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VDOT
Virginia Department of Transportation

STATEMENT OF QUALIFICATIONS

REPLACEMENT OF I-81 BRIDGES OVER RTE. 11, NORFOLK SOUTHERN RAILWAY & MIDDLE FORK HOLSTON RIVER

STATE PROJECT NO.: 0081-086-818; 0081-086-742
FEDERAL PROJECT NO.: BR-081-1(336)
CONTRACT ID NUMBER: C0097555DB102

JULY 12, 2018

ENGLISH
Since 1909

KCI

3.2 LETTER OF SUBMITTAL

ENGLISH
Since 1909
615 Church Street, Lynchburg, Virginia 24504
P. O. Box P-7000, Lynchburg, Virginia 24505
Tel: (434) 845-0301 Fax: (434) 845-0306

July 12, 2018

Suril R. Shah, PE
Alternative Project Delivery Division
Virginia Department of Transportation
1401 E. Broad Street
Richmond, Virginia 23219

RE: **LETTER OF SUBMITTAL FOR STATEMENT OF QUALIFICATIONS**
Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway & Middle Fork Holston River
Smyth County/City of Atkins, VA
Contract ID Number: C0097555DB102

Dear Mr. Shah,

English Construction Company, Inc. (English) is pleased to submit our qualifications for the subject project. Enclosed, please find our proposal specifically aligned with VDOT's goals for the successful completion of this project. As requested by the Department's RFQ, our submission includes:

- One (1) original paper version of the Statements of Qualifications, with full supporting documentation, which bear original signatures,
- One (1) CD-ROM containing the entire Statement of Qualifications in a single cohesive Adobe PDF file, and
- Ten (10) abbreviated paper copies of the original Statements of Qualifications.

English has thoroughly reviewed the Department's RFQ, including the RFQ Q&A from June 27, 2018. The following are responses to information and/or attachments requested in RFQ section 3.2.

3.2.1 LETTER OF SUBMITTAL | English Construction Company, Inc. (615 Church St., Lynchburg, VA 24504) will be the legal entity who will execute the Contract with VDOT. This Letter of Submittal is signed in ink by an authorized representative of English Construction Company, Inc.

3.2.2 OFFEROR'S POINT OF CONTACT INFORMATION | Our team has designated an official point of contact relative to this project; his information is as follows:

NAME & TITLE	ADDRESS	PHONE #	FAX #	EMAIL ADDRESS
John M. Jordan, Jr. Senior Vice President	615 Church St Lynchburg, VA 24504	434-845-0301	434-845-0306	jjordan@englishconst.com

3.2.3 PRINCIPAL OFFICER INFORMATION | Serving as the Prime Contractor for this project, English's principal officer's information is as follows:

NAME & TITLE	ADDRESS	PHONE #	FAX #	EMAIL ADDRESS
John M. Jordan, Jr. Senior Vice President	615 Church St Lynchburg, VA 24504	434-845-0301	434-845-0306	jjordan@englishconst.com

3.2.4 OFFEROR'S CORPORATE STRUCTURE | 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. A single 100% performance bond and a single 100% payment bond will be provided for the total contract value and time period.

3.2.5 IDENTITY OF LEAD CONTRACTOR AND LEAD DESIGNER | **English Construction Company, Inc.** will serve as the prime/general contractor responsible for overall construction of the project and will be the sole legal entity who will execute the Contract with VDOT. **KCI Technologies, Inc. (KCI)** will serve as the prime design consulting firm responsible for the overall design of this project, including roadway; survey; structure and/or bridge; environmental; geotechnical; hydraulics; traffic control devices; transportation management plan; right-of-way; utilities; public involvement/relations; quality assurance and quality control; railroad coordination; construction engineering and inspection; and overall design management.

3.2.6 AFFILIATED/SUBSIDIARY COMPANIES | Please see Attachment 3.2.6, provided in the Appendix.

3.2.7 DEBARMENT | Each of our team members certify that neither their firm nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. Certification Regarding Debarment Forms for both Primary Covered Transactions on Attachment 3.2.7(a) and Lower Tier Covered Transactions on Attachment 3.2.7(b) have been signed and are included in the Appendix.

3.2.8 VDOT PREQUALIFICATION | English is active, in good standing, and prequalified to bid on this project as outlined in VDOT's Rules Governing Prequalification Privileges. English is prequalified with VDOT (Vendor Number E008). A copy of English's VDOT prequalification certificate is included in the Appendix.

3.2.9 BONDING CAPACITY | English is capable of obtaining a performance and payment bond based on the current estimated contract value referenced in RFQ Section 2.1, which will cover the project and any warranty periods as detailed in the letter from Travelers Casualty & Surety Company regarding English's bonding capability, found in the Appendix

3.2.10 SCC AND DPOR REGISTRATION | All firms on our team comply with the law with regard to their respective organizational structure, any required registration with governmental agencies and/or entities, and any required governmental licensure, whether business, commercial, individual, or professional in nature. All team members are eligible at the time of this SOQ submittal, under the law and relevant regulations, to offer and to provide any services proposed or related to the project. All firms satisfy all commercial and professional registration requirements, including those requirements of the Virginia State Corporation Commission (SCC) and the Virginia Department of Professional and Occupational Regulations (DPOR). Full size copies of all SCC registrations and DPOR licenses, or evidence indicating the same, are included in the Appendix. Additionally, a table of this information is provided on Attachment 3.2.10 in the Appendix.

3.2.11 DBE STATEMENT | English fully supports VDOT's Disadvantaged Business Enterprise program and is committed to achieving or exceeding the four percent (4%) DBE goal for the entire value of the contract with the inclusion of DBE firms, including Hassan Water Resources, 3B Consulting Services, Kelly Consulting, and construction subcontractors.

English has put together a team of experienced firms and personnel who are focused on providing the Department with not only the best price for this project but also an unsurpassed quality. In addition, we have identified regional firms and personnel who bring similar experience and knowledge to the team. I am confident our SOQ presents a team of unmatched experience and accomplishment.

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.

Sincerely,
English Construction Company, Inc.

John M. Jordan, Jr.
Senior Vice President

3.3 OFFEROR'S TEAM STRUCTURE

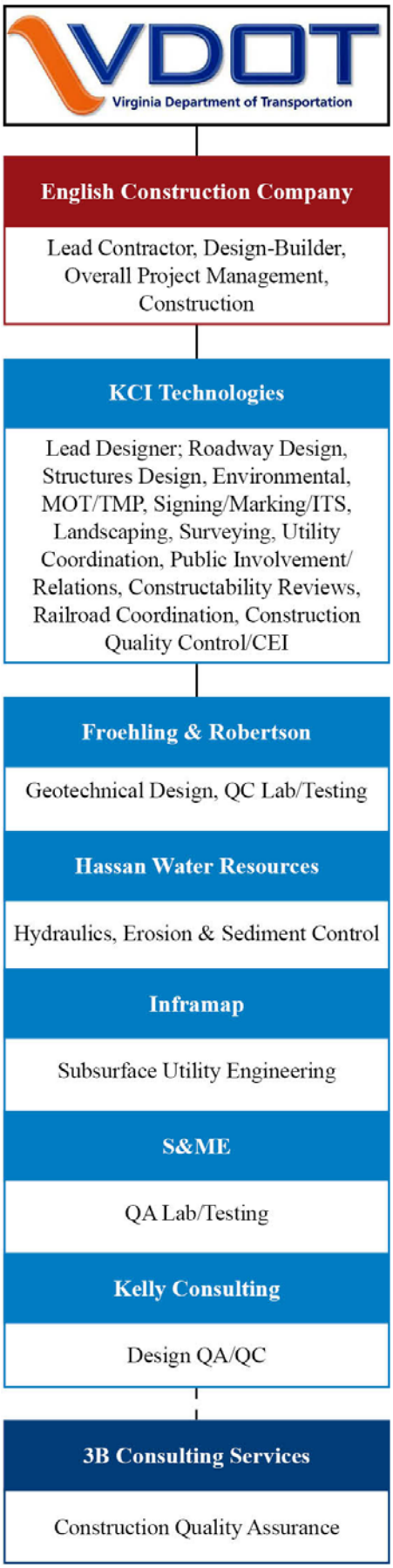
3.3 OFFEROR'S TEAM STRUCTURE

English Construction Company: English is a third generation family-owned business with a tradition of excellence in the Virginia Appalachian area since 1909. Over the last century, English has grown steadily, adding advanced skills, resources, and technology to embrace new opportunities along the way. Today, English is a multi-disciplined construction firm, with its primary work being performed in Virginia close to our Lynchburg headquarters. The company's areas of expertise have expanded through the years to include roadway and bridge facilities (both design-build and design-bid-build), civil, utility and industrial projects. Working under strong leadership, English's staff of 600 employees have 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's diversity, experienced office staff, and field personnel have contributed to the company's solid financial strength, which is evident by its 80-year relationship with the same bonding company. Throughout English Construction's dynamic history, the company has never outgrown the values that have made it successful since its inception.

KCI Technologies: Established in 1955, KCI is an employee-owned, full service engineering firm employing more than 1,400 people in 40 offices, including Richmond and Sterling, VA. KCI was named the 2017 ENR Mid-Atlantic Design Firm of the Year and is a leader in fast-track design-build projects. KCI has excelled in providing management and design services on 35 major transportation design-build projects, either completed or currently under construction for VDOT, NCDOT, SCDOT, MoDOT, MDSHA, and ODOT. KCI's value engineering and innovative designs have saved their DOT clients approximately $20 million in the last 20 years. In addition, KCI specializes in construction engineering with a client list of over 60 contractors, which provides KCI's competitive edge for constructability and efficient designs.

3B Consulting Services *(DBE)*: Led by founder Preston E. Breeding, PE, CCM, 3BCS has successfully served as the Lead Design Engineer and Project Management team for southwest Virginia's largest capital improvement projects including highways, bridges, commercial developments, or industrial construction. 3BCS's team of engineers, designers, construction managers, construction inspectors, and environmental specialists bring decades of combined experience working on some of the region's premier projects. 3BCS is dedicated to serving clients throughout the Appalachian Region and specializes in projects that feature rugged terrain, challenging subsurface conditions, mineral components, and careful coordination with state and federal agencies. The team is experienced in many disciplines of engineering and construction, including construction engineering inspection, quality assurance, and quality control.

Froehling & Robertson: F&R has been serving the design and construction communities for more than 135 years. Established in 1881 with a full-service operations center in Roanoke since 1961, F&R is a leading multi-disciplinary engineering firm that predates their competition.



With three drilling rigs, an AASHTO accredited laboratory, and a geotechnical manager with experience on over 100 sinkhole projects in Virginia and Florida, all in their Roanoke office, F&R is uniquely qualified to address the Karst challenges associated with this project. For nearly 70 years, F&R has provided clients in the transportation sector with the full range of engineering services, including core competencies of geotechnical engineering and construction materials testing. In fact, F&R has provided design and construction engineering services on nearly every design-build transportation project in the Roanoke Valley/New River Valley region over the past five years, including drilling and geotechnical services on the following VDOT projects: I-581 Elm Avenue Interchange in Roanoke, I-81 Truck Climbing Lanes in Montgomery County, Route 220 Widening in Botetourt County, I-81 New River Bridge in Montgomery and Pulaski Counties, Route 122 Bridges over Goose Creek in Moneta, I-81 Bridge Replacement over Halls Bottom Road in Bristol, and Route 60 Bridge Replacement in Clifton Forge.

Hassan Water Resources *(DBE)*: HWR is an engineering firm specializing in hydrology and hydraulic analysis, including roadway drainage, stormwater management and water quality, and river mechanics and scour analysis. HWR utilizes GIS integrated software such as GEOPAK and Watershed Modeling System to provide innovative practical solutions to transportation projects, and to perform multiple task assignments simultaneously. HWR is uniquely qualified for this project due to their experienced senior hydraulic engineers working on VDOT projects throughout the Commonwealth. HWR has been the hydraulic engineer for the Woodrow Wilson Bridge Project since 2007 and is currently finalizing the Virginia Sector project-wide Stormwater Management and Water Quality and Cameron Run Hydraulic Analysis models and reports.

InfraMap: Founded in 1987, InfraMap is a leading provider of subsurface utility engineering (SUE) and utility infrastructure mapping services. They collect utility infrastructure data in the field using sophisticated geophysical techniques and instrumentation, including ground penetrating radar (GPR), with automated data collection gear and state of the art survey equipment. InfraMap performs a variety of tasks in the completion of utility locating assignments for transportation projects. InfraMap is also capable of performing topography surveys, developed right-of-way maps and DTM surveys.

S&ME: Founded in 1973 as a local geotechnical engineering firm, S&ME has grown to an 1100-person corporation. Employing a diversity of services and collaborative approach, S&ME provides practical solutions to their clients' infrastructure, development and environmental challenges. S&ME has developed a Quality System Manual used to achieve quality objectives in the testing areas of soils, aggregates, bituminous materials, and Portland cement concrete. Each of S&ME's laboratories meets the basic requirements of ASTM D3740 "Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as used in Engineering Design and Construction." S&ME's laboratories are accredited by the American Association of State Highway and Transportation Officials (AASHTO) for Soils, Concrete and Asphalt. The laboratories participate in the AASHTO Accreditation Program through the laboratory inspection and sample proficiency program performed by AASHTO Materials Reference Laboratory (AMRL) and the Cement and Concrete Reference Laboratory (CCRL) of the National Bureau Standards.

Kelly Consulting *(DBE)*: Kelly Consulting provides services on a wide range of design-build, VDOT, and locality projects, including rural and urban interstates and primaries; complex interchanges; structure and bridge rehabilitation, widening, and replacement projects; and urban enhancement projects. During their work on complex, rural highway design and construction projects, the firm has gained experience in roadway design and TMP plans, as well as constructability reviews, quality assurance and quality control, and construction inspection and testing. Kelly Consulting's staff of engineers and inspectors has over 75 years of combined experience on VDOT road and bridge projects.

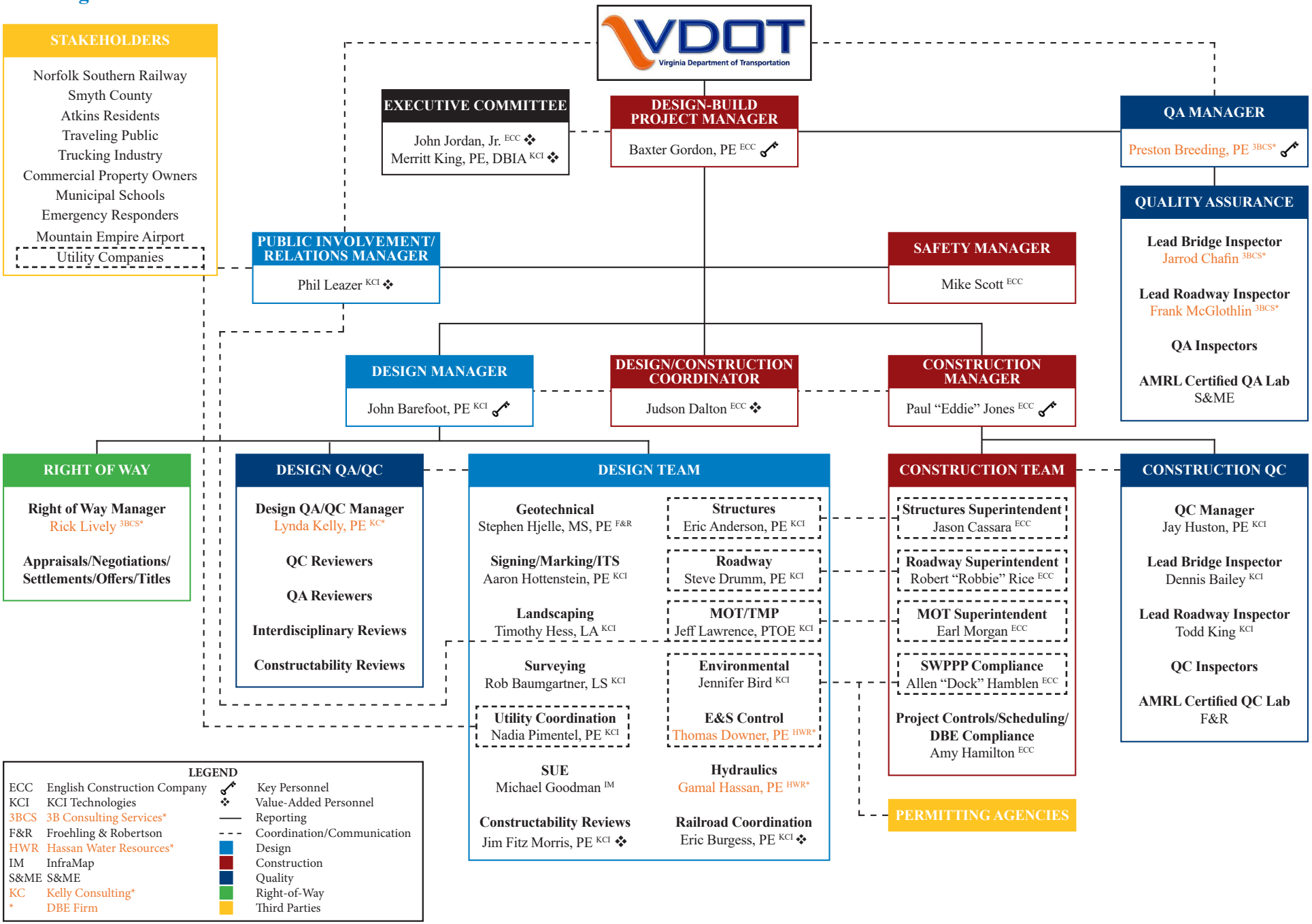
3.3.1 Key Personnel

Our management team includes four Key Personnel positions; each of these individuals have been selected based on their extensive experience and expertise in each of their respective areas of design, construction and administration of similar projects. No job duties or responsibilities of Key Personnel will be delegated to others for the duration of this contract. The chart below introduces our Key Personnel; resumes with qualifications are included in Appendix 3.3.1. More information on their roles and responsibilities can be found in section 3.3.2.

