A Design-Build Project
Replacement of I-81 Structures
18942 & 18944 over Rte. 808
Halls Bottom Rd and Sinking Creek
From: 0.94 Miles Northeast of Rte F310
To: 1.83 Miles Southwest of Rte 611 Spring Creek Rd
Washington County, Virginia
State Project No.: 0081-095-038
Contract ID Number: C00107116DB85
November 9, 2015

Brenda L. Williams  
Commonwealth of Virginia  
Alternative Project Delivery Office  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

RE: Statement of Qualifications, Design-Build Replacement of I-81 Structures 18942 & 18944 over Rte. 808 Halls Bottom Rd and Sinking Creek, RFQ No.: C00107116DB85

Dear Ms. Williams:

Blythe Development Company (Blythe) is pleased to submit one original paper version of our Statement of Qualifications (SOQ), seven abbreviated copies of the original paper version, and one CD-ROM containing the entire original in a single PDF file to provide design-build services for the Replacement of I-81 Structures 18942 & 18944 over Rte. 808 Halls Bottom Rd and Sinking Creek project. Blythe has thoroughly reviewed the Request for Qualifications (RFQ) and Addendum Number 1.

The following is requested information and/or attachments separated by numbered tabs with sections corresponding to the order set forth in Section 3.2:

Acknowledgement of Receipt of RFQ, Revisions, and/or Addenda (Form C-78-RFQ) and SOQ Checklist - Completed and included as Attachments 2.10 and 3.1.2 in the Appendix.

3.2.1 Blythe Development Company (Blythe), 1415 E. Westinghouse Boulevard, Charlotte, NC 28273, is the legal entity who will execute the contract with VDOT. We have examined the RFQ, attended the Project Information Meeting and visited the project site. Blythe appoints the following:

3.2.2 **Jason Hoyle, Design-Build Project Manager**, will serve as the **Point of Contact** for the Offeror:  
1415 E. Westinghouse Boulevard, Charlotte, NC 28273 / P: (704) 588-0023 / F: (704) 588-9935  
jhoyle@blythedevelopment.com

3.2.3 **Luke Blythe, Vice President of Operations**, will serve as the **Principal Officer** for the Offeror.  
1415 E. Westinghouse Boulevard, Charlotte, NC 28273 / P: (704) 588-0023 / F: (704) 588-9935  
lblythe@blythedevelopment.com

3.2.4 Blythe is a North Carolina corporation, authorized to conduct business in Virginia by the SCC, and will be the sole major participant firm and responsible party to the design-build contract with VDOT. Blythe will hold all financial responsibility for the contract.

3.2.5 **Lead Contractor**: Blythe Development Company (Blythe)/**Lead Designer**: Rummel, Klepper & Kahl, LLP (RK&K)

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

3.2.7 Certification Regarding Debarment Forms (Attachments 3.2.7(a) and 3.2.7(b)) have been signed and are included in the Appendix.

3.2.8 VDOT Prequalification Certificate (#B1096, Active) evidence is included in the Appendix.

3.2.9 A Surety Letter is included in the Appendix.

3.2.10 SCC and DPOR information are listed in Attachment 3.2.10 with supporting documentation in the Appendix.

3.2.11 Blythe is committed to achieving a 2% DBE participation goal for the entire value of the contract.

Our Team (Blythe and RK&K) is enthusiastic about the opportunity to participate in the design-build process for the Replacement of I-81 Structures 18942 & 18944 over Rte. 808 Halls Bottom Rd and Sinking Creek project and is confident we will complete this project on time and within budget. Collectively, Blythe and RK&K bring the leadership, skills and shared core values to assist VDOT in delivering a project that sets the standards for others to follow.

Sincerely,

Blythe Development Company

Luke Blythe  
Vice President of Operations
Section 3.3
Offeror's Team Structure
3.3 TEAM STRUCTURE

With a track record of successfully delivering over $250 million in design-build (DB) roadway and bridge projects, Blythe Development Company (Blythe) comes to VDOT with the hands-on experience and top notch personnel it takes to effectively execute the design and construction, as well as to manage the risks of the Design-Build Replacement of I-81 Structures 18942 & 18944 over Route 808 Halls Bottom Road and Sinking Creek project. During our design-build history, Blythe has exceeded owners’ expectations in the on-time, on-budget delivery of high-quality projects, while meeting some of the most strenuous maintenance of traffic and environmental commitments.

Through the years, Blythe has built a solid reputation of strategically aligning with the design-build partners most suited to meet the specific needs and requirements of the project at hand. For this project, we have selected Rummel, Klepper & Kahl, LLP (RK&K) as our lead design firm, along with the added depth of four highly qualified sub-consultants. Together these firms make up the Blythe Design-Build (DB) Team.

Blythe has successfully worked with RK&K on the Design-Build Macy Grove Road Improvement project in Kernersville, North Carolina, as well as the I-73/PTI Project in Greensboro, North Carolina. Therefore, the two firms understand and know how to work with each other’s strengths and abilities.

Established, strong working relationships are vital to the success of any design-build project. Since the individuals on our Team have already developed a rapport and knowledge of each other’s abilities, skills, and working style, the framework for the project implementation is strengthened. The Replacement of I-81 Structures 18942 & 18944 over Rte. 808 Halls Bottom Rd and Sinking Creek design and construction phases will not be a “training ground” for the Blythe DB Team, but instead will be one additional example of our Team’s success. Following is a graphic showing our strong inter-firm working relationship and experience.

### 3.3.1 KEY PERSONNEL

The Blythe DB Team has assembled a Team of highly-qualified and experienced individuals and structured them accordingly for optimal performance. These key staff and design firms come together with a shared history on successful projects, have established working relationships, and are ready to hit the ground running. Though our task leaders and technical staff are responsible for items such as design, public involvement and/or construction, everyone is ultimately responsible for the total success of the project. The chart below introduces our Key Personnel (resumes in Appendix - Attachment 3.3.1):

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Firm</th>
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</thead>
<tbody>
<tr>
<td>Design-Build Project Manager (DBPM)</td>
<td>Jason Hoyle</td>
<td>Blythe</td>
</tr>
<tr>
<td>Quality Assurance Manager (QAM)</td>
<td>Julie Perkoski, PE</td>
<td>CES</td>
</tr>
<tr>
<td>Design Manager (DM)</td>
<td>Gary S. Johnson, PE, DBIA</td>
<td>RK&amp;K</td>
</tr>
<tr>
<td>Construction Manager (CM)</td>
<td>Nathan Thomas</td>
<td>Blythe</td>
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<tr>
<th>Experience Working Together</th>
<th>Blythe</th>
<th>RK&amp;K</th>
<th>Anderson &amp; Associates</th>
<th>CES Consulting</th>
<th>ECS Mid-Atlantic</th>
<th>Volkert</th>
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<tr>
<td>Blythe</td>
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#### Additional Design and Construction Support

We have assembled a highly skilled team of professionals that have been selected because of their proven competencies in engineering, construction and design-build. Each member was hand-selected based on their experience relative to this project’s scope and complexities, as well as their familiarity working together as a team. A DB icon has been placed next to the names of the individuals with design-build experience.
Lead Structural Engineer/Deputy DM, Craig Ponte, PE, will be involved in all aspects of bridge design for this project. He has over 12 years of progressive Virginia design experience with new and rehabilitated structures. Craig was one of the lead designers of the VDOT Huguenot Bridge replacement project in Richmond, Virginia. This 3000’ long bridge spans the James River and included a complex maintenance of traffic plan that drove the structural design. Craig is also working on a bridge replacement project for VDOT along Route 360 in Amelia County were advanced chloride degradation complicated the design process. He leaned on his extensive knowledge to arrive at the correct and most cost-effective solution. Craig will report to the DM.

Roadway Design Engineer, John McDowell, PE, brings more than 35 years of experience in the design and management of complex roadway design projects and will focus on roadway and intersection design for this contract. He has been responsible for leading and directing the geometric design and plans production for the roadway design, preparation of the Traffic Control Plans, as well as interfacing with the various elements of the project design including structures, drainage, signals and lighting design. Previous VDOT project experience includes I-64 Widening and Route 623 Interchange Improvements DB Project where John performed various design activities including roadway quality control in close coordination with Gary Johnson, our proposed Design Manager for this project. John will report to the DM.

Drainage/Hydraulics Design Engineer, Brian Finerfrock, PE, offers more than 13 years of advanced technical roadway and drainage experience, as well as, rural and urban design project experience. He provided similar services for the VDOT I-64 Widening and Route 623 Interchange Improvements DB Project. Brian has extensive experience in design, and consultant management oversight of general drainage, hydrologic studies, hydraulic bridge studies, and bridge scour analysis for many of VDOT’s largest projects. His project experience includes various types of municipal and roadway design projects on new location, reconstruction and widening as well as major VDOT drainage improvements for 12 of RK&K’s contracts since 2009. This experience includes serving as lead Hydraulics Engineer for several task orders in the Bristol District via RK&K’s statewide VDOT On-Call Drainage and River Mechanics contract. Brian will report to the DM.

Geotechnical Engineer, Randy Wirt, PE, will be in charge of all aspects of geotechnical engineering and evaluation for the project. With 15 years of experience, Randy has served as the lead geotechnical engineer for multiple VDOT projects in the region with varying project delivery systems including I-81 over Route 11 and Middle Fork Holston River Bridge Replacement in Smyth County, Route 83 over Cranes Nest River in Dickenson County, I-581/Elm Avenue Interchange Improvements in Roanoke, Route 220 over Back Creek Bridge Replacements in Roanoke County, and the Route 460/Southgate Drive Connector project in Blacksburg, Virginia. Randy also has considerable experience in VDOT Design-Build projects throughout the Commonwealth and is currently the Geotechnical Engineer of Record on the VDOT I-64 Widening and Route 623 Interchange Improvements DB Project with RK&K. Randy will report to the DM.

Landscape Architect, David Mitchell, LA, LEED AP, has 20 years of experience as a site designer specializing in site grading, planting plans, conceptual site planning and preparation of construction documents. His experience includes all aspects of site design and environmental design, as well as all facets of landscape architectural services. His ability to integrate elements with minimal disturbance and financial impact has gained the respect from clients and consultants. David will report to the DM.

Wetland Delineation & Environmental Permitting Coordinator, Ricky Woody, II, PWS, has more than 27 years of experience providing project management leading and supporting the preparation of various NEPA documents, securing wetlands and water quality permits and promoting compliance with environmental clearances for both large and small transportation projects. He has a strong foundation in environmental resource studies which is required for successful document/permit approvals including; wetland delineation, Unified Stream Methodology, rare, threatened and endangered species studies, water quality monitoring, habitat assessments, and mitigation design. Ricky has experience in performing project reviews and providing corrective action recommendations to remain compliant with project specific environmental commitments. Ricky has been involved in numerous VDOT projects providing environmental engineering and services and has managed all environmental aspects of several major and minor infrastructure projects, including the I-64 Widening and Route 623 Interchange Improvements DB Project, Woodrow Wilson Bridge, Manassas Bypass, and Fairfax County Parkway. Ricky will report to the DM.

Signing & Striping Engineer, Usman Ali, PE, PTOE, has more than 8 years of experience specializing in the design of traffic control devices for VDOT and local counties and municipalities. He is a skilled traffic engineer with strong credentials in design, analysis and modeling and knowledge of MUTCD, FHWA, AASHTO, and ITE best practices. Usman’s expertise encompasses traffic signal design, signing and marking plans, lighting analysis and design. Usman has performed similar services on two previous VDOT design-build projects, the I-
64 Widening and Route 623 Interchange Improvements DB Project and the Route 29 Solutions DB Project. Usman will report to the DM.

**Noise Analysis Designer, Kevin Hughes**, is RK&K’s lead Noise Analyst and Sound Barrier Design Project Coordinator and brings more than 28 years of experience to this project. His specific noise analysis experience includes identification of noise sensitive areas, evaluating existing noise environments through field reconnaissance and monitoring, determining community impacts and need for noise abatement, predicting future traffic noise levels using the FHWA Traffic Noise Model, determining reasonableness and feasibility, evaluating cost-effective mitigation measures, preparing technical reports, and participating in community meetings. Furthermore, he has prepared contract plans for many noise abatement projects. Kevin will report to the DM.

**Surveying/Plats, Christopher Kaknis, LS** offers more than 27 years of survey experience that includes all aspects of surveying. This experience has included miles of design surveys, bridge situation surveys and aerial mapping control surveys. His knowledge of right-of-way surveys is supplemented by extensive boundary surveying experience outside of VDOT assignments. Christopher has overseen the completion of 25+ survey projects within the Bristol District through Anderson & Associates (A&A) Survey Term Contract with VDOT. In addition to conventional surveys he has also led A&A’s work in data collection for highway asset maintenance. This has involved managing A&A’s crews and also subcontractors which can have as many as 13 crews at one time. He offers complete mastery of VDOT rules and methodology and his ability to manage teams. Christopher will report to the DM.

**ITS/Lighting Engineer, Barry Brandt, PE, PTOE**, is responsible for providing the design of traffic signals, roadway lighting, ITS devices, and other traffic control devices such as highway signing and pavement markings. Barry brings more than 25 years of experience to the team and is familiar with the MUTCD, the IES RP-8 Standard Recommended Practice for Roadway Lighting, the National Electrical Code, the AASHTO Roadside Design Guide, and other applicable guidelines pertaining to traffic signal, roadway lighting and ITS design. In recognition of his service, he was awarded the “Outstanding Public Service Award” presented by Maryland SHA for his performance of signal, lighting and ITS design as well as development of the electrical and lighting design training programs. Barry has been the project manager for 14 traffic engineering and ITS contracts. Barry will report to the DM.

**Erosion and Sediment Control Engineer, Alice Ortman, PE**, has more than 10 years of experience in erosion and sediment control design and other water resources engineering services for transportation projects. Alice served over 8 years at VDOT as an Associate Hydraulic and River Mechanic Engineer. Her experience includes the design of roadway drainage systems, stormwater management design, storm water pollution and prevention plans, and erosion and sediment control plans for both rural and urban projects, as well as Hydrologic and Hydraulic Analyses (H&HA’s) and scour computations. Computer skills include Microstation, GEOPAK Drainage and Road, HEC-RAS, HY-8, Ensoft Hydro Suite, Visual Urban, TerrainPro, and other hydraulic programs used by VDOT. Alice was the Hydraulic Engineer for the VDOT I-64 Widening and Project 623 Interchange Improvements DB Project. She will report to the DM.

**Utility Coordinator, Jay McGuire, PE**, offers over 20 years of experience in coordinating utility installations and relocations. He has served as a key design engineer for Anderson & Associates on many significant VDOT projects. These included preliminary studies on widening I-81, planning and final design on several segments of US 58 and design on US 250 west of Staunton. He has worked with numerous localities, on multifaceted utility projects. Many of these projects have included the need to coordinate work within VDOT rights-of-way. His portfolio includes the installation of numerous miles of water and wastewater infrastructure which routinely requires coordination between natural gas, telephone, electric and fiber optic providers among others. He knows the VDOT design process and the individuals in the many other agencies that are involved in the design and approval process of transportation projects. Jay will report to the DM.

**Lead Traffic Engineer, Jim Durbin, Jr., PE, LEED AP**, brings 20 years of experience in the design and management of a variety of projects, including the preparation of MOT plans and pedestrian improvements. Jim has been lead engineer on numerous projects for roadway and site plan approval, permitting, being responsible for design/construction documents to permitting and through project administration and construction. Management and design experience has involved interfacing with federal (FHWA, OSHA, COE), state (DCR, VDOT), and municipalities throughout design and construction stages. Jim performed similar services on previous VDOT design-build projects, the I-64 Widening and Route 623 Interchange Improvements DB Project and the Route 29 Solutions DB Project. He will report to the DM.

