Roadway Widening</li> <li>- Intersection/Interchange Improvements</li> <li>- Structures/Bridge</li> <li>- Geotechnical</li> <li>- Drainage/SWM</li> <li>- TMP/MOT</li> <li>- Signing/Marking</li> <li>- ITS</li> <li>- Signal &amp; Lighting</li> <li>- Environmental Permitting</li> <li>- ROW Acquisition</li> <li>- Survey/SUE</li> <li>- Utility Design</li> <li>- Public/Stakeholder Involvement</li> </ul>	<p><b>PROJECT NARRATIVE:</b> AMT is the Engineer of Record and Construction Quality Control Manager for this large design-build project in northeastern Virginia, which provides traffic relief and safety for the ongoing BRAC consolidation occurring in the vicinity of Fort Belvoir. The Route 1 Improvements project implements a series of enhancements along Route 1 from the Telegraph Road intersection north to Mt. Vernon Memorial Highway for a distance of 3.68 miles. These improvements generally widen Route 1 from four to six lanes, provide a one-mile new alignment to avoid major property impacts, improve intersection safety, operations and capacity with new traffic signals and acceleration/deceleration lanes, and provide parallel pedestrian and bicycle facilities for the entire length. In addition, this project has replacement bridges over Accotink Creek, major culverts and equipment/wildlife crossing structures under Route 1, and</p>	<p align="center"><b>Route 1 at Route 286 Newly Constructed Intersection</b></p> 
<b>Delivery</b>	<ul style="list-style-type: none"> <li>- Concurrent, Interdisciplinary Design</li> <li>- Accelerated Schedule</li> <li>- Multiple Design Teams/Project Segments</li> <li>- Design Build</li> <li>- Contractor-provided QAM</li> <li>- Contractor-provided Const. QC</li> </ul>		<p><b>Widened Roadway, SWM Pond at new Traffic Circle</b></p> 

**OFFICE LOCATION:** Design services were provided from AMT's Richmond and Chantilly offices, in addition to the project on-site field office. Construction services were provided from the field office.

- VERIFIABLE EVIDENCE OF GOOD PERFORMANCE:**
- AMT structured its delivery of the project to allow for adequate time for outreach and community input. First construction package was approved within 1 month of VDOT Design Approval following Public Hearing.
  - Acquired Individual Wetland Permit from ACOE within 7 months of application (2 months ahead of schedule)
  - Commendation from the County for excellent SWM facility design

- PROPOSED PERSONNEL INVOLVED:**
- Laura Mehiel, P.E.
  - Matt Willems, P.E.
  - Fred Wagner, P.E.
  - Tim Wells, EIT
  - Khoss Babaei, P.E.
  - Jack Goode, P.E., PTOE