A Design-Build Project
Fall Hill Avenue Widening
and Mary Washington Boulevard Extension
City of Fredericksburg, Virginia

State Project No.: U000-111-233, P101, R201, C501, B609
UPC 88699
Federal Project No.: STP-5A01()
Contract ID Number: C00088699DB59

May 2, 2013
Submitted to: Virginia Department of Transportation
3.2 Letter of Submittal
May 2, 2013

Bill Arel, P.E.
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Annex Building, 8th Floor
Richmond, VA 23219

Re: Letter of Submittal – Fall Hill Avenue Widening and Mary Washington Boulevard Extension
    City of Fredericksburg, Virginia (Contract ID Number: C00088699DB59)

Dear Mr. Arel:

For more than a decade, the widening of Fall Hill Avenue and extension of Mary Washington Boulevard has been on the radar of the Virginia Department of Transportation. The inadequate traffic capacity levels, as well as the substandard rating of the bridge over I-95, have made the success of this project critical to the safety and convenience of the public. The project faces several challenging aspects – including right of way acquisition, utility, drainage, environmental, historical, and traffic management concerns – and VDOT is seeking a team capable of delivering efficient and price-conscious design-build services that still offer the very maximum in quality and service.

To best address VDOT’s concerns on this project, W. C. English, Incorporated (English) has assembled a team of technical experts focused on providing the Department with not only the best price for this project, but the best quality. Many of the personnel on our team have lived or worked near the Fall Hill Avenue corridor and have a vested personal interest in the project’s success. In addition, we have identified regional firms and personnel who bring technical experience and knowledge to the team. I am confident our SOQ presents a team of unmatched experience and accomplishment.

Our design and engineering partner for this project is CDM Smith Inc. Other team members include Stantec Consulting Services Inc. (right of way and utility coordination/design); Williamsburg Environmental Group, Inc. (environmental and landscaping – SWAM); EBA Engineering, Inc. (quality assurance); Dovetail Cultural Resource Group (cultural resources – DBE); Triad Engineering, Inc. (geotechnical engineering); Engineering & Materials Technologies, Inc. (QA testing – DBE); and ECS Mid-Atlantic, LLC (construction QC testing).

As requested in Section 3.2 of the RFQ, the English team offers the following information:

3.2.1, 3.2.2, 3.2.3 Wilson L. Dickerson, Jr., P.E. (Senior Vice President) is the principal officer of W.C. English, Incorporated, the legal entity with whom a design-build contract with VDOT will be written. Mr. Dickerson will serve as the authorized representative and point of contact for the English team relative to this SOQ, and he will serve as the offeror’s representative. His contact information is shown to the right.
3.2.4 English is structured as a corporation and is not a limited liability company, joint venture, or any form of partnership. 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 W. C. English, Incorporated will serve as the lead contractor. CDM Smith Inc. will serve as the lead designer. More information on the history and expertise of these firms, as well as our subconsultants and subcontractors, can be found in Section 3.3.

3.2.6 The full legal names and addresses of English’s affiliated and/or subsidiary companies are identified in Attachment 3.2.6 in the Appendices.

3.2.7 Signed Certification Regarding Debarment forms – Attachments 3.2.7 (a) and 3.2.7 (b) – are provided in the Appendices.

3.2.8 W. C. English, Incorporated’s certification number is E009, and the firm is an active prequalified contractor to do business with VDOT. A copy of the certificate is included in the Appendices.

3.2.9 In the Appendices, please find a letter from Travelers Casualty & Surety Company regarding English’s bonding capability.

3.2.10 See Attachment 3.2.10 in the Appendices, along with full-sized copies of all registrations.

3.2.11 English is fully committed to meeting and/or exceeding the 15 percent DBE participation goal during the design and construction of the project. During the design phase, Dovetail Cultural Resource Group, a certified DBE in Virginia, will provide cultural resources services related to this project. Additionally, Engineering & Materials Technologies, Inc., a certified DBE in Virginia, will provide QA testing services. English will solicit prices from and subcontract work to qualified DBEs to assist in building the project and meeting the required goal.

Our team is 100 percent 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

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

☑ Experienced team
☑ Local resources
☑ Project familiarity
☑ Objectivity in our QA/QC process
3.3 Offeror’s Team Structure
3.3 Offeror’s Team Structure

English’s philosophy is simple:

Our word is our bond. Our customers are our partners. Evidence of good performance is that most of our work comes through negotiated contracts with repeat clients, rather than through the competitive bid process.

English has selected our team members with a particular focus on meeting the cultural, historical, environmental, traffic capacity, and safety needs that are so critical to this project. Not only have we teamed with local and regional firms capable of rapid response and high-quality deliverables, but we have given close consideration to making sure we have the best personnel from those firms to fit this job.

W. C. English, Incorporated Offeror, legal entity, lead contractor

In business for more than 100 years, English is a multi-disciplined construction firm licensed in eight states in the southeast United States, primarily working in Virginia, North Carolina, and South Carolina. The company’s areas of expertise have expanded through the years from general contracting to include monumental structures, power plants, water and wastewater treatment facilities, public safety, correctional and courthouse facilities, factories, highways and bridges, and historic renovations. Working under the leadership of 120 tenured personnel, English’s staff of 500 employees has supported 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 worked extensively with VDOT, local counties, and other local municipalities on design-build and construction projects similar in nature to the Fall Hill Widening. Just down the road, we built the Cowan Boulevard extension and faced many of the same project risks and issues we will see on this project. Additionally, English’s North Gayton Road project in Henrico County has many of the same features as this project and involved extensive public relations and utility coordination.

CDM Smith Inc. Lead designer, roadway and bridge design, hydraulic design, noise analysis, traffic engineering, quality control

CDM Smith has provided engineering and design services to dozens of design-build/PPTA projects nationally, including several in Virginia. The firm’s staff of 5,000 includes almost 1,000 personnel providing expertise in bridge, roadway, hydraulics, and other transportation-related disciplines, with experience in the design of roadways and structures in complex and context-sensitive locations. The firm’s construction inspection personnel have extensive experience working on bridge and roadway widening projects in both urban and rural areas, as well as high traffic configurations. CDM Smith will lead design from its Richmond office, and the firm’s project staff are prepared to be easily accessible to VDOT’s personnel.

CDM Smith has partnered with English on numerous Virginia roadway projects, as demonstrated in Section 3.4. Similar to the Fall Hill location, CDM Smith’s team members have performed work on many design-build and design-bid-build projects nationwide, including similar work in Virginia, Tennessee, North Carolina, and Florida. The Design Manager for this project has led several design-bid-build projects that are similar in nature to the Fall Hill project and has successfully managed design, permitting, and construction phase services.

Williamsburg Environmental Group, Inc. Environmental, landscape design

WEG, a SWaM certified small business, is a full-service environmental consulting and engineering firm providing environmental mitigation, permitting, and landscape architecture. The firm has a staff of nearly 100 professionals (including regulatory specialists, environmental scientists, stream and wetland ecologists,
geomorphologists, soil scientists, landscape architects, planners, and engineers) in its Fredericksburg, Richmond, and Williamsburg offices. Since 2003, WEG has worked with VDOT on numerous projects; the firm is currently working with the Department on projects related to wetlands and water quality and engineering services, wetland and stream maintenance monitoring, and services under the Richmond District design contract.

**WEG has participated on several design-build and design-bid-build projects, including the Fredericksburg District I-95/Route 630 Interchange Design, the Lorton Road Widening in Fairfax, and the Celebrate Virginia South project. WEG’s personnel have experience with the laws and regulations they anticipate for the Fall Hill project and have an understanding of the regulatory requirements associated with permitting, roadway, and multimodal projects. They have worked within the regulatory arena and are familiar with agency processes on both a state and federal level.**

**Dovetail Cultural Resource Group Cultural resources**

Dovetail is a certified SWaM and DBE (#647398) firm located in Fredericksburg. Their 30-member staff has a wide range of expertise, experience, and qualifications which include archaeological and architectural history services, National Register of Historic Places nomination, historic and archival research, artifact curation and analysis, development of educational materials and programs, historic cemetery identification and analysis, and Civil War Battlefield survey and boundary delineation studies. Dovetail’s founders, Kerri Barile and Michael Carmody, both served as preservation program coordinators in the VDOT Fredericksburg District office.

**Dovetail has extensive project experience in and around the Fall Hill Avenue project area, including conducting data recovery excavations for a Civil War confederate camp site (approximately 0.25 miles south); mapping Civil War earthworks associated with the northern defenses for the city; and serving as cultural resource consultants and coordinating with the local stakeholders, the National Park Service, and non-profit historical groups for the VDOT Route 3 widening project.**

**Stantec Consulting Services Inc. Utilities, survey, right of way**

Founded in 1954, Stantec provides professional consulting services in planning, engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics for infrastructure and facilities projects. On December 14, 2012, Greenhorne & O’Mara joined Stantec. G&O’s outstanding reputation as a leader in Virginia in infrastructure and design; transportation, environmental, and water resources engineering; geospatial and information technology; and hazard mitigation and security services is now combined with Stantec’s global expertise and more than 5 decades of experience.

**Stantec’s project personnel have worked with English and CDM Smith on many VDOT and other local and regional projects, including design-build projects. They have a thorough understanding of VDOT’s needs and requirements for utility design, location, and coordination, as well as right of way (ROW) and easement acquisition.**

**Triad Engineering, Inc. Geotechnical engineering**

Formed in 1975, Triad is a full-service engineering consultant firm specializing in geotechnical engineering, construction inspection and testing, drilling, laboratory testing, environmental services, civil design, land surveying, and other earth-science related disciplines. Projects have included design engineering; topographic and boundary surveys; subsurface explorations; construction monitoring, inspection, and testing; environmental assessments and remediation; and preparation of contract documents.
Triad has provided services on thousands of projects – in Virginia and regionally – of varying size and complexity since beginning operations. Triad maintains a successful working relationship with CDM Smith, partnering on numerous design-build and design-bid-build roadway and bridge projects for the West Virginia DOT.

**EBA Engineering, Inc. Quality assurance**

Founded in 1981, EBA has become one of the most experienced and respected CEI firms in the states of Maryland and Virginia. The firm’s professional services include environmental, geotechnical, structural, transportation, and utility engineering; construction management and inspection; surveying; and materials testing. Through a long track record of providing QA services on Virginia projects, EBA has gained a thorough understanding of VDOT’s construction program, *Road and Bridge Specifications and Standards, Work Area Protection Manual*, Site Manager record keeping systems, and administrative procedures.

*EBA has successfully provided CEI services on numerous contracts statewide, including recent VDOT projects such as the NOVA District Maintenance Inspection Contract; NOVA District-wide Construction Inspection Contract 2; and Richmond District Wide Construction Inspection Contract 3.*

**ECS Mid-Atlantic, LLC QC testing**

ECS specializes in geotechnical construction materials testing, environmental, and facilities engineering. The firm maintains a full-service AASHTO-accredited concrete and soils laboratories in numerous locations; these laboratories participate in QA/QC programs such as AMRL and CCRL. ECS maintains in-house training programs, and the firm’s personnel are certified by agencies such as ACI, WACEL, VDOT, and the International Code Council.

*ECS’s Fredericksburg office has professional staff, certified field personnel, and in-house laboratories that have provided QA/QC services on numerous construction materials testing projects in the Fredericksburg area. The firm’s extensive QA/QC testing experience includes several projects with our team members. ECS worked with English, CDM Smith, and Stantec on the I-81 truck climbing lanes project in Rockbridge County, and with CDM Smith and Stantec on the Route 199/ Jamestown 2007 project in James City County.*

**Engineering & Materials Technologies, Inc. QA testing**

E. M. Tech provides geotechnical, structural, and forensic engineering; consulting; materials testing; and construction QA/QC services to its clients in the Virginia, Maryland, and Washington, DC region. Since its founding in 1997, the firm has become one of the area’s most respected full-service engineering consulting firms. E. M. Tech is registered as a DBE in Virginia and participates in the successful development of projects involving numerous and varied construction methods.

*E. M. Tech has or is currently providing QA/QC testing and related services for several projects in Northern Virginia, including the Virginia DMV truck weigh station in Dumfries; the I-495/Capital Beltway HOT Lanes; and a roadway/pavement rehabilitation at Daingerfield Island (an FHWA project) in Alexandria.*

**3.3.1 Key Personnel Resume Forms**

Key Personnel Resume Forms (Attachment 3.3.1) for the six key personnel are provided in the tabbed attachment, and brief biographical information is shown on the following pages. All of our key personnel have previous experience in transportation projects of this size and with similar roles and responsibilities requested for this project. They demonstrate professional commitment and have stellar reputations, along with offering substantial benefits to this project.
### Key Personnel

#### 3.3.1.1 Design-Build Project Manager
**Judson Dalton** (English)
12 years exp.

- Proven management of Virginia design-build projects, such as the North Gayton Road project in Henrico County (served as the Design-Build Project Manager)
- Management of earthwork, structures, concrete and asphalt paving, utilities, and storm drainage
- Extensive VDOT experience, including oversight of construction quality management and contract administration
- Multi-phased construction expertise, including management of the risks associated with construction sequencing

#### 3.3.1.2 Quality Assurance Manager
**George Romack, P.E. (EBA)**
40 years exp.

- Extensive experience negotiating issues on behalf of VDOT
- QA oversight on comparable roadway and structural construction projects
- Experience as a VDOT construction engineer with a thorough understanding of the components and objectives of VDOT’s QA/QC plan for design and construction
- 30 years of FHWA experience – knowledge of state and federal quality guidelines

#### 3.3.1.3 Design Manager
**Randall Harris, P.E. (CDM Smith)**
26 years exp.

- Expertise in design and management of similar VDOT projects
- Proven experience managing multi-disciplined projects and teams, including oversight and review of design plans, specifications, constructability, and meeting demanding schedules
- Thorough understanding of VDOT design and construction standards and procedures, including the design QA/QC program
- Management of project risks to ensure proper mitigation during the design phase

#### 3.3.1.4 Construction Manager
**Darrell Sullivan** (English)
12 years exp.

- Background as a VDOT construction manager on numerous similar projects
- VDOT roadway and bridge construction experience, including roadway widening projects
- Multi-phased construction expertise, including management of the risks associated with construction sequencing
- Coordination and oversight of QA/QC personnel during implementation and maintenance of project construction quality programs

#### 3.3.1.5 Lead Environmental Manager
**Brian Hawley, P.W.S. (WEG)**
18 years exp.

- Experience in wetlands science, regulatory permitting, and compensatory mitigation
- Interfaces with VDOT on project scoping considerations, management, and issue resolution for two current VDOT environmental contracts
- Experience managing water quality permitting for VDOT’s Fredericksburg District
- Contributing author of the VDOT Water Quality Permitting Manual and other VDOT environmental guidance documents

#### 3.3.1.6 Lead Right of Way Manager
**Brenda Knight** (Stantec)
34 years exp.

- Background as a VDOT transportation ROW professional
- Experience includes negotiations, relocation assistance, preparation of legal documents, and real estate transfer documents
- Supervises property management relative to disposal of surplus property
- Coordination of consultant work to ensure quality and timeliness of their work
- Provides guidance and interpretation of VDOT policies and procedures

In addition to the key personnel listed above, we have also provided the identity of the project leaders and other participants who are responsible for major functions to be performed as shown in the organizational chart in section 3.3.2. They include:
Road Design and Transportation Management | Robert Bass, P.E. (CDM Smith): Experience in design and coordination of Virginia roadway projects ranging widely in complexity, including roadway geometry, drainage, MOT, and roadside development (Yrs exp: 26; Virginia P.E.; Certified Advanced Traffic Control Design Specialist)

Lead Structural Engineer | Cindy Shamblin, P.E. (CDM Smith): Experience designing and managing structural projects ranging in complexity, including design-builds for VDOT (multiple bridges in Region 1) and the West Virginia DOT (Yrs exp: 28; Virginia P.E.)