KEY PERSONNEL				
TITLE	NAME	FIRM	Years Exp.	DB Exp.
Design-Build Project Manager (DBPM)	Baxter Gordon, PE	ECC	37	✓
Quality Assurance Manager (QAM)	Preston Breeding, PE	3BCS	18	✓
Design Manager (DM)	John Barefoot, PE	KCI	24	✓
Construction Manager (CM)	Paul “Eddie” Jones	ECC	34	✓

Our team is illustrated on the organization chart on page 6. We have established specific responsibilities for each key staff member of our organizational structure to ensure effective project management. The personnel presented are committed to the successful delivery of this project. Our team understands that no primary team member, including subcontractors and subconsultants, will be changed without VDOT approval. Our organizational chart shows the “chain of command” and reporting relationships of all team members. The solid lines represent reporting relationships in managing, designing, and constructing the project. The dashed lines represent the coordination and communication that will take place between the disciplines. Also shown below is the separation between QA and QC inspection and field/laboratory testing in accordance with the *Minimum Requirements for Quality Assurance and Quality Control on Design Build and P3 Projects, July 2018.*

3.3.2 Organizational Chart



Key Personnel

Design-Build Project Manager (DBPM): Baxter Gordon, PE

Mr. Gordon will be the primary point of contact for this project. He has full authority of all aspects of our team's responsibilities. He will be responsible for the overall project design and construction and will be supported by the key personnel (QAM, DM, and CM). Mr. Gordon will also coordinate any required public outreach and public meetings with our public relations manager, Phil Leazer. Also supported by the safety manager, Mike Scott, Mr. Gordon will ensure that construction safety is incorporated into the design and all construction operations. He will also proactively identify and mitigate project risks and will maintain the project schedule to ensure timely completion of design and construction. Mr. Gordon has over 37 years of experience building bridges throughout Virginia and the Mid-Atlantic. He has managed fast track design-build projects, such as the MLK Expressway over interstate I-264 and the APM Terminals Port Facility. As former Vice President of Robertson Construction, a Salem based company, he has a long history of building bridges in the Salem District for VDOT along the I-81 corridor, making him extremely familiar with the karst geological conditions and the challenges they represent. His railroad experience includes being the Project Manager for the Route 640 Campbell County Bridge over Norfolk Southern tracks and the Staunton River, a bridge for Norfolk Southern over James Street in Lynchburg, the MKL project, railroad bridges at Fort Eustis, VA; and he is currently working with Norfolk Southern on the submittals required to begin construction on the Odd Fellows Road project in Lynchburg for VDOT. His bridge construction experience shows his ability to adapt to the challenge that each unique project requires, including different substructure conditions and techniques with phasing of construction and traffic control to include complex girder erection, as illustrated in our Key Personnel resumes in Appendix 3.3.1.

Quality Assurance Manager (QAM): Preston Breeding, PE

Mr. Breeding will report to our DBPM, with independent oversight by VDOT. He will remain independent from the construction QC team and will have no involvement in the construction operations. He will be responsible for the QA inspection and testing of all materials used and work performed on the project, to include monitoring of English's QC program. He will ensure that all work and materials, testing, and sampling are performed in conformance with the contract requirements, and the "approved for construction" plans and specifications. He will have full authority to suspend work if conditions warrant. Mr. Breeding is a registered, licensed, Professional Engineer in the Commonwealth of Virginia. He has over 18 years of experience and has served as a QAM for multiple VDOT design-build projects, including Route 460 Connector Phases I and II and Poplar Creek Phase A / Route 460/121 projects in Buchanan County. He also previously served as the Project Controls Engineer for VDOT's Bristol District, where he was responsible for oversight of the District's internal quality control program, intended to improve the overall district CQIP average, review of project schedules, and analysis of claims.

Design Manager (DM): John Barefoot, PE

Mr. Barefoot will report to the DBPM and coordinate with both the DBPM and CM to develop a cost effective, efficient, and constructible design. He will manage the design team and will be responsible for coordinating the individual design disciplines and ensuring the overall project design is in conformance with the contract documents. He will coordinate with the CM during construction to confirm field conditions meet design assumptions and reevaluate these assumptions where necessary. He will also be responsible for establishing and overseeing a QA/QC program for all pertinent disciplines involved in the design of the project, including, review of design, working plans, shop drawings, specifications, and constructability for the project. Illustrating his ability to effectively do this, Mr. Barefoot received a 5 for Project Management on the most recent VDOT Performance Evaluation. Mr. Barefoot is a registered Professional Engineer in the Commonwealth of Virginia. Mr. Barefoot has served as Design Manager (or Design Project Manager) on projects ranging from $10M to $100M. Most recently, he was the Lead Bridge Designer of the I-81 replacement bridges (NBL/SBL) at Exit 14 in Abingdon, VA and Assistant Design Manager for the structures on the I-64 Segment II project in Williamsburg, VA. Important to advancing this project, his experience in design-build bridge projects will prove beneficial to this

project. Addressing the risks later identified, Mr. Barefoot designed the bridge replacement for Route 460 over the Norfolk Southern Railway (while maintaining traffic) where he eliminated all splices over the railroad.

Construction Manager (CM): Paul "Eddie" Jones

Mr. Jones will report directly to the DBPM and will communicate with the DM during both design and construction phases to ensure construction is consistent with the project design. He will oversee the entire construction team, including the superintendents, who will oversee construction crews in the field. He will also manage all construction QC activities to ensure the materials used and work performed meet contract requirements and the "approved for construction" plans and specifications. Mr. Jones will be located on the project site for the duration of construction operations. Mr. Jones has a number of certifications as cited on his resume and will have all required certifications prior to construction commencement. Mr. Jones is currently assigned to NCDOT Contract C202962 which is to be complete in July 2018. With Mr. Jones' vast experience over the last 30 years managing projects with bridges over interstates, railroads, and large creeks, and mass grading including rock and phasing for traffic control, he is very qualified to serve as CM for this project. His bridge construction experience shows his ability to adapt to the challenge that each unique project requires, including different substructure conditions and techniques with phasing of construction and traffic control to include complex girder erection, as illustrated in our Key Personnel resumes in Appendix 3.3.1.

Value Added Positions

Executive Committee: John Jordan, Jr. and Merritt King, PE, DBIA

To facilitate the partnering process and to allow our DBPM and his team to focus on the project's safety, quality, and schedule, we have implemented an Executive Committee comprised of design and construction senior management. Serving on the Executive Committee will be John Jordan, Sr. Vice President of English Construction and Merritt King, PE, DBIA, Sr. Vice President of KCI. This committee will represent the English Team with contractual agreements, resource commitments, framework of policies and procedures and legal and financial representation. This committee will provide the DBPM with all the design, construction, personnel, equipment, and financial resources to adequately complete this project and will assist the DBPM with facilitating communication with VDOT, contractual issues, public information, third party coordination, adherence to schedule, and owner escalation issues.

Design/Construction Coordinator (DCC): Judson Dalton

Mr. Dalton will act as a liaison between design and construction to interface between field crews and the designers in a timely manner. Adding this position enhances the effectiveness of the DBPM by allowing the DBPM to focus on critical issues, VDOT satisfaction, and the project's schedule instead of micromanaging the coordination/communication between the construction and design staff. Mr. Dalton will act as an extension to the DBPM to address, monitor, and maintain the lines of communication between the design staff and the construction staff. Having a dedicated DCC avoids delays or rework, streamlines reviews, and eliminates potential construction field issues. Mr. Dalton's main responsibility is to ensure that the project is delivered in accordance with the contract documents and in accordance with the contractor's desired means and methods. He will utilize the following tools:

- Bi-weekly Task Force (discipline based) meetings between the design team and the Construction Manager to discuss contract requirements, constructability, value engineering concepts, and submission progress throughout the life of the project
- Bi-weekly internal design meetings with all disciplines to discuss current priorities, latest updates to design which can impact other disciplines and design/permit status and the project's schedule
- Inter-disciplinary design reviews prior to milestones to ensure design disciplines are coordinated
- Constructability reviews of design prior to submission to VDOT
- Monthly scheduling meetings to review CPM progress and re-prioritize design or construction as needed

Mr. Dalton's extensive knowledge includes design-build projects, construction quality management, and contract administration. He has been a project manager with English since 2007 and has managed numerous transportation

projects involving earthwork, structures, concrete and asphalt paving, utilities, and storm drainage. He is currently representing W. C. English, Incorporated, an affiliated company with English, on the Design Build Joint Venture for the $400+million P3 project widening I-77 for the proposed 26 miles of HOT lanes. He served as project manager on the $38 million North Gayton Road project in Henrico County, VA. This project consisted of the design and construction of 8,000' of divided highway from Rt. 250 to Pouncey Tract Road, including two prefabricated arches and a bridge over I-64. It also included rebuilding 1,000' of Shady Grove Rd from Pouncey Tract to Twin Hickory. Another project he managed was the $15 million Route 221 project in Bedford County for VDOT, which consisted of approximately two miles of four new lanes on Route 221 and the replacement of an existing bridge. Mr. Dalton will report to the DBPM and communicate regularly with the DM and CM.

Public Involvement/Relations Manager: Phil Leazer

Mr. Leazer has more than 27 years of experience administering transportation improvement programs. He has managed all public involvement, outreach and education efforts on nearly 100 transportation projects. Mr. Leazer has been involved with successful citizen outreach programs to gain "buy in" for local sales tax programs and gained support for three successful public votes through an extensive public involvement program. As a result of these public outreach efforts each of the sales tax program referendums showed significant increases in public support with approval percentages of 51%, 73% and 82% respectfully. Mr. Leazer will coordinate closely with the TMP Manager, Jeff Lawrence, on three important levels of outreach. Communication regarding (1) project purpose and progress, (2) upcoming major short-term disruptions, and (3) daily operations will be orchestrated internally and communicated externally optimizing outreach tools. Example tools include social media, earned media, VDOT ITS network, and field devices such as variable message boards. Mr. Leazer and Mr. Lawrence will work together to alert travelers of traffic conditions approaching and within the work zone(s), particularly for special events to ensure minimal disruption.

Railroad Coordinator: Eric Burgess, PE

Mr. Burgess has 18 years of experience designing and inspecting bridges, including projects with numerous bridge crossings involving railroad coordination. He has played an integral part in providing effective planning, communication, and engineering with the railroad, state agency, designer and contractor to ensure that the design, construction, operation and maintenance of both highway and railroad modes are compatible. He has experience with Norfolk Southern projects, including I-520 Palmetto Parkway over Norfolk Southern Railway in Aiken County, SC; SC 198 Bridge over Norfolk Southern Railway in Cherokee County, SC; Norfolk Southern Railway Bridge over SC 133 in Pickens, SC and Norfolk Southern Railway Bridge over Coddle Creek in Harrisburg, NC. His duties have included coordination with railroad officials, third party reviews, submittals and approvals, as well as synchronization of interests between the railroad, AMTRAK, and FRA concerning passenger platforms and loading requirements.

Constructability Reviews: Jim Fitz Morris, PE

Mr. Fitz Morris has 27 years of experience in bridge design, value engineering, design reviews, constructability reviews, and construction-phase contractor engineering services. He has designed or supervised the design of construction engineering services for more than 500 bridge projects throughout the Southeast. These construction engineering services entail a wide variety of engineered designs, including work trestles, temporary bridges, girder erection plans, vertical shoring plans and temporary towers, earth retaining structures, cofferdams, falsework and formwork, aerial platforms, mass concrete analysis, bridge jackings, bridge load rates for construction equipment loads and other specialized structural systems to assist with building bridges. Mr. Fitz Morris routinely provides these services to English and is familiar with their preferred methodologies.

3.4 EXPERIENCE OF OFFEROR'S TEAM

3.4 EXPERIENCE OF OFFEROR'S TEAM

Our team has been involved in numerous VDOT, PPTA, and design-build projects and has a proven track record of providing successful projects completed on aggressive schedules and within budget.

English has a long history of delivering design-build projects and fully understands the process and the requirements. With our construction experience, we are very familiar with bridge replacement projects of this nature, proven by such projects as the Tom's Creek Road/Route 460 Interchange, located within Montgomery County; the Route 460 Christiansburg Bypass, which included eight bridges; and the Atlee Elmont Interchange/I-95, which included 10 bridges. With English's design-build experience, we understand the process and how to work as a partner with VDOT. English is extremely experienced in interstate improvement projects, dealing with high traffic volumes, and maintaining traffic with lane shifts and lane closures. The experience of our personnel, the depth of resources that we are able to assign to the project, and our partnering approach result in a sound, qualified team to design and build this project and will allow our team to provide a very competitive proposal.

KCI is a leader in design-build and has provided design services on more than 35 design-build contracts across the United States, including the VDOT Route 288/I-64 Interchange PPTA in Richmond, VA, I-64 Segment 2 improvements in Hampton Roads, and VDOT ARRA Region 2 Multiple Bridge Rehabilitation Project in the Salem and Lynchburg Districts. Other design-build and similar experience includes the I-95 Access Improvements in Stafford County, VA; Intercounty Connector Design-Build in Montgomery County, MD; I-95/I-495/MD 210 Interchange Reconstruction in Prince George's County, MD; I-195 Interstate Access Road to BWI from I-95 to BWI Airport in Linthicum Heights, MD; SCDOT Statewide Bridge Replacement Program (33 Bridges); and NCDOT Express Design-Build Bridge Replacements in Divisions 13 and 1. KCI's projects have been recognized with awards from ACEC, ASCE, MDOT, and several regional professional organizations.

For additional information on our team's experience, Work History Forms for both English and KCI have been provided in Appendix 3.4.1. These projects demonstrate our team's relevant experience on projects with similar scope and complexity. Highlights of the relevancy of these projects are provided in the following table.

Project Relevance						
	I-64/I-295 Flyover Interchange	I-64/North Gayton Road	Downtown/ Midtown Tunnel/MLK Extension	I-64 Widening, Segment 2	I-520 Palmetto Parkway, Phase I	I-95/ Veterans Memorial Highway
Construction Value	$50M	$38M	$9M	$138M	$42M	$37M
Design-Build		✓	✓	✓	✓	
Interstate	✓	✓	✓	✓	✓	✓
Bridges	✓	✓	✓	✓	✓	✓
Geotechnical Issues	✓	✓	✓	✓	✓	
Complex MOT	✓	✓	✓	✓	✓	✓
Utility Relocations	✓	✓		✓	✓	✓
3rd Party Coordination	✓	✓		✓	✓	✓
Railroad Coordination			✓	✓	✓	

3.5 PROJECT RISKS

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Successfully mitigating risk is essential to minimizing project costs and maintaining the project schedule. Our risk mitigation strategies are based on personal and organizational experience working with key project stakeholders and managing complex design-build projects. Our team has evaluated this project in detail to identify the potential risk factors encountered on a design-build project of this nature.

3.5.1 Critical Risks

As referenced in the RFQ Section 3.5 "Project Risks," our team has addressed the **railroad coordination** risk. Based on review of available boring data and as-built bearing levels, we have determined that Karst conditions are less prevalent than typical, and therefore, we have identified the following two additional major risks: **construction access** and **maintenance of traffic.** These three critical risk factors are described in greater detail below with proposed solutions and mitigation strategies.