**Public Outreach Manager, Keli Ratcliffe, CPSM**, offers 15 years of experience in the development and implementation of strategic communication programs. Keli possesses a thorough knowledge of public and stakeholder activities supporting transportation planning and design-build projects. Working closely with RK&K and VDOT, Keli will prepare strategic communication plans, crafting the methodology necessary to
successfully implement the project public participation program. Recently, Keli successfully managed the public information efforts of the Downtown Revitalization Project in Rural Retreat, Virginia, where proposed infrastructure and economic development improvements were presented, along with potential funding opportunities over the next ten years. She will report to the DBPM.

**Design QA/QC Manager, Tommy Peacock, PE, PLS** will arrange for design quality assurance and design quality control procedures in accordance with the quality control plan. He will verify that checks and reviews have been made prior to submissions, including review comment checking, contract conformance reviews, interdisciplinary reviews, and constructability reviews. With over 52 years of experience, Tommy will serve as a DB resource to the team. He managed two of the three projects listed in the lead designer’s experience section. Tommy provides the hands-on efforts needed to ensure adequate resources are assigned, accelerated schedules are maintained, and the team is responsive to clients. Tommy holds a PE Certification in North Carolina and he will report to the DM.

**Construction QC Manager (CQC Manager), Kenny Robinson,** offers over 35 years of experience with the construction of highways, secondary and primary roads and bridges. As a Residency Administrator in the Staunton District, he had oversight of transportation networks that included 3,096 miles of roadway, two interstates, and 180 major bridges. As a VDOT Assistant Resident Engineer in the Bristol District, he was responsible for the 250 centerline miles of I-81 and I-77, and accumulated significant knowledge of the District’s infrastructure. Expertise pertinent to this project includes supervision of inspectors; quality control and assurance; and coordination with FHWA, VDOT, and state officials. His design-build experience includes VDOT’s Route 61 over the New River and the Route 50 Corridor Traffic Calming. On the Route 50 project he had oversight of the quality assurance and quality control teams. Kenny will coordinate the third-party QC testing lab and testing technicians. He was involved with VDOT’s Replacement of Route 29 over the Tye River, another design-build project where Kenny provided quality assurance inspection of the construction of a new, 2-lane, prestressed concrete girder bridge and coordinated with the Quality Assurance Manager (QAM) during development of the QC program. Kenny will also attend weekly two-week look-ahead meetings and keep abreast of the overall project schedule for accurate inspection/testing staff scheduling. Kenny has the authority to stop specific work activities that do not meet QC requirements. He will report to the CM.

**Design/Construction Coordinator (DCC), Richard Kirkman, PE,** offers over 23 years of experience working in heavy-highway construction, specializing in bridge construction projects. Richard has led all of Blythe’s DB bridge projects, including the NCDOT Market Street Bridge Replacement and Widening Project in Greensboro, North Carolina. Serving as a resource to the DBPM, his role will be coordinating between the engineering and construction teams, to ensure that all of VDOT’s expectations and requirements are met. He will review all design submittals for conformance to project requirements, constructability and specific project scheduling needs. Richard holds a PE Certification in North Carolina and he will report to the DBPM.

**Safety Manager, Bruce Poling,** will provide regular oversight of plans and field activities to provide a safe environment for VDOT, construction workers and the traveling public. Bruce, with over 20 years of experience, will provide all needed safety training for the project and aid in developing a job-specific safety plan to address unique project hazards that will enhance our standard Blythe policies, including subcontractor protocols. Bruce has the authority to stop work which does not meet Blythe’s strict safety requirements. Bruce reports to the CM.

**Grading Superintendent/Environmental Manager/Utility Manager/MOT Manager, Mike Parker,** will supervise all roadway construction for the project. His role will extend to managing the environmental controls as well as overseeing all MOT operations. Any utility construction and relocation will be coordinated by Mike as well. His 30 years of heavy highway experience and recent involvement in NCDOT design-build projects brings the oversight and knowledge to the project that will be needed for success. Mike will report to the CM.

**Bridge Superintendent, Marvin Leatherwood,** will manage all aspects of bridge construction. He will give oversight to our in-house bridge crews and manage all subcontractor work. Marvin’s experience with bridge replacement projects and 28 years of construction experience will ensure that the project will be built at the highest quality and will be delivered on time. Marvin will report to the CM.

### 3.3.2 ORGANIZATIONAL CHART

The Blythe DB Team organizational chart illustrates our “chain of command” and notes key personnel team members. Solid lines identify the reporting relationships of our team members in managing, designing and constructing the project, and illustrate clear reporting lines from the DBPM to the design and construction team. Dashed lines represent indirect reporting and obligations to the owner and/or Corporate Management. The chart also shows that a clear separation exists between QA and Construction QC inspection and field/laboratory testing.
Functional Relationships

Design-Build unites the contractor and designer more than just contractually. It integrates innovative design and construction techniques that benefit schedule and cost, which ultimately lead to client satisfaction. Our Design/Construction Coordinator, Richard Kirkman, PE, will ensure the required interface between Blythe’s management/field crews and the designers occurs in a timely manner with the concerns of each openly discussed. Having a dedicated Design/Construction Coordinator work on the project during the early design stages eliminates subsequent delays or rework, streamlines reviews, and eliminates potential construction field issues. Additional ways in which our team will be fully integrated include:

- Inter-disciplinary design reviews prior to milestones to ensure design disciplines are coordinated
- Blythe constructability reviews of design, especially for MOT, highway and bridge plans
- Weekly schedule meetings to review the previous weeks work and develop the two week look ahead, and monthly scheduling meetings to review CPM progress during design development and construction
- Weekly foreman meetings to discuss the schedule and coordination
- Morning huddles with the crews to set the safety and production goals for the day
- Weekly progress meetings with the owner to review and discuss quality, submittals, and progress payments once construction begins
- Monthly partnering meetings with all stakeholders for issue resolution

**Design-Build Project Manager (DBPM), Jason Hoyle**, has full and complete authority for all design and construction matters for the Blythe DB Team. Jason is responsible for all contract management and is VDOT’s primary point of contact throughout the project. As DBPM, Jason has full responsibility for coordination, integration and direction of the entire design-build team, including design, construction, quality assurance, MOT, safety, utilities and environmental permitting/protection. He will supervise the Design Manager, Design/Construction Coordinator, Public Outreach Manager, Construction Manager, and Quality Assurance Manager throughout the project. Jason will be involved with the project starting with preconstruction, through design, construction, and punch out; assist with constructability reviews and safety audits; oversee the quality management program, purchasing and all construction operations; and be responsible for third-party communication for the Blythe DB Team, in conjunction with the Design / Construction Coordinator and the Public Outreach Manager.

**Quality Assurance Manager (QAM), Julie Perkoski, PE,** reports directly to the DBPM and will have direct, independent access to VDOT. She will ensure work is performed in conformance with contract requirements and “approved for construction” plans and specifications. She will be responsible for development and adherence to the QA Plan, QA inspection and testing of all materials used and work performed. As an independent entity, Julie will audit and monitor Blythe’s Construction Quality Control Program. She will have the authority to stop construction, enforce compliance with all specifications, and issue/require resolution of all Non-Conformance Reports (NCRs). The QA Team will conduct independent and concurrent tests and analysis of the work with the construction Quality Control Team. She will maintain project quality records and approve and submit pay estimates. In addition, Julie will submit monthly written reports to the VDOT project manager and the Executive Committee.

**Design Manager (DM) Gary S. Johnson, PE, DBIA,** will also report directly to the DBPM. He will be responsible for providing a quality product and input into the project schedule, meeting all design milestones and interfaces, and ensuring the Design QA/QC Manager’s involvement. Gary is responsible for assuring all design work is performed in accordance with current policies, procedures, and guidelines. He will manage all aspects of design. He will assign resources as needed, oversee design sub-consultants, coordinate design and review schedules, develop and implement corrective measures, if necessary, and ensure environmental compliance measures are integrated into the design. Gary will maintain his involvement in the project once construction begins to oversee any plan modifications and shop drawings, and review construction activities with the CM as work progresses.

**Construction Manager (CM), Nathan Thomas** will report directly to the DBPM. He will manage the efforts of the on-site construction team including the Construction Quality Control Manager, Safety Manager, Project Manager, superintendents, and project scheduling team. He will also manage project controls and oversee DBE compliance. He will be assigned to this project and be onsite full-time for the duration of construction. He will play a key role in conjunction with the Design/Construction Coordinator in constructability reviews for all aspects of the design and work with him to oversee the coordination between the design and construction forces with regard to utilities and MOT. Along with his staff, Nathan will focus on ensuring that construction is performed safely, and all materials and work are in accordance with the approved plans and contract documents. He will also coordinate with the DM during construction for the proper and timely issuance and review of any RFI’s and shop drawings, as well as preparation of as-builts and plan revisions. Nathan will hold responsibility for managing the construction quality control activities.
Keys to Success

Proper communication and coordination between the many parties involved in this project are the keys to success. This cooperation will be based upon open and honest communication plus frequent meeting and updates. The Blythe DB Team will have internal weekly meetings during the design phases with key construction and design staff present. Tracking sheets will be developed to track progress of utilities, and various design disciplines efforts, as well as environmental and design approvals. Once construction starts, the design participants will be reduced to the DM, DCC, Design QA/QC Manager, and key design discipline leaders. Added to the weekly meetings as the construction begins will be the superintendents, field surveyors, MOT Manager and Construction QC Manager. Key stakeholder representatives including utility companies, EMS responders, etc. will be invited to these weekly meetings. Monthly meetings will also be held with the Blythe DB Team, as well as VDOT, QAM, stakeholders and others required to enhance the partnering effort and resolve any pertinent issues.

Quality assurance efforts will be coordinated with, but independent of the day to day QC and construction efforts. The QAM, Julie Perkoski, will be given timely notice of all construction activities so her QA staff can be onsite at the appropriate and required times to document compliance. She will have access to all meetings and records she feels are required to provide independent assurance that the construction complies with all contractual and design requirements. Julie will report directly to the DBPM and provide VDOT and the project’s Executive Committee with the reports and assurances required. She will have unrestricted access to the construction and fabricator sites/facilities. A representative of Blythe’s management team will contact the QAM monthly to confirm the project is in compliance.

From a design perspective, this major bridge project along a highly congested corridor will require close coordination between the following disciplines:

- Structural team, led by Craig Ponte, PE, of RK&K
- Roadway team, led by John McDowell, PE, of RK&K
- Drainage/Hydraulics team, led by Brian Finerfrock, PE, of RK&K
- Geotechnical team, led by Randy Wirt, PE, of ECS
- Maintenance of Traffic, led by Jim Durbin, Jr., PE, LEED AP, of RK&K

Building on their previous experience working together on similar projects, including Virginia design-build projects, this design team, under the leadership of Gary S. Johnson, PE, DBIA, will work closely with the construction team to arrive at the best solution for this project. It is important to note that this previous experience working together is critical to ensure that a cost-effective and efficient design is achieved and delivered.

Executive Committee

The Executive Committee consists of owners of the DB Team firms and will serve as a guiding group and resource to the Blythe DB Team. They will ensure that all team partners, including VDOT, are on the same page and that proper and sufficient resources are allocated to the project. The Executive Committee will meet monthly to discuss the overall progress and performance of the Team.

Public Relations/Public Involvement

Anderson & Associates, Inc. (A&A) will lead the Public Relations/Public Involvement efforts and has extensive experience in public process and public information meetings associated with various transportation projects. A&A’s work will include research, marketing strategy, digital/social media design and development, broadcast/outdoor/print design and development, media planning and buying, public affairs outreach and community coalition building. A&A has successfully worked on VDOT projects such as the Route 58 project in Southwest Virginia, where A&A organized and participated in community meetings and public hearings.

Commitment to Keep Team Intact

The Blythe DB Team understands the importance of keeping the proposed team intact throughout the life of the project. With this understanding, we have selected specific personnel with current assignments that will allow them to serve on this project in the capacity needed. It is our intention that the individuals identified in this Statement of Qualifications, both Key Individuals and non-Key Individuals, will serve on this project through completion of construction.
Section 3.4

Experience of Offeror's Team
3.4 TEAM EXPERIENCE

Blythe and RK&K have successfully teamed to deliver similar design-build projects. This work history will enhance the Blythe DB Team’s ability to identify, openly discuss and solve issues as they arise on the project. Also, the additional Blythe DB Team members listed below have a solid history of working with Blythe and RK&K, as well as strong design-build experience. The key Blythe DB Team members include:

Blythe Development Company will serve as the Lead Design-Build Contractor. Blythe was founded in 1989 by twin brothers Jack and Frank Blythe. The firm is headquartered in Charlotte, NC as a licensed general contractor specializing in heavy highway and site work construction in Virginia, North Carolina, and South Carolina. Blythe performs nearly $185 million in civil improvement projects per year and is currently ranked among the 100 largest privately held corporations in North Carolina, as well as ranked 323rd by Engineering News Record (ENR) in the list of “Top 400 Contractors”. Blythe self performs erosion control, grading, maintenance-of-traffic (MOT), storm drain, water, sewer, asphalt paving, flatwork concrete, structures, MSE wall, sound wall and culvert construction. Known for unparalleled partnering, Blythe delivers projects on time and on budget without lingering disputes. We hold employee and public safety to a high standard and our 0.66 EMR ranks Blythe in the top of the upper quartile of civil contractors validating our commitment to quality. **Blythe has successfully worked with RK&K on the Design-Build Macy Grove Road Improvement project in Kernersville, North Carolina, and worked with both RK&K and team member Volkert on the I-73/PTI Project in Greensboro, North Carolina.**

Rummel, Klepper & Kahl, LLP (RK&K), offers the full range of transportation planning and design services. Their transportation, planning and engineering team excels in resolving complex infrastructure and permitting challenges. RK&K’s experience in rural and urban areas, corridors, and central business districts dealing with highway, bridge, and railway projects have given them the experience necessary to become prequalified with multiple departments of transportation. In addition, RK&K was just presented with an award from the VTCA for US 250 McIntire Interchange project in Charlottesville. The project was chosen as the top submittal in the category of "Projects Greater than $10 Million," which recognizes outstanding design work in the transportation industry in Virginia. **RK&K has successfully worked with each of the firms on this team. RK&K worked with Blythe on the Design-Build Macy Grove Road Improvement project, with Volkert on a VDOT Fredericksburg Districtwide CEI contract, as well as many projects in a Prime role with Anderson & Associates, CES Consulting and ECS Mid-Atlantic.**

Anderson & Associates, Inc. (A&A) has been providing quality engineering, surveying, planning, public involvement and landscape architecture services since the firm was founded in 1968. A&A has extensive experience in Virginia, and in the Bristol District, providing surveying services for the following projects: I-81 Exit 14, I-81 Exit 7, I-77 Bridge overpasses, nine Routes throughout Bristol and the Wytheville Connector Road. **A&A has successfully worked with Blythe on the Microsoft Project in Boydton, VA, the Martinsville-Henry County Industrial Park, and A&A has worked RK&K on multiple projects as a sub and a prime, including the VDOT Valley View Boulevard over 1-581 project in Roanoke and the Eco Energy project.**