Hydraulic Design | Larry Clegg, P.E. (CDM Smith): Hydraulic design experience for VDOT and regional projects, including culvert and bridge hydraulic design, storm sewer, ditch, and stormwater management facilities, as well as development of environmental/USACE permits for hydraulic projects (Yrs exp: 28)

Cultural Resources | Kerri Barile, Ph.D. (Dovetail): Served as preservation program coordinator for VDOT; has worked on dozens of Fredericksburg area historic sites, buildings, and battlefields, including archaeological data recoveries on the Marriott site and nearby Smith Run Civil War encampment (Yrs exp: 20)

Noise Analyses | Rajit Ramkumar, P.E., LEED® AP (CDM Smith): One of CDM Smith’s leading air and noise experts; noise analysis work includes the I-485 design-build project in North Carolina and studies throughout the U.S. (Yrs exp: 10; FHWA Traffic Noise Model 2.5 training; LEED-accredited professional)

Utility Manager | David Malinoski, P.E. (Stantec): Extensive experience in the management, design, relocation, and coordination of public and private utilities, including several large and complex Virginia PPTA/design-build projects (Yrs exp: 34; Virginia P.E.)

Geotechnical Engineer | Randy Moulton, P.E. (Triad): Expertise includes reviewing and preparing subsurface exploration programs and evaluating geotechnical data and review, as well as design of deep foundations and retaining walls, evaluation of groundwater and seepage problems, and design of earth and earth-rock dams (Yrs exp: 36; Virginia P.E.)

Traffic Engineering | John Gould, P.E. (CDM Smith): Has managed traffic engineering and signal systems design for large design-build and design-bid-build projects for several state DOTs, including leading traffic efforts on Tennessee DOT’s massive SmartFIX40 project (Yrs exp: 29; Virginia P.E.)

Survey | Ivan Moody, R.L.S. (Stantec): Leads boundary, topographic, QA, construction stake-outs, and as-built surveys and has extensive experience in research of land records and plat preparation (Yrs exp: 30; Virginia R.L.S.)

Landscaping | George Rhodes, III, P.L.A. (WEG): Work includes conceptual designs and construction plans for environmentally and culturally sensitive areas, public outreach, agency coordination, and regulatory permitting (Yrs exp: 18; Virginia P.L.A.)

QC Manager | Victor Niagro (CDM Smith): Decades of experience in construction/reconstruction of roads, bridges, storm drains, and sidewalks; extensive VDOT work, including QC inspection for English’s I-81 truck climbing lanes design-build project (Yrs exp: 29; numerous VDOT, ACI, DCR, and OSHA certifications)

Lead QA Inspector | Christian Gagnon (EBA): Inspection experience on urban, complex construction projects, including sampling and testing of materials and placement; working knowledge of VDOT standards and relevant local, state, and federal regulations; experience working with USACE’s QC program (Yrs exp: 22)

3.3.2 The organizational chart – with clear reporting lines for managing, designing, and constructing the project, as well as the clear separation between quality assurance and construction operations – is illustrated on the following page. This chart identifies all disciplines and positions that will be necessary to complete the project including key personnel, project leaders, and other participants who are responsible for major functions to be performed. As shown, our team is organized to provide VDOT with a single source responsible for the delivery of a quality project. We will ensure that the chain of command is followed throughout design and construction of the project with our partnering style approach where issues are resolved at the lowest possible level.
KEY THIRD PARTIES
- State and Federal Government (Virginia DHR, FHWA, NPS)
- City of Fredericksburg
- Friends of the Rappahannock
- Historic Fredericksburg Foundation, Inc.
- Celebrate Virginia
- Central Park
- Mary Washington Hospital and Local Emergency Responders
- Local Communities, Businesses, and the Traveling Public
- Private Utilities

KEY PERSONNEL
Individual firm affiliation is indicated in superscript as follows:

1 English
2 CDM Smith
3 WEG
4 Dovetail
5 Stantec
6 Triad
7 EBA
8 ECS
9 E. M. Tech

Design-Build Project Manager
Judson Dalton

CONSTRUCTION MANAGER
Darrell Sullivan

QC MANAGER
Victor Niagro

QC INSPECTORS
CDM Smith

QC TESTING
ECS

GRADING SUPERINTENDENT
Paul Carter

BRIDGE SUPERINTENDENT
Mark Hackney

DESIGN MANAGER/DESIGN QA/QC
Randall Harris, P.E.

DESIGN TEAM LEADERS
ROAD DESIGN/TRANSPORTATION MANAGEMENT
Robert Bass, P.E.

LEAD STRUCTURAL ENGINEER
Cynthia Shamblin, P.E.

HYDRAULIC DESIGN
Larry Clegg, P.E.

LEAD ENVIRONMENTAL MANAGER
Brian Hawley, P.W.S.

CULTURAL RESOURCES
Kerri Barile, Ph.D.

NOISE ANALYSIS
Rajit Ramkumar, P.E., LEED® AP

GEOTECHNICAL ENGINEERING
Randy Moulton, P.E.

UTILITY MANAGER
David Malinoski, P.E.

LEAD RIGHT-OF-WAY MANAGER
Brenda Knight

TRAFFIC ENGINEERING SIGNS/SIGNALS
John Gould, P.E.

SURVEY
Ivan Moody, R.L.S.

LANDSCAPING
George Rhodes, III, P.L.A.
Functional relationships for the organizational chart on the previous page are as follows:

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Functional Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VDOT</strong></td>
<td>VDOT is the contracting entity. VDOT’s project manager will coordinate directly with the Design-Build Project Manager (hereafter referred to as “PM”). He will also interact with the Quality Assurance Manager (QAM) through VDOT’s independent assurance and independent verification process.</td>
</tr>
<tr>
<td><strong>Design-Build Project Manager</strong></td>
<td>Judson Dalton will be responsible for the overall project management and will be VDOT’s primary contact. The QAM, the Design Manager (DM), and the Construction Manager (CM) will report directly to Mr. Dalton. He will also coordinate with all third parties.</td>
</tr>
<tr>
<td><strong>Design Manager</strong></td>
<td>Reporting directly to the PM, Randall Harris will be responsible for managing the design process and coordinating all design project leaders. He will also interact with the CM and QAM.</td>
</tr>
<tr>
<td><strong>Construction Manager</strong></td>
<td>Reporting directly to the PM, Darrell Sullivan will be responsible for managing the construction process and all construction QC activities. He will coordinate the Quality Control Manager (QCM), coordinate structural monitoring, supervise English’s bridge and roadway superintendents, and coordinate subcontractors. He will also interact with the QAM and the DM.</td>
</tr>
<tr>
<td><strong>Quality Assurance Manager</strong></td>
<td>While reporting directly to the PM, George Romack will be responsible for the QA program and will coordinate with VDOT, supervise project QA inspection staff, and coordinate with design project leaders and the QA testing agency. He will also interact with the DM, CM, and QCM.</td>
</tr>
<tr>
<td><strong>Design Project Leaders</strong></td>
<td>Reporting to the DM, all design project leaders will manage and be responsible for their assigned disciplines. They will also interact with the construction team, other project leaders, and the QAM through the DM as necessary. Our design project leaders include the lead environmental manager and lead ROW manager, who will work extensively with VDOT and local stakeholders to make sure all documentation is addressed and to keep the project on schedule.</td>
</tr>
<tr>
<td><strong>Quality Control Manager</strong></td>
<td>Reporting directly to the CM, Victor Niagro will coordinate the QC inspection staff and the QC testing agency while reporting all sampling, testing, visual inspections, certifications, and daily diaries directly to the QAM.</td>
</tr>
<tr>
<td><strong>Key Third Parties</strong></td>
<td>Third parties will coordinate with the PM and VDOT, as required. They may also interact with other team members through the PM as necessary. As shown on the organizational chart, we have identified many key third parties whose interest in the project could impact the projects schedule. Our PM, DM, and project leaders will work hard to maintain open lines of communication with these parties to keep the project on track. Additionally, key third parties will have extensive input and maintain communication with the PM and VDOT, particularly focused on maintenance of traffic, utility, ROW, and environmental/cultural aspects of the project. One major concern to this project is the key third parties involved in the Memorandum of Agreement (MOA). They include the FHWA, City of Fredericksburg, and Virginia Department of Historic Resources (DHR), as well as the National Parks Service, Friends of the Rappahannock, and the Historic Fredericksburg Foundation.</td>
</tr>
</tbody>
</table>
3.4 Experience of Offeror’s Team
Experience of Offeror’s Team

3.4.1 The English team has been involved in numerous successful VDOT, PPTA, and design-build projects together (as well as on other teams). Our personnel know what needs to be done, with whom we need to coordinate, and how to make things happen. We bring all of this experience together to provide the best team for this project.

English and CDM Smith have provided six relevant and recent projects highlighting our capability and are similar in size, scope, and complexity to the project. We have shown our qualifications to serve as lead contractor and lead designer as well as our cooperative work history, partnering, and teaming experience. We have provided verifiable evidence of good performance as well as lessons learned that will be used for the benefit of this project. The projects listed at right are detailed in the work history forms provided in Attachments 3.4.1(a) and 3.4.1(b) in the Appendices.

On the following pages, we provide more information on our relevant work experience, as well as a table of our team’s experience working together. As further evidence of our qualifications, the following projects, on which English and its affiliated companies served as general contractor and/or CDM Smith has served as the lead designer, have provided valuable experience with respect to the key challenges on the Fall Hill project:

I-81 Truck Climbing Lanes, Rockbridge County, VA: English is constructing approximately 6.7 miles of truck climbing lanes, three bridge replacements, improvements to existing northbound left and right shoulders, upgrades to all guardrails, and bridge retaining walls. CDM Smith is providing independent QC inspection services. Stantec (as G&O) provided utility design and relocation coordination and ROW acquisition services and ECS provided inspection and materials testing. The project also consisted of developing mitigation strategies for wetland and stream impacts and a detailed MOT plan for the construction, milling, and overlap of the existing northbound lanes.

Spotsylvania County Transportation Improvement Projects Design-Build, Spotsylvania County, VA: English was a member of the Spotsylvania County Infrastructure, LLC (SCI) which was formed to serve as the developer and design-builder of the $94 million Spotsylvania County transportation improvement projects. English’s responsibilities in this project included design management, construction, QA, public relations, and program management for half of the projects. CDM Smith and Stantec served as engineering design firms on this GEC. The project also required ROW negotiations, utility relocations, and major MOT plans to handle traffic while widening the existing roads.

Route 895 - Pocahontas Parkway PPTA, Richmond, VA: As a contractor to FD/MK, English built the 8-mile roadway section which included 14 bridges and a toll plaza. CDM Smith was selected by FD/MK to provide the design for the Route 895 toll system and to complete the design and construction drawings for the Airport Connector Road.

PROJECT FEATURES KEY:

- Cultural/Historical
- Environmental Mitigation
- Utilities
- Right of Way
- Traffic Management
- Phased Construction
I-64 Rest Area and Welcome Center, New Kent County, VA: English/CDM Smith conducted this project to demolish, design, and construct a new Safety Rest and State Welcome Center on I-64 eastbound for VDOT. The project included removal and replacement of the rest area building, new utility extensions to the building, and MOT plans to lengthen the acceleration and deceleration lanes to the facility from I-64.

I-85 Rest Area and Welcome Center, Mecklenburg County, VA: English/CDM Smith conducted the first VDOT design-build project for a new Safety Rest and State Welcome Center on I-85 northbound. The project required removal and replacement of the building and extending the acceleration and deceleration lanes for the facility from I-85. MOT plans were required for these lanes.

Route 288, Richmond, VA: As part of the design-build group with APAC, English performed $7 million of excavation, grading, and storm drainage work on the project from the I-64 interchange to Route 250.

Southern Avenue, Washington, DC: CDM Smith was the lead designer for this $8.9 million design-build project for the replacement of the existing bridge on Southern Avenue over Suitland Parkway.

I-485, Charlotte Outer Loop, Charlotte, NC: CDM Smith is the lead designer for this fully controlled access freeway on new alignment from west of NC 115 to west of I-85. This $139.5 million project is an 8-lane divided facility with a diverging diamond interchange and is one of two remaining sections of the I-485 loop around Charlotte.

SmartFIX40, Knoxville, TN: CDM Smith provided roadway and structural design, traffic and geotechnical engineering, surveying, CPM scheduling, and CEI services, among other work, for one of Tennessee DOT’s largest and most award-winning projects to date. The Hall of Fame Drive bridge over I-40 and Ramp 1-A is a signature of the project—the architectural features provide a beautiful accent to this gateway to the City of Knoxville and allowed for an economical and time-sensitive solution for the interstate.

Natchez Trace Parkway, Adams County, MS: CDM Smith was the lead designer for this final 4.3-mile segment of 2-lane highway including seven bridges for this $26 million design-build project. The project won the 2006 ACEC South Carolina Engineering Excellence Award for special projects with a cost of more than $10 million.

State Route 46 over Lake Jesup Bridge Replacement, Seminole County, FL: CDM Smith served as the lead designer on this $37.7 million design-build project, which was 1.5 miles long and included a new 3,740-foot bridge where the St. Johns River intersects with Lake Jesup. The project also involved roadway intersection realignments and roadway construction.

Veterans Memorial Boulevard, Bowling Green, KY: CDM Smith was responsible for design of 1.5 miles of roadway, signal design for seven intersections, signing, and pavement marking. This was the first design-build project by the Kentucky Transportation Cabinet and involved widening an existing 2-lane roadway to a 5-lane urban minor arterial.

Region 1 Multiple Bridge Rehabilitation, VDOT Bristol District, VA: CDM Smith was the lead designer for this $4.2 million design-build project for the rehabilitation of 19 bridges located in eight counties in southwest Virginia.

West Point Bridge Replacements, West Point, VA: CDM Smith provided CEI for the construction of the replacement bridges over the Mattaponi and Pamunkey rivers, including widening the town’s main street from two to five lanes. This project received the VDOT 2006 Statewide Construction Quality Award and was the 2007 State Winner of the NPHQ National Achievement Award.