Project Risk 1: Railroad Coordination

Description

Railroad coordination, during the design phase and construction activities, is a risk that is relevant and critical to the success of the project. KCI will provide railroad coordination with Norfolk Southern and VDOT. The railroad coordination effort will involve determination of current and future track operating requirements and future track development, as well as gaining approval for pier locations in the right-of-way, coordinating construction activities within Norfolk Southern right-of-way, and coordinating flagger services.

Impact

The main impact associated with railroad coordination would be impacts to the design and construction schedule. Railroad reviews take a long time for all design and construction related submittals. In addition to schedule impacts, it will be important to communicate construction activities to ensure safety of the English team during construction and the operations of the railroad facility. From Norfolk Southern's perspective, the main impact would be a field construction situation, which may cause them to alter train schedules.

Working adjacent to a live railroad creates production constraints with limited or intermittent track time.

Mitigation

Initiating coordination with VDOT and Norfolk Southern early in the design process will help mitigate impacts to the construction schedule. From a design standpoint, we will provide conceptual plans as soon as possible to show Norfolk Southern the impacts to their right-of-way with vertical and horizontal clearances from current and future tracks. We will also provide the locations and types of pier foundations adjacent to the existing tracks, as showing the construction limits and excavation to construct the pier foundations will be beneficial in speeding up the review and approval process. The design plans will meet all governing criteria, thereby resulting in an expedient review and approval process. In addition, the English team will follow our QA/QC plan to ensure that the plans submitted are correct and accurate, therefore limiting the need for any resubmittal of design plans and excess coordination with Norfolk Southern. Our team's consideration of beam erection, such as eliminating beam splices over the existing tracks and evaluating crane placement will also lessen potential impacts. Selecting a span configuration and superstructure type that limits the need to utilize track time to work in the railroad clear zone will also help to mitigate impact to the construction schedule.

Our team's proposed Railroad Coordinator, Eric Burgess's experience in managing bridge projects, construction, engineering design, and experience with railroads, including Norfolk Southern, and state agencies allows him to provide the leadership and vision necessary to facilitate a successful project from project conception through design and construction that satisfies both railroad and highway modes of transportation and their interests.

The construction personnel will work hand in hand with the railroad's onsite flagman to ensure that Norfolk Southern is aware of and on board with all construction activities. Regular communication with the railroad flagman will also inform the construction personnel of the Norfolk Southern's train schedule, identifying all available track time, which will allow for proper planning of each activity. The railroad flagman will be invited to attend all project schedule meetings and, at a minimum, will be informed of the planned schedule by being

included on all look ahead submissions, as well as the meeting minutes from schedule meetings if they are unable to attend. The railroad flagman will also have direct access to all relevant onsite personnel to include the Construction Manager and Structure Superintendent.

We will hold a pre-design kickoff meeting with VDOT and Norfolk Southern to ensure we are on the same page regarding designing and constructing the bridge. It is critical for our team to maintain constant communication with Norfolk Southern to ensure the safety of construction field and railroad personnel, as well as trains. Our team has a long history of working successfully over and around railroad tracks on bridge projects constructed for VDOT, NCDOT, and directly for Norfolk Southern. We intend to effectively utilize that experience by planning properly and executing the plan with the right personnel and equipment for the task at hand.

Role of VDOT and Other Agencies

Norfolk Southern will play a key role in helping the English team by completing the design reviews within the review period allotted in the RFP. VDOT will be responsible for providing the agreement with Norfolk Southern, and with participation in coordination meetings, as needed.

Project Risk 2: Construction Access

Description

A unique risk identified for this project is the access issue presented by the layout of the existing bridges, the proposed bridge, the skew of both the existing and proposed structures, the local terrain, the existing utilities, and the proximity of Route 11/Norfolk Southern Railway/Middle Fork Holston River.

We understand that a great design serves no purpose if the design doesn't provide the contractor with appropriate means and methods to access each component of the project.

Impact

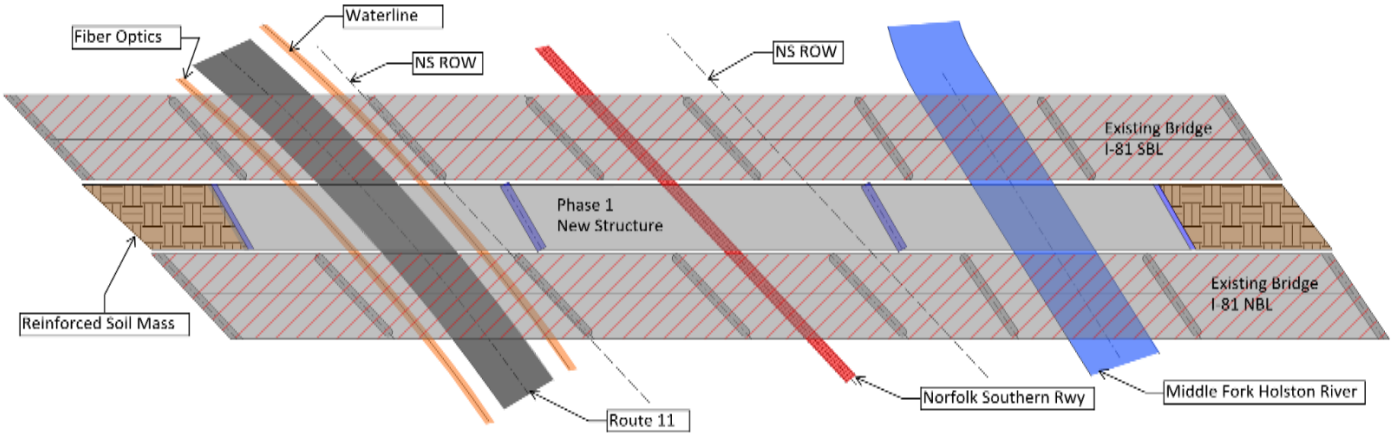
The project's first phase will consist of constructing a 30(+/-)-foot-wide by 394-foot-long bridge between the two existing bridges carrying both northbound and southbound traffic. The 30(+/-)-foot-wide structure does not include additional temporary width required for all overhangs and screed necessary for the construction of this phase. The length of the proposed bridge at 394 feet is shorter than the existing bridges (northbound lane = 484 feet / southbound lane = 501 feet). The shorter structure means that the proposed abutments will be placed in front of the existing abutments, creating access issues down and between the existing bridges. Pier one is located between Route 11 and the railroad and pier two is located between the railroad and Middle Fork Holston River. The locations of each pier creates access issues for each substructure component and the erection of all girders within these confined locations. Pier one also has, in addition to Route 11 on the south, the existing waterline adjacent to Route 11 and the overhead communication line running parallel to the railroad just north of the pier. Pier one also has significant terrain issues that limit access from the east. Span B creates an additional challenge for girder erection, because spanning the railroad creates the need for an even larger crane or cranes required to meet the 150% capacity mandated by the railroad.

Future phases will have the same access issues and constraints as outlined in Phase 1 above for all substructure components. However, the girder erection constraints are greatly relieved after the first phase is constructed.

Mitigation

We will have regular constructability reviews and meetings with both the design and construction teams in the design phase to work through all of the design/space constraints and the construction team's equipment/means and methods constraints. These constructability reviews will include the DBPM, DM, CM, DCC, Structures Designer, and Structures Superintendent to ensure all available knowledge base is part of the discussion identifying the issues/constraints and the solutions.

Construction Access
Tight Workzone in Median



As part of the constructability reviews, the team will review the use of appropriate temporary shoring, creating the needed allowable space between the existing bridges for construction of both abutments, which will likely need to be accessed from the median of I-81. Temporary shoring will also be evaluated for the construction of all substructure foundations with dual purpose – one, to create access without impacts to adjacent project features to include Route 11, the waterline, Norfolk Southern Railway, and the river; and two, to ensure that there is room for all equipment required to fit with the bridge components between all existing and operational site features. The type of shoring implemented will need to be thoroughly vetted to avoid any issues that the Karst/rock project features could create, including schedule dynamics and cost repercussions.

Constructability reviews will also include evaluation of the maintenance of traffic plan and construction phasing to improve access points to substructure and superstructure components. Construction personnel will interface with the design team during this review to ensure sufficient space for appropriate means and methods.

Access to the substructure components will likely be created from Flowing Springs Road from the west with one access on either side of the railroad, creating access to both piers one and two. Right-of-way constraints and the need for temporary easements will need to be reviewed for these locations. Phase 1 will require an extensive review of equipment size utilizing this access. All machines for Phase 1 would have to pass under the existing southbound lane of I-81, which already has vertical clearance issues. All machines needed will either have to be sized to pass under the existing structure or be able to be disassembled and then reassembled at the needed locations between the existing structures.

Girder erection for Phase 1 will need to have all equipment reviewed for constructability, for not only space constraints, but also the railroad capacity requirements that Span B will have. The lack of swing space will require careful coordination for all girder delivery and placement for picking for each span. It is likely that machines that are used for construction of substructure components will not be able to be used for girder placement activities. As an option, launching the girders from one abutment or the other or the use of rubber tired gantry cranes will also be reviewed for constructability and cost implications. Shoring towers and steel girder splice locations will also be part of the review process. Also, as outlined above with constructability reviews, the girder type will have to be reviewed for weight/equipment comparison, which may dictate the girder material selected during design, if not identified as a requirement within the language of the future RFP. The team will also evaluate the level of stress that the construction operations could place on each type of girder.

Role of VDOT and Other Agencies

We anticipate VDOT's role to include over the shoulder reviews as concepts are developed. Norfolk Southern will need to review work plans within their right-of-way to ensure all requirements are being met. Continued coordination with FAA will be required for any modifications that the temporary crane operation approval may need due to significant crane size and boom lengths adjacent to the Mountain Empire Airport.

Project Risk 3: Maintenance of Traffic

Description

The English team identifies the maintenance of traffic during construction activities as a risk that is relevant and critical to the success of the I-81 project. We understand the inherent risks to workers and the traveling public through work zones, and the project presents some unique challenges in ensuring the safety of motorists while providing enough space to efficiently and safely complete the work. We realize that I-81 is a corridor of nationwide importance and an economic engine for Virginia and the region. Interstate long-haul trucks (many with double trailers), oversize trucks, and permit load vehicles traverse the corridor at all hours and mix with both commuter traffic and vacationers.

Impact

Accidents and injuries, both on the roadway and within the work site, are devastating on many levels. The immediate impact to the victim, mobilization of first responders, and the resultant travel delays due to incident management and lane closures cost time and money. Additionally, the English team understands the human factors; that when drivers "see orange" and are delayed, they "see red" and lash out at other drivers, work crews, and, ultimately, VDOT. Work zone signage that is confusing to drivers increases the likelihood of abrupt maneuvers that cause crashes.

The project presents some unique challenges in ensuring the safety of motorists while providing enough space to efficiently and safely complete the work.

Mitigation

The English team is committed to maintaining the safest possible work zones. The transportation management plan (TMP) will include detailed traffic management plans for each stage of the work, a detailed traffic operations plan, and an extensive public involvement plan that covers local interests and regional and interstate operations, such as long-haul trucking. We will establish a list of project stakeholders, work with VDOT and locals to identify all of the constraints and acceptable lane closures, prepare several staging and MOT alternatives, identify the benefits and costs of each, and select the staging and MOT plan that minimizes the time to complete the project safely.

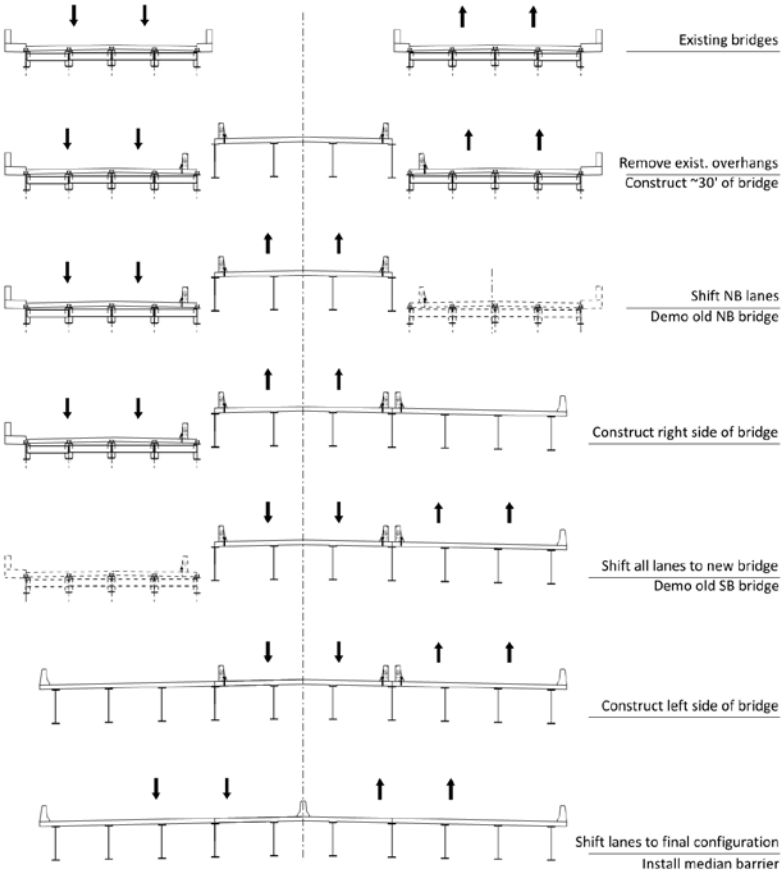
Earl Morgan will serve as the English team's MOT Superintendent, and he brings decades of bridge and roadway construction experience on the interstate system. Earl led the MOT efforts on the I-295/VA 895, I-295/I-64, I-95 at Atlee/Elmont, and the I-95/Lewistown Road interchange projects that each included multiple bridges, complex traffic shifts, and required extensive coordination with VDOT. The English team will work closely with the VDOT Public Information Officer (PIO) to develop and implement the Public Involvement Plan during construction.

The English team realizes that the bridge work must also meet the stated requirements in the project's Categorical Exclusion (CE) that has limits on the acceptable work impact to social and natural environmental features. The RFQ Plan improvements to the I-81 mainline and bridges are entirely within the existing roadway footprint. Extending beyond this footprint with maintenance of traffic items like temporary grading to the outside of existing roadways may create impacts that cause the CE to be invalid, possibly forcing an environmental re-evaluation, more detailed environmental studies, and causing project delays. Our alternative staging plans will remain within the roadway footprint to the fullest extent practicable to meet the environmental commitments.

Prevailing speeds on I-81 are well over 70 mph and tend to be higher in the southbound direction. The English team realizes that the risk to workers and travelers could be reduced by incorporating a work zone speed limit when shoulder closures and lane shifts are in place. The traffic control plans will be developed in compliance with the Work Area Protection Manual, Traffic Safety and Operations Manual, and VA Supplement to the MUTCD. We will prepare a Work Zone Speed Limit request and the required supporting documentation per TE Memo 350.1, with the understanding that additional signing, PCMS, and coordination with VDOT Southwest Regional Operations (SWRO) is essential to keep travelers informed of the reduced speeds and traffic shifts.

The new bridge will need to be put in place in stages. The English team will approach the staging alternatives with an open mind and look for options that eliminate stages (especially with the construction of the bridge in the median) and consider various Accelerated Bridge Construction (ABC) methods to quickly replace the structurally deficient bridges as soon as possible (with emphasis on the northbound lane bridge); time savings result in cost savings for the English team, reduced user costs, and the ability to open the new bridge sooner for safer mobility. The I-81 mainline is ultimately being raised in order to provide adequate clearance on Route 11. We realize there are opportunities to adjust the grade to decrease the amount that I-81 needs to be raised, and we will evaluate options in the RFP phase. As some of the options may involve different traffic arrangements and temporary traffic modifications, our public relations manager, Phil Leazer, will coordinate all traffic operations with VDOT, as well as local stakeholders.

Bridge Sequence of Construction
(Based on Conceptual Plans)



Role of VDOT and Other Agencies

The English team understands that VDOT staff is involved in many projects, and our goal is to keep the VDOT team informed while minimizing the work they need to perform. We will keep open communication with the VDOT Project Manager, coordinate with Bristol District staff, and will work closely with the VDOT PIO to keep roadway users and the community aware of construction status and traffic changes. When developing the TMP, we will work with the Bristol District Traffic Engineer and Smyth County staff, as necessary, to prepare the initial plan, implement the plan, and adjust it as needed during construction. We will also keep other stakeholders (such as emergency services, utility companies, the Virginia State Police, and the Board of Education, etc.) informed.