CES Consulting, LLC (CES) is a multi-discipline engineering consulting firm specializing in Project Controls, Construction Engineering & Inspection, Quality Assurance Management, Cost Estimating and Analysis and Utility Coordination. The firm, based in Gainesville, VA, was founded in 2010 and employs a staff of approximately 50 throughout the Commonwealth. CES’s proposed QAM, Julie Perkoski, PE, has performed QAM duties on various design-build projects for VDOT including the Meadowville Interchange at I-295 which won a Merit award from the Design Build Institute of America. Other design-build projects include the Virginia Capital Trail Sherwood Forest project, the I-66 ATMS project in Northern Virginia, and the Rt. 29 Solutions project in Charlottesville, VA. Currently, CES is providing the QAM for the Rt. 60 Widening project in Midlothian for Chesterfield County. **CES has worked with each design firm on the Blythe DB Team, including RK&K, ECS Mid-Atlantic, Anderson & Associates, and Volkert.**

ECS Mid-Atlantic, LLC (ECS) is a multi-discipline engineering consulting firm specializing in the related fields of geotechnical, environmental, and construction materials engineering. The firm, based in Chantilly, VA, was founded in 1988 and employs a staff of approximately 500 throughout the Commonwealth. Staff includes registered professional engineers and geologists, certified lab technicians and construction inspectors, and field engineers. The Geotechnical Group performs subsurface explorations and engineering with emphasis on foundation systems for buildings of all types, drainage system designs and other groundwater issues, retaining structures, problem soil sites, slope stability evaluations, and deep foundation designs. **ECS is working with Blythe on current commercial and residential developments including a 225 acre industrial park for Henry County. Additionally, ECS is currently providing similar services to RK&K on the I-64 Widening and Route 623 Interchange Improvements DB Project for VDOT. ECS has also worked with Anderson & Associates and Volkert on multiple projects across Virginia.**
Volkert, Inc. has been in business for 90 years and offers multidisciplinary transportation engineering and construction management. Volkert is one of the top professional engineering companies providing construction management and inspection services with more than 50% of the firm’s revenue generated by CEI contracts. They have the staff resources and equipment to provide the full spectrum of inspection as well as cost, schedule, risk, claims and document management services. Volkert has participated on teams for 24 design-build projects. This experience includes providing civil, structural, traffic engineering, survey, quality control (QC), and quality assurance (QA) services for design-build projects ranging in size up to $2.3 billion. In Virginia, Volkert has provided design and QA management services for 11 design-build/PPTA projects ranging in size up to $210 million, demonstrating their ability to work effectively to resolve non-complying work in a cost-efficient manor on behalf of VDOT. Volkert has previously worked with RK&K, CES and ECS on various contracts across Virginia, including the Lorton Road Widening in Fairfax County and the VDOT Fredericksburg Districtwide CEI Contract.

Experience in Bristol District
The Blythe DB Team’s relationship with the Bristol District goes back to the mid-1990's beginning with RK&K’s work on Route 603 in Grayson County and Route 58 in Washington, Smyth and Grayson Counties. RK&K also developed final plans for two sections of Route 58 in Washington County and recently completed final plans for the reconstruction of I-81 Exit 14 in Abingdon. In addition to the overall plan coordination and development, each of these projects required close coordination with VDOT staff where RK&K performed constructability reviews and developed detailed maintenance of traffic plans to ensure that the proposed improvements could be constructed and that traffic could be maintained. RK&K also partnered with Bristol District staff to facilitate a Risk Analysis of the Route 460/Coalfields Expressway Connector project.

Over the past 10 years, RK&K has been awarded multiple on-call contracts that included task order assignments within the Bristol District. These contracts include two Bristol Districtwide CEI contracts, an on-call traffic engineering contract for Southwest Regional Operations and a Statewide Limited Services Drainage Design and/or River Mechanics Engineering contract. Task order assignments varied widely from construction inspection services for a structural rehabilitation of the Big Walker & East River Tunnels on I-77 to engineering design and road improvements for Route 609, and hydraulic design and environmental support for the Route 83 (Lovers Gap) project.

As previously mentioned, our subconsultant Anderson & Associates also has extensive experience working in the Bristol District, including survey services for the following projects: I-81 Exit 14, I-81 Exit 7, I-77 Bridge Over Passes, Routes 619, 643, 757, 460, 58, 676, 11, 640, 611, and Wytheville Connector Road in the Bristol District. Additionally, Volkert has worked in the Bristol District providing VDOT an Interstate Bridge Maintenance Study and Interstate Restorative Maintenance Work. ECS has worked on eight projects in the District, including the Route 83 Bridge Replacement over Cranes Nest River and the Route 58 over Peggy Branch.

This experience working in the Bristol District offers the Blythe DB Team an advantage of knowing the localities, the soil conditions and community stake holders.

Design for Future Bridge Widening
On a recent assignment for the Fairfax County Department of Transportation, RK&K developed the preliminary designs for the widening, extension and new bridge structures for Jones Branch Connector over I-495 and I-495 Express Lanes. Each of the bridges included specific design features to allow for future bridge widening in the median. These features included calling for the construction of the foundation and substructure units in the initial project. In addition, the structural design addressed the anticipated loads for a future light rail train and details to allow portions of the deck to be reconstructed for the imbedded rail lines. All of these design elements led to a more efficient and cost effective structure upon final buildout. This project was designed by our proposed DM, Gary Johnson, PE and Lead Roadway Engineer, John McDowell, PE.
3.5 PROJECT RISKS

The Blythe DB Team will employ the CMAA endorsed approach to risk management through the use of a “Risk Register” which includes a formal list of identified risks, potential impacts to the project, and mitigation strategies for each issue. Our team’s risk management process has already commenced, will continue throughout design and construction, and enable the team to respond to changes in an organized and proactive way as specific project issues unfold. The Blythe DB Team will employ a five step risk management approach to the project including the following stages:

1. **Identify** – name risks facing the project, determine cause and effect, and categorize risks
2. **Assess** – assign probability of occurrence, severity of impact, and determine response
3. **Analyze** – quantify risk severity, determine risk exposure, establish risk tolerance level, and determine risk contingency (applicable during preliminary design and pricing)
4. **Manage** – define response plans and actions, establish ownership of risk, and manage response (after NTP)
5. **Monitor / Review** – monitor/review/update risks, monitor response plans, update risk exposure, analyze trends, and produce reports (after NTP, during design, during construction)

We have reviewed the available information for the project, visited the site during various traffic and weather conditions, and jointly discussed the major risks. With the mindset of project risk being defined as an issue that has the potential to impact the project schedule, budget, or both, the team has identified the three most critical risks facing the design-build team during the course of the project:

**Risk No. 1 – Bridge and Roadway Geotechnical and Karst Geologic Conditions**

**Risk Identification:** The alignment of the bridge replacement project passes through the NE-SW trending Honaker Formation of the Valley and Ridge Physiographic Province that includes carbonate dolostone and limestone which are prone to karst activity. The project site is located between the Alvarado Fault to the north and Stone Mill Anticline to the south, which may indicate folded and faulted, erratic rock conditions. Multiple sinkholes and karst land are mapped within 1,000 feet surrounding the project site, including a cavern opening. A thin veneer of alluvial deposits overlies residual soils and rock surrounding Sinking Creek which passes beneath the existing bridges, east of Halls Bottom Road. The residual soils are anticipated to consist primarily of a thin layer of fine grained residual soils (CH/MH/CL/MH) over rock, with existing fill embankment of similar soil types beneath Halls Bottom Road and the existing I-81 approaches. Based on the geotechnical data report (GDR) and our Team’s experience in this geology, consistency of the overlying residual soils are anticipated to be soft to medium stiff, with decreasing strength near the rock surface in some instances. SPT N-values within the existing fill embankment and laboratory testing indicate very soft to medium stiff conditions, with moisture contents above optimum in some cases. Rock coring encountered limestone and dolostone with acceptable RQD values; however, near Sinking Creek, suitable rock was overlain by 6 to 8 feet of low RQD limestone. Shallow perched groundwater was encountered within borings near Sinking Creek.

**Why this Risk is Critical:** The Blythe DB Team views these existing subsurface conditions as comprising risk for the bridge and roadway foundations due to characteristic karst conditions, as well as soft existing fill and alluvial deposits that are unsuitable for bridge and roadway support, and if not addressed appropriately during design and construction could lead to stability and settlement issues.

**Risk Impact to the Project & Mitigation Strategies:** The karst and soft subsurface conditions place potential financial and schedule risk on the project. The strategies described below include activities planned during both design and construction to mitigate the geotechnical risks. The Blythe DB Team has identified three components of the geotechnical risk, with the impact and mitigation strategy for each described below.

**Karst Conditions**

**Impact:** With the potential for an erratic rock surface, poor rock layers, mud seams, and void spaces characteristic of karst geology, there is the likelihood that support for bridge foundations will require over excavation of unsuitable soil and/or poor rock in order to reach suitable bearing conditions. Although the GDR borings did encounter a relatively consistent top-of-rock elevation, it is our experience that suitable rock elevation within each foundation footprint may be variable, even within a single foundation element.

**Mitigation:** To mitigate the potential impact of karst conditions negatively affecting the project, the Blythe DB Team will review existing geotechnical data and conduct early phase geotechnical explorations within the footprint of the new bridge foundations. The geotechnical investigation program will include SPT soil test
borings and may include geophysical surveying with electrical resistivity where applicable, to characterize the bedrock conditions. The Geotechnical Team follows a process of comparing existing geotechnical boring log information, readily available geologic mapping, new SPT soil boring data, and geophysical testing results to create a bedrock profile along the bridge substructure alignments. In this process, the Blythe DB Team will identify the top of weathered rock and sound bedrock elevations and evaluate potential karst conditions well in advance of the bridge foundation design. Subsequent to this process, applicable bridge foundations and construction methods are selected that consider the potential impact of karst variable rock surface and quality. Overall, this mitigation strategy is conducted during the earliest investigation and design phases so as not to impact the Project Schedule for design approvals and foundation construction activities.

**Potentially Unsuitable Soils**

**Impact:** With the potential need for modifications to the existing approach embankments, approach work for I-81, as well as Halls Bottom Road, will likely encounter subgrade soils consisting of residuum, alluvium, and fill soils which classifies as high-plastic clays and silts (CH/MH). Based on the GDR, a significant portion of these soils were observed to be moist to wet with moisture contents greater than or equal to 20% of the respective soils’ optimum moisture content. SPT N-values were also soft in part. These soils pose a risk to the project due to the additional time required to delineate the extent of these soils during construction and the time and cost required to modify or remove and replace these soils with suitable fill.

**Mitigation:** To mitigate the potential for unsuitable soils to negatively affect the project schedule, the Blythe DB Team will review existing geotechnical data and focus early phase geotechnical explorations on areas anticipated to include unsuitable soils. This proactive planning will also focus on laboratory tests of the samples to include natural moisture contents, Atterberg limits, and Standard Proctor tests. The results of these tests will help delineate the lateral extent and depth of unsuitable soils to allow for proactive measures to be taken in early earthwork phases for the median and roadway cross section construction. After the delineation of potentially unsuitable soils the Blythe DB Team will identify alternative treatment methods using a feasibility matrix. The matrix outlines the applicable station ranges, depth of treatment, and proposed treatment method. Typical treatment methods in this geologic setting that the Blythe DB Team will evaluate for the median and roadway cross-sections on this project include undercut and replacement, geosynthetic separation and stabilization fabrics, and in-situ soil modification. The in-situ soil treatments that may be considered include lime or cement admixtures to create a stabilized subgrade. The Geotechnical Team will conduct specific laboratory testing programs to optimize the lime or cement admixture percentages based on subgrade soil classifications and strength of the soil/admixture treated soil. Overall, this mitigation strategy is conducted during the design phase so as not to impact the Project Schedule during actual earthwork activities.

**Rock Excavation**

**Impact:** Shallow rock was encountered within the GDR borings near the existing Halls Bottom Road elevation. Rock is also exposed in excavated slopes and at the ground surface to the immediate southeast of the bridge replacement. The erratic rock surface typical for the local karst and folded/faulted geology could be encountered at shallow depths in areas which have not yet been explored, potentially requiring rock excavation. A project risk exists if shallow hard rock is located in areas requiring excavation. Additional measures to excavate these materials, including blasting and ripping, pose a risk to the project cost and schedule, and may potentially impact MOT operations and locations of crossovers.

**Mitigation:** To mitigate this potential adverse impact, the Blythe DB Team will focus on delineating these areas by review of existing geotechnical data and a combination of test pits and SPT soil test borings. Early identification of these areas reduces the risk to the critical path of the project due to delays that could result from mobilizing different earthwork equipment, preparing blasting and ripping protection measures, location of temporary travel lanes, etc. The areas requiring more difficult excavation will be delineated as part of the early phase design submittals, ensuring that time for review and approval of blasting operations does not further impact the project schedule.

**Role of VDOT and other Agencies:** The Blythe DB Team fully expects to handle and manage the risks associated with the existing subsurface conditions. We expect to take on these risks when we propose on a design-build project and this project is no exception. Outside of the standard process for VDOT review of plans and other contract documents, no significant additional effort is anticipated from VDOT or any other agency.

**Risk No. 2 – Maintenance of Traffic**

**Risk Identification:** Maintenance of Traffic (MOT) during construction and Constructability are critical issues due to the limited availability of detour routes and the high volume of truck and other traffic along I-81. Traffic must be maintained and disturbance minimized to ensure efficient and safe road operations during construction.
Why this Risk is Critical: On I-81, traffic volumes dictate the need for two lanes of traffic during peak hours, with a 50% directional split. Since reducing the number of travel lanes will severely impact traffic flow on I-81 during peak hours, it is anticipated that any reduction in travel lanes will be unacceptable. On Halls Bottom Road, closing the crossing below I-81 may result in a lengthy detour (up to five miles) for traffic crossing from the residential area on the south side of the road to Route 11 on the north side. Additionally, lane restrictions, closures or narrowing of lanes can increase the hazards associated with the MOT installation on both I-81 and along Halls Bottom Road. With this in mind, the safety of construction workers and the traveling public is paramount.

In addition, the elevations of the bridges are being raised as much as four feet to address geometric requirements. This means that new bridges and pavements will be at different elevations from the existing, requiring shoring, additional phasing and complex temporary road configurations. A properly developed MOT plan is essential to minimize hazards and to minimize disruption to the traveling public.

Constructability issues are also of concern. Under the bridge, Halls Bottom Road and Sinking Creek flank both an existing and proposed pier. The RFQ plans call for the bridge abutments and pier to be replaced in the same locations as existing. This would require full demolition of the abutments and pier, including the removal of all foundation components, which will increase the time required for construction.

Risk Impact to the Project & Mitigation Strategies: Without a properly developed and executed MOT plan, travel through the work zone may become hazardous, travel delays may be frequent and the project duration may be significantly extended.

As part of the MOT and TMP development, the Blythe DB Team will investigate strategies to maintain two lanes of traffic in each direction along I-81 during construction. Since the proposed replacement bridge will fill the median, allowing for future construction of new travel lanes, we will construct the bridge on an even plane from the “inside out”. By creating the new structure in the median, this will allow us to shift traffic in either direction onto the median section of the bridge while the outer bridges are demolished and the new bridge widened. Once complete, the required median barrier will be installed on the bridge deck to provide physical separation between the eastbound and westbound traffic. By doing this, two lanes of traffic in each direction will be provided during peak periods and traffic disruption will be minimized. Lane closures may still be employed during off-peak periods to shorten the overall construction schedule.