**PROJECT FEATURES KEY:**

- Cultural/Historical
- Environmental Mitigation
- Right of Way
- Utilities
- Traffic Management
- Phased Construction
The English Team – Working Together

In addition to English and CDM Smith maintaining a long-standing and successful working relationship, our subconsultants have experience working together on Virginia projects:

<table>
<thead>
<tr>
<th>Project Name and Location</th>
<th>English</th>
<th>CDM Smith</th>
<th>WEG</th>
<th>Stantec</th>
<th>Dovetail</th>
<th>Triad</th>
<th>EBA</th>
<th>ECS</th>
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</table>
3.5 Project Risks
3.5

Project Risks

3.5.1 Understanding project risk is an integral component of our commitment to quality. The key to successfully mitigating project risks is a continuous process: we must identify, manage, and resolve project risks, as well as monitor the development and implementation of a risk management plan. The English team has identified three areas of risk that are critical to on-time and on-budget completion and must be mitigated to ensure that this project stays on schedule, maintains support from the stakeholders, and can be successful.

Utility and Right of Way Risks

**Issues**

The project will face utility conflicts and relocation schedules impacting construction of the replacement bridge over I-95 and construction of Mary Washington Boulevard. Overhead utilities need to be shifted away from the proposed bridge alignment to allow adequate room to construct the new bridge. Relocation of the transmission towers on Mary Washington Boulevard will require attention to the lead time required for procuring the replacement towers. ROW acquisition will have a significant impact on utility relocation schedules if not acquired early enough. More time may be required for acquiring easements on properties with conservation easements and those requiring relocation of personal property.

**Features**

Several Dominion Transmission towers are in conflict with the construction of Mary Washington Boulevard. They are located in the proposed median and westbound lanes. We will meet with Dominion early to review the solutions developed with VDOT and determine schedule requirements. Numerous underground telecommunications and fiber optic cables run along Fall Hill Avenue and at the roundabout, and these will also need to be relocated. Additionally, the aerial utilities along the bridge over I-95 need to be relocated to allow for phased construction of the new bridge. Further, ROW acquisitions must be prioritized to allow early or phased relocation of utilities. Properties with conservation easements may need to include replacement easements for utility relocations. The acquisitions will need to be coordinated with owners and relevant agencies including DHR, the City, and VDOT, in accordance with the MOA. In addition, we anticipate VDOT will be involved in approvals of the appraisals, compensation, and relocation costs.

**Benefits**

Key to this project will be early coordination with utility companies, particularly with Dominion and telecommunication companies (Verizon, Comcast, Cox) to share schedules and incorporate those into the construction schedule. We anticipate holding a UFI meeting early in the project schedule, as well as supplemental coordination meetings. As early as possible, utilities must be authorized to acquire long lead items required by the schedule. We anticipate utility relocations will be phased with the construction schedule and ROW acquisition in an effort to minimize temporary relocations. VDOT will be invited to participate in coordination meetings with utilities and kept apprised of coordination efforts. VDOT’s role will also include review of proposed utility relocation plans. Additionally, the English team’s utility experts will review the feasibility of making design changes to minimize the utility impacts.

**Proof**

Early approval for Dominion’s long lead items have been utilized by our team members on the Route 895 project in Richmond and the I-95/Route 1 projects in Alexandria. Early coordination with utility companies with phased relocations was successful on the I-495 Hot Lanes project in Fairfax. Relocation work was coordinated with the phased construction schedule. ROW acquisition was prioritized for relocations and properties needed for bridge construction and utility relocations.
Environmental and Cultural Resources Risks

Issues
The involvement of federal agencies in the funding and permitting of this project will require compliance with Section 106 of the National Historic Preservation Act prior to issuance of federal and state permits. A Section 106 MOA has been executed on this project and several properties (parcels 26 and 27, the Kefauver and Burns properties) are encumbered by historic and/or open space easements. The MOA includes a number of project obligations, such as the production of a data recovery treatment plan, execution of the data recovery, production of an interpretive plan, production of a tree removal plan, and coordination and movement of the Fall Hill Manor Gate. These obligations require approval, comment, or coordination with outside agencies and/or groups. In addition, acquisition of land or easements on the properties with historical or open space easements may require coordination and negotiation with outside agencies including the DHR. The MOA obligations present challenges in coordinating with outside agencies in an efficient manner to maintain the project schedule.

Features
All of the obligations in the MOA, including preparation of a data recovery treatment plan, tree removal plan, and movement of the Fall Hill Manor Gate require some degree of coordination with outside agencies. It is our understanding that the required interpretive plan will be developed and implemented by the city. The MOA also provides FHWA, DHR, and VDOT “review and approval” authority of the treatment plan for the data recovery. To mitigate this risk, we plan on initiating work on the MOA items and property acquisition on the easement properties as soon as an NTP is issued, assuring work begins on these items as soon as possible. In addition, we would like to engage the agencies who will be involved in this process (including FHWA, DHR, and VDOT) at the outset of the project to establish a process and point of contact for the various reviews that will be required.

Benefits
An early start on the cultural resource tasks will allow any potential coordination problems or issues that consulting agencies or parties may have regarding MOA obligations to be brought up and addressed early in the project timeline. Additionally, the identification of official points of contact and development of a document review process at the outset of the project will establish expectations of those involved and should allow for a more timely review of material.

Proof
The development of a coordination process and identification of points of contact proved very useful on two projects Dovetail has conducted recently. On the Broad Street Bus Rapid Transit project in Richmond, a similar process was established to keep review of more than 600 resources in the project area moving. This process allowed DHR, DRPT, the City of Richmond, and the engineering firm to all stay on track with cultural resource obligations and approvals. In a similar manner, Dovetail has been working on the Purple Line project in Maryland. This is a large project with numerous cultural resource issues. The prime engineering firm initiated a coordination and QC program that encompasses all cultural resource reviews. This process has allowed the numerous agencies involved in this project to keep the review of cultural resources moving and not delay the project.

Starting early on cultural resource tasks has proved useful on many projects. The Route 3 widening in Spotsylvania County was a good example of a project that involved more cultural resource work than originally anticipated by the county. Because this work was initiated and coordinated with the agencies early in the project development process, the cultural resource work did not cause any project delays.
### Maintenance of Traffic/Traffic Management Plan Risks

#### Issues

The project consists of widening existing Fall Hill Avenue from Carl D. Silver Parkway, across I-95 and extending to the existing canal bridge. There, a new connection will be built to the hospital and over to Route 1. Traffic control will be a major issue/risk while widening the existing heavily traveled road and providing access to the bridge construction in the median of I-95. Designing an MOT that allows the traveling public a safe and efficient method to pass through the work zone is extremely important to VDOT, the English team, Mary Washington Hospital, Celebrate South, and all who use the facility for access from Route 1 to Route 3.

The first issue is how best to handle the pedestrian and vehicular traffic as we widen existing Fall Hill Avenue. Our TMP will provide two-way traffic on the existing road while allowing us to build to the outsides. The traffic will then be shifted to one side while the other side is completed. Traffic will be split to allow us to complete the paved median with turn lanes. As work progresses, we will provide and maintain access to the adjoining properties. *The challenge will be staying within the limits established in the environmental document, especially in areas where the proposed grade varies significantly from existing conditions.* Our plan will provide construction personnel with clear direction; provide proper traffic control devices, based on the current *Virginia Work Area Protection Manual*; and be designed to reduce problems for the public as they access both Celebrate South and Mary Washington Hospital.

The second issue is to provide proper access to the pier work in the median of I-95. The average daily traffic on the interstate is 144,000 vehicles per day. Our engineers will develop a plan for ingress and egress that will allow safe movements for our employees, emergency services, and the traveling public on I-95. When shipments are received or material is hauled in and out, it will be done by providing acceleration and deceleration lanes either constructed in the median or by use of short-term lane closures. These points will be signed in accordance with the VWAPM to alert the traffic on I-95, and our employees will be trained on proper methods to access the site. This project will require a comprehensive incident management section of the TMP to ensure that the team is thoroughly prepared and will know who is responsible, what assets are prepositioned, and how and where necessary detours are to be employed. *Emergency access to the hospital will be critical.*

#### Features

Our strategies to design and provide proper traffic control will be a joint effort between our designers, our construction personnel, and VDOT. As we partner together, the plan provided will incorporate the knowledge of experienced individuals, provide safety expectations, and minimize the impacts to the traveling public. This is important to all of us and especially to VDOT; it will reduce issues and complaints that are normal to a construction project and – most importantly – prevent accidents and injury. As we move through the design process and into construction, VDOT will be involved at critical junctures and be a partner in this decision making process.

English has used these same procedures on both the North Gayton Road and I-81 design-build projects with great success. Even though the Cowan Boulevard project was not a design-build, English worked with VDOT on a TMP to aid in the widening of the existing road and to access the pier work on I-95. Together, with the project owners, English has constructed the projects safely and with minimum impacts to the traveling public. English also used public information meetings and VDOT’s website to keep the public informed. These methods proved successful before on these projects, and we will continue them on Fall Hill Avenue.
Offerors shall furnish a copy of this Statement of Qualifications (SOQ) Checklist, with the page references added, with the Statement of Qualifications.

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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<td>Statement of Qualifications Checklist and Contents</td>
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<td>Section 3.1.2</td>
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<td>Appendix</td>
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<td>Attachment 2.10 (Form C-78-RFQ)</td>
<td>Section 2.10</td>
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<td>Appendix</td>
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ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C000758777DB47
PROJECT NO.: 0064-007-111, P101, R-201, C-501, B-627

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 11/03/2011 (Date)
2. Cover letter of Addendum No. 1 4/8/2013 (Date)
3. Cover letter of (Date)

W. C. English, Incorporated

[Signature]
Wilson L. Dickerson, Jr., PE., Senior Vice President

May 2, 2013
Attachment 3.2.6 – Affiliated and Subsidiary Companies
Offerors shall complete the table and include the addresses of affiliates or subsidiary companies as applicable. By completing this table, Offerors certify that all affiliated and subsidiary companies of the Offeror are listed.

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

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<thead>
<tr>
<th>Relationship with Offeror (Affiliate or Subsidiary)</th>
<th>Full Legal Name</th>
<th>Address</th>
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<tr>
<td>Shared Management &amp; Related Ownership</td>
<td>English Construction Company, Inc.</td>
<td>PO Box P-7000, Lynchburg, VA 24505</td>
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<tr>
<td>Shared Management &amp; Related Ownership</td>
<td>Counts &amp; Dobyns</td>
<td>37 Leland Rd, Rustburg, VA 24588</td>
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<tr>
<td>90% Ownership</td>
<td>Thomas Bros., LLC</td>
<td>494 Glenmore Drive, Salem, VA 24153</td>
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<tr>
<td>100% Ownership</td>
<td>Lee Construction Company of the Carolinas, Inc.</td>
<td>PO Box 7667, Charlotte, NC 28241</td>
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<tr>
<td>100% Ownership</td>
<td>MCC Acquisition, LC</td>
<td>PO Box 568, South Boston, VA 24592</td>
</tr>
<tr>
<td>Beverley E. Dalton (Sole stockholder of W. C. English, Incorporated) and A. Douglas Dalton, Jr., (stockholder of English Construction Company) own 99.15%</td>
<td>Adams Construction Company</td>
<td>PO Box 12627, Roanoke, VA 24027</td>
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Attachments 3.2.7 (a) and (b) – Certification Regarding Debarment
ATTACHMENT NO. 327(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

   a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.
   
   b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; and have not been convicted of any violations of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;
   
   c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1) b) of this certification; and
   
   d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

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

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

[Signature] May 2, 2013 Wilson L. Dickerson, Jr., PE
[Signature] Date Senior Vice President
Title

W. C. English, Incorporated

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

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

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

[Signature] 4/12/13 [Principal]

Date Title

[Signature] CSM Smith

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

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

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

Signature 3/29/13  Principal
Date

Title

Williamsburg Environmental Group, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

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

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

Signature: [Signature] Date: 29 MAR 2013

Title: President

DOWETAIL CULTURAL RESOURCE GROUP

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

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

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

[Signature] 4/24/13 [Title]

[Name of Firm]
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

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

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

[Signature] 4/5/13 [Principal Engineer]
Date [Title]

Triad Engineering, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(h)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

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

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

[Signature] April 2, 2013 [First Executive VP]
[Signature] Date Title

EBA Engineering, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

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

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

Signature  Date

Vice President/Branch Manager

Title

ECS Mid-Atlantic, LLC

Name of Firm
ATTACHMENT NO. 3.2.7(h)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: U000-111-233, P101, R201, C501, B609

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

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

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

Signature  Date  Principal Engineer

Signature  Date  Title

Engineering & Materials Technologies, Inc.  (E.M. Tech)
Name of Firm
VDOT Prequalification
E009
W. C. ENGLISH, INCORPORATED
FREQ. EXP : 04/30/2014

--FREQ ADDRESS ------------- WORK CLASSES (LISTED BUT NOT LIMITED TO)
P. O. BOX P-7000 002 - GRADING
LYNCHBURG, VA 24505-7000 003 - MAJOR STRUCTURES
PHONE : 434-845-0301 007 - MINOR STRUCTURES
FAX : 434-845-0306

BUSINESS CONTACT: DICKERSON, JR., WILSON LAMBERT
EMAIL: WDICKERSON@ENGLISHCONST.COM

-----DBE INFORMATION-----

DBE TYPE : N/A
DBE CONTACT : N/A

E417
ENVIRONMENTAL EROSION CONTROL, L.L.C.
FREQ. EXP : 04/30/2014

--FREQ ADDRESS ------------- WORK CLASSES (LISTED BUT NOT LIMITED TO)
P. O. BOX 392 036 - SOIL STABILIZATION
CLOVERDALE, VA 24077 070 - EROSION CONTROL
PHONE : 540-537-7990
FAX : 540-342-5462

BUSINESS CONTACT: JENNINGS, ERIC TODD
EMAIL: ERIC@EESCOIL.COM

-----DBE INFORMATION-----

DBE TYPE : N/A
DBE CONTACT : N/A
May 2, 2013

Commonwealth of Virginia
Department of Transportation (VDOT)
Central Office Mail Center
Loading Dock Entrance
1401 East Broad Street
Richmond, Virginia 23219
Attention: Brenda L. Williams

REF: REQUEST FOR QUALIFICATIONS A DESIGN-BUILD PROJECT
   Fall Hill Avenue Widening and Mary Washington Boulevard Extension
   City of Fredericksburg, Virginia
   State Project No.: U000-111-233, P101, R201, C501, B609  UPC 88699
   Federal Project No.: STP-SA01( ) Contract ID Number: C00088699DB59

To Whom It May Concern:

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 $125,000,000. 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 W. C. English, Incorporated 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 a 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction and said bonds will cover the Project and any warranty periods 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

Whitney D. Melton
Attorney-in-Fact

WDM/sll
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. 213599

Certificate No. 005184735

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, and Frances M. Saunders

of the City of Altavista 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 11th day of September 2012.

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

By: Robert L. Raney, Senior Vice President

State of Connecticut
City of Hartford ss.

On this the 11th day of September 2012, 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, 2016.

Marie C. Tetreault, Notary Public

58440-8-12 Printed in U.S.A.
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 Attorney-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 such 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 2nd day of May, 2013.