3.1.2
SOQ CHECKLIST

ATTACHMENT 3.1.2

Project: 0081-086-818; 0081-086-742
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	Appendix 3.1.2
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Appendix 2.10
Letter of Submittal (on Offeror's letterhead)				1-2
Authorized Representative's signature	NA	Section 3.2.1	yes	2
Offeror's point of contact information	NA	Section 3.2.2	yes	1
Principal officer information	NA	Section 3.2.3	yes	1
Offeror's Corporate Structure	NA	Section 3.2.4	yes	1-2
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	2
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	Appendix 3.2.6
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appendix 3.2.7
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Appendix 3.2.8
Evidence of obtaining bonding	NA	Section 3.2.9	no	Appendix 3.2.9

ATTACHMENT 3.1.2

Project: 0081-086-818; 0081-086-742
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	Appendix 3.2.10
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix 3.2.10
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix 3.2.10
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix 3.2.10
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	Appendix 3.2.10
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	2
Offeror's Team Structure				3-9
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	5, 6-9
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix 3.3.1
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix 3.3.1
Organizational chart	NA	Section 3.3.2	yes	6
Organizational chart narrative	NA	Section 3.3.2	yes	5, 7-9

ATTACHMENT 3.1.2

Project: 0081-086-818; 0081-086-742
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Experience of Offeror's Team				10
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix 3.4.1
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix 3.4.1
Project Risk				11-15
Provide a narrative for Project Risk 1	NA	Section 3.5.1	yes	11-12
Identify and discuss two additional **unique** risks that are critical for the Project	NA	Section 3.5.1	yes	12-15

2.10
FORM C-78-RFQ

ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. **C0097555DB102**

PROJECT NO.: **0081-086-818; 0081-086-742**

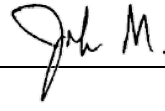
ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

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 – June 1, 2018 (Date)
2. Cover letter of _____ (Date)
3. Cover letter of _____ (Date)

English Construction Company, Inc.



SIGNATURE

July 12, 2018

DATE

John M. Jordan, Jr.

PRINTED NAME

Senior Vice President

TITLE

3.2.6
LIST OF AFFILIATED AND SUBSIDIARY COMPANIES

ATTACHMENT 3.2.6

State Project No. 0081-086-818; 0081-086-742

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Subsidiary	Fairfield Echols, LLC	PO Box P-7000, Lynchburg, VA 24505
Affiliate	W. C. English, Incorporated	PO Box P7000, Lynchburg, VA 24505
Affiliate	Lee Construction Company of the Carolinas, Inc.,	PO Box 7667, Charlotte, NC 28241-7667
Affiliate	MCC Acquisition LC	PO Box 568, South Boston, VA 24592
Affiliate	Curles Neck Investments, LLC	PO Box P7000, Lynchburg, VA 24505
Affiliate	Counts & Dobyns, Inc.	37 Leland Road, Rustburg, VA 24588
Affiliate	Adams Construction Company	PO Box 12627, Roanoke, VA 24027
Affiliate	Lakeside Centre, LLC	PO Box P7000, Lynchburg, VA 24505
Affiliate	Court Street Properties, LC	PO Box P7000, Lynchburg, VA 24505
Affiliate	First Choice Public-Private Partners, LLC	PO Box P7000, Lynchburg, VA 24505
Affiliate	First Choice Public-Private Partners, Rappahannock Regional Jail, LLC	PO Box P7000, Lynchburg, VA 24505
Affiliate	First Choice Public-Private Partners, Old Walker Grant School, LLC	PO Box P7000, Lynchburg, VA 24505

3.2.7
DEBARMENT FORMS

ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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

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

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

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

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

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

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

Signature	July 12, 2018	John M. Jordan, Jr. Senior Vice President
	Date	Title

English Construction Company, Inc.
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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

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

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

Signature	6/29/2018	VICE PRESIDENT
	Date	Title

KCI TECHNOLOGIES, INC.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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

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

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

Signature	06-29-2018 Date	Vice-President Title

3B Consulting Services, LLC
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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

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

Signature ANDREW R. FRANK	6-28-2018	VA TRANSPORTATION PROGRAM MANAGER
	Date	Title

FROEHLING & ROBERTSON, INC.
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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

Signature	6/29/2018	President
	Date	Title

Hassan Water Resources, PLC

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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

Signature	7/10/2018 Date	Vice President Business Development Title

InfraMap Corp.
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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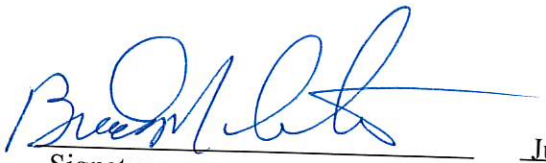

Signature

July 9, 2018
Date

SVP / COO
Title

S&ME, Inc.
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-086-818; 0081-086-742

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

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

Signature	6/28/2018 Date	President Title

Kelly Consulting, LLC
Name of Firm

3.2.8
OFFEROR'S VDOT PREQUALIFICATION CERTIFICATE

Department's List of Prequalified Vendors
Includes All Qualified Levels As Of 6/1/2018
- E -

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

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

Work Classes (Listed But Not Limited To)
002 - GRADING
003 - MAJOR STRUCTURES
007 - MINOR STRUCTURES

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

-- DBE Information --

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

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

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

Work Classes (Listed But Not Limited To)
002 - GRADING
003 - MAJOR STRUCTURES
007 - MINOR STRUCTURES

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

-- DBE Information --

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

3.2.9
LETTER OF SURETY

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

July 12, 2018

Commonwealth of Virginia
Department of Transportation
Central Office Mail Center
Loading Dock Entrance
1401 E. Broad Street
Richmond, VA 23219
Attention: Suril R. Shah, P.E.

Re: **Letter of Submittal – Replacement of I-81 Bridges over Rte. 11, Norfolk Southern Railway & Middle Fork Holston River**
State Project No.: 0081-086-818;0081-086-742
Federal Project No.: BR-081-1(336) *Contract ID No.: C009755DB102*

Dear Mr. Shah,

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

English Construction Co., Inc. is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the current anticipated cost of construction ($21,000,000.) and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this project.

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

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

Sincerely,

TRAVELERS CASUALTY & SURETY COMPANY OF AMERICA

Kim VandeBogart
Attorney-in-Fact

Power of Attorney Attached

TRAVELERS

POWER OF ATTORNEY

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

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

Attorney-In Fact No. 231754

Certificate No. 007438622

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

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

of the City of Lynchburg, State of Virginia, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 9th day of January, 2018.

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

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

State of Connecticut
City of Hartford ss.

By: _____
Robert L. Raney, Senior Vice President

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

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

MARIE C. TETREAULT NOTARY PUBLIC CONNECTICUT

_____
Marie C. Tetreault, Notary Public

58440-5-16 Printed in U.S.A.

WARNING: THIS POWER OF ATTORNEY IS INVALID WITHOUT THE RED BORDER

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

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 12th day of July, 20 18.

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.

WARNING: THIS POWER OF ATTORNEY IS INVALID WITHOUT THE RED BORDER

3.2.10
SCC AND DPOR INFORMATION TABLES

ATTACHMENT 3.2.10

State Project No. 0081-086-818; 0081-086-742

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	**SCC Information (3.2.10.1)**			**DPOR Information (3.2.10.2)**			
	SCC Number	**SCC Type of Corporation**	**SCC Status**	**DPOR Registered Address**	**DPOR Registration Type**	**DPOR Registration Number**	**DPOR Expiration Date**
English Construction Company, Inc.	00541995	Corporation	Active	615 Church Street Lynchburg, VA 24504	Contractor Class A	2701000873	04-30-2020
KCI Technologies Inc.	F0598690	Foreign Corporation	Active	936 Ridgebrook Road Sparks, MD 21152	Business Entity	0407003113	12-31-2019
KCI Technologies Inc.	F0598690	Foreign Corporation	Active	1025 Boulders Pkwy Boulders V Richmond, VA 23225	Branch Office	0411000938	02-29-2020
KCI Technologies Inc.	F0598690	Foreign Corporation	Active	3014 Southcross Blvd. Rock Hill, SC 29730	Branch Office	0411000956	02-29-2020
3B Consulting Services, LLC	S4231561	Limited Liability Company	Active	140 Hilltop Ave Lebanon, VA 24266	Business Entity	0407006181	12-31-2019
3B Consulting Services, LLC	S4231561	Limited Liability Company	Active	135 Highland Drive Lebanon, VA 24266	Branch Office	0411001108	02-29-2020
Froehling & Robertson, Inc.	00272112	Corporation	Active	1734 Seibel Drive NE Roanoke, VA 24012	Branch Office	0411000053	02-29-2020
Hassan Water Resources, PLC	S2293282	Professional Limited Liability Company	Active	2255 Parkers Hill Dr Maidens, VA 23102	Professional Limited Liability Company	0413000299	12-31-2019
InfraMap Corp.	F1055252	Foreign Corporation	Active	10365 Cedar Lane Glen Allen, VA 23059	Business Entity	0407003343	12-31-2019
S&ME, INC.	F1154568	Foreign Corporation	Active	2020 Liberty Road STE 105 Lexington, KY40505	Business Entity Branch Office	0411000992	02-29-2020
Kelly Consulting, LLC	S5609310	Limited Liability Company	Active	230 Charwood Dr, Ste H Abingdon, VA 24210	Business Entity	0407006757	12-31-2019

ATTACHMENT 3.2.10

State Project No. 0081-086-818; 0081-086-742

SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	**Individual's Name**	**Office Location Where Professional Services will be Provided (City/State)**	**Individual's DPOR Address**	**DPOR Type**	**DPOR Registration Number**	**DPOR Expiration Date**
English Construction Company, Inc.	Robert Baxter Gordon	Lynchburg, VA	3311 Woodridge Place Lynchburg, VA 24503	Professional Engineer	0402024675	01-31-2020
3B Consulting Services, LLC	Preston Edward Breeding	Lebanon, VA	135 Highland Drive Lebanon, VA 24266	Professional Engineer	0402040251	12-31-2018
KCI Technologies Inc.	John Benjamin Barefoot	Richmond, VA	14521 Leafield Dr. Midlothian, VA 23113	Professional Engineer	0402032375	07-31-2020
3B Consulting Services, LLC	H Richard Lively	Lebanon, VA	101 Millbrook Terrace Forest, VA 24551	Certified General Real Estate Appraiser	4001001989	10-31-2019

3.2.10
SCC AND DPOR REGISTRATIONS/LICENSES

SCC eFile
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SCC eFile
- SCC eFile Home Page
- Check Name Distinguishability
- Business Entity Search
- Certificate Verification
- FAQs
- Contact Us
- Give Us Feedback

Business Entities
UCC or Tax Liens
Court Services
Additional Services

SCC eFile
Business Entity Details

Help

ENGLISH CONSTRUCTION COMPANY, INCORPORATED

General

SCC ID: 00541995
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 12/16/1946
Status: Active
Shares Authorized: 100000

Principal Office

615 CHURCH STREET
PO BOX P7000
LYNCHBURG VA24505

Registered Agent/Registered Office

JAMES P KENT JR
525 7TH ST
PO BOX 299
ALTAVISTA VA 24517
CAMPBELL COUNTY 115
Status: Active
Effective Date: 11/8/2005

Select an action

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

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Business Entity Details

Help

KCI Technologies, Inc.

General

SCC ID: F0598690
Entity Type: Foreign Corporation
Jurisdiction of Formation: DE
Date of Formation/Registration: 12/19/1988
Status: Active
Shares Authorized: 1000

Principal Office

936 RIDGEBROOK RD
SPARKS MD21152

Registered Agent/Registered Office

C T CORPORATION SYSTEM
4701 COX ROAD
SUITE 285
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 1/4/2018

Select an action

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File an annual report
- Pay annual registration fee
- Order a certificate of good standing
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3B Consulting Services, LLC

General

SCC ID: S4231561
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 9/20/2012
Status: Active

Principal Office

140 Hilltop Avenue
Lebanon VA24266

Registered Agent/Registered Office

CRYSTAL L BREEDING
140 HILLTOP AVENUE
LEBANON VA 24266
RUSSELL COUNTY 183
Status: Active
Effective Date: 9/20/2012

Select an action

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File a principal office address change
- Pay annual registration fee
- Order a certificate of fact of existence
- Submit a PDF for processing (What can I submit?)
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Business Entity Details

Help

FROEHLING & ROBERTSON, INCORPORATED

General

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

Principal Office

3015 DUMBARTON ROAD
HENRICO VA23228

Registered Agent/Registered Office

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

Select an action

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File an annual report
- Pay annual registration fee
- Order a certificate of good standing
- Submit a PDF for processing (What can I submit?)
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Business Entity Details

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Hassan Water Resources, PLC

General

SCC ID: S2293282
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 7/16/2007
Status: Active

Principal Office

2255 PARKERS HILL DR
MAIDENS VA23102

Registered Agent/Registered Office

GAMAL E HASSAN
2255 PARKERS HILL DR
MAIDENS VA 23102
GOOCHLAND COUNTY 137
Status: Active
Effective Date: 5/4/2010

Select an action

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File a principal office address change
- Pay annual registration fee
- Order a certificate of fact of existence
- Submit a PDF for processing (What can I submit?)
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SCC eFile
Business Entity Details

Help

InfraMap Corp.

General

SCC ID: F1055252
Entity Type: Foreign Corporation
Jurisdiction of Formation: DE
Date of Formation/Registration: 10/22/1990
Status: Active
Shares Authorized: 1500

Principal Office

10365 CEDAR LANE
GLEN ALLEN VA23059

Registered Agent/Registered Office

C THOMAS GREEN III
311 S BOULEVARD
RICHMOND VA 23220
RICHMOND CITY 216
Status: Active
Effective Date: 9/2/2016

Select an action

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File an annual report
- Pay annual registration fee
- Order a certificate of good standing
- View eFile transaction history
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Business Entity Details

Help

S&ME, Inc.

General

SCC ID: F1154568
Entity Type: Foreign Corporation
Jurisdiction of Formation: NC
Date of Formation/Registration: 10/29/1997
Status: Active
Shares Authorized: 1000000

Principal Office

3201 SPRING FOREST ROAD
RALEIGH NC27616

Registered Agent/Registered Office

COGENCY GLOBAL INC.
250 BROWNS HILL COURT
MIDLOTHIAN VA 23114
CHESTERFIELD COUNTY 120
Status: Active
Effective Date: 6/2/2017

Select an action

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File an annual report
- Pay annual registration fee
- Order a certificate of good standing
- View eFile transaction history
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Additional Services

SCC eFile
Business Entity Details

Help

Kelly Consulting, LLC

General

SCC ID: S5609310
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 5/18/2015
Status: Active

Principal Office

230 Charwood Drive
Suite H
Abingdon VA24210

Registered Agent/Registered Office

C T CORPORATION SYSTEM
4701 COX ROAD
SUITE 285
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 12/11/2017

Select an action

- File a registered agent change
- File a registered office address change
- Resign as registered agent
- File a principal office address change
- Pay annual registration fee
- Order a certificate of fact of existence
- Submit a PDF for processing (What can I submit?)
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Screen ID: e1000

DPOR License Lookup License Number 2701000873

License Details

Name	ENGLISH CONSTRUCTION COMPANY INC
License Number	2701000873
License Description	Contractor
Firm Type	Corporation
Rank [1]	Class A
Address	615 CHURCH STREET, LYNCHBURG, VA 24504
Specialties[2]	Commercial Building (CBC) Highway / Heavy (H/H) Residential Building (RBC)
Expiration Date	2020-04-30

1 Refer to the Statutory Definitions (http://law.lis.virginia.gov/vacode/title54.1/chapter11/section54.1-1100/) for descriptions of the rank or class of license (A, B, or C) that determines the monetary limits on contracts/projects.

2 Refer to the Classification Definitions (http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-20) and Specialty Definitions (http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-30) for detailed definitions of these classifications and specialties.

DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).