The raising of the profile along I-81 will cause some challenges to MOT. The Blythe team will mitigate this risk by fully investigating the use of temporary shoring consisting of driven sheeting, soldier pile walls, or fabric reinforced wire basket walls. The system selected will be the one that best mitigates the risk by being able to be installed and removed safely, given the existing geotechnical conditions and phasing.

While traffic disruptions along Halls Bottom Road cannot be fully eliminated, these disruptions will be minimized to the greatest extent possible. Road closures will be necessary when superstructure demolition is in progress, new girders/beams are set in place, and bridge deck concrete pours occur. The Blythe DB Team will close the undercrossing only during non-peak hours and only for short-terms to minimize inconvenience to traffic. The detailing of the bridge superstructure will also be designed with a focus on minimizing girder erection time, thereby minimizing the number and length of necessary closures.

In order to address the abutment/pier constructability issue, the Blythe DB Team will investigate constructing the new bridge abutments and pier offset longitudinally from the existing such that they can be constructed without fully demolishing the substructures of the existing bridges. This will allow faster and more efficient construction to occur. In order to do this, we may slightly offset Halls Bottom Road, possibly reducing it to one-lane, two-way operation during construction using temporary traffic signals. The new abutments and pier will be constructed adjacent to the existing and the bridge superstructure constructed on these new substructure elements.

Role of VDOT and other Agencies: The Blythe DB Team will handle and manage the risks associated with the Maintenance of Traffic and Constructability issues. Since we plan to avoid significant impacts to Sinking Creek, we expect there to be no significant environmental issues related to our Maintenance of Traffic and Construction techniques. VDOT’s role in this risk will be limited to posting appropriate messages to the traveler information system in cooperation with the Blythe DB Team. We anticipate no significant role from other agencies with these issues.
Risk No. 3 – Environmental Risk

Risk Identification: The Blythe DB Team anticipates the project may be regulated by the Tennessee Valley Authority (TVA) Act of 1933 which prohibits the construction of any structure or flood control across, along, or in the Tennessee River or any of its tributaries without the approval of the TVA. We also anticipate the project may involve additional coordination with Fish and Wildlife Service (FWS) for the Indiana Bat (Myotis sodalis), the Northern Long-Eared Bat (Myotis septentrionalis), and the Gray Bat (Myotis grisescens), and the Department of Game and Inland Fisheries (DGIF) for the Tennessee dace (Chrosomus tennesseensis).

Why this Risk is Critical:

TVA Coordination

The TVA Act prohibits the construction, operation, or maintenance of any structure affecting navigation, flood control, or public lands or reservations across, along, or in the Tennessee River or any of its tributaries until plans for such construction, operation, or maintenance have been submitted to and approved by the TVA. Section 26a is designed to ensure that construction along the shoreline and in waters of the Tennessee River system and the TVA reservoirs does not adversely impact TVA’s responsibility for managing the river system and for achieving “Unified Development and Regulation of the Tennessee River”. This coordination has the potential of increasing the project schedule by four months.

Threatened and Endangered (T&E) Species

The Indiana bat was listed as endangered in 1967. The Northern long-eared bat was listed as a federal threatened species with the Interim 4(d) Rule on May 4, 2015. The treatment plans for these species are similar as they have similar life cycles and habitats. Both species hibernate in caves, or occasionally, in abandoned mines during the winter. During the summer, both species roost under the bark of living, dying or dead trees. They consume a variety of flying insects found along rivers or lakes and in uplands.

The gray bat was added to the U.S. List of Endangered and Threatened Wildlife and Plants in 1976. With rare exceptions, gray bats live in caves year-round. During the winter, gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern United States. The bats eat a variety of flying aquatic and terrestrial insects present along rivers or lakes. This risk is critical because there is potential that any of these species of bats could be located in trees in the project area, or even under the deck of the existing bridges, which impacts the schedule for demolition of the existing structures.

The potential habitat for the State Endangered Tennessee dace may also be present. The Tennessee dace is a minnow of the carp family and requires cold to cool creeks and small streams in an upland habitat. It inhabits rocky and silty pools. The species has been observed in five counties in Virginia, including Washington County, with observations noted within 2 miles of Sinking Creek.

Section 7 consultation may be required between the Federal Highway Administration (FHWA) and U.S. Fish and Wildlife Service (USFWS). This risk is critical because the project development time may be subject to a regulatory prescribed timeframe of 135 days for USFWS to issue their Biological Opinion, with additional time to prepare the biological assessment to support the project design. This will need to be completed prior to the NEPA reevaluation and water quality permit issuance.

Risk Impact to the Project & Mitigation Strategies:

TVA Coordination

Impact: The project may require a permit in accordance with Section 26a of the TVA Act for the crossing of Sinking Creek. Since permit approvals under Section 26a are Federal actions, they are subject to the requirements of the National Environmental Policy Act (NEPA) and other Federal laws. In that regard, TVA evaluates all projects for impacts under Section 7 of the Fish and Wildlife Threatened and Endangered Species Act, Section 106 of the National Historic Preservation Act for cultural resources, Section 404 of the Clean Water Act for Dredge and Fill activities, and Section 401 of the Clean Water Act for State Water Quality Certification as well as TVA policies.

This risk potentially delays project construction until the environmental clearances are secured from appropriate agencies, since they are required in order for TVA to issue the 26a permit.

Mitigation: The Blythe DB Team will coordinate with TVA for review and present the Design-Build activities as “off-reservoir” activities. This procedure will minimize the coordination needed to secure the 26a permit, if actually needed.
The Blythe DB Team will provide TVA with copies of supporting documentation relating to permit issues and NEPA environmental documents. TVA may use this information in its permit evaluations. TVA may reference the Programmatic Categorical Exclusion (PCE) that has already been completed for the project. Most importantly, we will present the project design information in a way to demonstrate that it is a “Maintenance Replacement” of existing bridges that will upgrade the overpass bridges to current design and safety standards. This project conforms with the definition of a maintenance project for TVA, which is different than the definition of a maintenance project to VDOT. The result will be having the project excluded from requiring a TVA 26a permit.

**Threatened & Endangered (T&E) Species**

*Impact:* The potential impact to the project, if Section 7 consultation is required, is between 6 and 9 months to complete this coordination and will include species specific minimization conditions that may result in an increase in project construction cost.

Another potential impact to the project is the time required to coordinate with DGIF, which could take 4 to 6 months to complete, and may require a fish survey and include species specific minimization conditions. These conditions could include a time of year restriction (TOYR) for in-stream activities from April 1 to July 31, impacting the project cost and schedule.

*Mitigation:* The Blythe DB Team will confirm VDOT’s determination that this project will have no adverse effects on T&E species. As per the FHWA/USFWS Programmatic Agreement, any project tree removal that the Blythe DB Team proposes will adhere to a TOYR of April 15 through September 15 of any year.

As for the structure replacement, the Blythe DB Team may deploy exclusion devices such as noise machines or netting prior to April and leave in place through May to discourage bats from resting on the bridge. However, if work must be performed on the structures between April 1st and August 15th, we will visually examine structures for evidence of bat activity prior to performing the work. If no evidence of bat activity is documented, the Blythe DB team will notify VDOT and proceed with the proposed work. If evidence of bat activity is documented, we will provide photos of any observed bats to obtain a determination of whether or not they are a protected species. Our environmental team, led by Ricky Woody, has recent and relevant experience performing bat emergence surveys as part of their work on the current Route 29 Solutions DB Project.

The Blythe DB Team anticipates that work performed between August 16th and March 31st in any year will not require visual examination. Any work that is outside the footprint of the bridge deck, not under the superstructure (wing walls, riprap, etc.), and does not require tree removal during the above tree removal time of year restriction will not require visual examination.

In the event that undocumented bats are observed roosting on the structure after work has begun, the Blythe DB Team will suspend work immediately, document the location, and notify VDOT. We will take photos of any observed bats to assist in determining if they are a protected species.

The Blythe DB Team will avoid any in-stream work that could affect the potential habitat of the Tennessee dace during the TOYR. This may involve the installation of cofferdams outside the time of year restriction, if in-stream work is required for the project.

**Role of VDOT and other Agencies:** We will request that VDOT provide existing documentation of the clearances used to secure the CE for the project. As on many projects, VDOT will be asked to provide EQ 103, EQ 200 and EQ 201 acceptance documentation when submitted by the Blythe DB Team. VDOT may be required to participate in agency negotiations with the FHWA and the appropriate resource agencies for Cultural Resources and T&E species.

The Virginia Department of Historic Resources (VDHR) already concurs with the finding of No Effect based on the preliminary project design. FWS concurs with “Not Likely to Adversely Affect” or No Effect determination based on preliminary design. The U.S. Army Corps of Engineers (USACE) also concurs with and is expected to issue the project’s permit as either a Nationwide Permit 23 Categorical Exclusion or Nationwide #3 Maintenance Replacement Permit. Virginia Department of Environmental Quality (VDEQ) will provide Section 401 Water Quality Certification for the USACE permit. Therefore, the roles of these other agencies is expected to be limited.

**Overall Project Risk Summary**

The Blythe DB Team understands that risks are inherent in design-build projects and proposes on this design-build project with our eyes wide open. We fully take on the risk of this project as required in the RFQ and subsequent RFP.
Offerors shall furnish a copy of this Statement of Qualifications (SOQ) Checklist, with the page references added, with the Statement of Qualifications.

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<td>Offeror’s VDOT prequalification evidence</td>
<td>NA</td>
<td>Section 3.2.8</td>
<td>no</td>
<td>Appendix 3.2.8</td>
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<td>Evidence of obtaining bonding</td>
<td>NA</td>
<td>Section 3.2.9</td>
<td>no</td>
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</table>
## STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

<table>
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<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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<td>SCC and DPOR registration documentation (Appendix)</td>
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<td>Full size copies of DPOR Registration (Key Personnel)</td>
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<td>Section 3.2.10.3</td>
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<td><strong>DBE statement within Letter of Submittal</strong> confirming Offeror is committed to achieving the required DBE goal</td>
<td>NA</td>
<td>Section 3.2.11</td>
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<td><strong>Offeror's Team Structure</strong></td>
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<td>Key Personnel Resume – DB Project Manager</td>
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<td>Key Personnel Resume – Quality Assurance Manager</td>
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<td>Section 3.3.1.2</td>
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<td>Section 3.3.1.3</td>
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<td>Appendix 3.3.1</td>
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<td>Organizational chart</td>
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<td>Organizational chart narrative</td>
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<td>Section 3.3.2</td>
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## ATTACHMENT 3.1.2

### Project: 0081-095-038, Contract ID#: C00107116DB85

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
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<td>Section 3.4</td>
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<td>Project Risk</td>
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<td>Identify and discuss three critical risks for the Project</td>
<td>NA</td>
<td>Section 3.5.1</td>
<td>yes</td>
<td>Pages 11-15</td>
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</table>
Attachment 2.10

Form C-78 RFQ Acknowledgement of RFQ, Revision and/or Addenda
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO.  C00107116DB85
PROJECT NO.: 0081-095-038

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENNA

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:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>(Date)</td>
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<td>2.</td>
<td>Cover letter of RFQ Addendum No. 1</td>
<td>10/15/2015</td>
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<td>(Date)</td>
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<td>3.</td>
<td>Cover letter of</td>
<td>(Date)</td>
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</tbody>
</table>

F. W. Butthe  

SIGNATURE  

10-29-15  

DATE  

Frank W. Butthe  

PRINTED NAME  

Vice President  

TITLE
Attachment 3.2.6
Affiliated and Subsidiary Companies of the Offeror
ATTACHMENT 3.2.6

State Project No. 0081-095-038, Contract ID#: C00107116DB85

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.**

<table>
<thead>
<tr>
<th>Relationship with Offeror (Affiliate or Subsidiary)</th>
<th>Full Legal Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blythe - Subsidiary</td>
<td>Blythe Brothers Asphalt</td>
<td>1415 E. Westinghouse Blvd., Charlotte, NC 28273</td>
</tr>
<tr>
<td>ECS - Parent Company</td>
<td>Engineering Consulting Services, Ltd.</td>
<td>14026 Thunderbolt Place, Suite 300, Chantilly, VA 20151</td>
</tr>
<tr>
<td>ECS - Subsidiary</td>
<td>ECS Carolinas, LLP</td>
<td>1812 Center Park Drive, Suite D, Charlotte, NC 28217</td>
</tr>
<tr>
<td>ECS - Subsidiary</td>
<td>ECS Southeast, LLC</td>
<td>1281 Kennestone Circle, NE, Suite 200, Marietta, GA 30066</td>
</tr>
<tr>
<td>ECS - Subsidiary</td>
<td>ECS Midwest, LLC</td>
<td>1575 Barclay Boulevard, Buffalo Grove, IL 60089</td>
</tr>
<tr>
<td>ECS - Subsidiary</td>
<td>ECS Capitol Services, PLLC</td>
<td>655 15th Street, NW, Washington DC 20005</td>
</tr>
<tr>
<td>ECS - Subsidiary</td>
<td>ECS Central, LLC</td>
<td>318 Seaboard Lane, Franklin, TN 37067</td>
</tr>
<tr>
<td>ECS - Subsidiary</td>
<td>ECS Texas, LLP</td>
<td>2120 Denton Drive, Suite 105-104, Austin, TX 78758</td>
</tr>
<tr>
<td>ECS - Subsidiary</td>
<td>ECS Florida, LLC</td>
<td>2815 Directors Row, Suite 500, Orlando, FL 32809</td>
</tr>
<tr>
<td>Volkert-Subsidiary</td>
<td>Allied Engineering &amp; Testing, Inc.</td>
<td>5850 Corporation Circle, Fort Myers, FL 33905</td>
</tr>
</tbody>
</table>
Attachment 3.2.7 (a) and (b)

Certification Regarding Debarment
ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0081-095-038
Contract ID#: C00107116DB85

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

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

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

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

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

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

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

Signature Date Title

BLYTHE DEVELOPMENT COMPANY

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-095-038
Contract ID#: C00107116DB85

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

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

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

[Signature] October 13, 2015 [Date]
[Partner] [Title]

Rummel, Klepper & Kahl, LLP (RK&K)

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-095-038
Contract ID#: C00107116DB85

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

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

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

[Signature]  10/19/15  [Vice President]
[Date]  [Title]

Anderson & Associates, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-095-038
Contract ID#: C00107116DB85

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

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

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

Signature _______ Date 10/22/2015

President

Title

CES CONSULTING LLC

Name of Firm
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-095-038
Contract ID#: C00107116DB85

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

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

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

__________________________  10/16/15  
Signature               Date

__________________________  
Title

__________________________  
Name of Firm

VICE PRESIDENT

ECS MID- ATLANTIC, LLC
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-095-038
Contract ID#: C00107116DB85

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

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

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

[Signature] October 28, 2015

Senior Vice President

Date Title

Volkert, Inc.

Name of Firm
CERTIFICATE OF QUALIFICATION

BLYTHE DEVELOPMENT CO.