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. Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.
Attachment 3.2.10 –
SCC and DPOR Information
## ATTACHMENT 3.2.10

**State Project No. U000-111-233, P101, C501, R201, B609**

### 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.

<table>
<thead>
<tr>
<th>Business Name</th>
<th>SCC Number</th>
<th>SCC Type of Corporation</th>
<th>SCC Status</th>
<th>SCC Address</th>
<th>DPOR Address</th>
<th>DPOR Registration Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>W.C. English, Incorporated</td>
<td>0068944-8</td>
<td>S-Corp</td>
<td>Active</td>
<td>PO Box P-7000 Lynchburg, VA 24505</td>
<td>Class A Contractor</td>
<td>2701003331</td>
<td>04-30-2014</td>
<td></td>
</tr>
<tr>
<td>CDM Smith Inc.</td>
<td>F154186-3</td>
<td>S-Corp</td>
<td>Active</td>
<td>2112 West Laburnum Ave, Suite 100, Richmond, VA 23227</td>
<td>APELSCIDLA Branch Office</td>
<td>0411000652</td>
<td>02-28-2014</td>
<td></td>
</tr>
<tr>
<td>CDM Smith Inc.</td>
<td>F154186-3</td>
<td>S-Corp</td>
<td>Active</td>
<td>1100 Marion St, Suite 200, Knoxville, TN 37921</td>
<td>APELSCIDLA Branch Office</td>
<td>0411000900</td>
<td>02-28-2014</td>
<td></td>
</tr>
<tr>
<td>CDM Smith Inc.</td>
<td>F154186-3</td>
<td>S-Corp</td>
<td>Active</td>
<td>700 Washington St., East, Geary Plaza, Suite 210, Charleston, WV 25301</td>
<td>APELSCIDLA Branch Office</td>
<td>0411000903</td>
<td>02-28-2014</td>
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<tr>
<td>Williamsburg Environmental Group, Inc.</td>
<td>0357437-3</td>
<td>S-Corp</td>
<td>Active</td>
<td>5209 Center Street Williamsburg, VA 23188</td>
<td>APELSCIDLA Business Entity</td>
<td>0407003693</td>
<td>12-31-2013</td>
<td></td>
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<tr>
<td>Williamsburg Environmental Group, Inc.</td>
<td>0357437-3</td>
<td>S-Corp</td>
<td>Active</td>
<td>1011 Boulders Springs Dr., Ste 225 Richmond, VA 23225</td>
<td>APELSCIDLA Branch Office</td>
<td>0411000595</td>
<td>2-28-2014</td>
<td></td>
</tr>
<tr>
<td>Williamsburg Environmental Group, Inc.</td>
<td>0357437-3</td>
<td>S-Corp</td>
<td>Active</td>
<td>150 Riverside Pkwy, Ste. 301 Fredericksburg, VA 22406</td>
<td>APELSCIDLA Branch Office</td>
<td>0411000596</td>
<td>2-28-2014</td>
<td></td>
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<tr>
<td>Dovetail Cultural Resource Group</td>
<td>0668553-1</td>
<td>S-Corp</td>
<td>Active</td>
<td>Not required for cultural resources firms</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>
## ATTACHMENT 3.2.10

State Project No. U000-111-233, P101, C501, R201, B609

### SCC and DPOR Information

<table>
<thead>
<tr>
<th>Company Name</th>
<th>F1 or S1 or S2 or X</th>
<th>Entity Type</th>
<th>Status</th>
<th>Address Details</th>
<th>APELSCIDLA Branch Office or Business Entity</th>
<th>Registration Date</th>
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</thead>
<tbody>
<tr>
<td>Stantec Consulting Services Inc.</td>
<td>F149319-8</td>
<td>S-Corp</td>
<td>Active</td>
<td>10800 Midlothian Turnpike Suite 310, North Chesterfield, VA 23235</td>
<td>APELSCIDLA Branch Office</td>
<td>02-28-2014</td>
</tr>
<tr>
<td>Stantec Consulting Services Inc.</td>
<td>F149319-8</td>
<td>S-Corp</td>
<td>Active</td>
<td>10800 Midlothian Turnpike Suite 310, North Chesterfield, VA 23235</td>
<td>Real Estate Appraiser Board</td>
<td>03-31-2015</td>
</tr>
<tr>
<td>Triad Engineering, Inc.</td>
<td>F059539-9</td>
<td>S-Corp</td>
<td>Active</td>
<td>200 Aviation Dr, Winchester, VA 22062</td>
<td>APELSCIDLA Business Entity</td>
<td>12-31-13</td>
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<tr>
<td>EBA Engineering, Inc.</td>
<td>F123900-5</td>
<td>S-Corp</td>
<td>Active</td>
<td>714 Westwood Office Park, Fredericksburg, VA 22401</td>
<td>APELSCIDLA Branch Office</td>
<td>02-28-2014</td>
</tr>
<tr>
<td>ECS Mid-Atlantic, LLC</td>
<td>S120821-6</td>
<td>LLC</td>
<td>Active</td>
<td>915 Maple Grove Drive Ste 206, Fredericksburg, VA 22407</td>
<td>APELSCIDLA Branch Office</td>
<td>02-28-2014</td>
</tr>
<tr>
<td>Engineering &amp; Minerals Technologies, Inc.</td>
<td>0478633-1</td>
<td>S-Corp</td>
<td>Active</td>
<td>7857 Coppermine Dr, Manassas, VA 20109</td>
<td>APELSCIDLA Business Entity</td>
<td>12-31-2013</td>
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### ATTACHMENT 3.2.10

State Project No. U000-111-233, P101, C501, R201, B609

**SCC and DPOR Information**

<table>
<thead>
<tr>
<th>Business Name</th>
<th>Individual's Name</th>
<th>Office Location Where Professional Services will be Provided (City/State)</th>
<th>Individual's DPOR Address</th>
<th>DPOR Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
</tr>
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<tbody>
<tr>
<td>EBA Engineering, Inc.</td>
<td>George Patton Romack, P.E.</td>
<td>Fredericksburg, Virginia</td>
<td>96 Hamlin Dr., Fredericksburg, VA 22405</td>
<td>Professional Engineering</td>
<td>0402041824</td>
<td>02-28-2014</td>
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<tr>
<td>CDM Smith Inc.</td>
<td>Randall Alan Harris, P.E.</td>
<td>Richmond, Virginia</td>
<td>8500 Summit Acres Dr, Richmond, VA 23235</td>
<td>Professional Engineering</td>
<td>0402025745</td>
<td>01-31-2015</td>
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</table>
SCC and DPOR Documentation
CISM0180 CORPORATE DATA INQUIRY

CORP ID: 0068944 - 8  STATUS: 00 ACTIVE  STATUS DATE: 05/23/02

CORP NAME: ENGLISH, INCORPORATED, W. C.

DATE OF CERTIFICATE: 04/06/1954  PERIOD OF DURATION:  INDUSTRY CODE: 00

STATE OF INCORPORATION: VA VIRGINIA  STOCK INDICATOR: S STOCK

MERGER IND: S SURVIVOR  CONVERSION/DOMESTICATION IND:

GOOD STANDING IND: Y  MONITOR INDICATOR:

CHARTER FEE: MON NO: MON STATUS: MONITOR DTE:

R/A NAME: JAMES P KENT JR

STREET: 525 7TH STREET  AR RTN MAIL:

CITY: ALTAVISTA  STATE : VA  ZIP: 24517

R/A STATUS: 4  ATTORNEY  EFF. DATE: 03/15/05  LOC : 115

ACCEPTED AR#: 212 06 7229  DATE: 03/16/12  CAMPBELL COUNTY

CURRENT AR#: 212 06 7229  DATE: 03/16/12  STATUS: A  ASSESSMENT INDICATOR: 0

YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
13 130.00

130.00 6,000

(Screen Id:/Corp_Data_Inquiry)
**CORPORATE DATA INQUIRY**

- **CORP ID:** F154186 - 3  **STATUS:** 00 ACTIVE  **STATUS DATE:** 03/19/03
- **CORP NAME:** CDM Smith Inc.
- **DATE OF CERTIFICATE:** 03/19/2003  **PERIOD OF DURATION:**  **INDUSTRY CODE:** 70
- **STATE OF INCORPORATION:** MA  **MASSACHUSETTS**  **STOCK INDICATOR:** S STOCK
- **MERGER IND:** S SURVIVOR  **CONVERSION/DOMESTICATION IND:**
- **GOOD STANDING IND:** Y  **MONITOR INDICATOR:**
- **CHARTER FEE:** 2500.00  **MON NO:**
- **R/A NAME:** CT CORPORATION SYSTEM
- **STREET:** 4701 COX RD STE 301  **AR RTN MAIL:**
- **CITY:** GLEN ALLEN  **STATE:** VA  **ZIP:** 23060 6802
- **R/A STATUS:** 5  **B.E. AUTH IN VI EFF. DATE:** 01/05/04  **LOC : 143**
- **ACCEPTED AR#: 213 51 1590**  **DATE: 03/06/13**  **HENRICO COUNTY**
- **CURRENT AR#: 213 51 1590**  **DATE: 03/06/13**  **STATUS: A**  **ASSESSMENT INDICATOR:** 0

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<th>FEES</th>
<th>PENALTY</th>
<th>INTEREST</th>
<th>TAXES</th>
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<td>25,000,000</td>
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</table>

(Screen Id:/Corp_Data_Inquiry)
CISM0180

CORPORATE DATA INQUIRY

04/10/13 10:57:59

CORP ID: 0357437 - 3 STATUS: 00 ACTIVE STATUS DATE: 05/14/08

CORP NAME: WILLIAMSBURG ENVIRONMENTAL GROUP, INC.

DATE OF CERTIFICATE: 04/17/1990 PERIOD OF DURATION: INDUSTRY CODE: 00

STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK

MERGER IND: CONVERSION/DOMESTICATION IND:

GOOD STANDING IND: Y MONITOR INDICATOR:

CHARTER FEE: 50.00 MON NO: MON STATUS: MONITOR DTE:

R/A NAME: GREGORY R. DAVIS

STREET: 4801 COURTHOUSE STREET, SUITE 300 AR RTN MAIL:

CITY: WILLIAMSBURG STATE : VA ZIP: 23188

R/A STATUS: 4 ATTORNEY EFF. DATE: 02/25/04 LOC : 316

ACCEPTED AR#: 212 05 8145 DATE: 03/15/12 WILLIAMSBURG CI

CURRENT AR#: 212 05 8145 DATE: 03/15/12 STATUS: A ASSESSMENT INDICATOR: 0

YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES

13 100.00 0.00 0.00 0.00 100.00 5,000

(Screen Id:/Corp_Data_Inquiry)
CISM0180 CORPORATE DATA INQUIRY 10:58:45

CORP ID: 0668553 - 1 STATUS: 00 ACTIVE STATUS DATE: 11/30/06
CORP NAME: Dovetail Cultural Resource Group I, Inc.

DATE OF CERTIFICATE: 11/30/2006 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: VA VIRGINIA STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
CHARTER FEE: 50.00 MON NO: MON STATUS: MONITOR DTE:
R/A NAME: CHARLES W PAYNE JR

STREET: 725 JACKSON ST STE 200 AR RTN MAIL:
CITY: FREDERICKSBURG STATE: VA ZIP: 22401
R/A STATUS: 4 ATTORNEY EFF. DATE: 11/30/06 LOC: 206
ACCEPTED AR#: 212 17 7232 DATE: 11/19/12 FREDERICKSBURG
CURRENT AR#: 212 17 7232 DATE: 11/19/12 STATUS: A ASSESSMENT INDICATOR: 0
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
12 100.00 1,000

(Screen Id:/Corp_Data_Inquiry)

CORP ID: F149319 - 8  STATUS: 00 ACTIVE  STATUS DATE: 02/19/08
CORP NAME: Stantec Consulting Services Inc.
DATE OF CERTIFICATE: 12/04/2001  PERIOD OF DURATION:  INDUSTRY CODE: 00
STATE OF INCORPORATION: NY NEW YORK  STOCK INDICATOR: S STOCK
MERGER IND: S SURVIVOR  CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y  MONITOR INDICATOR:
CHARTER FEE: 2500.00  MON NO:  MON STATUS:  MONITOR DTE:
R/A NAME: CORPORATION SERVICE COMPANY
STREET: Bank of America Center, 16th Floor  AR RTN MAIL:
1111 East Main Street
CITY: RICHMOND  STATE : VA ZIP: 23219
R/A STATUS: 5  B.E. AUTH IN VI EFF. DATE: 04/29/11  LOC : 216
ACCEPTED AR#: 212 54 6780  DATE: 12/04/12  RICHMOND CITY
CURRENT AR#: 212 54 6780  DATE: 12/04/12  STATUS: A  ASSESSMENT INDICATOR: 0
YEAR  FEES  PENALTY  INTEREST  TAXES  BALANCE  TOTAL SHARES
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(Screen Id:/Corp_Data_Inquiry)
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<td>R/A NAME</td>
<td>RANDY L. MOULTON</td>
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<tr>
<td>STREET</td>
<td>y.o. BOX 2397</td>
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**Assessment**

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CORP ID: F123900 - 5
STATUS: 00 ACTIVE
STATUS DATE: 12/03/07

CORP NAME: EBA ENGINEERING, INC.