DPOR License Lookup License Number 0407003113

License Details

Name	KCI TECHNOLOGIES INC
License Number	0407003113
License Description	Business Entity Registration
Rank	Business Entity
Address	936 RIDGEBROOK ROAD, SPARKS, MD 21152
Initial Certification Date	1992-08-06
Expiration Date	2019-12-31

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402024959	FLOYD, HARVEY MICHAEL	Professional Engineer License	Engineering	2020-02-29
0402033857	GRIFFITH, CHRISTOPHER JOHN	Professional Engineer License	Engineering	2019-11-30
0402035121	OFORI-AWUAH, KWABENA	Professional Engineer License	Engineering	2019-01-31
0402044936	DRUMM, STEPHEN FRANCIS	Professional Engineer License	Engineering	2020-06-30

Showing 1 to 4 of 4 entries

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DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR

DPOR License Lookup License Number 0411000938

License Details

Name	KCI TECHNOLOGIES INC
License Number	0411000938
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	1025 BOULDERS PKWY BOULVERS V, RICHMOND, VA 23225
Initial Certification Date	2012-06-27
Expiration Date	2020-02-29

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402049644	HOVERMAN, KATHY LYNN	Professional Engineer License	Engineering	2020-01-31

Showing 1 to 1 of 1 entries

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DPOR License Lookup License Number 0411000956

License Details

Name	KCI TECHNOLOGIES INC
License Number	0411000956
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	3014 SOUTHCROSS BLVD, ROCK HILL, SC 29730
Initial Certification Date	2012-11-13
Expiration Date	2020-02-29

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402048509	BURGESS, ROBERT ERIC	Professional Engineer License	Engineering	2019-02-28

Showing 1 to 1 of 1 entries

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DPOR License Lookup License Number 0407006181

License Details

Name	3B CONSULTING SERVICES LLC
License Number	0407006181
License Description	Business Entity Registration
Firm Type	LLC - Limited Liability Company
Rank	Business Entity
Address	140 HILLTOP AVE, LEBANON, VA 24266
Initial Certification Date	2012-09-24
Expiration Date	2019-12-31

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402040251	BREEDING, PRESTON EDWARD	Professional Engineer License	Engineering	2018-12-31
0402041354	WHITTAKER, MATTHEW BERT	Professional Engineer License	Engineering	2019-12-31
0403003044	KEEN, JORDAN HEATH	Land Surveyor License	Land Surveying	2020-06-30

Showing 1 to 3 of 3 entries

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DPOR License Lookup License Number 0411001108

License Details

Name	3B CONSULTING SERVICES LLC
License Number	0411001108
License Description	Business Entity Branch Office Registration
Business Type	LLC - Limited Liability Company
Rank	Business Entity Branch Office
Address	140 HILLTOP AVE, LEBANON, VA 24266
Initial Certification Date	2014-04-14
Expiration Date	2020-02-29

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402041354	WHITTAKER, MATTHEW BERT	Professional Engineer License	Engineering	2019-12-31
0403003044	KEEN, JORDAN HEATH	Land Surveyor License	Land Surveying	2020-06-30

Showing 1 to 2 of 2 entries

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DPOR License Lookup License Number 0411000053

License Details

Name	FROEHLING ROBERTSON INC
License Number	0411000053
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	1734 SEIBEL DR N E, ROANOKE, VA 24012
Initial Certification Date	1992-04-08
Expiration Date	2020-02-29

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402034076	ALFORD, HOYT BELTON	Professional Engineer License	Engineering	2019-10-31
0402036465	KRISNITSKI, DAVID ANDREW	Professional Engineer License	Engineering	2020-01-31
0402038338	BRUCE, GARY ALLEN	Professional Engineer License	Engineering	2019-04-30
0402044284	WOODRUFF, JESSYCA BEEBY	Professional Engineer License	Engineering	2019-07-31
0402047179	BRYAN, PAUL THOMAS	Professional Engineer License	Engineering	2019-06-30

Showing 1 to 5 of 5 entries

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DPOR License Lookup License Number 0413000299

License Details

Name	HASSAN WATER RESOURCES PLC
DBA Name	HWR
License Number	0413000299
License Description	Professional Limited Liability Company
Rank	Professional Limited Liability Company
Address	2255 PARKERS HILL DRIVE, MAIDENS, VA 23102-2244
Initial Certification Date	2009-07-06
Expiration Date	2019-12-31

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402033382	HASSAN, GAMAL ELDIN	Professional Engineer License	Engineering	2019-06-30

Showing 1 to 1 of 1 entries

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DPOR License Lookup License Number 0407003343

License Details

Name	INFRAMAP CORP
License Number	0407003343
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	10365 CEDAR LANE, GLEN ALLEN, VA 23059
Initial Certification Date	1995-10-10
Expiration Date	2019-12-31

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402021873	HUFFMAN, MARK RANDALL	Professional Engineer License	Engineering	2019-01-31
0403001452	ARMENDINGER, STEPHEN H	Land Surveyor License	Land Surveying	2018-09-30

Showing 1 to 2 of 2 entries

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DPOR License Lookup License Number 0411000992

License Details

Name	S&ME, INC
License Number	0411000992
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	2020 LIBERT RD STE 105, LEXINGTON, KY 40505
Initial Certification Date	2013-04-30
Expiration Date	2020-02-29

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402046102	LEAKE, WILLIAM A	Professional Engineer License	Engineering	2019-08-31

Showing 1 to 1 of 1 entries

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DPOR License Lookup License Number 0407006757

License Details

Name	KELLY CONSULTING, LLC
License Number	0407006757
License Description	Business Entity Registration
Firm Type	LLC - Limited Liability Company
Rank	Business Entity
Address	230 CHARWOOD DR STE H, ABINGDON, VA 24210
Initial Certification Date	2015-06-05
Expiration Date	2019-12-31

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402032745	KELLY, LYNDA HOLLEY	Professional Engineer License	Engineering	2019-07-31

Showing 1 to 1 of 1 entries

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DPOR License Lookup License Number 0402024675

License Details

Name	GORDON, ROBERT BAXTER
License Number	0402024675
License Description	Professional Engineer License
Rank	Professional Engineer
Address	LYNCHBURG, VA 24503
Initial Certification Date	1994-01-06
Expiration Date	2020-01-31

DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).

DPOR License Lookup License Number 0402040251

License Details

Name	BREEDING, PRESTON EDWARD
License Number	0402040251
License Description	Professional Engineer License
Rank	Professional Engineer
Address	LEBANON, VA 24266
Initial Certification Date	2004-12-21
Expiration Date	2018-12-31

Related Licenses [1]

License Number	License Holder Name	License Type	Relation Type	License Expiry
0407006181	3B CONSULTING SERVICES LLC	Business Entity Registration	Engineering	2019-12-31

Showing 1 to 1 of 1 entries

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DPOR License Lookup License Number 0402032375

License Details

Name	BAREFOOT, JOHN BENJAMIN
License Number	0402032375
License Description	Professional Engineer License
Rank	Professional Engineer
Address	MIDLOTHIAN, VA 23113
Initial Certification Date	1998-07-16
Expiration Date	2020-07-31

DPOR License Lookup build 1,198 (built 2017-07-13 02:34:41).

DPOR License Lookup License Number 4001001989

License Details

Name	LIVELY, H RICHARD
License Number	4001001989
License Description	Real Estate Appraiser License
Status	Active
Rank	Certified General RE Appraiser
Address	FOREST, VA 24551
Initial Certification Date	1993-10-29
Expiration Date	2019-10-31

Continuing Education [1]

Start Date	End Date	Requirement	Hours Required	Hours Earned	Hours Deficit
2017-11-01	2019-10-31	Appraiser Other Category	21	14	7
2017-11-01	2019-10-31	Appraiser USPAP Update	7	0	7

Showing 1 to 2 of 2 entries

1 No continuing education is required for **inactive** licenses.

A total of 28 classroom hours of Continuing Education is required to renew your license.

Of the 28 classroom hours, you will need to complete the 7-hour classroom USPAP course which shall be the National Uniform Standards of Professional Appraisal Practice course or its equivalent. (The 15-hour USPAP course cannot be used in lieu of the 7-hour USPAP course for continuing education.)

3.3.1
KEY PERSONNEL RESUME FORMS

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: **BAXTER GORDON, PE / PROJECT MANAGER**

b. Project Assignment: **DESIGN-BUILD PROJECT MANAGER**

c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): **ENGLISH CONSTRUCTION COMPANY / FULL TIME**

d. Employment History: With this Firm 21 Years With Other Firms 16 Years

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

English Construction Company / Project Manager (1996-Present): R. Baxter Gordon is presently a Project Manager with English Construction Company in the Road and Bridge Division. He has overall responsibility to insure that the projects he manages are successfully completed on schedule and on budget for both English and the client, as applicable through both design and construction. English affords him full authority to exercise all control over the work. To meet this responsibility, he works with the project personnel to determine the best means and methods of construction and manages all design work as applicable. He is experienced at contract administration, scheduling, procuring appropriate and adequate resources including Labor, Material, Equipment, and Subcontractors and making sure they are available when needed. He manages the ongoing schedule, productivity, quality, and safety of both the personnel working the job and the general public.

He is experienced at avoiding and resolving disputes that come up during construction and working with all the team members to minimize and when possible illuminate their impact to the project. He will strive to insure all members of the team are treated engaged and contributing to the successful completion of the project. He has demonstrated the ability to meet contractual obligations and avoid and resolve disputes in the past and can do so under Section 10.2.2 of RFP Part 4- General Conditions of Contract. He is capable of coordinating all required public outreach and meetings.

Mr. Gordon offers this team 35 plus years of experience in the construction industry with extensive experience as a Project Manager in the heavy civil construction field. This experience includes road and bridge projects ranging in price from $55 million dollars to under one million dollars. He has successfully completed bridges across interstates, rivers, the Intracoastal Waterway, railroads, and primary roads as well as projects involving significant grading and road construction and complex phased MOT plans near high volumes of traffic.

He has managed Infrastructure fast track projects, the largest being the $90 million APM Terminal yard package, as well as having design build experience. At the beginning of his career he worked on several large industrial projects. He has found innovative ways of expediting construction, solving problems and building unique structures.

Robertson Construction / Vice President (1990-1996): Before coming to English, he spent six years as Vice President of Robertson Construction which was headquartered in Salem, Virginia and worked primarily in that area. This has given him extensive experience with bridge construction in the Salem District including dealing with the karst geological conditions. During this period he had extensive field experience constructing bridges and other structures along the I-81 corridor.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:

Vanderbilt University, Nashville, TN/BE/1979/Civil Engineering

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

1994 / Registered Professional Engineer / VA Registration #024675

VDOT Advanced Work Zone Traffic Control #043015010 expires 4/30/2019

g. Document the extent and depth of your experience and qualifications relevant to the Project.

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

(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)

Martin Luther King Expressway Extension, Portsmouth, VA

Name of Firm: English Construction Company **Owner:** VDOT

Project Role: Project Manager **Dates:** 2013-2016

Description: Mr. Gordon served as **Project Manager** for three bridges for the MLK Expressway in Portsmouth with a contract value of $9 million dollars on the larger P3/**Design-Build** contract. Mr. Gordon had overall responsibility for the construction, quality, contract administration, procuring materials, equipment, subcontractors and labor to complete the project on schedule He worked with Construction Manager and the project engineer to prepare work plans for all

work constructed by English (as a sub to Curtis Contracting on the SKW JV). This included working with KCI to design the extensive shoring required beside live traffic on **Interstate 264**, the ramp to Interstate 264 and Route 17, including the median. He managed the structural steel erection plans, designed by KCI, for curved steel girders next to Interstate 264 and over the existing rail road tracks. **He and KCI also collaborated** on complicated form work designs. He designed work plans for driving concrete piles up to 110 foot long immediately adjacent to Interstate 264 and Route 17 including its median. He designed the plan for setting concrete girders, up to 140 foot long, in the tight spaces the project required. Being a subcontractor on this $2 billion dollar project required extensive interaction with the SKW Design Build Team. This required Mr. Gordon to work with designers, SKW, Curtis, QC, QA, QA oversite firms, the owner Elizabeth River Crossing, VDOT and the City of Portsmouth. Mr. Gordon was also responsible for the schedule and timely delivery of English's portion of the work. This project consisting of a P3 toll project timely delivery was paramount. Mr. Gordon's management alongside the Construction Manager delivered this portion of the overall project on time.

Robertson Bridge, Piedmont Drive, Danville, VA

Name of Firm: English Construction Company **Owner:** VDOT
Project Role: Project Manager **Dates:** 2010 -2012
Description: English constructed this $17 million dollar bridge replacement on Piedmont Dr. between Route 58 and 29 Business in Danville. As **Project Manager**, Mr. Gordon had overall responsibility for the construction, quality, contract administration, procuring materials, equipment, subcontractors and labor to complete the project on schedule, as well as DBE compliance. The eight-span bridge is approximately 900-feet-long, with five lanes and a shared use path (SUP). All roadway and bridge components were built with **phased construction** to keep traffic flowing. The final bridge was a single structure which required connecting the substructure and the superstructure. The project included extensive bridge construction over and in the Dan River. **Worked with KCI** to redesign the cofferdams and extensive tie back shoring along Route 29, The redesign of the cofferdams from the VDOT plans provided both improved constructability and cost savings for the project. Mr. Gordon on the roadway construction managed **multiple phases of construction** to keep the intersections open, requiring extensive traffic control and phasing the installation of new traffic lights. Mr. Gordon with project staff managed the utility work items included relocating water, sewer, and gas lines, along with a new water intake to Danville's water treatment plant. Environmental challenges included working in the and along the river as well as protecting wetlands. Throughout the project, he maintained an excellent **working relationship with** VDOT's Area Construction Engineer for the project. Mr. Gordon and Construction Engineer were able to partner and resolve multiple utility conflicts and problems. As an example, the newly constructed intake would not connect with the remaining components with in the City's Water Treatment plant, nor would the old valves operate appropriately to allow for the completion of the installation, Mr. Gordon and Construction Engineer worked together with City officials to resolve the issue propelling the project to a successful completion all the while limiting the disruption to the City's operating intake and plan.

Cowan Blvd., Carl D Silver Parkway, Fredericksburg, VA

Name of Firm: W. C. English, Incorporated **Owner:** VDOT
Project Role: Project Manager **Dates:** 2002-2005
Description: Project Manager working over, beside and in the median of **Interstate 95** on a new **four lane bridge constructed over Interstate 95**. Mr. Gordon had overall responsibility as **Project Manager** for the construction, quality, procuring materials, equipment, subcontractors and labor to complete the bridge safely and on schedule. He was responsible for traffic control for the bridge work including building the substructure and setting the structural steel across Interstate 95. He worked directly with Mr. Judson Dalton (on site personnel) to implement and manage all aspects of the project to include the complex traffic control requirements along both I-95 and Route 1. Mr. Gordon managed project operations around the extremely heavy flow of traffic on Interstate 95, including the logistics of getting equipment, materials and personnel into the median of I-95. He also designed the steel erection plan for staging, unloading and erecting the girders across the interstate which included time of day restriction for lane closure as well as small 15 minute windows for interstate shutdown utilizing slow rolls for actual girder erection. The bridge itself consisted of a five-span, four-lane bridge, with a shared use path (SUP). Mr. Gordon also managed several environmentally sensitive areas one of which included the installation of a new conspan structure over an existing stream that was diverted for the duration of the installation.

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

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: **PRESTON BREEDING, PE / VICE PRESIDENT**

b. Project Assignment: **QUALITY ASSURANCE MANAGER**

c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): **3B CONSULTING SERVICES / FULL TIME**

d. Employment History: With this Firm 6 Years With Other Firms 12 Years

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

3B Consulting Services, LLC (3BCS) / Vice President (2012-present): Mr. Breeding has extensive experience with oversight of VDOT funded construction projects administered through both the design-build and design-bid-build delivery methods. Mr. Breeding manages 3BCS's design-build program where he has served as both a Quality Assurance Manager and a Design Manager for multiple VDOT design-build projects. Additionally, his experience with design-build projects has developed his full understanding of the implementation of roadway plans and projects through construction. He has working knowledge of VDOT's Construction Division Manuals, its policies and procedures, VDOT Road & Bridge Standards and Specifications, the Work Area Protection Manual, as well as FHWA and AASHTO design guidelines.

A. Morton Thomas & Associates, Inc. / Senior Associate (2007-2012): Mr. Breeding managed up to 120 construction inspection personnel throughout a six state territory with a primary focus on Virginia. Mr. Breeding served as Construction Inspection Coordinator for numerous on-call, district-wide CEI contracts where he managed up to 60 construction inspectors. Mr. Breeding also served as a Quality Assurance Manager for VDOT Design-Build projects in both the Bristol and Lynchburg Districts. Mr. Breeding was also assigned a responsible charge engineer construction engineer for significant projects in the Bristol and Fredericksburg Districts.

VDOT Bristol District / Project Controls Engineer (2005-2007): Mr. Breeding served as the Project Controls Engineer for the Bristol District. His duties included oversight of the District's internal quality control program to improve the overall district CQIP average, review of project schedules, and analysis of claims. Mr. Breeding was also responsible for oversight of the District's two on-call CEI contracts and one project specific CEI contract.