Vendor Number: B1096

In accordance with the Regulations of the Virginia Department of Transportation, your firm is hereby notified that the following Rating has been assigned to your firm:

PREQUALIFIED (PROBATIONARY)

Your firm specializes in the noted Classification(s):

GRADING; ASPHALT CONCRETE PAVING; ROADWAY MILLING;
UNDERGROUND UTILITIES; EXCAVATING

Issue Date: February 28, 2015

This Rating and Classification will Expire: February 29, 2016

Suzanne FR Lucas, State Prequalification Officer

Don E. Silles, Director of Contracts

It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other than those named on this certificate.
Jason Hoyle | Division Manager
Blythe Development Co.| 1415 E. Westinghouse Blvd. Charlotte, NC 28273
jhoyle@blythedevelopment.com

From: Silies, Don E. (VDOT) [mailto:Don.Silies@VDOT.Virginia.gov]
Sent: Wednesday, November 4, 2015 11:42 AM
To: Jason Hoyle <jhoyle@blythedevelopment.com>
Subject: FW: Blythe Development Company bid waiver request for State Project No.: 0081-095-038 UPC 107116

Jason,

I have reviewed the qualifications of Blythe Development Co. and I find them acceptable for the purpose of bidding this Design/Build project. Therefore, I hereby waive the bidding restriction on your firm for this project. Keep in mind that this waiver is predicated on your compliance with the rules for prequalification. The rules state that you are limited to no more than three projects at any given time, not exceeding a total cost of $6 million. This waiver allows you to bid beyond that dollar limit but should you be successful on this project, you will be ineligible for any further VDOT work as a prime contractor. As we discussed, once a satisfactory evaluation is received on this project, your firm will be eligible for a change to full prequalification. That would then eliminate the need for any future waivers. VDOT looks forward to your proposal.

Don Silies
Director of Contracts
Virginia Department of Transportation
(804) 786-1630
Don.Silies@vdot.virginia.gov
Don,

Thank you for taking the time to talk to me about Blythe Development’s qualification status with VDOT. Blythe is interested in pursuing the Halls Bottom Road design-build project (State Project No.: 0081-095-038 & Contract ID Number: C00107116DB85) which has a value of approximately $13M. We would like to request a waiver for our qualification status in order to submit on the Halls Bottom Road project.

Thanks again,

Jason Hoyle | Division Manager
Blythe Development Co. | 1415 E. Westinghouse Blvd. Charlotte, NC 28273
jhoyle@blythedevelopment.com

From: Silies, Don E. (VDOT) [mailto:Don_Silies@VDOT.Virginia.gov]
Sent: Tuesday, November 3, 2015 2:16 PM
To: Jason Hoyle <jhoyle@blythedevelopment.com>
Cc: Stoney Bumgardner <StoneyB@blythedevelopment.com>; Luke Blythe <lblythe@blythedevelopment.com>; ‘Gary Johnson’ <gjohnson@rkk.com>; Dennis Heuer <dheuer@rkk.com>
Subject: RE: Blythe Development Company

Jason,

Please give me a call at your earliest convenience.

Don Silies
Director of Contracts
Virginia Department of Transportation
(804) 786-1630
Don.Silies@vdot.virginia.gov

From: Jason Hoyle [mailto:jhoyle@blythedevelopment.com]
Sent: Tuesday, November 03, 2015 12:37 PM
To: Silies, Don E. (VDOT)
Cc: Stoney Bumgardner; Luke Blythe; ‘Gary Johnson’; Dennis Heuer
Subject: Blythe Development Company

Mr. Silies,

I am with Blythe Development Company and we are pursuing the Halls Bottom Road design build project with RK&K. We are in the process of finishing up our submittal and a question has come up
about our VDOT Certificate of Qualification. Our current rating is Prequalified (Probationary) and a copy of our VA certifications are attached. The VDOT Certificate of Qualification is the last one in the attachment. Can you tell me what steps need to be taken before we submit our qualifications for this project?

Thank you,

Jason Hoyle | Division Manager
Blythe Development Co. | 1415 E. Westinghouse Blvd. Charlotte, NC 28273
jhoyle@blythedevelopment.com
October 28, 2015

VDOT
715 E. Riverside Drive
Tazewell, VA 24651

RE: Our Client: Blythe Development Company
Project: Replacement of I-81 Structures 18942 & 18944 over Rte. 808
Halls Bottom Road and Sinking Creek, Washington County, VA
State Project No. 0081-095-038; Contract ID No. C00107116DB85
Value: $13,000,000.00

Dear Sir or Madam:

It is a pleasure to comment on the bonding qualifications of Blythe Development Company. We have handled the contract Performance and Payment bond requirements on behalf of the above firm for over fifteen (15) years. Their current bonding limits through the Liberty Mutual Insurance Company are $75,000,000 single job /$225,000,000 aggregate work program. Current unutilized bonding capacity is $110,000,000.

We consider Blythe Development Company to be one of the more outstanding contractors in this area and we recommend them highly. Blythe Development Company is well managed, capably staffed and sufficiently financed to process the work they are bidding.

It is our understanding that the above referenced project has an estimated value of approximately $13,000,000.00. Liberty Mutual Insurance Company would be most willing to provide the Performance and Payment Bond, in the event they are awarded the contract and enter into a contract satisfactory to all parties.

As surety for Blythe Development Company, Liberty Mutual Insurance Company, with an A.M. Best Financial Strength Rating of “A” (Excellent) and a Financial Size Category of XV ($2 Billion or greater), is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm is the successful bidder and enter into a contract for this Project.

Please note that the decision to issue performance and payment bonds is a matter between Blythe Development Company and Liberty Mutual Insurance Company and will be subject to our standard underwriting at the time of the final bond request, which will include but not be limited to the acceptability of the contract documents, bond forms and financing. We assume no liability to third parties or to you if for any reason we do not execute said bonds.

It is our pleasure to share this information with you.

Sincerely

Liberty Mutual Insurance Company

Angela D. Ramsey, Attorney-In-Fact
THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.
This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

Certificate No. 7049892

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the “Companies”), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Angela D. Ramsey; Donna K. Ashley; G Timothy Wilkerson; Jennifer C. Hoeing; John D. Leak; III; John F. Thomas; Wendy E. Lahn; Wendy M. Lands; William J. Quinn

all of the city of Charlotte, state of NC, each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, and for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 8th day of July 2015.

American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: __________________________

David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA
COUNTY OF MONTGOMERY

On this 8th day of July 2015, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes herein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires March 28, 2017

By: __________________________

Teresa Pastella, Notary Public

Member, Pennsylvania Association of Notaries

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect as follows:

ARTICLE IV - OFFICERS - Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitations as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII - Execution of Contracts - SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company’s Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, 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 28th day of October 2015.

By: __________________________

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

<table>
<thead>
<tr>
<th>Business Name</th>
<th>SCC Number</th>
<th>SCC Type of Corporation</th>
<th>SCC Status</th>
<th>SCC &amp; Address</th>
<th>DPOR Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blythe Development Company</td>
<td>F1627514</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>1415 E Westinghouse Boulevard Charlotte, NC 28273</td>
<td>Class A Contractor</td>
<td>2705094714</td>
<td>05/31/2017</td>
</tr>
<tr>
<td>Rummel, Klepper &amp; Kahl, LLP</td>
<td>K0004178</td>
<td>Foreign Limited Liability Partnership</td>
<td>Active</td>
<td>2100 East Cary Street Suite 309 Richmond, VA 23223</td>
<td>ENG</td>
<td>0411000271</td>
<td>02/29/2016</td>
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<td></td>
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<td>900 Ridgefield Drive Suite 350 Raleigh, NC 27609</td>
<td>ENG</td>
<td>0411001046</td>
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<td>81 Mosher Street Baltimore, MD 21217</td>
<td>ENG</td>
<td>0407002860</td>
<td>12/31/2015</td>
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<td>12600 Fair Lakes Circle, Suite 300 Fairfax, VA 22030</td>
<td>ENG</td>
<td>0411000577</td>
<td>02/29/2016</td>
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<tr>
<td>Anderson &amp; Associates of Virginia, Inc.</td>
<td>01712629</td>
<td>Corporation</td>
<td>Active</td>
<td>100 Ardmore Street Blacksburg, VA 24060</td>
<td>ENG, LS</td>
<td>0407004805</td>
<td>12/31/2015</td>
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<tr>
<td>CES Consulting, LLC</td>
<td>S3416007</td>
<td>Limited Liability Company</td>
<td>Active</td>
<td>13991 Virginia Cedar Court Gainesville, VA 20155</td>
<td>ENG</td>
<td>0407005783</td>
<td>12/31/2015</td>
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<tr>
<td>ECS Mid-Atlantic, LLC</td>
<td>S1208216</td>
<td>Limited Liability Company</td>
<td>Active</td>
<td>2119-D North Hamilton Street Richmond, VA 23230</td>
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<td>0411000384</td>
<td>02/29/2016</td>
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<tr>
<td>Volkert, Inc.</td>
<td>F1366592</td>
<td>Foreign Corporation</td>
<td>Active</td>
<td>6225 Brandon Avenue Suite 540 Springfield, VA 22150</td>
<td>ENG, LA</td>
<td>0407002610</td>
<td>12/31/2015</td>
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<tr>
<td>Business Name</td>
<td>Individual's Name</td>
<td>Office Location Where Professional Services will be Provided (City/State)</td>
<td>Individual's DPOR Address</td>
<td>DPOR Type</td>
<td>DPOR Registration Number</td>
<td>DPOR Expiration Date</td>
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</tr>
<tr>
<td>Rummel, Klepper &amp; Kahl, LLP</td>
<td>Gary Sebastian Johnson</td>
<td>Richmond, VA</td>
<td>3808 Ivory Court Richmond, VA 23233</td>
<td>Professional Engineer License</td>
<td>0402033863</td>
<td>09/30/2017</td>
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</tr>
<tr>
<td>CES Consulting, LLC</td>
<td>Julianne Perkoski</td>
<td>Gainesville, VA</td>
<td>4000 Monitor Drive Hampton, VA 23669</td>
<td>Professional Engineer License</td>
<td>0402026174</td>
<td>06/30/2017</td>
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BLYTHE DEVELOPMENT CO.

General

SCC ID: F1627514
Entity Type: Foreign Corporation
Jurisdiction of Formation: NC
Date of Formation/Registration: 5/10/2005
Status: Active
Shares Authorized: 100000

Principal Office

1415 E WESTINGHOUSE BLVD
CHARLOTTE NC28273

Registered Agent/Registered Office

MICHAEL M COLLINS
275 W MAIN ST
COVINGTON VA 24426
ALLEGHANY COUNTY 102
Status: Active
Effective Date: 5/10/2005

Screen ID: e1000

https://sccefile.scc.virginia.gov/Business/F162751

10/14/2015
STATE CORPORATION COMMISSION

Richmond, May 10, 2005

This is to certify that a certificate of authority to transact business in Virginia was this day issued and admitted to record in this office for

BLYTHE DEVELOPMENT CO.

a corporation organized under the laws of NORTH CAROLINA and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business.

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

Office of the Clerk

August 12, 2015

CT CORPORATION SYSTEM
4701 COX RD STE 285
GLEN ALLEN, VA 23060

RECEIPT

RE: RUMMEL, KLEPPER & KAHL, LLP

ID: K000417 - 8

DCN: 15-08-12-0504

Dear Customer:

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

The annual continuation report was filed on August 12, 2015.

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

Sincerely,

Joel H. Peck
Clerk of the Commission

GPACCEPT
CISLFD

P.O. Box 1197, Richmond, VA 23218-1197
Tyler Building, First Floor, 1300 East Main Street, Richmond, VA 23219-3939
Clerk's Office (804) 371-9733 or (888) 722-2551 (toll-free in Virginia) www.scc.virginia.gov/clk

08/24/2015 2:50PM (GMT-04:00)
CERTIFICATE OF FACT

I certify the following from the records of the Commission:

On September 25, 2001, a statement of registration as a foreign registered limited liability partnership was filed in this office by Rummel, Klepper & Kahl, LLP, a Maryland limited liability partnership.

This certificate of registration is in effect as of this date.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
January 24, 2013

Joel H. Peck
Clerk of the Commission
Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, March 24, 2006

This is to Certify that the statement of registration of

Rummel, Klepper & Kahl, LLP
(Date of registration - September 25, 2001)

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

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
81 MOSHER ST
BALTIMORE, MD 21217

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

(POCKET CARD)
COMMONWEALTH OF VIRGINIA
BOARD FOR APESCI/IA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407002860 EXPIRES: 12-31-2015
PROFESSIONS: ENG
RUMMEL KLEPPER & KAHL LLP
81 MOSHER ST
BALTIMORE, MD 21217

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-5500

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
RK&K
12600 FAIR LAKES CIR, STE 300
FAIRFAX, VA 22030

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

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
ANDERSON & ASSOCIATES OF VIRGINIA, INC.

General

SCC ID: 01712629
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 12/5/1976
Status: Active
Shares Authorized: 50000

Principal Office

100 ARDMORE ST
BLACKSBURG VA24060

Registered Agent/Registered Office

S. K. ANDERSON
100 ARDMORE STREET
BLACKSBURG VA 24060
MONTGOMERY COUNTY 160
Status: Active
Effective Date: 2/28/1980

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

Screen ID: e1000

Need additional information? Contact info@sccefile.scc.virginia.gov. Website questions? Contact webmaster@scc.virginia.gov.

PDF (pdf) Reader | text/plain Viewer | text/html Viewer | text/x-pdf Viewer | text/word Viewer
Built with: 3.0.0.2440C
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

NUMBER
0407004805

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

PROFESSIONS: ENG, LS

ANDERSON & ASSOCIATES OF VIRGINIA INC
100 ARDMORE STREET
BLACKSBURG, VA 24060

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

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

(POCKET CARD)
COMMONWEALTH OF VIRGINIA
BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407004805 EXPIRES: 12-31-2015
PROFESSIONS: ENG, LS
ANDERSON & ASSOCIATES OF VIRGINIA INC
100 ARDMORE STREET
BLACKSBURG, VA 24060

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.
**CES Consulting, LLC**

**General**

- SCC ID: S3416007
- Entity Type: Limited Liability Company
- Jurisdiction of Formation: VA
- Date of Formation/Registration: 10/14/2010
- Status: Active

**Principal Office**

13991 VIRGINIA CEDAR COURT  
GAINESVILLE VA20155

**Registered Agent/Registered Office**

AVTAR SINGH  
13991 VIRGINIA CEDAR COURT  
GAINESVILLE VA 20155  
PRINCE WILLIAM COUNTY  
176

Status: Active  
Effective Date: 1/4/2013
This is to certify that the certificate of organization of

Construction Engineering & Scheduling Consulting Engineers, PLC

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

State Corporation Commission
Attest:

Clerk of the Commission
COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

AT RICHMOND, OCTOBER 26, 2010

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

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

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

CERTIFICATE OF AMENDMENT

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

STATE CORPORATION COMMISSION

By  

James C. Dimitri
Commissioner

10-10-26-1101
LLAACPT
CIS0368
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

NUMBER
0407005783

EXPIRES ON
12-31-2015

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

PROFESSIONS: ENG

CES CONSULTING LLC
13991 VIRGINIA CEDAR COURT
GAINESVILLE, VA 20155

Garden N. Dixon, Director

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

COMMONWEALTH OF VIRGINIA
BOARD FOR APBSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407005783 EXPIRES: 12-31-2015
PROFESSIONS: ENG
CES CONSULTING LLC
13991 VIRGINIA CEDAR COURT
GAINESVILLE, VA 20155

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

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.
ECS - Mid-Atlantic, LLC

General
SCC ID: S1208216
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 4/16/2004
Status: Active

Principal Office
14026 THUNDERBOLT PL STE 100
CHANTILLY VA20151

Registered Agent/Registered Office
JAMES A ECKERT
14026 THUNDERBOLT PL STE 100
CHANTILLY VA 20151
FAIRFAX COUNTY 129
Status: Active
Effective Date: 4/16/2004

Screen ID: e1000
This is to certify that the certificate of organization of

Engineering Consulting Services - Mid-Atlantic, LLC

SCC ID: S1208216

was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: April 16, 2004

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION  
AT RICHMOND, AUGUST 5, 2004  

The State Corporation Commission has found the accompanying articles submitted on behalf of ECS - Mid-Atlantic, LLC  
(formerly known as Engineering Consulting Services - Mid-Atlantic, LLC) 

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

CERTIFICATE OF AMENDMENT  

be issued and admitted to record with the articles of amendment in the Office of the Clerk of the Commission, effective August 5, 2004.  