DATE OF CERTIFICATE: 10/22/1997
PERIOD OF DURATION:
INDUSTRY CODE: 70

STATE OF INCORPORATION: MD MARYLAND
STOCK INDICATOR: S STOCK

MERGER IND:
CONVERSION/DOMESTICATION IND:

GOOD STANDING IND: Y
MONITOR INDICATOR:

CHARTER FEE: 2000.00
MON NO:
MON STATUS:
MONITOR DTE:

R/A NAME: CT CORPORATION SYSTEM

STREET: 4701 COX RD STE 301
AR RTN MAIL:

CITY: GLEN ALLEN
STATE: VA
ZIP: 23060 6802

R/A STATUS: 5
B.E. AUTH IN VI EFF. DATE: 01/05/04
LOC: 143

ACCEPTED AR#: 212 53 6976
DATE: 09/26/12
HENRICO COUNTY

CURRENT AR#: 212 53 6976
DATE: 09/26/12
STATUS: A
ASSESSMENT INDICATOR: 0

YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
12 1,700.00 1,000,000

(Screen Id:/Corp_Data_Inquiry)
**LLCM3220**

**LLC DATA INQUIRY**

**LLC ID:** S120821 - 6  **STATUS:** 00 ACTIVE  **STATUS DATE:** 04/16/04

**LLC NAME:** ECS - Mid-Atlantic, LLC

**DATE OF FILING:** 04/16/2004  **PERIOD OF DURATION:**  INDUSTRY CODE: 00

**STATE OF FILING:** VA VIRGINIA  **MERGER INDICATOR:**

**CONVERSION/DOMESTICATION INDICATOR:**

**PRINCIPAL OFFICE ADDRESS**

**STREET:** 14026 THUNDERBOLT PL STE 100  
**CITY:** CHANTILLY  **STATE:** VA  **ZIP:** 20151-0000

**REGISTERED AGENT INFORMATION**

**R/A NAME:** JAMES A ECKERT

**STREET:** 14026 THUNDERBOLT PL STE 100  
**RTN MAIL:**

**CITY:** CHANTILLY  **STATE:** VA  **ZIP:** 20151-0000

**R/A STATUS:** 2  **O/D OF CORP M/M**  **EFF DATE:** 04/16/04  **LOC:** 129  **FAIRFAX COUNTY**

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(Screen Id:/LLC_Data_Inquiry)

**04/10/13  11:05:45**
CORPORATE DATA INQUIRY

CORP ID: 0478633 - 1  STATUS: 00 ACTIVE  STATUS DATE: 01/29/97
CORP NAME: ENGINEERING & MATERIALS TECHNOLOGIES, INC.
DATE OF CERTIFICATE: 01/29/1997 PERIOD OF DURATION:  
INDUSTRY CODE: 70
STATE OF INCORPORATION: VA VIRGINIA  STOCK INDICATOR: S STOCK
MERGER IND:  
GOOD STANDING IND: Y  MONITOR INDICATOR: 
CHARTER FEE: 50.00  MON NO: 
R/A NAME: SHAHZAD S MOOSA
STREET: 7857 COPPERMINE DR  AR RTN MAIL:
CITY: MANASSAS  STATE: VA ZIP: 20109
R/A STATUS: 2 OFFICER  EFF. DATE: 07/20/06  LOC: 176
ACCEPTED AR#: 213 01 1156  DATE: 11/28/12  PRINCE WILLIAM
CURRENT AR#: 213 01 1156  DATE: 11/28/12  STATUS: A  ASSESSMENT INDICATOR: 0
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
13 100.00

(Screen Id:/Corp_Data_Inquiry)
BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
*CLASSIFICATIONS* BLD H/H

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

Gordon N. Dixon, Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

PROFESSIONS: ENG

CDM SMITH INC
2112 WEST LABURNUM AVE
SUITE 100
RICHMOND, VA 23227

Gordon R. Dixon, Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

CDM SMITH INC
1100 MARION ST
SUITE 200
KNOXVILLE, TN 37921
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

CDM SMITH INC
700 WASHINGTON ST., EAST
GEARY PLAZA, SUITE 210
CHARLESTON, WV 25301

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 357-6500

NUMBER
0411000595

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

PROFESSIONS: ENG

WILLIAMSBURG ENVIRONMENTAL GROUP INC
1011 BOULDER SPRINGS DR
STE 225
RICHMOND, VA 23225

Gordon N. Dixon, Director

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AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

STANTEC CONSULTING SERVICES INC
10800 MIDLOTHIAN TURNPIKE
SUITE 310
NORTH CHESTERFIELD, VA 23235-4725

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9950 Mayland Dr., Suite 400, Richmond, VA 23233
TelephoneNumber: (804) 367-8500

REAL ESTATE APPRAISER BOARD
BUSINESS REGISTRATION

STANTEC CONSULTING SERVICES INC
10800 MIDLOTHIAN TURNPIKE SUITE 310
NORTH CHESTERFIELD VA 23235

Alteration of this document, use after expiration, or use by persons other than those named may result in criminal prosecution under the Code of Virginia.

Gordon N. Dixon, Director

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

 COMMONWEALTH OF VIRGINIA

REAL ESTATE APPRAISER BOARD
BUSINESS REGISTRATION
NUMBER: 4008 001770 EXPIRES: 03-31-2015
STANTEC CONSULTING SERVICES INC
10800 MIDLOTHIAN TURNPIKE SUITE 310
NORTH CHESTERFIELD VA 23235

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

PROFESSIONS: ENG

ECS-MID-ATLANTIC LLC
915 MAPLE GROVE DR
STE 206
FREDERICKSBURG, VA 22407-6935

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2013

NUMBER
0407005994

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

PROFESSIONS: ENG

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

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

COMMONWEALTH OF VIRGINIA

BOARD FOR APESCI/IDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407005994 EXPIRES: 12-31-2013
PROFESSIONS: ENG
ENGINEERING & MATERIALS TECHNOLOGIES, INC
7857 COPPERMINE DR
MANASSAS, VA 20109

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

GEORGE PATTON ROMACK
96 HAMLIN DR
FREDERICKSBURG, VA 22405

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE

RANDALL ALAN HARRIS
8500 SUMMIT ACRES DR
RICHMOND, VA 23235

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
Attachment 3.3.1 –
Key Personnel Resume Forms
# ATTACHMENT 3.3.1

## KEY PERSONNEL RESUME FORM

### Brief Resume of Key Personnel anticipated for the Project.

<table>
<thead>
<tr>
<th>a. Name &amp; Title</th>
<th>Judson H. Dalton, Design-Build Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment</td>
<td>Design-Build Project Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated</td>
<td>W.C. English, Incorporated</td>
</tr>
<tr>
<td>d. Years experience:</td>
<td>With this Firm 12 Years With Other Firms 0 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen(15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):</td>
<td></td>
</tr>
<tr>
<td>2007 - Present...Design-Build Project Manager...... W. C. English, Inc. (North Gayton Road)</td>
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<tr>
<td>2003 - 2004..... Asst. Construction Manager...... W. C. English, Inc. (Cowan Boulevard)</td>
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<tr>
<td>2001 - 2002..... Grade Checker/Foreman...... W. C. English, Inc. (Route 895 Connector)</td>
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<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
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<tr>
<td>Randolph Macon College, Ashland, Virginia / B.A. / 2001 / Business and Economics</td>
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<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #.</td>
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<tr>
<td>2009 / LEED Certification / VA Registration #10382156</td>
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<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
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</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each assignment, not those of the firm.</td>
<td></td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
<td></td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each assignment.</td>
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<tr>
<td>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)</td>
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</tr>
</tbody>
</table>

**Project Name:** North Gayton Road Design-Build, Richmond, Virginia  
**Name of Firm:** W.C. English, Inc.  
**Start Date:** 2007 (Design Phase) 2009 (Construction Phase)  
**End Date:** 2012  
**Project Role:** Design-Build Project Manager  
Mr. Dalton served as the project manager for this design-build, which project consisted of the design and construction of an 8,000-foot extension of a 4-lane divided highway from Route 250 to Pouncey Tract Road, including two conspan bridges and one bridge across I-64. It also included widening and rebuilding 1,000 feet of Shady Grove through an urban corridor and the construction of a shared-use path. As the design-build project manager, Mr. Dalton oversaw the entire design and construction process and coordinated with the client and local stakeholders.

**Responsibilities:**

- Provided overall project management included extensive construction engineering and inspection, QA/QC, and public involvement/relations, as well as all right of way acquisition
- Oversaw the development/execution of the traffic management plan
- Managed design and construction of retaining walls including MSE walls
- Managed design and construction of roadway on existing and new alignment
- Built and managed the project CPM schedule
- Managed subcontractors
- Led all project progress meetings, as the single point of contact
- Coordinated and paid for all utility relocations with a value of more than $1 million
- Managed design and installation of temporary and permanent traffic control devices
- Managed hydraulic design and construction including stormwater management
- Managed design and phased bridge construction over I-64
- Managed geotechnical investigation and foundation design
- Oversaw the environmental assessment and permitting
- Supervised personnel/equipment usage for self-performed work
- Planned events and communicated with the owner, inspectors, and engineers
Project Name: APM Terminals, Portsmouth, Virginia  
Name of Firm: W.C. English, Inc.  
Start Date: 2005   End Date: 2007  
Project Role: Assistant Project Manager and Construction Manager  
Mr. Dalton assisted with project management duties and provided oversight for construction of this 260-acre site development for a container handling facility which includes excavation, storm piping, water, sewer, electrical, stone, asphalt and concrete paving, and a rail system for cranes. This $90 million project was completed in 24 months.

Responsibilities:
- Worked directly with the project manager
- Supervised personnel/equipment usage for self-performed work constructing new road system throughout the property and the construction of all stormwater management facilities
- Planned/coordinated project progress meetings
- Scheduled and managed subcontractors
- Coordinated and scheduled owners’ inspectors and engineers working hand in hand with the QA/QC team scheduling testing and correcting any NCR to include the appropriate documentation
- Built and maintained the project CPM schedule

Project Name: Cowan Boulevard, Stafford County, Virginia  
Name of Firm: W.C. English, Inc.  
Start Date: 2002   End Date: 2005  
Project Role: Assistant Construction Manager  
Mr. Dalton assisted in oversight of all construction activities for this $11 million project, which extended the existing roadway in both directions as a 4-lane divided highway through an urban corridor with a shared use path connecting to Jefferson Davis Highway (U.S. 1 Bypass) to the east and Carl D. Silver Parkway to the west and widened existing facility to a 4-lane divided facility. Mr. Dalton participated in the construction management for three sections:
- The intersection of Central Park Boulevard and Carl D. Silver Parkway (project extension)
- In the median of I-95 building the bridge in both directions (construction of bridge over I-95)
- On Cowan Boulevard from I-95 to Route 1 (new alignment and widened existing alignment)

His work included oversight of 194,000 cubic yards of excavation, a major bridge across I-95, a large arch culvert with a pedestrian trail and bridge, and two signalized intersections. It also included replacing a 12-inch water line which paralleled the roadway. English, as the prime contractor, also had to work with an elementary school adjacent to the project to provide proper and safe access for the students, and Mr. Dalton participated in this process.

Responsibilities:
- Planned and coordinated project progress meetings
- Supervised personnel/equipment usage for self-performed work, which included grading and structure operations for the construction of roadway within existing footprint and the new alignment, the bridge over I-95, storm drain installation with stormwater management, execution of the TMP, and all traffic control on Cowan Boulevard and I-95 (temporary and permanent conditions)
- Scheduled and managed subcontractors to include the relocation of the public utilities
- Planned and coordinated with VDOT inspectors and engineers

Project Name: Route 895 Connector Project, Henrico County, Virginia  
Name of Firm: W.C. English, Inc.  
Start Date: 1998   End Date: 2002  
Project Role: Assistant Construction Manager/Foreman  
Mr. Dalton participated in the management of construction for this $85 million project, which was the first PPTA project initiated in the State of Virginia (as a design-build project, it had a very aggressive schedule). While assisting with construction management and serving as foreman of a construction crew, Mr. Dalton provided services for building 8 miles of roadway (which had 10 major drainage structures); 3,200,000 cubic yards of grading; 450,000 tons of stone and asphalt; and 14 bridges with 1,260,000 square feet of MSE walls. He also provided these services for the rebuilding the interchange of Chippenham Parkway (Route 150) and I-95, which included the connection with the 895 connector and then continuing the 895 connector to the tie-in with Route 295. English was a subcontractor for FD/MK (prime).

Responsibilities:
- Supervised personnel/equipment usage for self-performed work on heavy grading operation through new alignment which included execution of the TMP to include all necessary traffic control (temporary and permanent)
- Scheduled and assisted with inspectors and engineers
- Supervised the stormwater management facilities, specifically along I-295 at the new interchange
- Managed the installation and maintenance of all erosion control measures
- Coordinated and managed subcontractors including all storm drain installation
## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
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<tbody>
<tr>
<td>a. Name &amp; Title: George P. Romack, P.E., Senior Construction Manager</td>
</tr>
<tr>
<td>b. Project Assignment: Quality Assurance Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated: EBA Engineering, Inc.</td>
</tr>
<tr>
<td>d. Years experience: With this Firm 3 Years With Other Firms 0 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):</td>
</tr>
<tr>
<td><em>August 2010 - Present..... Senior Construction Manager..... EBA Engineering, Inc.</em></td>
</tr>
<tr>
<td><em>April 2006 - May 2010..... Construction Engineer..... VDOT Fredericksburg District</em></td>
</tr>
<tr>
<td><em>January 2005 - April 2006..... Construction Engineer..... VDOT Fredericksburg Area</em></td>
</tr>
<tr>
<td><em>1998 (and previous) - 2004..... Senior Engineer/Program Manager..... Federal Highway Administration</em></td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td><em>Virginia Polytechnic Institute, Blacksburg, Virginia / B.S. / 1968 / Civil Engineering</em></td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td><em>2006 / Civil Engineering / VA Registration # 041824</em></td>
</tr>
<tr>
<td><em>1984 / Structural Engineering / DC Registration # 8522</em></td>
</tr>
</tbody>
</table>

- Document the extent and depth of your experience and qualifications relevant to the Project.
  - Note your specific responsibilities and authorities for each assignment, not those of the firm.
  - Note whether experience is with current firm or with other firm.
  - Provide beginning and end dates for each assignment.

(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)

**Project Name:** Route 610 Indiantown Road, King George, Virginia  
**Name of Firm:** VDOT  
**Start Date:** 2005  
**End Date:** 2006  
**Project Role:** VDOT Area Construction Engineer  
Mr. Romack oversaw VDOT’s consultants and contractors providing services on this 2-mile project, which included a roadway upgrade and realignment, new drainage structures, and culvert widening and rehabilitation.  
**Responsibilities:**  
- Monitored project quality during construction (Minimum requirements for QA/QC on design-build PPTA projects)  
- Conducted regular project visits to monitor construction and participate in problem resolution  
- Met with materials lab personnel to review test results ensuring construction quality Ensured construction in accordance with the contract, plans and specifications  
- Conducted monthly review of project records, including materials notebook