AMEC Foster Wheeler, f/k/a MACTEC Engineering and Consulting, Inc. / Senior Engineer (2002-2005): Mr. Breeding's role as Senior Engineer included duties focused primarily on large scale geotechnical engineering projects and comprehensive construction engineering roles. Mr. Breeding managed the geotechnical investigation for the Coalfields Expressway PPTA Project and provided Quality Control Inspection and Testing for the Route 58 Meadows of Dan Bypass as examples of typical project assignments.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:

University of Tennessee, Knoxville/BS/2000/Civil Engineering

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

2004 / Professional Engineer / VA (#0402040251); 2008 / Professional Engineer / TN (#00113185); 2008 / Professional Engineer / NC (#035567); 2014 / Professional Engineer / WV (#18263); 2014 / Professional Engineer / KY (#30387); 2016 / Professional Engineer / AL (#36189); 2017 / Professional Engineer / SC (#34718); CCM / CMAA 2009

g. Document the extent and depth of your experience and qualifications relevant to the Project.

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

(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)

Route 460 Connector Phase II Design-Build, Buchanan County, VA

Name of Firm: 3B Consulting Services, LLC **Owner:** VDOT

Project Role: Quality Assurance Manager **Dates:** 2013-2017

Description: This $108 million **design-build project** includes construction of 6.4 miles of rough grade roadway in mountainous terrain. The project relevance includes the design-build delivery method, implementation of the QA/QC Plan in accordance with VDOT's Minimum Guidelines for PPTA/DB Projects, close coordination with design team members to implement construction lessons learned, completion of constructability reviews, and oversight of the QA inspection process. Mr. Breeding served as the Construction **Quality Assurance Manager** for this $108 million design-build project. Mr. Breeding was responsible for the development of the QA/QC Plan for the project, managed

the day-to-day construction QA team, was responsible for project records management, reviews payment applications, reviews the project schedule updates, issues NCR's where appropriate, maintains the Issue Tracking Log, and developed materials for monthly reports to VDOT. Mr. Breeding also served as the Design Manager during the design phase of the project where he oversaw roadway plan development, permitting, ROW acquisition, and geotechnical engineering. Mr. Breeding was instrumental in leading constructability reviews of plans at each stage of development and ensuring that contractor personnel were engaged in the design process at all levels.

Route 460 Connector Phase I Design-Build, Buchanan County, VA

Name of Firm: 3BCS / AMT **Owner:** VDOT
Project Role: Engineering Project Manager / QAM / QC **Dates:** 2008-2015
Description: The Route 460 Connector Phase I project features the two largest bridges ever built in the Commonwealth of Virginia. At a height of over 265 above the valley floor, these twin cast-in-place segmental box girder bridges feature 500-foot spans supported by solid H-shaped piers. The twin structures over Grassy Creek also included construction of two tail spans which featured 120-foot long concrete bulb tees. The abutments featured MSE walls nearly 50 feet tall. Foundation types included spread footings on rock, drilled shafts, and micropiles. The project also featured a second bridge over Hunts Creek. The Hunts Creek bridge was 433 feet long, constructed with concrete bulb tees, and founded on drilled shafts. The project relevance includes the design-build delivery method, implementation of an extensive QA/QC Plan, management of project records and materials notebook, and coordination between Contractor and VDOT on a complex project. Mr. Breeding served as the Engineering Project Manager who assembled the design team for this $90 million design-build project. Mr. Breeding worked with Bizzack Construction to develop the design team members to deliver this challenging project in remote southwestern Virginia. Mr. Breeding provided constructability reviews, played a key role in structure type selection, and developed the QA/QC Plan for design and construction. Mr. Breeding served as the **QAM** for the project during the team's first selection as the DB (the project was cancelled as a result of a court order) and managed the QAM during the second selection and completion of the project. Mr. Breeding served as interim QAM during two medical absences of the QAM. After leaving AMT, Bizzack Construction engaged 3BCS to provide oversight of the QC testing program and Mr. Breeding returned to the project as the QC Manager to provide oversight to the critical phases of structural inspection including grouting and post-tensioning operations.

Poplar Creek Phase A / Route 460/121 Design-Build, Buchanan County, VA

Name of Firm: 3B Consulting Services, LLC **Owner:** VDOT
Project Role: Design Quality Assurance Manager **Dates:** 2014-Present
Description: This project includes a multi-disciplined design team under the **design-build** delivery method. The project originally featured two significant bridges structures before the contract was renegotiated to shorten the project and replace one bridge with a box culvert. Mr. Breeding was responsible for leading a thorough review of design alternatives which resulted in the replacement of the Poplar Cree Bridge with a 2,300-foot long triple box culvert. The design change saved VDOT over $80 million and reduced the overall environmental impacts by more than 10%. The relevance to the Exit 114 project include the design-build delivery method, implementation of a QA/QC Plan, structural design alternatives, constructability reviews, and project reporting. Mr. Breeding is serving as the Quality Assurance Manager and Design Manager for the Poplar Creek Phase A project in the Bristol District. Mr. Breeding leads the design team where he oversees roadway design, structural design, survey, permitting, geotechnical engineering, utility coordination, and ROW. Mr. Breeding was responsible for the development of the QA/QC Plan for Design and is currently developing the QA/QC Plan for Construction. Mr. Breeding leads the day-to-day design activities for the project and closely coordinates with the DBPM and VDOT.

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

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

Poplar Creek Phase A Design-Build, Design QAM/Design Manager, Anticipated Completion Dec. 2018

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: **JOHN BAREFOOT, PE / SENIOR PROJECT MANAGER**

b. Project Assignment: **DESIGN MANAGER**

c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): **KCI TECHNOLOGIES, INC. / FULL TIME**

d. Employment History: With this Firm 1 Years With Other Firms 24 Years

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

KCI Technologies, Inc. / Senior Project Manager (2016-Present): Mr. Barefoot currently serves as Senior Project Manager on complex and time critical projects for KCI. He is finishing up a design-build project for KCI on Interstate 64 in the Newport News area (plans are sealed and providing construction support). He is otherwise available to devote all the attention necessary to the I-81 over Route 11 project.

Mead & Hunt, Inc. / Business Unit Leader, Senior Project Manager, and on the Board of Directors (2010-2016): Mr. Barefoot managed the design and survey operations and financials in South Carolina, North Carolina, and Virginia. He was responsible for staffing offices, pursuing design-build and design-bid-build projects in all three states, as well as overseeing the progression of assigned projects. He remained involved in management of high profile projects throughout the mid-Atlantic area. On the Board of Directors for six years, his responsibilities included setting the strategic direction of the company (approximately 500 employees in 25 offices and 20 states).

RPM Engineers, Inc. *(Merged with Mead & Hunt)*/ Owner, President & Senior Project Manager (2005-2010): Mr. Barefoot managed operations and financial requirements, maintained personnel, and serviced/maintained new and existing clients throughout South Carolina, West Virginia, Virginia, and Ohio. His responsibilities included the management of nearly 80 employees, execution of human resource functions, financial decision making, development of estimates and fee proposals, implementation of marketing strategies, development and administration of client contracts, communication with and oversight of subconsultants, and coordination/management of design-build projects. Mr. Barefoot was specifically assigned to manage large projects and design build pursuits.

TRC/SITE-Blauvelt Engineers, Inc. (SBE) / Vice President & Senior Project Manager (1996-2005): Of particular interest is Mr. Barefoot's history of working with staff from KCI, English Construction, VDOT Central Office and VDOT Bristol District Staff which began while he was employed at SBE. From 1996-1999, Mr. Barefoot served as Lead Project/Bridge Engineer on several successful projects in Virginia. In 1997, Mr. Barefoot worked with English Construction on Virginia's first Public Private Partnership (Route 895/I-95). In 1999, Mr. Barefoot was promoted to Vice President, Office Manager, and Senior Project Manager and relocated to start a new office in South Carolina. In addition to serving as Senior Project Manager on most of the projects in the SC office, responsibilities also included managing a staff of 19 employees, overseeing the finances for the region, and implementing growth strategies. While in SC, Mr. Barefoot first worked with KCI (formerly TKA) as a partner and more specifically with Merritt King, Eric Burgess, Jim Fitz Morris, and Eric Anderson (also on this English Team) in 2003, where he served as Project Manager (for SBE's portion) on one of SC's first design-build projects. Mr. Barefoot also served as Project Manager on several high profile jobs that included managing roadway design, bridge design, and supporting services; projects ranged from $20M to $200M in construction value.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:

Virginia Military Institute, Lexington, VA/BS/1993/Civil Engineering (with distinction)
University of Virginia, Charlottesville, VA/MS/1995/Civil Engineering

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

1998/PE/VA #32375

g. Document the extent and depth of your experience and qualifications relevant to the Project.

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

(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)

I-64 Widening – Segment 2 Design-Build, Newport News, York County and James City County, VA

Name of Firm: KCI Technologies, Inc. **Owner:** Virginia Department of Transportation

Project Role: Assistant Design Manager – Structures **Dates:** 2016-Present

Description: This **design-build** project includes interstate widening from two-lanes to a three-lane section from the point where the I-64 Segment I project ends to the west for approximately seven miles. The proposed improvements include full-depth reconstruction of the existing lanes, the addition of one 12-foot-wide travel lane and one 12-foot-wide paved shoulder in each direction. Mr. Barefoot served as the Assistant **Design Manager** – Structures for KCI for the widening design of eight bridges (EBL/WBL **I-64** bridges over Yorktown Road, EBL/WBL **I-64 bridges** over Jefferson Road, EBL/WBL **I-64** bridges over Burma Access Road and **Naval Railroad** (US Navy Weapons Station), EBL/WBL **I-64** bridges over Penniman Road and **CSX railroad**), as well as the repair and retrofit of the existing eight bridges and load ratings for each stage of construction (including final "as-built"). Widening of the existing roadway, bridges, and railroad crash protection is occurring in the median of the existing interstate avoiding impacts to existing interchanges and requiring Mr. Barefoot to develop **maintenance of traffic** concepts to allow for both construction of the new bridge and allow for the repairs to the existing structures (including continuity pours at the joints). He also had to work with geotechnical engineers to address local soil conditions to develop solutions to **address geotechnical issues** related to down drag at each of the sites. Because existing bridges were narrowly meeting clearance requirements, any widening created substandard clearances underneath; Mr. Barefoot worked with the team to develop creative solutions to **increase clearances under the bridges**. Mr. Barefoot juggled the progression of the plans for the eight bridges which were being developed by two teams under his supervision and management. Plans are approved and the bridges are under construction.

I-81/Jonesboro Road Interchange (Exit 14), Abingdon, VA

Name of Firm: Mead & Hunt, Inc. **Owner:** Virginia Department of Transportation
Project Role: Lead Bridge Engineer **Dates:** 2011-2016

Description: Mr. Barefoot served as Lead Bridge Engineer for this major interchange modification in the **Bristol District**, which involved reworking all of the ramps (roadway design by others) and the need for VDOT to do a **staged bridge replacement** of both deteriorated **I-81 northbound and southbound bridges**. The bridges were much larger and **raised to increase clearance underneath** while maintaining traffic. As Lead Bridge Engineer, complex challenges due to a tight project area within a **karst environment** required unique solutions and details which Mr. Barefoot provided. Mr. Barefoot's team provided a thorough investigation of all viable types of structures that met the design standards at this location and considered lightweight concrete and steel bridges with high performance steel as well as hybrid superstructures for the twin bridge replacements. Various span arrangements were studied, including a single-span structure with MSE retaining walls, two-span structures and three-span structures. It was determined that a two-span structure of equal spans with the use of prestressed concrete Bulb-T beams in the superstructure would provide the optimum solution for the bridge structure. The abutments are semi-tall supported on H-piles. The piers are solid wall piers supported on H-piles and are located on the median of Jonesboro Road under I-81. Aesthetic treatments were provided on the parapets and the pier walls. Mr. Barefoot worked with the team's geotechnical sub-consultant and VDOT geotechnical staff to create procedures to address pile driving issues that might occur in the karst environment; procedures included:

- Providing the contractor "Stop Driving Elevations" at each substructure unit that alerted the contractor to stop driving a particular pile that might be a "problem pile", alert the team to determine a quick solution while the contractor moved to the next pile to ensure there weren't delays.
- A testing procedure to allow for capturing whatever capacity might be available in a "problem pile."
- Designing with piles of reduced capacity to allow for "problem piles" that might be encountered during driving and providing the team the ability to reanalyze the footing to take advantage of neighboring piles' excess capacity.
- Designing footing dimensions and pile layouts with contingency piles locations in case additional piles needed to be driven.

ARRA Region II Bridge Replacements, Salem and Lynchburg Districts, VA

Name of Firm: RPM Engineers, Inc./Mead & Hunt **Owner:** Virginia Department of Transportation
Project Role: Design Manager **Dates:** 2010-2011

Description: Mr. Barefoot served in a similar capacity as the **Design Manager** leading the design effort for this bundle of twelve **design-build** bridges. The bridges consisted of a superstructure replacement ranging from 20 feet to 213 feet in length. This project is unique because although he was working for RPM Engineers (RPM), Mr. Barefoot **led teams of bridge designers from KCI** at ten sites, Infrastructure Engineers (IE) at one site, and one team from RPM for the largest bridge which carried Route 29 Business over Route 29 Bypass. Additionally, Mr. Barefoot served as the Design Project Manager for the roadway design, utility coordinating, surveying, and Quality Assurance at all sites. While not on the interstate system, the projects were located in the Lynchburg District and Salem District, four of the locations involved **staged bridge replacement** and **maintenance of traffic on portions of the existing bridges** during construction, and three projects involved a **large primary route** (Route 29). Mr. Barefoot worked with many of the same KCI staff members that we are proposing for this project, including Merritt King, Eric Burgess, and Eric Anderson.

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

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

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: **PAUL "EDDIE" JONES / CONSTRUCTION MANAGER**

b. Project Assignment: **CONSTRUCTION MANAGER**

c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): **ENGLISH CONSTRUCTION COMPANY / FULL TIME**

d. Employment History: With this Firm 34 Years With Other Firms 0 Years

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

English Construction Company / Construction Manager (1984-Present): Eddie Jones is presently a Construction Manager with English in the Road and Bridge Division. He has overall responsibility to ensure the projects he manages are successfully completed on time and on budget. To meet this responsibility he, works with the field personnel and subcontractors to determine the best means and methods of construction, and manages all design work as applicable. He is experienced at contract administration, scheduling, insuring appropriate and adequate resources including Labor, Material, Equipment, and Subcontractors are available when needed. He then manages the ongoing schedule, productivity, quality, and safety of both the personnel working the job and the general public.

He is experienced at resolving issues that come up during construction and working with all the team members to minimize their impact to the project.

Mr. Jones offers this team 34 years of experience in the construction industry with extensive experience as a Construction Manager in the Heavy Civil Construction Field. This experience includes road and bridge projects from a $60 million dollar to under a million dollars. He has successfully completed projects to include interstates, rivers/streams, railroads, primary and secondary roads, rock excavation, karst conditions, challenging schedules, and extensive traffic control and site constraints. He is experienced with phased construction of both bridge and roadway construction projects.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:

Marion High School / Diploma / 1982

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

4-18-17/E&S Control/Stormwater Level II(NCDOT)/1340; 3-15-16/Responsible Land Disturber/39617; 5-3-12/OSHA 10 Hour/15-003829792; 1-30-15/OSHA 30 Hour/12-601218586; 5-2-15 WZTC Intermediate with Traffic Control Supervisor Cert (TCS) – ATSSA/219257; 3-11-15/WZTC Traffic Control Supervisor (TCS) NCDOT; 04-11-06/Competent Person Training-Trench & Excavation

Mr. Jones will have all required certifications prior to construction commencement.

g. Document the extent and depth of your experience and qualifications relevant to the Project.

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

(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)

Route 221, Roanoke County, VA

Name of Firm: W. C. English **Owner:** VDOT

Project Role: Construction Manager **Dates:** 2010 - 2013

Description: **Construction Manager**, managing all construction processes, to include coordinating with the Quality Control for this $20 million project consisting of two miles of roadway reconstruction/widening of Route 221 at Bent Mountain in Roanoke County. Construction included 374,600 CY of excavation, 268,800 CY of the excavation was rock, three bridges (two on Route 221 and one on Cotton Hill Road), over 15,000 tons of asphalt paving, storm drainage (6,900' piping), one double box culvert, and one retaining wall. The excavation yielded a considerable amount of waste that had to be hauled on road with traffic to a waste pit that was used and maintained as part of the project. This project involved considerable traffic control and blasting operations. The project's traffic control included three phases. The bridge construction included considerable access issues with work adjacent to and over Back Creek. Extensive temporary shoring was needed to accomplish the phased roadway construction along with the constrained bridge sites. The project not only included temporary retaining walls, the construction of permanent retaining walls was also part of the project. It also included several environmentally sensitive areas with countless erosion control measures that required constant

inspection and maintenance, the entire project length ran adjacent to and crossed Back Creek. The project also included challenging utility relocations to include waterline and sewer line construction along Back Creek.