STATE CORPORATION COMMISSION  
By  
[Signature]  
Commissioner
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-6500

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

PROFESSIONS: ENG

ECS MID- ATLANTIC LLC
2119-D NORTH HAMILTON ST
RICHMOND, VA 23230

ALTERATION OF THIS DOCUMENT USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRM OTHER
THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
Volkert, Inc.

General

- SCC ID: F1366592
- Entity Type: Foreign Corporation
- Jurisdiction of Formation: AL
- Date of Formation/Registration: 1/21/1999
- Status: Active
- Shares Authorized: 2250

Principal Office

3809 MOFFETT RD
MOBILE AL 36618

Registered Agent/Registered Office

CORPORATION SERVICE COMPANY
BANK OF AMERICA CENTER, 16TH FLOOR
1111 EAST MAIN ST.
RICHMOND VA 23219
RICHMOND CITY 216
Status: Active
Effective Date: 7/13/2011

Screen ID: e1900
Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That Volkert, Inc., a corporation incorporated under the law of Alabama, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on January 21, 1999; and

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

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
November 15, 2013

Joel H. Peck, Clerk of the Commission

CISECOM
Document Control Number: 1311155890
STATE CORPORATION COMMISSION

Richmond, December 7, 2009

This is to certify that a certificate of authority to transact business in Virginia was issued and admitted to record in this office for

Volkert, Inc.
(Formerly known as Volkert & Associates, Inc.)
(Formerly known as David Volkert & Associates, Inc.)
(Date of qualification – January 21, 1999)

a corporation organized under the laws of ALABAMA and that the said corporation is authorized to transact business in Virginia, subject to all Virginia laws applicable to the corporation and its business.

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

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

PROFESSIONS: ENG, LA

VOLKERT INC
6225 BRANDON AVE STE 540
SPRINGFIELD, VA 22150

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE

GARY SEBASTIAN JOHNSON
3808 IVORY CT
RICHMOND, VA 23233
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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

| a. Name & Title: | Jason Hoyle, Division Manager |
| b. Project Assignment: | Design-Build Project Manager |
| c. Name of Firm with which you are now associated: | Blythe Development Company (Blythe) |
| d. Employment History: With this Firm 12 Years With Other Firms 8 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:

**Division Manager – Blythe Development Company**

Mr. Hoyle offers over 20 years of construction experience in both highway and bridges. He directs and leads design-build projects ensuring all project activities are in accordance with contract specifications. He interacts with the Design Manager, Construction Manager, owner representatives to complete projects on time and within budget by overseeing the safety program, budgets, schedules, change orders, expenditures and billings. He also assigns and manages project resources including staff resources and equipment.

**Project Manager – Blythe Development Company**

Project Manager for multiple NCDOT heavy highway projects. These projects included new location, improving existing infrastructure and replacing existing structures. Design-Build Project Manager for two design-build projects: NC73 and Macy Grove Road. Blythe is a Joint Venture (JV) partner on the I-73/PTI project, where Mr. Hoyle has fulfilled the role of Assistant Design-Build Project Manager, working alongside RK&K. He supervised construction and was responsible for project design, construction quality and contract administration.

**Project Manager – Blythe Construction Company**

Project Manager for several NCDOT projects near Charlotte, NC. Responsible for all construction aspects of new location, widening and bridge replacement projects. Bridge construction included new construction and remove/replace. Bridges were constructed over roads, wetlands, streams and railroads. Responsibilities included field operations, means and methods of construction, project staffing, and safety.

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

*University of North Carolina at Charlotte, Charlotte, NC – BSCE/1997/Civil Engineering*

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

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

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Dates:</th>
<th>Sept. 2013-present</th>
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<tbody>
<tr>
<td>DB I-73 / PTI Greensboro, NC (Design-Build)</td>
<td></td>
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<tr>
<td>Project Role:</td>
<td>Assistant Design-Build Project Manager</td>
<td>With Current Firm? Yes</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>North Carolina Dept. of Transportation</td>
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</table>

As Blythe Development’s representative in the JV, Mr. Hoyle led the company’s interest in pursuing the project, responding to the RFQ, preparing the technical and price proposals and overseeing the project as the Assistant Design-Build Project Manager. His responsibilities included administering the contract, communicating with the Owner, document control, ensuring adequate staff and equipment resources and monitoring the project schedule. Project consisted of widening 1.5 miles of existing NC 68 (phased construction & in-depth MOT) and 9.4 mile new location construction of I-73. The project was phased based on permitting which allowed construction to begin six months after award. Total construction duration was 32 months. Approximately 4.8 million cubic yards of material was moved and 15 structures were constructed. The list of structures included a $12M taxiway bridge for the Greensboro/PTI airport and dual 7 span bridges over Reedy Fork. Contract value: $181M

Relevance to Project
✓ Design-Build
✓ Bridge Construction
✓ Interstate Widening
✓ Extensive MOT
✓ RK&K Designer
<table>
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<tr>
<th>Project Name</th>
<th>Dates</th>
<th>Project Role</th>
<th>With Current Firm?</th>
<th>Client/Owner</th>
<th>Relevance to Project</th>
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<td>Macy Grove Road</td>
<td>June 2012-Sept. 2015</td>
<td>Design-Build Project Manager</td>
<td>Yes</td>
<td>North Carolina Dept. of Transportation</td>
<td>Design-Build, RK&amp;K Designer, Bridge Construction, Extensive MOT</td>
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<td>Kernersville, NC (Design-Build)</td>
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<td>NC 73</td>
<td>Sept. 2009-May 2012</td>
<td>Assistant Design-Build Project Manager</td>
<td>Yes</td>
<td>North Carolina Dept. of Transportation</td>
<td>Design-Build, Extensive Utility and ROW Coordination</td>
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<td>Huntersville, NC (Design-Build)</td>
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<tr>
<td>Greensboro Eastern Loop</td>
<td>Oct. 2013-Present</td>
<td>Project Manager</td>
<td>Yes</td>
<td>North Carolina Dept. of Transportation</td>
<td>Bridge Design, Interstate Widening, Extensive MOT</td>
</tr>
<tr>
<td>Greensboro, NC</td>
<td></td>
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<td>Graham Street Bridge Replacement</td>
<td>Apr. 2001-Nov. 2002</td>
<td>Project Manager</td>
<td>Yes</td>
<td>North Carolina Dept. of Transportation</td>
<td>Bridge Construction, Utility and ROW Coordination</td>
</tr>
<tr>
<td>Charlotte, NC</td>
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</tbody>
</table>

Mr. Hoyle led Blythe Development during the pursuit of the project, prepared the technical and price proposals and tracked the design of the project through construction. Mr. Hoyle worked with RK&K, the lead Designer on this project, to optimize the design which led to a shorter construction duration. One of the critical design elements was managing traffic along I-40 Business that carries 55,000 vpd. Mr. Hoyle led the team through a phased construction sequence along I-40 Business which led to a safe and manageable MOT plan. ROW acquisition was key to the success of this project. Through meticulous planning, parcels were acquired for utility and road construction in order to minimize any schedule impacts. This project included the construction of a new interchange with I-40 Business and three new structures and was completed on-time in 30 months. Contract value: $38M

Assistant Design-Build Project Manager responsible for coordinating between design and construction as well as overseeing all aspects of construction. Document control, submittal tracking, utility coordination, ROW acquisition were critical to the success of the project. Mr. Hoyle directed all of these activities while being solely responsible for the financial and timely delivery of this project. NC 73 was widened from a 2-lane to 4-lane for 1.8 miles. Extensive utility coordination and ROW coordination (96 parcels) was involved. Project was completed on time in 32 months. Contract value: $19M

Mr. Hoyle led the estimating team through project award and was Project Manager actively involved with construction. Under his management, he developed an aggressive schedule and team of Blythe staff and subcontractors to execute the work. He oversees the construction operations and ensures adequate staff and equipment resources are available. This project consists of widening 2 miles of US 29 and 4.2 miles of new location of I-840. Approximately 2.2 million cubic yards of material will be moved and 12 structures constructed. One of the 12 structures includes a 2 span bridge over US 29 which carries 65,000 vpd. The project will be completed in 30 months, finishing 12 months ahead of the contract completion date. Contract value: $112M

Mr. Hoyle managed the roadway and bridge construction for duration of the project. With more than 60 trains per day, Mr. Hoyle coordinated extensively with CSX to remove and replace existing structures without train schedule disruption. Responsibilities extended to being the point of contract for the Owner, resolving contractual issues, scheduled all in-house and subcontractor activities and maintained project schedule.

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

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

Not Applicable
**ATTACHMENT 3.3.1**  
**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title: Julie Perkoski, PE, Regional Director and Senior Project Manager</td>
</tr>
<tr>
<td>b. Project Assignment: Quality Assurance Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated: CES Consulting, LLC</td>
</tr>
</tbody>
</table>
| d. Employment History: With this Firm, < 1 Years With Other Firms, 30 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):  
**Regional Director and Senior Project Manager – CES Consulting, LLC**  
April 2015 – present  
Ms. Perkoski is an integral team member with a focus in the quality management and quality assurance of complex highway and bridge projects. She serves as Quality Assurance Manager (QAM) on design-build (DB) projects and is responsible for the Quality Assurance of projects through the oversight of the team and the contractor for each project performing the roles of QA and QC inspection. She is thoroughly familiar with VDOT Minimum Requirements for Quality Assurance and Quality Control on Design-Build and P3 Projects, January 2012. She also is Regional Director and is responsible for marketing and business development for CES Consulting.  
**Assistant Vice President and Project Manager – Parsons Brinckerhoff, Inc.**  
June 1993 – March 2015  
Ms. Perkoski served as Quality Assurance Manager (QAM), providing quality assurance services for various VDOT DB projects. She is thoroughly familiar with VDOT Minimum Requirements for Quality Assurance and Quality Control on Design-Build and P3 Projects. As a Project Lead Construction Engineer, she provided construction management and design services for numerous highway, airport, military, governmental, recreational, and residential facilities. She has extensive VDOT experience, including the I-295 Widening/Interchange at Meadowville Road, I-66 Advanced Traffic Management System (ATMS), I-295/1-64 Interchange Construction Management, Virginia Capital Trail (Sherwood Phase), and the Pinner’s Point Intelligent Transportation System (ITS). She managed the construction inspection staff of ten inspectors in the Hampton Roads area, and performed company project management duties for project invoicing and cost control. She also assisted in development of bridging documents, project controls (constructability, bidability, scheduling and risk analysis).  
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:  
Pennsylvania State University, University Park, PA – BAE/1985/Architectural Engineering |
| f. Active Registration: Year First Registered/Discipline/VA Registration #:  
1995/Professional Engineer/VA (#0402026174) |
| 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)  
| Project Name: DB Route 60 Widening from Alverser to Old Buckingham, Chesterfield County, VA (Design-Build) |
| Project Role: Quality Assurance Manager |
| Client/Owner: Chesterfield County |
| Dates: April 2015-Ongoing |
| With Current Firm?: Yes |
| Relevance to Project:  
[ ] Design-Build  
[ ] Virginia Project  
[ ] Bridge Design  
[ ] QAM |

The project consists of corridor widening from 4 to 6 lanes and includes construction of bridges and widening of existing bridges, ROW acquisition, utility relocation, major storm drainage and stormwater management facilities, roadway pavement structure. Ms. Perkoski’s responsibilities include development of the project QA/QC plan, overseeing the Design QA/QC processes, managing daily quality assurance operations; monitoring and reviewing inspection diaries; ensuring material testing was performed in accordance with the project specifications; and working with the contractor, design engineer, and Chesterfield County to keep project progressing on schedule, including resolving construction issues. Contract value: $8.5M
<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Quality Assurance Manager</th>
<th>Dates:</th>
<th>With Current Firm?</th>
<th>Relevance to Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB Route 29 Solutions</strong>&lt;br&gt;Albemarle, VA (Design-Build)</td>
<td></td>
<td>April 2015-est. Oct. 2017</td>
<td>Yes</td>
<td>Design-Build, Virginia Project, Bridge Design, QAM, RK&amp;K Design</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Quality Assurance Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>VDOT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This DB project consists of a package of projects to improve the Route 29 corridor north of Charlottesville in Albemarle County including Rio Road Grade Separated Intersection, US 29 Widening and Berkmar Drive Extension. Ms. Perkoski’s responsibilities include assuming the QAM responsibilities during the project QAM’s absence, which included managing daily quality assurance operations; monitoring and reviewing inspection diaries; ensuring material testing is performed in accordance with the project specifications; and conducting preparatory inspection meetings prior to the start of construction activities. Ms. Perkoski is currently working with RK&amp;K and the proposed Design Manager, Gary Johnson, on this project. Contract value: $116M</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Manager of Design Construction Services</th>
<th>Dates:</th>
<th>With Current Firm?</th>
<th>Relevance to Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB Elizabeth River Tunnels Project</strong>&lt;br&gt;Norfolk/Portsmouth, VA (Design-Build)</td>
<td></td>
<td>Oct. 2012-March 2015</td>
<td>No</td>
<td>Design-Build, Virginia Project, Bridge Design, Worked with RK&amp;K</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Manager of Design Construction Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>Elizabeth River Crossings/VDOT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms. Perkoski’s served as Manager of the Design Construction Services for this $2.1B DB/P3 project. The project included the design and construction of a new Midtown Tunnel, rehabilitation of the existing Midtown and Downtown Tunnels and design and construction of the new MLK extension, which is an elevated roadway connection to I-264. The project scope included major road construction from Hampton Boulevard and Brambleton Boulevard to the Norfolk approach of the Midtown Tunnel, from existing MLK Expressway and Rt. 164 to the Portsmouth approach of the Midtown Tunnel, and major road and bridge construction of the new MLK Expressway extension. Her responsibilities included assisting in the QA review of the design documents, designing the ITS layout for the project, managing the RFI and shop drawing reviews, and coordinating with the project design team and contractor to ensure the RFI and shop drawing reviews were correct and timely. Ms. Perkoski worked with RK&amp;K (GEC contract) and the proposed Design Manager, Gary Johnson, on this project. Contract value: $2.1B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Quality Assurance Manager</th>
<th>Dates:</th>
<th>With Current Firm?</th>
<th>Relevance to Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB I-66 ATMS</strong>&lt;br&gt;Northern Virginia</td>
<td></td>
<td>Dec. 2013-March 2015</td>
<td>No</td>
<td>Virginia Project, QAM</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Quality Assurance Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>VDOT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Assurance Manager (QAM) for project on I-66 in Fairfax and Prince William Counties, one of the busiest thoroughfares in Northern Virginia. Ms. Perkoski was responsible for overseeing the development of the QA/QC plan. The scope of this project included shop drawing submittals and installation of numerous ITS &amp; lane control sign structures along the corridor to better manage and enhance the traffic flow during peak and non-peak hours. Other responsibilities included: managing daily quality assurance for concrete foundation, conduit installation and ITS operations; monitoring and reviewing inspection diaries; ensuring material testing was performed in accordance with the project specifications; and working with the contractor, engineer, and VDOT to resolve construction issues that were impacting the cost and schedule of the project. Assisted the Department in prioritizing the schedule for the portions of the I-66 corridor that needed the functioning of the ATM System the most. Contract value: $33.9M</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Quality Assurance Manager</th>
<th>Dates:</th>
<th>With Current Firm?</th>
<th>Relevance to Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB Meadowville Interchange</strong>&lt;br&gt;Chester, VA (Design-Build)</td>
<td></td>
<td>Aug. 2010-Dec. 2011</td>
<td>No</td>
<td>Design-Build, Virginia Project, QAM, Project size</td>
</tr>
<tr>
<td>Project Role:</td>
<td>Quality Assurance Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>VDOT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Assurance Manager (QAM) for Meadowville Road Interchange DB project which included the design and construction of the new diamond interchange at I-295 and Meadowville Road in Chesterfield County. Project consisted of new ramps from the Meadowville Road overpass to and from I-295, with the widening of the interstate to accommodate new ramps. Ms. Perkoski’s responsibilities included the development of the QA/QC Manual; managing daily quality assurance operations; monitoring and reviewing inspection diaries; ensuring material testing was performed in accordance with the project specifications; and working with the contractor, engineer, and VDOT to resolve any construction issues. Contract value: $11.7M</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. Not Applicable
**ATTACHMENT 3.3.1  
KEY PERSONNEL RESUME FORM**