**Project Name:** Route 208 Courthouse Bypass, Spotsylvania County, Virginia  
**Name of Firm:** VDOT  
**Start Date:** 2006  
**End Date:** 2009  
**Project Role:** VDOT District Construction Engineer  
This project included new construction (grading, drainage, bituminous paving) of a 3.5 mile-bypass. Mr. Romack oversaw VDOT’s consultants and contractors providing services for the bypass.  
**Responsibilities:**  
- Monitored project quality during construction (minimum requirements for QA/QC on design-build and PPTA projects)  
- Supervised engineers, inspectors, and materials personnel assigned to the project  
- Participated in resolution of environmental issues  
- Provided oversight of project, including review of project records and materials notebook  
- Reviewed material testing reports on a regular basis to ensure construction quality  
- Accommodated needs of the public and local businesses
| Project Name: DCE Route 624 Cat Point Creek, Richmond County, Virginia |
| Name of Firm: VDOT |
| Start Date: 2006 | End Date: 2008 |
| **Project Role:** VDOT District Construction Engineer |
| Mr. Romack oversaw VDOT’s consultants and contractors during construction. This project included a new 800-foot bridge construction and old bridge demolition, along with approach roadway realignment and improvement. |
| **Responsibilities:** |
| - Monitored project quality during construction (minimum requirements for QA/QC on design-build and PPTA projects) |
| - Provided oversight of project, including project records, fabrication plans, and materials notebook |
| - Reviewed material testing reports on a regular basis to assure construction quality |
| - Resolved issues pertaining to access, construction techniques, field testing of high strength bolts, and project schedule |
| - Supervised engineers, inspectors, and materials personnel assigned to the project |
| - Performed quality inspections of bridge construction |

| Project Name: DCE Route 639 Bragg Road, Spotsylvania County, Virginia |
| Name of Firm: VDOT |
| Start Date: 2008 | End Date: 2010 |
| **Project Role:** VDOT District Construction Engineer |
| This project involved roadway widening and improvements to 2.5 miles of Route 639, and Mr. Romack oversaw VDOT’s consultants and contractors providing services during construction. |
| **Responsibilities:** |
| - Monitored project quality during construction (minimum requirements for QA/QC on design-build and PPTA projects) |
| - Communicated regularly with inspection staff and the contractor to address the concerns, including meeting with the home owners on site |
| - Supervised engineers, inspectors, and materials personnel assigned to the project |
| - Resolved numerous complaints and issues from business owners and residents along the road over access, dust, noise, etc. |
| - Provided oversight of project, including project records and materials notebook |
| - Reviewed material testing reports on a regular basis to assure construction quality |
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Name &amp; Title:</strong> Randall Harris, P.E., Principal</td>
</tr>
<tr>
<td><strong>b. Project Assignment:</strong> Design Manager</td>
</tr>
<tr>
<td><strong>c. Name of Firm with which you are now associated:</strong> CDM Smith Inc.</td>
</tr>
<tr>
<td><strong>d. Years experience:</strong> With this Firm 7 Years With Other Firms 19 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen (15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):</td>
</tr>
<tr>
<td>July 2011 - Present..... Senior Project Manager/Group Leader..... CDM Smith</td>
</tr>
<tr>
<td>September 2005 - July 2011..... Associate-in-Charge/Senior Project Manager..... CDM Smith</td>
</tr>
<tr>
<td>November 2000 - September 2005..... Transportation Group Manager/Project Manager..... Stantec</td>
</tr>
<tr>
<td>1998 (and previous) - November 2000..... Roadway Engineer/Project Manager..... Stantec</td>
</tr>
<tr>
<td><strong>e. Education:</strong> Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>North Carolina A &amp; T University, Greensboro, North Carolina / Bachelor of Science / 1986 / Architectural Engineering Design and Urban Planning</td>
</tr>
<tr>
<td><strong>f. Active Registration:</strong> Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td>1995 / Professional Engineer / Virginia Registration #0402-025745</td>
</tr>
<tr>
<td><strong>g. Document the extent and depth of your experience and qualifications relevant to the Project.</strong></td>
</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each assignment, not those of the firm.</td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each assignment.</td>
</tr>
<tr>
<td>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)</td>
</tr>
</tbody>
</table>

**Project Name:** Route 262 (PE-103), Augusta County, Virginia  
**Name of Firm:** Stantec  
**Start Date:** 1994 **End Date:** 2005  
**Project Role:** Project Manager  
Mr. Harris served as project manager for this 1.9-mile, 4-lane principal arterial roadway on new location from Route 252 to Route 254 with a construction value of $18.5 million. He managed preliminary studies and alternative evaluation; the selected alternative reduced right of way impacts along Route 254. He also oversaw the modification of an interchange at Route 252 including structure over Route 252, grade separation at the CSX Railroad and Route 703, and a partial diamond interchange at Route 254. Additionally, Mr. Harris managed major roadway and drainage design to Route 703 and Route 254.  
**Responsibilities:**  
- Managed and coordinated all design, as well as numerous subconsultants  
- Established and provided oversight of QA/QC plan and performed consultation during construction (similar to design-build services, as the design manager)  
- Developed MOT plans including a detour on Route 254  
- Coordinated with third-party agencies, such as CSX and DCR  
- Developed phased erosion and sediment plans including design of stormwater management facilities  
- Participated in value engineering and constructability reviews  
- Completed retaining wall design along Route 254  
- Completed all required permit sketches

**Project Name:** Route 262 (PE-104), Augusta County, Virginia  
**Name of Firm:** Stantec  
**Start Date:** 1994 **End Date:** 2005  
**Project Role:** Project Manager  
Mr. Harris served as project manager for this 2.5-mile, 4-lane principal arterial roadway on new location from Route 254 to Route 250 with a construction value of $12.5 million. He oversaw preliminary studies and alternative evaluation for interchange configurations, as well as the completion of a diamond interchange at Route 254, a diamond interchange at...
Route 720 and the completion of a diamond interchange at Route 250. The project included major design on Route 720, and construction of two noise barriers. This project received exceptional ratings for work performance on post design evaluation.

Responsibilities:
- Managed and coordinated all elements of design
- Established and provided oversight of QA/QC plan and performed consultation during construction (similar to design-build services, as the design manager)
- Managed value engineering and constructability review
- Oversaw public involvement, including additional sound wall meetings with Fox Hill area residents
- Completed phased erosion and sediment control plans, including design of stormwater management facilities

Project Name: McIntire Road Extension, City of Charlottesville and Albemarle County, Virginia
Name of Firm: CDM Smith
Start Date: 2005 End Date: 2013
Project Role: Project Manager
Mr. Harris served as project manager for the design of 0.53 miles of urban arterial roadway on new location with an adjacent enhanced pedestrian path. He managed structural staff for design of a 197-foot, 3-span steel plate girder bridge over the Norfolk Southern Railroad; a 280-foot, 3-span steel plated girder bridge over Meadow Creek; and a 110-foot bowstring steel truss pedestrian bridge over Meadow Creek. He also oversaw hydraulic design, phased erosion and sediment control plans, and scour analyses.

Responsibilities:
- Established and provided oversight of QA/QC plan, QA of project documents, and performed consultation during construction (similar to design-build services, as the design manager)
- Managed client contact with VDOT, overall work progress, and budget and subconsultant management
- Oversaw implementation of architectural treatment on two of the three bridges
- Managed final roadway design plans – design and oversight of other roadway designers

Project Name: Route 351 Pembroke Avenue over the Hampton River, Hampton, Virginia
Name of Firm: Stantec
Start Date: 1995 End Date: 2003
Project Role: Project Manager
Mr. Harris served as project manager for the roadway improvement and bridge replacement structure over the Hampton River. He oversaw services including surveys, digital mapping, and complete right of way and construction plans, as well as storm sewer design and scour analyses for structure over the Hampton River. Additionally, Mr. Harris managed the process of major private utility relocations.

Responsibilities:
- Managed several subconsultants
- Established and provided oversight of QA/QC plan and performed consultation during construction (similar to design-build services, as the design manager)
- Oversaw public involvement
- Managed roadway design and right of way and utility coordination
- Oversaw environmental coordination
- Oversaw MOT and detour plans

Project Name: Route 262 (PE-102), Augusta County, Virginia
Name of Firm: Stantec
Start Date: 1993 End Date: 2002
Project Role: Project Manager/Project Engineer
Mr. Harris served as project manager and engineer of 2.3 miles of 4-lane arterial roadway from Route 11 to Route 252 on new location with a construction value of $24.5 million. His design work included the completion of a full cloverleaf interchange with Route 11 and proposed interchange and roadway improvements of Route 613 and Route 252. Initially, only two lanes of this design were constructed based on current traffic requirements.

Responsibilities:
- Managed and coordinated elements of design
- Oversaw design of horizontal and vertical alignments and cross sections, as well as storm sewer design
- Oversaw MOT plans
- Provided consultation during construction
- Provided QA reviews
# ATTACHMENT 3.3.1

## KEY PERSONNEL RESUME FORM

**Brief Resume of Key Personnel anticipated for the Project.**

a. **Name & Title:** Darrell Sullivan, Project Superintendent

b. **Project Assignment:** Construction Manager

c. **Name of Firm with which you are now associated:** W.C. English, Incorporated

d. **Years experience:**
   - With this Firm: 12 Years
   - With Other Firms: 0 Years
   - Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen(15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):
     
     - 2010 - Present... Construction Manager ..... W. C. English, Inc. (Route 208 Spotsylvania County)
     - 2007 - 2010 ..... Construction Manager ..... W. C. English, Inc. (Spotsylvania Bond Projects)
     - 2005 - 2007 ..... Construction Manager ..... W. C. English, Inc. (Layhill Road Phases A, B, C)
     - 2004 - 2005 ..... Construction Manager ..... W. C. English, Inc. (Investigated possible projects)
     - 2000 - 2004 ..... Construction Manager ..... W. C. English, Inc. (Route 218 Stafford County)
     - 1998 (and previous) - 1999 ..... Construction Manager ..... W. C. English, Inc. (Route 29 Albemarle County)

e. **Education:**
   - Name & Location of Institution(s)/Degree(s)/Year/Specialization:
     - New River Community College, Dublin, Virginia / No Degree / 1973-1975
     - Architectural and Construction Engineering/ Virginia Tech, Blacksburg, Virginia / No Degree / 1975-1977

f. **Active Registration:**
   - Year First Registered/ Discipline/VA Registration #:
     - 2009 / ACI Certification / #1179286
     - 2009 / First Aid/CPR
     - 2008 / Responsible Land Disturber Certification / #29115
     - 2006 / E&S Control Certification / #3067C
     - 2008 / WZTC - Intermediate w/Traffic Control Supervisor Certification ATSSA Certification / #219253

g. **Document the extent and depth of your experience and qualifications relevant to the Project.**
   1. **Note your specific responsibilities and authorities for each assignment, not those of the firm.**
   2. **Note whether experience is with current firm or with other firm.**
   3. **Provide beginning and end dates for each assignment.**

   (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>State Route 208, Spotsylvania County, Virginia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Firm:</td>
<td>W.C. English, Inc.</td>
</tr>
<tr>
<td><strong>Start Date:</strong></td>
<td>2010</td>
</tr>
<tr>
<td><strong>End Date:</strong></td>
<td>Anticipated July 2013</td>
</tr>
<tr>
<td><strong>Project Role:</strong></td>
<td>Construction Manager</td>
</tr>
</tbody>
</table>

As construction manager, Mr. Sullivan has been tasked with overseeing all aspects of construction work on this $14 million VDOT project, which consists of relocating existing State Route 208 with new alignment which includes the addition of travel lanes as well as two new bridges over the Ta and Po rivers and the widening of existing facilities.

**Responsibilities:**

- 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
- Scheduled subcontractors
- Coordinated directly with VDOT and QA/QC staff to assist in implementing the quality program
- 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
-Reviewed cost and productions and evaluated resources on a daily basis
-Coordinated with property owners to maintain access to their property
**Project Name:** Layhill Road Phases A, B, C  
**Name of Firm:** W.C. English, Inc.  
**Start Date:** 2005  **End Date:** 2007  
**Project Role:** Construction Manager

The $4+ million project consisted of building an access road on new alignment into the new Leeland Station subdivision. Mr. Sullivan oversaw the entire construction process and managed workers and processes related to the construction portion of the job. The design connected two existing roads and included a 3,500-foot bridge over CSX Railroad, which included through lanes in both directions as well as dedicated left lane turn lanes for the subdivision access roads. This road also provided access to the newly completed Leeland Elementary School and a future library and community center.

**Responsibilities:**

- Provided overall project management including scheduling crews and subcontractors
- Worked with the owner to review designs, prior to and during construction, and met the schedule for school access
- Ensured project quality by using and managing the onsite quality control program
- Complied with all environmental and permit requirements, storm drain installation, and stormwater management
- Provided traffic control for the temporary and permanent conditions at all intersections
- Coordinated with all utility relocations

---

**Project Name:** Route 218, Stafford County, Virginia  
**Name of Firm:** W.C. English, Inc.  
**Start Date:** 2000  **End Date:** 2004  
**Project Role:** Construction Manager

Mr. Sullivan provided construction oversight and management of the entire construction team for this $16 million VDOT project consisted 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).

**Responsibilities:**

- 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 controls
- 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
- Coordinated the installation of utilities

---

**Project Name:** Route 29, Albemarle County, Virginia  
**Name of Firm:** W.C. English, Inc.  
**Start Date:** 1996  **End Date:** 1999  
**Project Role:** Construction Manager

Mr. Sullivan provided construction oversight and management of the construction team. This $10 million VDOT project had 0.93 miles of roadway, grading, drainage, asphalt paving, incidentals, gas/water lines, signals, and two bridges.

**Responsibilities:**

- Supervised and scheduled all construction, crews, and subcontractors
- Executed traffic management for the temporary and permanent conditions
- Monitored the installation and maintenance of erosion and sediment controls

---

**Project Name:** Frederick County Weigh Station  
**Name of Firm:** W.C. English, Inc.  
**Start Date:** 1993  **End Date:** 1995  
**Project Role:** Construction Manager

Mr. Sullivan provided construction oversight and management of the entire construction team for this project – including a I-81 Weigh-in Motion Scale System – which included grade, drainage, two box culverts, concrete paving, incidentals, scale house with computerized controls, facilities, and signal/lighting. For Mr. Sullivan’s and English’s hard work, the firm received the *Marvin M. Black Excellence in Partnering Award*.

**Responsibilities:**

- Coordinated subcontractors
- Monitored the schedule, quality control, and erosion control
- Coordinated installation of permanent and temporary traffic control devices
- Supervised and scheduled all construction
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a.</strong> Name &amp; Title: Brian Hawley, P.W.S., Program Manager - Transportation</td>
</tr>
<tr>
<td><strong>b.</strong> Project Assignment: Lead Environmental Manager</td>
</tr>
<tr>
<td><strong>c.</strong> Name of Firm with which you are now associated: Williamsburg Environmental Group, Inc.</td>
</tr>
<tr>
<td><strong>d.</strong> Years experience: With this Firm 12 Years With Other Firms 0 Years</td>
</tr>
</tbody>
</table>

Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen(15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):

- 2005 - Present..... Program Manager – Transportation ..... Williamsburg Environmental Group, Inc.
- 1999 - 2005..... Senior Environmental Specialist..... VDOT Fredericksburg District
- 1998 (and previous) - 1999..... Water Resources Engineer/Wetlands Scientist ..... Wetlands Studies and Solutions, Inc.

<table>
<thead>
<tr>
<th><strong>e.</strong> Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Virginia, Charlottesville, Virginia / M.E. / 1995 / Civil Engineering</td>
</tr>
<tr>
<td>Mary Washington College, Fredericksburg, Virginia / B.S. / 1987 / Physics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>f.</strong> Active Registration: Year First Registered/ Discipline/VA Registration #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 / Professional Wetland Scientist / VA Registration # 1253 (exp. 12/31/2014)</td>
</tr>
</tbody>
</table>

- Document the extent and depth of your experience and qualifications relevant to the Project.
  - Note your specific responsibilities and authorities for each assignment, not those of the firm.
  - Note whether experience is with current firm or with other firm.
  - Provide beginning and end dates for each assignment.

(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)

**Project Name:** VDOT Statewide Open-End Contracts: Wetland and Stream Maintenance and Monitoring and Related Services, Commonwealth of Virginia

**Name of Firm:** Williamsburg Environmental Group, Inc.

**Start Date:** 2007 **End Date:** Ongoing

**Project Role:** Contract Manager

Mr. Hawley is the contract manager providing stream/wetland mitigation monitoring, feasibility studies, and corrective action/remediation plan development and implementation for the VDOT on multiple task orders throughout the Commonwealth. This is the second consecutive 3-year term on this contract, and Mr. Hawley continues to work with VDOT and regulatory agencies to coordinate all needs as quickly as possible.