Route 460 Bypass, Christiansburg, VA

Name of Firm: English Construction Company, Inc. **Owner:** VDOT
Project Role: Construction Manager **Dates:** 1999 - 2003
Description: **Construction Manager** for all construction processes, to include coordinating with the Quality Control, for this $40 million project consisting of constructing the Route 460 Christiansburg Bypass with connections/ interchanges with existing Route 460 Business and Peppers Ferry Road. Construction included 2,132,000 CY of excavation, much of which was either rock or unsuitable, eight bridges, 32,000 SF of MSE Walls, 27,000 SF of temporary shoring, 179,000 tons of asphalt, 20,000 LF of storm drain pipe, 26,000 SF of sound wall and the planting of over 3,000 trees and shrubs. The excavation included lots of challenges from Karst conditions to include saturated soils, sinkholes, limestone formations and caverns. Sequence of construction and maintenance of traffic went hand in hand and had to be dealt with from beginning to end of this project because of the way the existing roads and the new bypass were interconnected. The maintenance of traffic also presented additional challenges with coordination with the Blacksburg Bypass project that was under construction at the same time. One unique challenge to the project included an unlined active railroad tunnel crossing under the proposed roadway and active construction site. The project's step terrain also created challenges for environmentally sensitive areas as well as the maintenance of all erosion control implemented.

I-73/74 from SW of 1304 (Harrington Rd) to I-73/74 Interchange South of Ellerbe, Richmond County, NC

Name of Firm: W. C. English **Owner:** NCDOT
Project Role: Construction Manager **Dates:** 2014-2018
Description: **Construction Manager**, managing all construction processes, to include coordinating with the quality control for the $50 million reconstruction and realignment of I-73/74. The construction includes 1,665,000CY of excavation, three bridges, over 215,000 tons of asphalt, 42,600 LF of storm drainage pipe, one double box culvert, and a sound wall. The bridge construction included construction over live traffic, temporary shoring, and permanent retaining walls. The project involves considerable traffic control that has to be coordinated with the extensive excavation and the phased construction of both the new service roads and the new mainline construction. The project's traffic control included four phases. It also includes several environmentally sensitive areas with countless erosion control measures that require constant inspection and maintenance. * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

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

Mr. Jones is currently assigned to NCDOT Contract C202962 which is to be complete in July 2018.

3.4.1
WORK HISTORY FORMS

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: **I-64/295 Flyover Interchange** Location: **Henrico County, VA**	Name: **AECOM**	Name of Client: **VDOT** Phone: **804-786-1630** Project Manager: **Don Silies** Phone: **804-786-1630** Email: **don.silies@vdot.virginia.gov**	**05/2009**	**05/2009**	**$49,075**	**$50,825**	**$35,000**

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

Project Scope

English Construction Company, Inc. performed the reconstruction of the I-64/295 interchange in Henrico County. This 2.52-mile stretch entailed a two-lane flyover ramp over I-64 and I-295, accommodating traffic movement from eastbound I-64 to eastbound I-295. Partial scope included relocating and widening of the ramp from westbound I-295 to westbound I-64; widening I-64 to the east and west of I-295; and widening a section of Pouncey Tract Road and the two-phased replacement of the bridge over I-64. As the general contractor, English's scope for the project included the construction of two new bridges, a 1,765-foot flyover bridge and a 338-foot overpass on Pouncey Tract Road. Both bridges were built over live I-64 traffic. The existing I-295 bridge over I-64 was also rehabilitated as part of this project. Additional project scope included approximately 150,000 CY of regular excavation, 70,000 CY of borrow excavation, as well as additional grading, drainage, asphalt paving, sound walls, retaining walls, temporary shoring, and traffic signals. The 99,400 SF of MSE retaining walls were a critical and challenging element in constructing the project. Wrapping around both abutments of the flyover structure, adjacent to the live interstate traffic on both I-64 and I-295, they created significant site constraints and significant coordination issues with both the bridge and grading operations. Temporary shoring was utilized to facilitate all MSE wall and bridge construction. Due to poor soil, undercutting became a major grading operation along I-64 during the widening operation. Maintenance of traffic (MOT) on I-64, I-295, and Pouncey Tract Road throughout the life of the project was crucial in that it affected virtually all construction operations. Some of the temporary lane closures were large/long enough that considerations had to be made for Route 288 movements two and a half miles to the west and Short Pump Route 250 movements one mile to the east. All operations for the project were either directly adjacent to or over live interstate traffic. The overall project was staged to minimize traffic disruptions and this goal was achieved. This project was delivered successfully within the contract time. The project also included water and sewer installation along Pouncey Tract Road coordinated with the bridge replacement over I-64. Also included with the Pouncey Tract Road bridge construction was coordinating the relocation of a Verizon duct bank from the existing bridge structure on to the new bridge structure with constant coordination between English personnel and Verizon staff with limited interruption in Verizon operations. Performance on this project is evidenced by the fact English received a bonus on this project for the high quality of the rideability of the bridge deck on the 1,765-foot-long flyover structure. VDOT's own testing identified English's ability to exceed project and delivery expectations. The increase in the final contract value was constituted by owner-directed changes that were part of increases in scope.

Similarities

- Bridge construction over and on interstate facilities
- Complex phased MOT operations on and adjacent to interstate traffic
- Poor soil conditions
- MSE walls
- Temporary shoring
- Night operations
- Utility relocations

Personnel

- Judson Dalton
- Earl Morgan

Relevant Project Elements

Interstate Girder Erection: The project included the construction of a new flyover structure over I-64 and I-295, as well as the replacement of the Pouncey Tract Road structure. Both of these structures included setting girders alongside and over interstate facilities. The flyover included a straddle bent made of structural steel and spliced. This straddle bent had to be erected over live eastbound I-64 interstate traffic. All of these erection operations included time of day restrictions and, in most cases, limited detour or slow roll time allowances. Many of these girder pics involved two cranes and simultaneous pics, complicating the erection plan and operation even further.

Partial Demolition & Phase Bridge Construction on Interstate: The replacement of the Pouncey Tract Road bridge included a partial demolition of the existing structure and also a two-phased sequence for the construction of the new structure. The two-phased construction for the new structure required the placement of a closure pour.

Maintenance of Traffic of Interstate: The project consisted of widening interstate facilities at the intersection of I-64 & I-295, the construction of two new bridges, the demolition of one existing bridge structure, and the rehabilitation of an existing bridge structure. Traffic control was a daily operation associated with every activity. Consideration had to be made continuously for proper implementation in concert with the project's MOT plan, keeping the traveling public and work force safe, but also the daily adjustments for access of material and equipment. Hauling operations, along with the traffic control devices had to be managed and constantly changed as the project progressed. Every operation that involved impacts to the traveling public had time of day restrictions on the interstate, as well as the secondaries that had to be coordinated with every construction task.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: **I-64/North Gayton Road Design-Build** Location: **Henrico County, va**	Name: **AECOM**	Name of Client: **County of Henrico** Phone: **804-501-5985** Project Manager: **Rob Tieman** Phone: **804-501-5985** Email: **tie@co.henrico.va.us**	**04/2012**	**12/2012**	**$38,600**	**$38,300**	**$21,700**

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

Project Scope

The extension of North Gayton Road begins at the intersection of West Broad Street and existing Gayton Road, crosses I-64 and proceeds on new alignment to the intersection of Pouncey Tract Road and Shady Grove Road. Extending nearly 2.10 miles, the project continues across Pouncey Tract Road, where it terminates at the intersection of Shady Grove Road (north end) and Twin Hickory Drive (south end). The project involved bridge construction over I-64 with MSE walls and the widening of the existing two-lane facility to four lanes at both ends of the project. The four-lane divided typical section demanded a closed drainage system and called for shared use paths to provide means for cyclists and pedestrian transportation. In conjunction with utility relocations, two arch culverts allowed the relocation of Bacova Road to accommodate phasing of the bridge construction. The geotechnical investigations discovered poor soil conditions at the southern bridge abutment. Undercutting then became a major operation, particularly the extensive undercutting for the foundation of the MSE walls. The bridge structure also included various aesthetic treatments, which included lighting, stone form liners on all parapet walls, and staining of all stoned pattern walls to match the color of the stone to the colors of the clients choosing. Traffic control along I-64, Route 250, Pouncey Tract Road, and Shady Grove Road took daily attention to ensure that traffic was not impacting any more than necessary and that all field operations were in accordance with the approve MOT plan. Highlights and challenges to this project included a detailed MOT plan to accommodate construction and provide a plan for ongoing use of existing business and residential entrances throughout the project footprint. The MOT plan called for proper construction access off of the interstate facility to access the pier construction in the median of I-64 for all personnel, materials, and equipment. Private utility relocations presented a variety of challenges, as relocation of nearly a mile of overhead Dominion power lines, Comcast and Verizon lines, and City of Richmond Gas necessitated synchronization with construction and scheduling, totaling in value of over $1M. With over 70 parcels of right-of-way acquisition required, the design-build team's involvement to include both design and construction staff was critical. The scheduling and prioritization of both utility relocations and right-of-way acquisition was one of the biggest upfront challenges to the team for scheduling the project and setting the table for an on time completions; throughout the life of the project, certainly for the duration of the ROW acquisition and the utility relocation, constant collaboration and adjustments were needed and key to the success of the project. Erosion control presented its own challenge with limited right-of-way for inclusion of traps and basins, which were often engineered to accommodate the constrained footprint to properly treat all out falling storm drains and retain overflow. English's greatest challenge was prioritizing acquisition to coincide with construction phasing. The use and management of a detailed CMP schedule, that included activities for each parcel, was key to the success and delivery of the project. The majority of the time difference between the original date and the actual date was due to Henrico County's reluctance to utilize emanate domain / condemnation during the right-of-way acquisition. Henrico County tries to avoid this process at all costs. The English Team partnered with the County to allow their preference by resequencing portions of the construction to allow the County more time on certain parcels. The County, in turn, partnered with English to allow more time for the work in the locations where more acquisition time could not be allowed. English participated in all public hearings for the project and met with each individual property owner throughout the duration of the project; on site staff knew the local residents by name, and vice versa, which created a great since of partnering with our local 3rd parties. This project was performed by W.C. English, Inc., an affiliate of **English Construction Company, Inc.** – the two are legally separate entities; however, labor resources to include management, field supervision, craft labor, and all industry expertise are routinely transferred from one company to the other. All personnel proposed for the Replacement of I-81 Bridges project will be employees of English Construction Company. Affiliated companies of the English group routinely share equipment resources through rental agreements, allowing full utilization of capital assets and enhanced means and methods.

Similarities

- Design-build
- Utility relocations
- ROW acquisition
- QA/QC
- Bridge construction over and on interstate facilities
- Complex phased MOT operations on and adjacent to interstate traffic
- Poor soil conditions
- MSE walls
- Temporary shoring
- Night operations

Personnel

- Judson Dalton
- Earl Morgan

Relevant Project Elements

Interstate Girder Erection: The project included the construction of a new structure over I-64. This structure included setting girders over I-64. All of these erection operations included time of day restrictions and, in most cases, limited detour or slow roll time allowances. Many of these girder pics involved two cranes and simultaneous pics complicating the erection plan and operation even further.

Maintenance of Traffic: The project consisted of construction of MSE wall abutments along the interstate and the construction of a new four-lane bridge with a raised median and sidewalks on both sides over I-64. Traffic control drove the allowable operations on a daily basis. Temporary shoulder closures were utilized in both directions of I-64 on both the inside and outside shoulders. In some cases, temporary concrete barriers were installed to close the shoulders for longer durations. Lane closures and slow rolls were utilized for larger operations to include the girder erection. All traffic control for the median of I-64, where the pier was constructed, had to include allowances for access of personnel, material, and equipment. Daily inspection and maintenance of all traffic control devices deployed was important to the constant quality of the implementation of the MOT plan.

Temporary Shoring of Interstate: Both bridge abutments for the new structure were constructed utilizing MSE walls. The construction of these MSE walls included a footer at an elevation that required the shoring of the outside shoulder of I-64, both eastbound and westbound. The eastbound site was shored utilizing temporary soil nails and the westbound side was shored utilizing temporary sheet piling.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: **Downtown Tunnel/Midtown Tunnel/MLK Extension Project (Contract A)** Location: **Portsmouth, VA**	Name: **Parsons Brinkerhoff**	Name of Client/ Owner: **Elizabeth River Crossings** Phone: **757-932-4400** Project Manager: **Jeff Mosher** Phone: **704-408-3963** Email: **jmosher@sugarcreekllc.us**	**11/2016**	**11/2016**	**$8,781**	**$8,944**	**$7,132**

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

Project Scope

As a subcontractor to Curtis Contracting Inc. on Contract A of the MLK Extension portion of the SKW JV's $2 billion dollar project, **English Construction Company, Inc.** constructed just under $9 million of bridge work. The first bridge is a 670-foot-long bridge over Route 17 and the ramp from northbound Route 17 to I-264, which takes traffic from the eastbound lane of I-264 to the newly constructed MLK expressway. The second bridge is an approximately 450-foot-long structure over the Norfolk and Portsmouth Belt Line (NPBL) Railroad track. The third part of the project was to construct the substructure for the first five spans of the MLK bridge over I-264, CSX Portsmouth rail yard, and Vulcan Materials sales yard. To build the ridge over the NPBL railroad track, which is owned by Norfolk Southern, English had to coordinate with the railroad and worked extensively with the railroad flagman during all construction activities. The coordination of work activities adjacent to and over the rail line included daily routine stoppage times for railroad traffic, which was coordinated daily between onsite railroad personnel and English's on site Construction Manager. English collaborated with KCI to design a structural steel erection plan for setting the curved steel girders going over the existing railroad tracks. English and KCI worked with the railroad's consultant, AECOM, to review, improve, and ultimately gain approval for the erection plan. English then worked with the railroad and its consultant inspectors to ensure that the steel girder erection plan was implemented as proposed and the rest of the superstructure was built to the satisfaction of the railroad, without disruption to the railroad's operations.

On the 670-foot-long bridge, English set prestressed concrete girders up to 140 feet in tight working areas adjacent to I-264, over Route 17 and the ramp from Route 17 to I-264 eastbound. While self-performing the pile driving operations, English drove concrete piles up to 110 feet immediately adjacent to live traffic on I-264 and Route 17, including in the median of Route 17. This bridge also had a very challenging geometry to the deck, consisting of both vertical and horizontal curves, including super elevation changes. The deck was verified to be within tolerances by the project QA and QC inspectors.

On all three bridges, English teamed with KCI and Jim Fitz Morris, PE to design the extensive shoring required beside live traffic on I-264, the ramp to I-264, and Route 17, including its median. KCI also designed the formwork for the large and complicated abutment structures. The temporary shoring was required in all cases due to the confined work area directly adjacent to open roadway facilities. The temporary shoring not only protected the existing roadways, but, in most cases, created the only allowable work space for the construction operations. All operations required extreme planning for logistics of material delivery, material placement, and equipment location due to the lack of space and the lack of access.

Being a subcontractor on this $2 billion dollar project required extensive interaction with the SKW Design-Build Team. This required English to work with designers, SKW, Curtis, QC, QA, QA oversite firms, Elizabeth River Crossings, VDOT, and the City of Portsmouth. This project was part of a P3 toll project and timely delivery was paramount. English delivered this portion of the overall project on time.

Similarities

- Design-build
- QA/QC
- Bridge construction over and on interstate facilities
- Construction over railroad facilities
- Complex phased MOT operations on and adjacent to interstate traffic
- Temporary shoring
- KCI participation
- Night operations

Personnel

- Baxter Gordon
- John Jordan, Jr.
- Jim Fitz Morris, PE (KCI)

Relevant Project Elements

Railroad Girder Erection: The structure over the NPBL Railroad track included construction adjacent to and over the existing NPBL rail line included the erection of concrete girders over the facility. English worked with KCI's Jim Fitz Morris to develop and implement a girder erection plan that was reviewed and approved by the railroad owner.

Handling Long and Heavy Structural Elements in Tight Spaces: English set prestressed concrete girder up to 140 long in tight locations and over traffic. Concrete piles up to 110 feet long were driven by English next to the interstate , in the narrow median of US 17 and other locations with limited access.