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

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Gary S. Johnson, PE, DBIA – Director of Design-Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Design Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
<td>RK&amp;K</td>
</tr>
</tbody>
</table>

**d. Employment History:** With this Firm 5 Years, With Other Firms 17 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):

<table>
<thead>
<tr>
<th>DB</th>
<th>Director of Design-Build and Structures – RK&amp;K</th>
<th>Sept. 2010 – present</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As the Director of Design-Build, Mr. Johnson is responsible for the successful delivery of all design-build projects in Virginia. He is also responsible for all structures projects in Virginia. He has more than 20 years of project management, design and construction inspection experience in structures, roadways, and mass transit stations. His extensive project management experience, formal training (MBA) and hands-on participation in inspection (NBIS), design and construction engineering assignments afford him in-depth knowledge of project requirements. Additionally, his experience with design-build projects has developed his full understanding of the implementation of bridge plans and projects through construction. He is a former member of the VTCA Engineering Consultant Leadership Committee and currently serves as the vice-chairman of the VTCA/VDOT Design-Build Committee where he serves as a voice of the industry to VDOT.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DB</th>
<th>Mid-Atlantic Unit Manager – T.Y. Lin International</th>
<th>May 2005 – Sept. 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project Manager and Lead Structural Engineer for dozens of bridge projects. Oversaw staff of 20 structural engineers. Served as Engineer of Record on bridge replacement projects. Served as Principal in Charge for design-build projects in Virginia, North Carolina and Washington DC.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DB</th>
<th>Director of Virginia Operations – Ammann &amp; Whitney</th>
<th>June 1993 – May 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project Manager and Lead Structural Engineer for projects throughout Virginia, Massachusetts and Pennsylvania. Served as Engineer of Record on bridge replacement and rehabilitation projects. Focused on rehabilitation of bridges damaged from over height loads and emergency response.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</th>
<th>Virginia Commonwealth University, Richmond, VA – MBA/2003/Business Administration University of New Hampshire, Durham, NH - BSCE/1993/Civil Engineering</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>f. Active Registration: Year First Registered/Discipline/VA Registration #:</th>
<th>1999/Professional Engineer/VA (#0402033863); 2010/DBIA Professional (#125387)</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>I-64 Widening and Route 623 Interchange, Henrico and Goochland Counties, VA (Design-Build)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role:</td>
<td>Principal-in-Charge</td>
</tr>
<tr>
<td>Client/Owner:</td>
<td>Virginia Department of Transportation</td>
</tr>
<tr>
<td>Relevance to Project</td>
<td></td>
</tr>
</tbody>
</table>
- Design-Build  
- Virginia Project  
- Bridge Design  
- Interstate Widening  
- Retaining Walls  
- Extensive MOT |

This design-build project involves the widening of 4.5 miles of Interstate 64 to the inside from a four-lane divided interstate to a six-lane divided interstate and improvements to the I-64/Route 623 Interchange. It also includes two mainline bridge replacements. The interchange improvements include upgrading the existing traffic signal, widening the I-64 westbound ramp to Route 623 to provide an additional turn lane, adding a left turn lane on Route 623 southbound to I-64 eastbound, and widening the I-64 eastbound off ramp to Route 623 to provide an additional turn lane. Mr. Johnson led the design of the bridges for this project, as well as multiple retaining walls required for the project. He was responsible for structural design including bridges and walls. Design is complete and construction is scheduled for completion in November 2015. During the proposal process, Mr. Johnson served as the lead coordinator amongst all of the disciplines to pull together the successful proposal. During the delivery of the project, Mr. Johnson serves as the Principal-in-Charge for this project and is fully involved in the entire design process as well as leading the structure design. **Contract value: $34.8M**
Mr. Johnson serves as the Principal-in-Charge for this project and is fully involved in the entire design process. He also serves as the Lead Structural Engineer. He is responsible for structural design of the bridges and retaining walls for the overall project that will reduce congestion on the busiest north-south corridor in the Charlottesville/Albemarle County region. The project will improve Route 29 between Polo Grounds Road and Towncenter Drive, extend Berkmar Drive from Hilton Heights Road to Towncenter Drive, and construct a grade-separated intersection at Route 29 and Rio Road. Mr. Johnson’s responsibilities include coordination with multiple subconsultants, managing the design schedule, ensuring conformance with the contract documents, and adhering to the aggressive design schedule. He personally oversaw the development of an advanced design where the Rio Road Bridge superstructure serves as a strut to support the retaining walls below. This innovative design will allow for the Grade Separated Intersection (GSI) to be constructed in 103 days. His extensive coordination with subconsultants and disciplines, including roadway, stormwater, right-of-way, utilities, traffic, geotechnical, lighting, and fire code experts is instrumental to delivering this design. This experience will prove to be an asset on the Replacement of I-81 Structures 18942 & 18944 over Rte. 808 Halls Bottom Rd and Sinking Creek project. Design for this project will be completed prior to the start of this the Halls Bottom Rd and Sinking Creek project. Contract value: $116.7M

Design Manager and Lead Structural Engineer for a roadway widening and bridge replacement project that included a nine-span bridge structure with a length of 1150 feet. The superstructure span arrangement consists of three, 3-span units made continuous for live load utilizing 72” Modified Bulb Tee girders. The substructure consists of three column bents founded on drilled shaft foundations. **Mr. Johnson led a multi-member, multi-disciplined project design team (including utilities, roadway, right-of-way, environmental, structures, and hydraulics) from proposal development through construction.** Complicating the project was extensive right-of-way negotiations, complex maintenance of traffic, complex hydraulic analysis, and an aggressive schedule. Maintenance of Traffic was complicated by a horizontal curve at the end of the bridge as well as the requirement to maintain all lanes during construction while replacing the bridge on its current alignment. Mr. Johnson was fully involved and in-charge of all design-related aspects from the pursuit to the project closeout. During construction, he was hands-on with the day-to-day management with the contractor and subcontractors performing the construction as well as serving as a liaison to the Client. Contract value: $17M

This is a major bridge replacement project in downtown Washington DC consisting of multi-span steel plate girders founded on multi-column piers constructed integrally with railroad crashwalls. The overall project was complicated by a significant substructure skew. Maintenance of Traffic during construction was the main driving force of the project and it was a deciding factor on bridge type and construction methods. Coordination with the railroad and overall MOT drove the most applicable structural alternatives. **Mr. Johnson, as the Design Manager, worked closely with the client, railroad, and contractor to arrive at the most feasible bridge replacement options.** Superstructure Options investigated by Mr. Johnson and his team included precast concrete, steel box girders, and concrete segmental construction. Working with the available budget, an overall project, consisting of a staged steel plate girder superstructure, was developed under Mr. Johnson’s leadership and delivered to a satisfied client. Contract value: $18M

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

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

<table>
<thead>
<tr>
<th>Client/Owner:</th>
<th>Project Role:</th>
<th>Project Name:</th>
<th>Dates:</th>
<th>With Current Firm?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia Department of Transportation</td>
<td>Principal-in-Charge/Lead Structural Engineer</td>
<td>Route 29 Solutions Albemarle County, VA (Design-Build)</td>
<td>March 2015-est. Oct. 2017</td>
<td>Yes</td>
</tr>
<tr>
<td>North Carolina Dept. of Transportation</td>
<td>Design Manager/Lead Structural Engineer</td>
<td>US 158 over Yadkin River Mocksville, NC (Design-Build)</td>
<td>June 2008-Sept. 2010</td>
<td>No</td>
</tr>
<tr>
<td>District Department of Transportation</td>
<td>Design Manager</td>
<td>New York Avenue Washington, DC (Design-Build)</td>
<td>June 2008-Feb. 2010</td>
<td>No</td>
</tr>
</tbody>
</table>
Brief Resume of Key Personnel anticipated for the Project.

| a. Name & Title: | Nathan Thomas, EI - Assistant Project Manager |
| b. Project Assignment: | Construction Manager |
| c. Name of Firm with which you are now associated: | Blythe Development Company (Blythe) |
| d. Employment History: | Mr. Thomas works directly with the design and construction team overseeing all aspects of bridge and highway infrastructure projects. His involvement begins with the estimating phase with take-off completion and rough estimating. After a successful bid, Mr. Thomas is responsible for creating both a project budget and critical path schedule, in addition to completing all vendor buy-out. He then works with upper management to assign the necessary resources (e.g. labor and equipment) and commences with managing the field operation staff to successful completion of the project. He has an in depth understanding and working knowledge on design-build and fast-track, large scale transportation infrastructure projects. He is also actively involved in the pursuit of design-build projects. |
| e. Education: | University of North Carolina at Charlotte, Charlotte, NC - BS/2012/Civil Engineering |
| f. Active Registration: | First Registered/Year: 2012/Engineering Intern/NC; Virginia DEQ RLD Certification and VDOT ESCCC Certifications will be earned/held prior to commencement of project construction |
| 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) |

| Project Name: | Macy Grove Road Kernersville, NC (Design-Build) |
| Dates: | June 2012-Sept. 2015 |
| Project Role: | Project Engineer |
| Client/Owner: | North Carolina Dept. of Transportation |
| Relevance to Project | Design-Build, RK&K Designer, Bridge Design, Extensive MOT |

Mr. Thomas managed Blythe’s bridge crews during the construction of 3 new structures and the removal of 2 existing bridges. He was responsible for the financial and timely delivery of the bridges which included an 18,000 SF deck bridge over Business I-40 that hosts 55,000 vpd, a new alignment bridge over a Norfolk Southern Railway and a new alignment bridge over a secondary roadway. He was responsible for coordination between bridge construction and roadway tie-ins. As Project Engineer, he was involved in overseeing all aspects of construction including document control, submittal tracking, utility coordination, financials and timely delivery of this project. Mr. Thomas worked extensively with RK&K, the designer for this DB project. Contract value: $38M
<table>
<thead>
<tr>
<th>Project Name</th>
<th>Rowan County – C203207 China Grove, NC</th>
<th>Dates:</th>
<th>Mar. 2014-Sept. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role</td>
<td>Assistant Project Manager</td>
<td>With Current Firm?</td>
<td>Yes</td>
</tr>
<tr>
<td>Client/Owner</td>
<td>North Carolina Dept. of Transportation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mr. Thomas managed the bridge construction for the duration of the project. He coordinated with Norfolk Southern Railway and NCDOT to construct new RR bridge. The new bridge was adjacent to the existing track that hosts more than 25 trains a day, including Amtrak passenger trains. Construction included the use of several temporary shoring systems and the compliance of multiple party specifications. As Assistant Project Manager, Mr. Thomas was involved in overseeing all aspects of construction including document control, submittal tracking, utility coordination, financials and timely delivery of this project. Contract value: $19M

Relevance to Project
- Bridge Design

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Davidson County – C203142 Lexington, NC</th>
<th>Dates:</th>
<th>Nov. 2013-June 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role</td>
<td>Project Engineer</td>
<td>With Current</td>
<td>Yes</td>
</tr>
<tr>
<td>Client/Owner</td>
<td>North Carolina Dept. of Transportation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mr. Thomas provided assistance to the Project Manager for project that included new alignment of Turner Road and bridge construction. The new alignment construction consisted of 103,000 CY of abutment fill that lead into a 530 LF bridge (20,000 + SF Deck). The bridge spanned Norfolk Southern Railway that hosts 25 plus trains a day as well as spanning a large stream. Mr. Thomas assisted in the coordination between roadway and bridge construction crews, along with the coordination with the NCDOT and Norfolk Southern Railway. As Project Engineer, Mr. Thomas was involved in overseeing all aspects of construction including document control, submittal tracking, utility coordination, financials and timely delivery of this project. Contract value: $8M

Relevance to Project
- Bridge Design

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Forsyth County – C202601 Kernersville, NC</th>
<th>Dates:</th>
<th>June 2012-Nov. 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role</td>
<td>Project Engineer</td>
<td>With Current</td>
<td>Yes</td>
</tr>
<tr>
<td>Client/Owner</td>
<td>North Carolina Dept. of Transportation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mr. Thomas provided assistance to the Project Manager for project that included the removal and replacement of the existing Salisbury Street Bridge over I-40 Business. This project included the removal of the existing 4-span, 200’ long bridge consisting of pre-stressed concrete girders, concrete deck, sidewalk and decorative classic bridge rail, founded on three pile bents. Temporary shoring was required to support the existing interstate while excavating and constructing the center bent footings and columns. Numerous improvements to the roadway approaches and nearby intersecting city streets were completed, including construction and installation of drainage structures, water & sewer lines, RCP, curb & gutter, sidewalk, driveways and new asphalt pavement. In addition, a 100’ long CIP concrete gravity retaining wall was built in order to facilitate road widening in close proximity to an existing church. Mr. Thomas assisted in the coordination between roadway and bridge construction crews along with the coordination with the client. As Project Engineer, he was involved in overseeing all aspects of construction including document control, submittal tracking, utility coordination, financials and timely delivery of this project. Contract value: $2M

Relevance to Project
- Bridge Demolition
- Bridge Design

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

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

Assistant Project Manager for Bridge Replacement Project in York County, SC to be complete in December 2015.
Assistant Project Manager for Bridge Replacement Project in Greenwood County, SC to be complete in July 2016.
Attachment 3.4.1 (a) and (b)

Work History Forms
ATTACHMENT 3.4.1(a)  
LEAD CONTRACTOR - WORK HISTORY FORM  
(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in Thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)</th>
</tr>
</thead>
</table>
| Construct New Interchange with Macy Grove and I-40 Business (Contract C202853, TIP U-2080) Forsyth County, NC (DESIGN-BUILD) | RK&K | North Carolina Department of Transportation  
Phone: 919-707-6617  
David Hering, PE  
Transportation Program Management  
919-707-6617  
dhering@ncdot.gov | 10/2015 | 09/2015 | $38,800 | $39,300 (Change Order for utility betterment) |

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.