**Responsibilities:**

- Provides project management and oversight of regulatory and permitting coordination
- Manages environmental assessments
- Oversees corrective action planning and resolution
- Manages permit and mitigation environmental compliance

**Project Name:** VDOT Statewide Open-End Contract: Wetlands and Water Quality Engineering Services, Commonwealth of Virginia

**Name of Firm:** Williams Environmental Group, Inc.

**Start Date:** 2010 **End Date:** Ongoing

**Project Role:** Contract Manager

Mr. Hawley is the contract manager providing delineation of the Waters of the United States (WOUS), threatened and endangered species surveys, Section 7 consultation support, permitting and regulatory support, and compensatory mitigation design services for the VDOT, on multiple task orders throughout the Commonwealth. He continues to work with VDOT and regulatory agencies to coordinate all needs as quickly as possible.

**Responsibilities:**

- Provides project management and oversight of regulatory and permitting coordination
- Leads permit and mitigation environmental compliance
- Manages environmental surveys
- Oversees compensatory stream and wetland mitigation
- Manages permitting and regulatory coordination
Mr. Hawley is the project manager providing environmental surveys and permitting including the development and implementation of a MOA to address Section 106 for the Banks Ford and Salem Church Battlefield Historic Districts, Phase III recovery, preservation of Confederate earthworks and encampments, as well as archeological sites on the 490-acre mixed-use project.

Responsibilities:
- Manages permitting and regulatory coordination, including Section 106 for historic, culturally sensitive areas (similar in nature to the Fall Hill project site)
- Provides project management
- Oversees erosion and sediment control compliance
- Manages permit environmental compliance

Mr. Hawley managed the delineation of WOUS including wetlands, threatened and endangered species surveys, permitting, agency coordination and regulatory support for this site, which required the resolution of Section 106 for prehistoric archaeological sites, as well as the Meadows, an equestrian facility and birthplace of Secretariat. The project had a very aggressive schedule and required approvals in order to support the relocation of the Virginia State Fair. Following Mr. Hawley’s and other WEG employees’ effort, the firm received a letter of recognition from the VDOT on this high profile project.

Responsibilities:
- Provided project management of environmental issues on a tight schedule
- Managed environmental surveys
- Oversees permitting and regulatory coordination

For this fast track governor’s transportation initiative project, Mr. Hawley has provided project management for delineation, threatened and endangered species, permitting, agency coordination and regulatory support, onsite in-kind self-mitigating stream relocation, and offsite stream mitigation design services using natural stream channel design (NSCD), necessary to obtaining a permit in 9 months.

Responsibilities:
- Provides project management of environmental issues on a tight schedule
- Manages environmental surveys
- Oversees compensatory stream and wetland mitigation
- Manages permitting and regulatory coordination
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Name &amp; Title:</strong> Brenda Knight, Right of Way Project Manager</td>
</tr>
<tr>
<td><strong>b. Project Assignment:</strong> Lead Right of Way Manager</td>
</tr>
<tr>
<td><strong>c. Name of Firm with which you are now associated:</strong> Stantec Consulting Services</td>
</tr>
<tr>
<td><strong>d. Years experience:</strong> With this Firm 1 Years With Other Firms 34 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen(15) years. (NOTE: If you have less than 15 years of experience, please list all of your experience for those years you have worked.):</td>
</tr>
<tr>
<td>2012 - Present….. Right of Way Project Manager….. Stantec Consulting Services</td>
</tr>
<tr>
<td>2000 - 2012….. Transportation Right of Way Specialist….. VDOT Fredericksburg</td>
</tr>
<tr>
<td>1998 (and previous) - 2000….. Transportation Right of Way Specialist….. VDOT Fredericksburg</td>
</tr>
<tr>
<td><strong>e. Education:</strong> Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>Northern Virginia Community College / course work / 1984 / Principles of Real Estate 1 and 2, Real Estate Law</td>
</tr>
<tr>
<td>American Institute of Real Estate Appraisers / 1980 / Real Estate Appraisal Principles</td>
</tr>
<tr>
<td><strong>f. Active Registration:</strong> Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td><strong>g. Document the extent and depth of your experience and qualifications relevant to the Project.</strong></td>
</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each assignment, not those of the firm.</td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each assignment.</td>
</tr>
<tr>
<td>(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)</td>
</tr>
</tbody>
</table>

**Project Name:** Route 218, Stafford County, Virginia  
**Name of Firm:** VDOT  
**Start Date:** 2011  
**End Date:** 2012  
**Project Role:** Right of Way Project Manager  
Ms. Knight served as the right of way project manager for this VDOT project. This project included 0.4 miles of roadway improvements including new turn lanes, drainage, curb and gutter, sidewalks, and landscaping to increase the capacity of turning movements and through traffic at the intersection with Route 1. The project was coordinated with the county’s redevelopment plans and designed to minimize the impact on historical resources. The project impacted 26 parcels and included the relocation of three residential and six commercial properties. The estimated project cost was $25 million including right of way acquisition, utility relocation, and construction.  
**Responsibilities:**  
- Coordinated acquisition of historic and conservation properties with VDOT’s environmental section and Virginia’s DHR  
- Oversaw and coordinated of acquisition and relocations

**Project Name:** Hanover County Project, Virginia  
**Name of Firm:** Stantec  
**Start Date:** 2012  
**End Date:** 2013  
**Project Role:** Right of Way Manager  
Ms. Knight served as the right of way manager for the acquisition of 12 parcels. This project includes intersection improvements on Pole Green Road at Walnut Grove Road and Rural Point Road. Improvements include changes in alignment and the addition of turn lanes.  
**Responsibilities:**  
- Provided project management and negotiations for 12 parcels  
- Assigned appraisal and BAR reports  
- Prepared title reports  
- Provided weekly project status updates to Hanover County
Project Name: Route 460, City of Lynchburg, Virginia
Name of Firm: Stantec
Start Date: 2012       End Date: 2013
Project Role: Right of Way Specialist
Ms. Knight served as the right of way specialist for Stantec. This 35-parcel limited access project included 17 relocations. This 1.3-mile project consisted of safety improvements on the Route 460/29 corridor from Route 501 (Campbell Avenue) to Route 29 (Monacan Parkway) using access management strategies. Improvements included closing or modifying crossovers and a jug handle for U-turns and left turns at Concord Turnpike. Additional improvements included auxiliary lanes for traffic entering or leaving Route 460/29, reducing or relocating private and business entrances, construction of right turn lanes, and a new access road for adjacent properties.
Responsibilities:
- Entered project/parcel data in VDOT’s right of way and utilities management system
- Provided parcel updates to the VDOT project manager
- Conducted negotiations and relocations

Project Name: I-495 HOT Lanes, Fairfax County, Virginia
Name of Firm: VDOT
Start Date: 2009       End Date: 2010
Project Role: Senior Right of Way Specialist
Ms. Knight served as the senior right of way specialist for VDOT. This 12-mile widening of the Capital Beltway between the Springfield Interchange and the Dulles Collector Road required the acquisition of 140 parcels including 15 relocations. Project improvements included the construction of new HOT lanes, additional general purpose lanes, and major intersection improvements of primary and secondary cross roads.
Responsibilities:
- Reviewed documents to ensure compliance with state and federal regulations approving relocation payments on behalf of VDOT
- Provided oversight for the performance of 15 relocations

Project Name: Courthouse Bypass Project, Route 208, Spotsylvania County, Virginia
Name of Firm: VDOT
Start Date: 2000       End Date: 2001
Project Role: Senior Right of Way Specialist
Ms. Knight served as the senior right of way specialist for VDOT. This 7.2-mile widening project included the acquisition of 107 parcels and 10 relocations. Route 208 was relocated to provide a more direct corridor between Fredericksburg and the Lake Anna region.
Responsibilities:
- Performed property management function including take possession of; checking for hazardous materials; and securing, maintaining, and managing disposal of buildings acquired by VDOT
- Negotiated property acquisitions
- Computed relocation computations
Attachments 3.4.1 (a) and (b) – Work History Forms
ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands) Original Contract Value</th>
<th>f. Contract Value (in thousands) Final or Estimated Contract Value</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)</th>
</tr>
</thead>
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<tr>
<td>Cowan Boulevard</td>
<td>VDOT</td>
<td>87 Deacon Road, Fredericksburg, Virginia 22405, Phone: 540-899-4300</td>
<td>07/2005</td>
<td>07/2005</td>
<td>$10,600</td>
<td>$11,000</td>
<td>$4,928</td>
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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.

W. C. English, Incorporated was awarded the $10.7 million Cowan Boulevard project by VDOT. The project extended the roadway in both directions as a 4-lane divided highway with a shared use path, connecting to Jefferson Davis Highway (U.S. 1 Bypass) to the east and Carl D. Silver Parkway to the west. The project had 194,000 cubic yards of excavation, a major bridge across I-95, a large conspan with considerable geotechnical investigation and foundation design, a shared-use trail, a bridge over I-95, and two signalized intersections. It also included replacing a 12-inch water line which paralleled the roadway. The work was done in three separate sections:

- From the intersection of Central Park Boulevard and Carl D. Silver Parkway (project extension)
- In the median of I-95 building the bridge in both directions (construction of bridge over I-95)
- Cowan Boulevard from I-95 to Route 1 (new alignment and widened existing alignment)

English worked with an elementary school adjacent to the project to provide proper and safe access for the students during all phases of construction. This work was done in conjunction with the traffic management plan (TMP), which included some real time changes. Those changes involved extensive dialogue between English and VDOT to overcome the challenges that this widened section posed. One unique challenge was the delay of the regular excavation due to the delayed private utility relocations, specifically on existing Cowan Boulevard in front of the elementary school. English and VDOT worked together to sequence the work. This required the borrow excavation to be performed prior to the regular excavation in an effort to allow continual progress, which ultimately led to on-time delivery. This particular project did not have private utility relocations that were the responsibility of the contractor, but it did expose English to the challenges that they present and required English to work creatively work for the overall success of the project.

Expected daily challenges included traffic control requirements/needs along the existing Cowan Boulevard, but specifically at the Route 1 tie-in due to several time of day restrictions; the Carl D. Silver Parkway with the extensive retail traffic; and I-95, which had its own time restrictions limiting work because of bridge construction that impacted the travel lanes to night-time operations only. Work was planned in accordance with the TMP, time restrictions, and numerous residential and retail properties throughout the project. Traffic control had to be adjusted regularly to accommodate the safety of the traveling public while accomplishing the construction tasks at hand. I-95 traffic control was planned and installed correctly to ensure not only the safety of the traveling public, but the construction crews as well. Proper ingress and egress for workers and supplies to the median had to be designed and installed. Some temporary traffic controls were in place for extended periods of time requiring regular inspection and maintenance to appropriately and continually handle the needs of the traveling public and provide safe working conditions for their employees.

The arch culvert on this project was of great importance to the city and to VDOT with an architectural stone finish on the wingwalls and shared use path inside the structure along with a stream. The stone finish on the wingwalls was one of the easier tasks with the wingwall construction; however, the geotechnical investigation and foundation design – along with the environmental constraints – posed much larger challenges. The foundations were 30 feet deep and excavations were roughly 20 feet wide running the entire length of both arch footers, and backfilled with #3 stone, one wrapped with geotextile fabric (the safety considerations with excavations of this nature are tremendous). Additionally, the existing stream was diverted via temporary stream diversion which limited access and storage to only one side. With the safety considerations being paramount for this operation, the threat of an excavation caving in was a constant battle. Especially with a live stream running only feet away from the eastern foundation excavation, creating an even more unstable environment. Site specific safety procedures were established and adhered to by English and VDOT and the construction operation was pursued in the most productive manner to limit – as much as possible – the exposure to the safety concerns and the environmental impacts. English’s experience within this area gave them a great deal of insight to the materials that will be encountered within the Fall Hill Widening and Mary Washington Boulevard Extension.

Local Knowledge: English gained a great deal of local knowledge from Cowan Boulevard, such as the existing geotechnical conditions from the bridge and arch foundations and the extensive grading and borrow operations. English also has a keen understanding of the traffic control requirements and needs from project experience within Central Park, along Route 1, and on I-95, which will be mirrored on this project, due to the close proximity of the two projects.

Evidence of Good Performance:

- English practiced constant communication with VDOT and other stakeholders, maintained an expedited schedule, and dealt efficiently with sequence changes, which allowed for on time delivery.
- English adapted and adhered to a safety plan focused on all site-specific changes and improvements.
- Daily considerations for traffic control needs facilitated safe and productive construction activities.
- Proper access to the bridge work in the median of I-95 minimized the impact to the traveling public and created a safe site for the construction personnel.
<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)</th>
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<tbody>
<tr>
<td>Route 218</td>
<td>W. C. English, Incorporated</td>
<td>Name: VDOT</td>
<td>09/2004</td>
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<td>$15,600</td>
<td>$16,600</td>
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<tr>
<td>Stafford County, Virginia</td>
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<tr>
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<td></td>
<td></td>
<td>Fax: 540-899-4300</td>
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<tr>
<td></td>
<td></td>
<td>Project Manager: Rob Shackelford</td>
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<tr>
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<td></td>
<td>Phone: 540-899-4300</td>
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<tr>
<td></td>
<td></td>
<td>Email: <a href="mailto:fredericksburginfo@vdot.virginia.gov">fredericksburginfo@vdot.virginia.gov</a></td>
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W. C. English, Incorporated was awarded this $16 million project by VDOT, located in Fredericksburg. The project consisted of rebuilding – from two lanes to four lanes – Route 218, Route 212, and Route 607. The project relocated a section of Route 218 and Route 607 with bridges (712 feet long and 190 feet long) over the railroad and required moving 200,000 cubic yards of excavation. The construction also required relocating public utilities, storm drainage installation, and the construction of two box culverts. The construction required phasing, shifting of traffic, and major traffic control to maintain access through the construction zone.

Major issues with constructing the Route 218 bridge included a sewer line conflict, coffer dams to protect the stream during pier construction, and dealing with the railroad. These issues were resolved with the joint effort of VDOT, English, utility owners, and the railroad. English worked with permitting agencies to construct a temporary bridge access the storm to provide access to the bridge piers.

Another issue with the bridges involved the piling – the foundations were designed for concrete piles. When English attempted to drive the test pile, hard strata of material did not allow the penetration of that layer without damaging the pile. Working together with VDOT and their designers, English changed from concrete to Steel “H” piles, which were driven successfully. There was also an issue with the box culvert under Route 608 near VDOT’s district office – a special retaining wall was required to support the fill and maintain traffic due to the elevation differences in the phasing of the work. Again, English and VDOT worked together to successfully resolve the issue by using a reinforced earth wall.

During construction, English had to maintain access to businesses and to ensure that water and sewer were available during the critical hours of operation. This was done through scheduling, contact with the owners, and taking a pro-active approach with the owners to reduce conflicts and impacts to their property. These same measures will be used on the Fall Hill project.

Even though there were a number of conflicts, English completed the project on time and without any liquidated damages.

**Local Knowledge:**
- English has gained a great deal of knowledge and understanding on how to best deal with design issues and working with the public while constructing this project.
- Instead of passing the design issues onto VDOT, English partnered with them and suggested possible solutions to resolve the issues.
- English also used personal contact to inform and work with the property owners to reduce issues and help the project run smoothly.