Design and Construction of Temporary Shoring Adjacent to Interstate and High Traffic Volume Roads: Jim Fitz Morris of KCI designed and English installed temporary shoring up to 20 feet deep adjacent to I-264 along with shoring in four additional locations directly adjacent to I-264 or US 17.

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: **I-64 Widening, Segment 2 Design-Build** Location: **Newport News, York County, and James City County, VA**	Name: **Allan Myers**	Name of Client: **Allan Myers** Phone: **804-290-8536** Project Manager: **Tom Heil** Phone: **804-290-8536** Email: **tom.heil@allanmyers.com**	**02/2016**	**07/2019**	**$138,800**	**$138,800**	**$1,100**

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

Project Scope

The project is located on I-64, from approximately 1.05 miles west of Route 199 (Humelsine Parkway/Marquis Center Parkway) to approximately 0.54 miles east of Route 238 (Yorktown Road) in Newport News, York County and James City County, Virginia. The project includes widening of the existing interstate to a three-lane section from the point where the I-64 Segment I project ends to the west for approximately seven miles. The proposed improvements include full-depth reconstruction of the existing lanes, the addition of one 12-foot-wide travel lane and one 12-foot-wide paved shoulder in each direction, and repair and widening of nine existing bridges and six box culverts located within the project limits. Widening of the existing roadway and bridges is occurring both to the median and the outside of the existing interstate which allowed for the most efficient maintenance of traffic. **KCI Technologies, Inc.** was a subconsultant, responsible for all of the bridge design on the project and performed structure and bridge design for eight bridges on an accelerated schedule, including the widening of I-64 over Jefferson Ave; I-64 over Penniman Rd and Abandoned Railroad; I-64 over Yorktown Road; and I-64 over Burma Access Road and Naval Railroad (US Navy Weapons Station). Bridge design and details included widening and rehabilitation for each dual structure using structural steel and prestressed concrete beams, prestressed concrete pile foundations, retrofit and new railroad crash walls, eliminating joints with deck closures and slab extensions, development of modified VDOT Alternate Abutment Details for bridges with high skews, beam end repair details, and bearing replacements. KCI worked closely with geotechnical engineers to limit the impact of down-drag forces on the new and existing substructure, including the use abutment preloading, slick-coating the abutment piles, and use of approach retaining walls. KCI also provided superstructure designs that minimized the structure depth in order to provide the required vertical clearance without requiring roadway work below the structures. KCI's design work was performed in our Richmond, VA office, with support from our Rock Hill, SC office.

Relevant Project Elements

Interstate Roadways: The project involves widening and/or improving seven miles of interstate facility and four interchanges on I-64 at exits 242, 243, 247 (Jefferson Ave), and 247 (Yorktown Road). Three of these interchanges involved improving bridges carrying the interstate over secondary routes underneath.

Bridges and Structures: KCI developed bridge plans for eight bridges that involved partial demolition of existing structures and maintenance of traffic for an interstate facility (I-64) in Newport News, VA over multiple VA routes. The staging of bridge widening is very similar to the staging for replacement of I-81 over Route 8.

Maintenance of Traffic: KCI, in support of the prime consultant, developed MOT schemes in the bridge work areas and developed bridge typical sections for multiple phases of construction.

Innovative Design Solutions/Construction Techniques: At one location, KCI removed and reused beams at I-64 to eliminate the need to rework facilities underneath the bridge. The bridge design made use of current prestressed concrete beam standards at a couple of locations to match stiffness but keep typical sections shallow to maintain clearances under the bridges. KCI eliminated the concrete diaphragms at the beam ends of the prestressed concrete bridges and opted for steel diaphrams to better fit the simply supported structures with continuity pours and slab extensions.

DBE Program Commitments: All DBE committals are being met for the goal set by both the team and VDOT in the contract.

Similarities

- Design-build
- Interstate over railroad
- Constructability and demolition over railroad
- Extensive interstate facility MOT
- Aggressive schedule to complete project
- Interstate facility w/local road improvements
- No impacts to facilities under interstate
- Major route & traffic congestion
- Roadway & traffic improvements
- Complex geotechnical challenges
- Bridge staging
- Demolition of structures
- Traffic control devices
- Transportation management plan
- Utility coordination
- Major stakeholder coordination
- Public involvement/communications

Personnel

- Merritt King, PE, DBIA
- John Barefoot, PE
- Eric Anderson, PE
- Eric Burgess, PE
- Jim Fitz Morris, PE

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: **I-520 Palmetto Parkway, Phase I Design-Build** Location: **Aiken County, SC**	Name: **United Contractors**	Name of Client: **SCDOT** Phone: **803-737-4202** Project Manager: **Claude Ipock, PE** Phone: **803-737-4202** Email: **ipockcr@scdot.org**	**08/2002**	**06/2004**	**$42,000**	**$42,000**	**$2,400**

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. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

Project Scope

The project consisted of the design and construction of 2.5 miles of new mainline interstate facility on I-520 from Sandbar Ferry Road in Augusta, Georgia to US 1 (Jefferson Davis Highway) near North Augusta, South Carolina, and five major bridge structures. This project provided the citizens and communities a link outside of Augusta and reduced travel time and relieved congestion in the area. This modified design-build project was bid as a "A+B" project (pricing & time to construct) with all roadway plans completed by SCDOT with unit rate prices and all bridges let as design-build with lump sum pricing. This fast track project featured over two million cubic yards of earthwork with two interchanges and phased design and construction to accommodate access to a major industrial plant along Dittman Court Road. Bridge structures were required for the Savannah River site, dual bridges over Savannah River swamp and overflow, bridge over Norfolk Southern Railroad, Dittman Court Road bridge over I-520, and dual US 1 bridges over I-520. **KCI Technologies, Inc.** served as the prime designer and work was performed in the Rock Hill, SC office. KCI provided overall design project management and structure design. As the design project management entity for the team, KCI was responsible for the management and coordination between all of the subconsultants for geotechnical, bridge hydrology, and bridge design and with the SCDOT Project Manager for submittals and approvals. The project was designed and constructed within the budget and schedule bid.

Relevant Project Elements

Interstate Roadways: The project consisted of 2.5 miles of new, four-lane divided, limited access interstate facility connecting the Bobby Jones Expressway in Georgia to US 1 in Aiken County, SC. Also, improvements to side roads, signalization, turning lanes and intersection improvements were improved for the existing local connecting roads.

Bridges and Structures: The main bridge over the Savannah River, which is a 14-span, 1,900' bridge consisting of 74" pre-stressed concrete bulb-tee beams with spans up to 139'. The bridge superstructure is supported by 20" diameter pipe piles at the end bents and 72" diameter drilled shaft piers with crash wall struts in the navigable channel as required by the vessel impact loading study. The bridge geometry includes two tapers on the bridge deck for acceleration and deceleration lanes in combination with horizontal and vertical curve alignments, all of which added complexity to the seismic design and detailing requirements of the SCDOT's Seismic Design Specifications for Highway Bridges, 2001. The design of the structures required an accelerated schedule of completion in order to meet the construction deadlines. In order to facilitate construction of the bridge over the Savannah River, the substructure plans were developed and approved by the SCDOT to permit drilled shaft installation prior to completion of the final plans. KCI was able to provide final design and plan details for this site in only five months and provided responsive contractor support during construction to ensure that the project was completed ahead of schedule. Other bridges on the project included 600' bridge over Savannah River swamp overflow, using AASHTO Type III beams and pre-stressed concrete piling for foundations; 150' single-span bridge over Norfolk Southern Railroad with structural steel girders and MSE wall abutments supported on steel pipe piles; 205' two-span bridge on Dittman Court Road over I-520 consisting of BT-63" bulb tee pre-stressed concrete beams supported on spread footings in the interior bent and steel pipe pile abutments; 161' single-span bridge over US 1 with structural steel beams supported on MSE wall abutments and steel pipe piles.

Environmental: The project was successfully constructed across the environmentally sensitive Savannah River and its floodplain, which includes a pristine wetlands caused by a breach in the aquifer with no impact to water quality. Construction techniques were used to minimize the chance for pollution or siltation to enter these bodies of water. Less intrusive drilled shafts were designed instead of cofferdams for the river site and driven concrete piles for the overflow bridge. Stone fill and turbidity curtains were used to cross the aquifer to minimize siltation. Gabion rip rap was used in the area of the Savannah River bank and levy for protection.

Safety/Limiting Impacts to Traveling Public: Phased construction of roadway and underpass was required to provide continuous access to a major industrial plant. Bridge beams over traffic at US 1/I-520 were erected at night with lane closures to reduce impacts to traffic during peak hours.

Stakeholder Communication: Extensive coordination with stakeholders included two DOTs (SCDOT and GDOT), two cities, two counties, resource agencies, community groups, local businesses/residents, and major utility companies.

Innovative Design Solutions/Construction Techniques: Innovative top-down construction techniques to build overflow bridge over a pristine cypress swamp formed by a freshwater aquifer. With regard to construction access, the team was required to obtain permission from private land owners for access between the Savannah River bridge and wetlands overflow bridge; also had to obtain a private easement with Norfolk Southern railroad to cross tracks for access. Innovative embankment settlement techniques, such as wick drains and undercut/stone backfill instead of stone columns; this VE savings was shared with SCDOT. Extensive seismic and settlement criteria required ground modifications. Challenging access issues to each site along the project, which included over one million CY of borrow material. Use of long span, 74" bulb tee pre-stressed concrete beams for the Savannah River bridge to maximize spans and eliminate piers in the waterway. Drilled shafts in the river for improved seismic response and eliminate costly cofferdams. Submerged crash wall formwork design for river piers saved time and costs on vessel impact design of main river piers. Innovative use of 20" steel pipe piles saved costs and eased construction. Value engineering for settlement and seismic issues required ground modifications, and our design team performed value engineering by eliminating costly stone columns using wick drains. Innovative design at the Dittman Court site by moving the new alignment of I-520 under Dittman Court Road, rather than over Dittman, allowed the use of the existing bridge for access to the industrial park.

DBE Program Commitments: All DBE committals were met for the goal set by SCDOT in the contract.

Similarities

- Design-build
- New alignment & structures
- Environmentally sensitive area
- Complicated project with aggressive schedule
- Acceleration & deceleration lanes/ramps
- New major route & traffic congestion
- Roadway & traffic improvements
- New major river bridge
- Extensive MOT
- Environmental & permitting
- Geotechnical
- Bridge hydraulics
- Storm drainage and SWM
- Traffic control devices
- Signs, sign structures, and foundations
- Transportation management plan
- Extensive utilities & coordination
- Major stakeholder coordination
- Public involvement/communications
- Design QA/QC
- Surveys
- Construction engineering and inspection

Personnel

- Merritt King, PE, DBIA
- John Barefoot, PE
- Eric Anderson, PE
- Eric Burgess, PE
- Jim Fitz Morris, PE

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: **I-95/Veterans Memorial Highway** Location: **Harford County, MD**	Name: **Allan Myers (Formerly Daisy Construction)**	Name of Client: **Maryland Transportation Authority** Phone: **410-537-7824** Project Manager: **Daniel Williams** Phone: **410-537-7824** Email: **dwilliams1@mdta.state.md.us**	**12/2006**	**01/2008**	**$60,000**	**$37,777**	**$890**

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

Project Scope

Capacity and safety had become major concerns for I-95, specifically at MD 24 where evening rush-hour traffic routinely slowed and backed up onto the interstate. The interchange is among the busiest north of the Baltimore Beltway and provides access to a major shopping hub as well as Aberdeen Proving Ground, which has experienced an influx of new jobs and families through the base realignment and closure process. Less than one half mile down the road, the MD 24 intersection with MD 924 was also experiencing severe congestion and higher than normal accident rates. MDTA worked with a team of designers and contractors to tackle both challenges at the same time by upgrading the existing I-95 interchange at MD Route 24 and replacing the MD 24/MD 924 intersection with a full grade-separated urban diamond. Because the junctions are located so closely together, an integrated solution was required. The team designed improvements that would allow traffic to flow freely through the MD 24/MD 924 interchange to eliminate backups on I-95 and accommodate capacity 25 years in the future. **KCI Technologies, Inc.** was the prime designer and performed the design work from the Sparks, MD office.

Relevant Project Elements

Interchange Improvements: The primary improvement consisted of capacity and safety improvements for the I-95 and MD 24 interchange for northbound traffic exiting the interstate. Design work included roadway and bridge design for separating the local MD 924 and through movement for MD 24 traffic to improve exit volume flow and back-up on to the interstate. The MD 24 through volume traffic will exit at the first Ramp A, with left turns onto MD 24 and a grade separated interchange to avoid the intersection congestion and delays. The local MD 924 traffic will exit at the second B loop ramp onto the barrier separated lanes ending at MD 924 intersection for residential and shopping center access. Design work included a grade separated interchange, roadway widening and realignments, exit and entrance ramps, drainage, new interconnected signals along MD 24, signing, lighting, pavement markings and landscaping.

Multiple Roadway Classification: KCI prepared roadway, traffic, drainage, structures plans for three types of classifications, interstate, arterial and collector facilities. Design work along I-95 included interstate widening, ramp widening and reconfiguration, ramp termini intersections redesign with signals, signing, lighting pavement marking, roadway drainage SWM and erosion controls plans phased with the traffic control plans. Design work for MD 24, a four-lane arterial, included roadway widened with barrier and raised median lanes to control traffic weave movements in separating the traffic to the MD 24 arterial, through movement from the MD 924 collector traffic accessing the local residential and shopping centers adjacent to the interchange. Design work for MD 924, a collector classification, included closed storm drainage, sidewalks, signals, ADA ramps and crosswalks, SWM and erosion controls.

Bridges: The project included a new MD 24 single-span grade separated bridge over MD 924 with MSE support walls for the approach roadway and stub abutments. Bridge foundations consisted of steel H piles driven after a 90-day settlement period for the approach roadway embankments. The MD 24 westbound two-span bridge over I-95 was widened for a new lane and shoulder to accept the exit ramp for Northbound I-95 and included lengthening of existing abutments, widening of the existing deck new parapets, and guiderail attachments.

Utility Coordination: Project included extensive coordination for water, gas, power and telecommunications lines that required both avoidance and relocations. Critical utilities that required relocations were a water and gas line crossing of MD 24 that were within the existing intersection that was being lowered by 4'. KCI provided the relocation for the water line design and coordinated with BGE for the gas line design and relocation. Phase of the water and gas line relocations were critical to the schedule to accommodate the traffic control phasing and bridge construction. Plans called for shifting the existing traffic to the north and lowering the utilities with evening lane closures followed by reconstruction of the existing intersection to the new profile grade.

As this work was being done, the outside power and telecommunication poles were being relocated for the new connecting ramps between I-95 and MD 24.

Schedule: Since the project had already been bid, MDTA asked the team to complete the redesign under an accelerated schedule with a secondary goal of compressing the project's construction time line. Partnering also played a key role in minimizing impacts to the schedule caused by strained suppliers, craftsman, designers and reviewers that were also supporting the simultaneous construction of the Intercounty Connector.

Safety and Mobility: Capacity and safety had become major concerns for I-95, specifically at MD 24, where evening rush-hour traffic routinely slowed and backed up onto the interstate. Critical challenges included minimizing congestion and reducing construction cost while meeting the original safety and capacity objectives. Safety and operational review included analysis of weave movements between ramps; sight stopping distance along ramps and mainline median barrier; design speed for ramps; merge lengths for the local and through traffic from I-95; and signal designs, including pedestrian and ADA compliance for intersection layout. Key design issues included truck turning movements, double left exit and entrances, shoulder widths and typical sections, minimization of right-of-way takes, and constructability.

Environment: KCI performed a detailed NEPA review and developed environmental base mapping showing impacts to wetlands, waters of the US, and forest stands. Environmental impacts were coordinated with regulatory and permitting agencies and a Categorical Exclusion was prepared for FHWA approval. KCI developed the analysis for FHWA Interstate Access Point Approval for the proposed improvements to I-95/MD 24 interchange, which entailed a full traffic modeling study outlining impacts to I-95 traffic with recommended improvements.

Maintenance: All sidewalks in the area were bought up to current ADA standards and low maintenance landscaping was specified for the planting plans in SWM facilities. Limited planting within the interchange and standard signal equipment were used for the project to minimize maintenance.

Similarities

- Complex interchanges
- Aggressive schedule to complete project
- Interstate facility w/local road improvements
- Major route & traffic congestion
- Roadway & traffic improvements
- Extensive interstate facility MOT
- Storm drainage and SWM
- Demolition of structures
- Traffic control devices
- Transportation management plan
- Major stakeholder coordination
- Public involvement/communications

Personnel

- Steve Drumm, PE
- Aaron Hottenstein, PE
- Jennifer Bird
- Jeff Lawrence, PE, PTOE