PROJECT FEATURES/NARRATIVE
This project consisted of constructing multiple bridges and interchanges with Macy Grove Road at I-40 Business and East Mountain Street. The existing structure carrying traffic over I-40 Business (55,000 vehicles per day) was removed and replaced with a new 156 foot, single-span, structural steel bridge with MSE walls used to minimize span length. Two other bridges were also constructed: a bridge carrying Macy Grove Road traffic over a NSRR and over East Mountain Street. Similar to what may be utilized on the Halls Bottom Road Project, median crossovers and the newly constructed ramps along with phased construction helped manage the MOT. I-40 Business was also widened for 1.5 miles as part of this project. Utility coordination and ROW acquisition were major components of the project and were managed by the RK&K team.

SCOPE AND COMPLEXITY SIMILARITIES
- Designs-build delivery  
- MOT on heavy commuter route  
- Highway design and construction including widening  
- Permitting and utility coordination  
- Remove and replace existing structure  
- Scope of remove and replace existing structure: $11M of the $39.3M

SUCCESSFUL DELIVERY
This project was delivered ahead of schedule by a month with a perfect safety record. There were no recordable safety incidents for the construction team or the travelling public.

The project was also delivered on budget for the original scope. The increase in contract value was for a utility betterment of extending a 24 inch waterline. This waterline was delivered for an overall lower cost to the owner, compared to a stand along contract to conduct the work.

LESSONS LEARNED
- Due to the high volume of train traffic on the NSRR, construction of the structure over NSRR took longer than anticipated. Bridge crews worked longer hours and on the weekend to overcome the delay. In the future, a longer duration will be accounted for in the schedule for structures over railroads with a high volume of train traffic.
- A large part of the success of the project was the role of the Design-Build Coordinator, Richard Kirkman. Richard was the liaison between the construction and design teams and kept both sides focused on the most critical parts of the project. Richard will serve in a similar role on the Halls Bottom Road Project.

BLYTHE ROLE
As the Design-Builder, Blythe was 100% responsible for construction, design, right-of-way acquisition and utility coordination. Blythe teamed with RK&K on this project.

Right-of-way acquisition and permitting were two schedule critical activities that led to getting the construction phase off to a good start. Post-award investigation by the RK&K design team of the permit requirements resulted in a nationwide permit being obtained instead of an individual permit. This allowed construction to begin earlier than originally scheduled. The construction management team, along with RK&K, developed a priority list of parcel acquisitions which allowed construction to progress.

The Design-Build team coordinated all utility construction and relocation. After right-of-way plans were developed, utility coordination quickly began. Close coordination was maintained with utility companies to finalize designs and begin construction as soon as right-of-way was acquired.

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

This project included the removal of the existing 4-span, 320’ long concrete deck-steel girder bridge over I-40 on NC-16 and replacement with a 2-span, 200’ long bridge consisting of pre-stressed concrete girders, concrete deck, sidewalk, & three bar metal rail, founded on three piers. MSE walls were built at each abutment location to allow for the use of shorter span lengths. A system similar to this operation will be investigated for the Halls Bottom Road Project. Numerous improvements to the roadway approaches were completed at both ends of the project, including construction and installation of drainage structures, RCP, curb & gutter, sidewalk, driveways and new asphalt pavement.

**SCOPE AND COMPLEXITY SIMILARITIES**

- Interstate corridor bridge demolition
- Interstate corridor bridge construction
- Interstate construction, including widening
- MOT of busy arterial and collector roads
- Night construction

**BLYTHE ROLE**

Blythe served as the prime contractor for this project which involved the removal and replacement of the existing four span bridge with a new bridge and upgrades to the roadway approaches. Blythe in-house forces were directly responsible for the following:

- Bridge demolition
- All aspects of bridge construction from H-pile installation to barrier rail construction
- Traffic control
- Erosion control
- Concrete flatwork construction including, curb & gutter, sidewalk and driveways
- Storm water system construction including drainage structure and pipe installation
- All aspects of roadway grading including collector and arterial road tie-ins

**Proposed Personnel for I-81 Project:**
- Marvin Leatherwood (Blythe)
- Nathan Thomas (Blythe)

**SUCCESSFUL DELIVERY**

This project was delivered under-budget and with a perfect safety record for the construction team and the travelling public.

Late in the contract, the owner made significant design changes to a portion of the project, which necessitated negotiation of additional contract time. Blythe worked with the designers to efficiently integrate these owner-directed changes and Blythe completed the project on-schedule with the additional time granted by the owner.

**ATTACHMENT 3.4.1(a)**

<table>
<thead>
<tr>
<th>LEAD CONTRACTOR - WORK HISTORY FORM (LIMIT 1 PAGE PER PROJECT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Project Name &amp; Location</td>
</tr>
<tr>
<td>b. Name of the prime design consulting firm responsible for the overall project design.</td>
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</tbody>
</table>

| Remove and Replace Bridge on NC-16 over I-40 (Contract C202729, TIP B-4456) | NCDOT Staff Engineers |
|———|———|
| Location | North Carolina Department of Transportation |
| Phone | 704-480-9020 |
| Division Construction Engineer | Larry Carpenter, PE |
| 704-480-9020 | lcarpenter@ncdot.gov |
| e. Contact Completion Date (Original) | 11/2012 |
| f. Contract Value (in Thousands) | $3,132 |
| g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement. | $2,931 |

| Challenge | Resolution |
|———|———|
| Contract only allowed for pacing of traffic and 20 minute closures to allow for demolition of existing structure over interstate traffic. | Blythe's management team developed, presented to the owner and received approval for an interstate detour plan which called for a full interstate closure at night, allowing for the uninterrupted demolition of the existing bridge. |

**Challenge:** Original contract time was very tight at just ten months with potential of significant contractual liquidated damages ($2000 per calendar day).

**Resolution:** The Blythe project management team developed and actively managed an aggressive critical path schedule. This enabled the timely design approval and delivery of key permanent materials, scheduling of key subcontractors and additional labor crews and ensured the team stayed ahead of any potential issues which could negatively affect the schedule.

*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.
Blythe in-house forces were directly responsible for the overall project design.

Blythe served as the prime contractor for this project which involved the removal and replacement of the existing four span bridge and associated roadway approaches with a new bridge and reconstructed roadway. Blythe in-house forces were directly responsible for the overall project design.

The scope of work for this project posed numerous challenges for the Blythe team. Thorough and detailed planning by Blythe project management staff allowed for successful resolution of these challenges, as follows:

**Challenge:** Ingress & egress to a narrow interstate median with reduced sight distances in both directions  
Resolution: Minor material deliveries were scheduled for low peak traffic times, with major material deliveries scheduled for night time, using escort vehicles to pace traffic flow

**Challenge:** Installation of temporary shoring (driven sheeting) in a tight median space immediately adjacent to interstate traffic was required  
Resolution: One lane of interstate traffic was closed in each direction at night to allow for installation of sheeting

**Challenge:** Contract only allowed for pacing of traffic and 20 minute closures to allow for demolition of existing structure over interstate traffic  
Resolution: Blythe’s management team developed, presented to the owner and received approval for an interstate detour plan which called for a full interstate closure at night, allowing for the uninterrupted demolition of the existing bridge.

**SUCCESSFUL DELIVERY**

This project was delivered on-time and under budget. This project was also delivered with a perfect safety record for the construction team as well as the travelling public. There were no reported incidents on this project. This is a testament to the importance Blythe places on safety.

**SCOPE CHALLENGES AND RESOLUTIONS**

The scope of work for this project included numerous challenges for the Blythe team. Thorough and detailed planning by Blythe project management staff allowed for successful resolution of these challenges, as follows:

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Project Name: 64 and Route 623 Design-Build  

 Counties, VA  

Henrico and Goochland  

Twin replacement bridges were designed for I-64 over Little Tuckahoe Creek. The existing 3-span bridges were in poor condition with the simple-span structures, and concerns about overloading the existing piers, a complete bridge replacement option was chosen. The new bridges are 130 foot simple span bridges utilizing prestressed concrete Bulb-T girders and a deck slab extension. With this option, our design team was able to design a robust, well-constructed bridge that can handle the future traffic demands of the area.

Innovative use of MSE retaining walls at culvert locations to address extreme scour conditions. An innovative abutment design was used, incorporating MSE -type straps at the abutment and wingwalls to carry a portion of the lateral loads, reducing the lateral load on abutment piles.

The project was designed to fit the needs of the construction schedule, with detailed work breakdown structure and execution plan. The use of an accelerated construction schedule allows for the quick installation of MSE walls to support the widened roadway, in lieu of extending the culverts, additional stream crossing mitigation is shorter than the option of culvert extensions.

Innovative Design – When implementing innovative design concepts in a project, it is important to engage VDOT early on in the project and make plan and design changes early on to minimize impact and cost. In this project, the design team worked closely with VDOT to develop an innovative design that would minimize the impact to the environment and traffic.

Environmental – RK&K provided full service environmental design and permitting for this project, including: wetland delineations and stream assessments; determination of wetlands and stream buffer widths; and securing cultural resource clearances from the Virginia Department of Historic Resources. An environmental commitment was added to the NEPA document.

Successful Delivery – Plan elements were delivered on schedule, allowing VDOT to proceed with the construction of the bridge. The project was completed on time, and the MSE walls were constructed to support the widened roadway, in lieu of extending the culverts.

Scope and Complexity Similarities – The project includes the design and construction of two replacement bridges, which is similar to the design and construction of a single bridge. However, the complexity of the project is increased by the need to design and construct two bridges simultaneously.

Lessons Learned – In this project, RK&K determined that a replacement design was the most cost-effective option for the client. Design During Pursuit – By doing a full hydraulic analysis during the pursuit phase of this project, RK&K determined that a replacement design was the most cost-effective option. This analysis helped to identify areas where cost savings could be achieved, and the client was able to make informed decisions early on.

Innovative Use of MSE Retaining Walls – MSE retaining walls are an innovative design concept that can be used to address extreme scour conditions. In this project, MSE walls were used to support the widened roadway, in lieu of extending the culverts.

Construction – Construction of the project included the design and construction of two replacement bridges, which is similar to the design and construction of a single bridge. However, the complexity of the project is increased by the need to design and construct two bridges simultaneously.

Performance – The project was designed to fit the needs of the construction schedule, with detailed work breakdown structure and execution plan. The use of an accelerated construction schedule allows for the quick installation of MSE walls to support the widened roadway, in lieu of extending the culverts.

Change Orders – Changes were minimal in this project, with the exception of changes to the MSE retaining walls. The changes were minor, and the project was completed on time.

Client Feedback – Client feedback was positive, with the client noting that the project was completed on time and within budget.
The Blythe DB Team's proposed - Environmental Permitting/Coordination - Public Involvement - ITS Conduit Routing - Signing Design - Noise Analysis & Sound Barrier Design - Utility Coordination/Utility Design

The project quickly, safely, and cost-effectively.

SUCCESSFUL DELIVERY
- RK&K received an impressive technical score of 93 on this design-build proposal, demonstrating that the team had the experience and qualifications to deliver the project.
- The I-40 Widening and Signing Project has won various professional accolades, including:
  - 2010 NAPA Safety Innovation Award
  - 2010 ACEC NC Engineering Excellence Award - Trailblazer Award
  - 2011 AGC Pinnacle Award for Best Highway Project in the Carolinas
  - 2011 ACEC/NC Engineering Excellence Award

The Design-Build Team's efforts

Highway/Roadway Design:
The dual bridges over U.S. 1/64 are five-span, 320-foot bridges in a highly congested area. The bridge superstructure consists of simple span steel girders and is tied into the existing bridge. At the time of construction, the existing bridges were curved with chorded steel girders and are along a vertical curve, making it a challenge to tie into the existing bridge. At the time of construction, the existing bridges were widened because right of way and permits are minimal.

LESSONS LEARNED
 Coordination is Key: Close coordination with subconsultants and the Contractor was vital to a successful design-build project. The project team identified and addressed issues early on, which helped in the timely completion of the project.

Utilize Staged Submittals:
Using staged submittals of design plans (structure, hydraulic, and erosion control) allowed work to begin much earlier than following the typical process. This process was especially well for median work, especially well for median work, allowing the project to be completed ahead of schedule.

The RK&K role:

RK&K was responsible for the following:
- Structural Engineering: The bridges carrying I-40 over Wade Avenue and U.S. 1/64 consist of single span steel girders and are tied into the existing bridge. The member work was performed by RK&K.
- Hydraulic and Erosion Control Design
- Roadway Design

The RK&K Raleigh Office, with assistance from the RK&K Richmond Office, served as the Lead Designer for this project. The RK&K Raleigh Office's primary responsibilities included:

- Comprehensive Design
- Construction Support

The RK&K Richmond Office, with assistance from the RK&K Raleigh Office, served as the Lead Designer for this project. The RK&K Richmond Office's primary responsibilities included:

- Envisioning Design
- Construction Support

The RK&K Bridge Design Firm's responsibilities included:

- Design
- Construction Support

S.T. Wooten
Firm's responsibilities.

f. Contract Value (in thousands)

October 2009

2011

$3,900

Contact information of the Client and Contractor responsible for overall construction of the project.

Tommy Peacock (RK&K)
Barry Brandt (RK&K)
Phone: 919-707-6601

As stated by NCDOT, the S.T. Wooten/RK&K team approach and responsiveness to the NCDOT contributed to one of North Carolina's finest transportation achievements.

Despite the challenges presented, the Design-Build Team was able to deliver the project quickly, safely, and cost-effectively.
**PROJECT NARRATIVE**

The project was critical and complex due to the location of an environmentally sensitive stream that runs throughout the project limits. For the successful delivery of the project, RK&K faced several challenges. These included designing the bridge to accommodate future widening, minimizing the time and cost associated with additional design by another consultant. These design features, including girder design for future widening, were critical and complex due to the location of an environmentally sensitive stream that runs throughout the project limits.

**SUCCESSFUL DELIVERY**

RK&K was responsible for the design of several new bridges being built over various roadways. The firm's high technical score of 92.8% during design-build selection process from the American Council of Engineering Companies (ACEC) of North Carolina was based on several criteria, including the design and construction of a six-lane, 46-foot median-divided, controlled access toll facility to meet a 70-mph design speed; accomplishing the bridge design under an aggressive design-build schedule; and the 2012 Grand Award for Engineering Excellence in Transportation for this project.

**SPECIFIC DESIGN FEATURES TO ALLOW FUTURE BRIDGE WIDENING**

To be possible, all necessary substructure units need to be already in place at the time the project were specifically designed so that future widening could occur by simply adding additional superstructure units as the need for future widening wall value to the Engineering profession, social and economic considerations, and complexity of the project.

**HIGHWAY/ROADWAY DESIGN**

Implementation of engineering principles and innovative solutions is continually incorporated into design details in order to achieve the highest level of efficiency and durability. The services were performed by the RK&K Raleigh Office, with assistance from the RK&K Richmond Office.

**IMPLEMENTING VALUE ENGINEERING PRINCIPLES AND INNOVATION**

In addition to the substructure, the beams were designed such that the same girder design can be utilized for future widening, minimizing the time and cost associated with additional design by another consultant. These design features, including girder design for future widening, were critical and complex due to the location of an environmentally sensitive stream that runs throughout the project limits.

**HIGHWAY DESIGN**

The design addressed the needs of sensitive stream that runs throughout the project limits. For the successful delivery of the project, RK&K faced several challenges. These included designing the bridge to accommodate future widening, minimizing the time and cost associated with additional design by another consultant. These design features, including girder design for future widening, were critical and complex due to the location of an environmentally sensitive stream that runs throughout the project limits.