**Evidence of Good Performance:**
- English maintained open communications with VDOT and property owners, using their input and modifying the schedule accordingly delivered the project on time.
- English developed safety plans and procedures for working over and around the railroad and in heavy traffic.
- Understanding daily considerations for traffic control and maintenance of traffic throughout the project and making traffic shifts was key to the successful delivery of the project.
- English partnered with VDOT and created solutions to help resolve issues quickly.

**Project Similarities:**
- Public involvement/relations
- Public utility relocation
- Roadway widening
- New alignment
- Extensive traffic control
- Stormwater management
- Bridge construction
- Large culvert construction
- Construction in and around environmentally sensitive areas
a. Project Name & Location
b. Name of the prime design consulting firm responsible for the overall project design.
c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.
d. Contract Completion Date (Original)
e. Contract Completion Date (Actual or Estimated)
f. Contract Value (in thousands)
g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.

Name: North Gayton Road
Location: Henrico County, Virginia
Name: AECOM

<table>
<thead>
<tr>
<th>Original Contract Value</th>
<th>Final or Estimated Contract Value</th>
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<td>$38,600</td>
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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.

W. C. English, Incorporated was responsible for overall project management, which included design; environmental assessment and permitting; traffic management plan (TMP); right of way acquisition; private utility relocation, coordination, and construction; QA/QC; and public involvement/relations for this design-build project with Henrico County. This project is very similar in nature to the Fall Hill project.

The extension of North Gayton Road began at the intersection of West Broad Street and the existing Gayton Road, crossed I-64, and proceeded on new alignment to the Pouncey Tract Road and Shady Grove Road intersection. This included the construction of a shared-use path through the corridor. The project continued across Pouncey Tract Road, where it terminated at the intersection of Shady Grove Road and Twin Hickory Drive. The total project length was estimated to be 2.10 miles.

Some of the project highlights included the construction of two arch culverts allowing the relocation of Bacova Road to accommodate the phasing of the bridge construction over the interstate and in conjunction with the utility relocations that occupied the footprint of the old Bacova Road alignment. An extensive TMP was required for traffic control and phasing was required to construct the widening of Shady Grove Road, improvements to Route 250, and the upgrade of the existing North Gayton Road, as well as the bridge construction over I-64. Poor soils were present throughout the project and under-covering these materials became a major component of the grading operation, and specifically at the southern bridge abutment where geotechnical investigations required extensive undercovering for the foundation design of the MSE walls.

The project also included the widening of existing 2-lane facilities at either end of the project to a 4-lane section. The widened section included building two new parallel lanes next to the existing lanes open to traffic with crossovers throughout for entrances and cross streets and the reconstruction of the existing lanes in subsequent phases after the new lanes.

Project challenges included a detailed MOT plan to accommodate construction and the appropriate strategy to facilitate the ongoing use of existing business and residential entrances. Designing and providing proper areas to the pier construction in the median was also challenging. Private utility relocations presented constant challenges for relocating almost a mile of overhead Dominion Power lines, Comcast and Verizon lines, and City of Richmond Gas. All of these lines had to be phased with construction and scheduled with the utility owners for a value in excess of $1 million. Erosion control presented its own challenge with limited right of way to place appropriate traps and basins, which were creatively engineered to accommodate – in some cases – using storm drains to handle and retain overflow, as well as the use of jacks structures to reduce the velocity of flow in areas of limited room.

Public involvement was paramount, with more than 70 parcels of right of way needing to be acquired by the design-build team. English participated in all of the public meetings and met with each property owner to inform them of English’s needs and negotiated the acquisitions. The right of way team, along with the design-build project manager (Jud Dalton), worked closely with the owner to identify the parcels that needed to be condemned and then worked directly with the owner throughout the process. Prioritizing the property acquisition to coincide with the construction phasing was one of the greatest challenges on this project. The utilization and management of a detailed CPM schedule with activities for each parcel was key to the success of this project.

Evidence of Good Performance:
- Partnering was an important part of this project from design through construction. Monthly meetings were held with the designers, contractor, and owner to ensure that the project was being designed to both VDOT and county standards. Design issues were resolved in these meetings to avoid conflicts during construction. Monthly progress meetings were held with upper management of all parties and weekly meetings were held with field personnel to discuss schedule and resolve issues. This entire process proved to be very beneficial and allowed the project to move forward successfully.
- An SPGP was obtained for this project, and during the completion of the plans the regulatory agencies deemed it necessary to void the SPGP and require an individual permit. This had a drastic impact to the schedule and resource allocation. Fully understanding the implications of plan changes was key to this project and was managed to avoid unexpected delays and regulatory changes/challenges.
- Understanding the stormwater management requirements and the space which they needed was critical to beginning the project correctly. It impacted the amount of right of way needed for a project and developed a need to creatively engineer a solution within restricted areas. Understanding this issue from the onset was vital.
- Constant communication with stakeholders throughout the project was crucial for right of way acquisition.
- The CPM schedule was built appropriately, updated regularly, and used daily to manage the project with a proactive approach rather than a reactionary one
- Keeping all resources productive overcame schedule changes, right of way constraints, and utility relocation delays.
- Proper QA/QC plan and controls ensured a quality project.

Project Similarities:
- Design-build contract
- QA/QC
- Right of way administration
- Public involvement/relations
- Utility relocation and coordination
- Roadway widening
- New alignment
- Shared use path
- Extensive traffic control
- Stormwater management
- Interstate bridge construction
- Large culvert construction
- Construction in and around environmentally sensitive areas

3
**ATTACHMENT 3.4.1(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime/general contractor responsible for overall construction of the project.</th>
<th>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Construction Contract Completion Date (Original)</th>
<th>e. Construction Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)</th>
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| Widening of Long Shoals Road – NCDOT Design-Build | Wright Brothers Construction Company  
Project Manager: Mitchell Simpson  
Phone: 423-336-2261  
Email: msimpson@wbcci.com | Name of Client/Owner: North Carolina Department of Transportation  
1591 Mail Service Center  
Raleigh, NC 27699  
Phone: 919-250-4124  
Project Manager: Randy Garris, P.E.  
Phone: 919-250-4124 | 10/2010 | 10/2010 | $54,000 | $4,166 |

**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.**

As part of the Wright Brothers team, CDM Smith was the prime designer and provided design, right of way acquisitions, and construction design services. Engineering included the design and preparation of construction and permitting documents for all roadway and bridge improvements, geotechnical and foundation design, signal design, lighting design review, hydraulic design, erosion control plans, signage plans, utility design, utility coordination, and the development of traffic control plans. A public information plan was also implemented.

Similar to the Fall Hill project, this project included considerable risks related to environmental permitting and maintenance of traffic, and the team successfully mitigated these risks.

The project design called for:

- Widening and shifting of 0.9 miles of NC 146 (Long Shoals Road) from West Clayton Road (S.R. 3501) to East of I-26
- Interchange re-design (single-point urban interchange) for NC 146 and I-26 that also included approximately 0.75 miles of I-26 widening and realignment
- A new 400-foot-long French Broad River bridge consisting of 45-inch and 72-inch prestressed concrete girders on reinforced concrete post and beam bents with drilled shafts
- Utility designs including the replacement and extensions of water, sewer, gas, and fiber optic conduit lines, utility coordination also required for the relocation of the electrical, telephone and TV cable utilities
- Environmental permitting
- Maintenance and protection of traffic for construction of the bridges and roadway widening, with special emphasis on the I-26 interchange and associated ramps
- Temporary and permanent signal designs, which included cable routing and signal coordination for traffic flow improvement
- Right of way and easement acquisitions

**Innovations:**

- CDM Smith designers shifted the alignment for Long Shoals Road to eliminate staged construction of the French Broad River bridge
- High strength structural steel (HPS 70W) were used for the I-26 bridge superstructure
- A temporary rock causeway was used instead of a temporary work bridge for construction activities in the French Broad River

**Evidence of Good Performance:**

- The environmental permits were obtained a month ahead of the original schedule. This prevented permitting from impeding on the design and construction schedule.
- The project was under budget and complete by the original October 2010 completion date.
- Higher strength materials were used and the design was completed with these materials in mind.
- The design also incorporated innovative geotechnical engineering to provide viable and cost-effective solutions.
- CDM Smith, and the entire design-build team, was responsive to the MOT requirements, so the work was conducted safely for both the public and the contractor.
- The project received an Engineering Excellence Award from North Carolina’s ACEC chapter in 2011.

CDM Smith led this project from their Raleigh, North Carolina office, with assistance from numerous regional offices, including Richmond. Our project noise analysis expert, Rajit Ramkumar, performed analysis work for the Long Shoals project and will perform similar work for the Fall Hill project from CDM Smith’s Richmond office.
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 Completion Date (Original)
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)

Name: Route 199/Jamestown 2007 - VDOT PPTA
Location: James City County, Virginia

Name of Client/Owner: Virginia Department of Transportation
1401 E. Broad Street
Richmond, VA 23219
Phone: 804-317-0128
Project Manager: Raymond Partridge
Phone: 804-317-0128

Name of Client/Owner: Virginia Department of Transportation
1401 E. Broad Street
Richmond, VA 23219
Phone: 804-317-0128
Project Manager: Raymond Partridge
Phone: 804-317-0128

12/2006 10/2005 $31,000 $31,000 $3,400

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.

As part of the Jamestown 2007 Corridor Constructors team, CDM Smith provided design and construction inspection services for the Route 199 project. The project provided transportation improvements in the Williamsburg-Jamestown area in advance of the Jamestown 1607-2007 Commemoration. This project addressed the Route 199 and Route 31 corridor, located in the communities of James City County and the City of Williamsburg, which is a critical passageway to many tourist attractions. The construction value of the project was approximately $31 million.

The project design called for widening of 1.5 miles of Route 199 from Route 60 to the Colonial Parkway; widening 1 mile of Route 199 from S. Henry Street to Brookwood Drive; improvements to turn lanes at the Jamestown Road/Route 199 intersection; and relocating 0.5 miles of Route 359 access to the Jamestown Settlement and Jamestown Island.

CDM Smith was the prime designer and provided design, construction design support, and QA/QC inspection services. Services included:

- Design and preparation of construction and permitting documents for all roadway improvements
- Geotechnical engineering
- Signal design and signage plans
- MOT plans
- Hydraulic design
- Erosion control plans
- Project scheduling

CDM Smith also provided a full range of construction testing and services for all four segments of the project. CEI services included urban roadway, curb and gutter, bridge, and work over marshlands. Additionally, CDM Smith managed G&O (now Stantec), who performed the right of way acquisition and utility design and coordination.

The overall project was completed 14 months ahead of schedule.

Innovations:
- Geotechnical grid (Tensar) as engineered fill was used in lieu of massive undercuts, providing responsive maintenance of traffic design and coordination.
- Due to right of way constraints, the team was proactive in coordination of the locations of the signal equipment and signs.

Evidence of Good Performance:
- The project was completed 14 months ahead of original contract completion date and 71 days ahead of revised project schedule.
- In VDOT’s October 21, 2005 press release, David Steele, P.E, the area construction engineer for the Hampton Roads District stated: “The Route 199 PPTA is an excellent example of a project where VDOT, the contractors, and the localities worked very well together to deliver a first-class project to our customers.”
- Recipient of the 2007 ASCE Outstanding Local Civil Engineering Achievement Award

CDM Smith led this project from their Richmond office, with assistance from numerous regional offices, including Knoxville, Tennessee. Robert Bass, who will lead roadway design and TMP for our team for the Fall Hill project, served as a designer for record drawings on the Jamestown project.
**Name:** I-485 Charlotte Outer Loop Design-Build  
**Location:** Mecklenburg County, North Carolina  
**Design-Build**  

---  

**Project Name & Location**  
Blythe Construction  
Project Manager: Brian Webb  
Phone: 704-375-8474  
Email: brian.webb@blytheconstruction.com  
Name of Client/Owner: North Carolina Department of Transportation  
1020 Birch Ridge Drive #16  
Raleigh, NC 27610  
Phone: 919-250-4124  
Project Manager: Randy Garris, P.E.  
Phone: 919-250-4124

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**Summary**  
Work began on the I-485 beltway 21 years ago and was originally scheduled to be completed by 2003. Due to a lack of funding, this approximately 59-mile project still had one segment and one major interchange left for completion. The approach for the completion of the beltway was to divide it into three separate contracts that included the completion of the northern outer loop, a new interchange at I-485 and I-85, and the widening of I-85 in Cabarrus County. On May 21, 2010, NCDOT awarded the Blythe-CDM Smith design-build team a contract for the design and construction of the remaining outer loop section. CDM Smith was the prime designer.

This 5.1-mile section will extend the northern urban loop around Charlotte and part of Huntersville. The project includes an 8-lane freeway on new alignment from west of NC 115 to west of I-85. Additional project details include a split diamond interchange with six roundabouts; one of the first diverging diamond interchanges on the east coast; 17 bridges; five reinforced concrete box culverts involving crossings of Norfolk Southern Railroad, several streams, cross roads, and a tributary to Stony Creek; 18 retaining walls; and three noise walls.

Although NCDOT has used the design-build approach on more than 30 projects in North Carolina, this is the first design-build-finance project for the state. With this method, the prime contractor accepts an extended payment schedule. For I-485, Blythe will complete construction in 4.5 years and NCDOT will continue to pay them for 1 year past the completion date. This project will dramatically improve traffic capacity deficiencies and increase mobility within the region. It was ranked as one of the governor’s highest priorities for the state. CDM Smith has worked with the entire design-build team to ensure that this high-priority, very visible project was kept on time and on budget.

**Innovations:**
- One of the most unique features of this project is the diverging diamond interchange at Mallard Creek Road and Odell School Road. A DDI is a rare form of interchange in which the two directions of traffic on the non-interstate road cross to the opposite side on both sides of the bridge over the interstate. It is unusual because it requires traffic on the overpass to briefly drive on the opposite side of the road. There is only one constructed DDI within the United States, located in Springfield, Missouri.
- The DDI provides many safety benefits including fewer conflict points, better sight distance, more difficult wrong-way entry onto ramps, and increased room for trucks to maneuver. Cost-saving features include the reduction of the bridge width over I-485, elimination of a bridge over the tributary to Stony Creek, reduction of lanes on the ramps, simpler signal timing and geometry, and reduced construction time.

**Evidence of Good Performance:**
- CDM Smith developed an alternative interchange design (DDI) which saved the state approximately $3 million. This was much less intrusive on the natural environment than the interchange in the environmental document.
- CDM Smith also developed a split diamond interchange at the ramp/Y-line intersections. This design was embraced by the City of Charlotte and NCDOT and fully supported by the developer of a mixed use development.
- The team streamlined the coordination review process with Norfolk Southern to get their approval of traversing an existing rail line in less than 6 months.

CDM Smith led this project from their Raleigh, North Carolina office, with assistance from numerous regional offices, including Knoxville, Tennessee and Charleston, West Virginia. Our project noise analysis experts, Rajit Ramkumar, performed very relevant and similar noise analysis work for the I-485 project and will perform similar work for the Fall Hill project from CDM Smith’s Richmond office. Additionally, our lead structural engineer, Cindy Shamblin, assisted the I-485 team with the design of project structures.