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Statement of Qualifications



A Design-Build Project

I-81 Bridge Replacement
at Exit 114
Montgomery County/
Town of Christiansburg, Virginia

September 6, 2017

State Project No.: 0081-154-733, P101,
R201, C501, B601, B616

Federal Project No.: IM-081-2(992)

Contract ID Number: C00093074DB96

Submitted By:



in conjunction with



Subconsultants:



3.2

LETTER OF SUBMITTAL



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CONSTRUCTION COMPANY

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3.2 - LETTER OF SUBMITTAL

September 6, 2017

Mr. Stephen D. Kindy, P.E.
 Alternate Project Delivery Office
 Virginia Department of Transportation
 1401 East Broad Street
 Richmond, Virginia 23219

RE: I-81 Bridge Replacement at Exit 114
 Montgomery County/ Town of Christiansburg
 Contract ID Number: C00093074DB96

Dear Mr. Kindy:

Orders Construction Company, Inc. (Orders), as the Offeror, is pleased to submit to the Virginia Department of Transportation (VDOT) our Statement of Qualifications (SOQ) in response to your Request for Qualifications (RFQ) for the I-81 Bridge Replacement at Exit 114. We are confident our SOQ presents a Team of superior experience and proven record in constructing and designing similar bridge replacement projects along the I-81 corridor. Orders and Whitman, Requardt & Associates, LLP (WRA) have worked together on several projects including the award winning I-81 Bridge Replacement over the Maury River and the I-81 Bridge Replacement over Halls Bottom Road Design-Build Project. Both of which have similar complexities in maintenance of traffic, bridge design and geotechnical engineering in karst geology to this Design-Build project.

3.2.1 Offeror - The full legal name and address of the Offeror is: Orders Construction Company, Inc., 501 Sixth Avenue, Saint Albans, WV 25177.

3.2.2 Point of Contact:
 Charlie Stokes, Vice President
 605 Lithia Road, Wytheville, VA 24382
 276.227.0378 (P), 276.223.0134 (F)
 cstokes@ordersconstruction.com

3.2.3 Principal Officer:
 Nathaniel R. Orders, President
 501 Sixth Avenue, Saint Albans, WV 25177
 304.722.4237 (P), 304.722.4230 (F)
 nate@ordersconstruction.com

- 3.2.4 Corporate Structure** - Orders is structured as a corporation. Orders will undertake full financial responsibilities for the project and accept the risks and liabilities for the performance of the work.
- 3.2.5 Lead Contractor and Lead Designer** - The Lead Contractor for this Project will be Orders Construction Company, Inc., and the Lead Designer will be Whitman, Requardt & Associates, LLP.
- 3.2.6 Affiliated and/or Subsidiary Companies** – The full legal names and addresses of all affiliated and/or subsidiary companies of the Offeror are provided in Attachment 3.2.6 in the Appendix.
- 3.2.7 Certification Regarding Debarment** – Attachments 3.2.7(a) and 3.2.7(b) are included in the Appendix.
- 3.2.8 VDOT Prequalification** - Orders' prequalification number is O017 and current VDOT prequalification status is active. Evidence of our prequalification is included in the Appendix.
- 3.2.9 Bonding Capacity** – Attachment 3.2.9 in the Appendix is a letter from our surety that provides evidence of our performance and payment bonding capacity for the estimated contract value of this project.
- 3.2.10 SCC and DPOR Registration Requirements** – SCC and DPOR registration information for all business entities on the Offeror's team are included in Attachment 3.2.10. Evidence of registrations and licenses are provided in the Appendix.
- 3.2.11 DBE Participation Goal** - Orders is committed to achieving or exceeding the eight percent (8%) DBE participation goal for the entire value of the contract.

Sincerely,

Nathaniel R. Orders
 President



3.3

OFFEROR'S TEAM STRUCTURE

3.3 OFFEROR'S TEAM STRUCTURE

Orders Construction Company, Inc. (Orders) will be responsible for managing the project in its entirety, supervising the construction and performing major elements of the construction work. Additional subcontractors for various specialty items such as guardrail, signage, and pavement striping will be under direct subcontract to Orders. Whitman, Requardt & Associates, LLP (WRA) will lead the design effort for all aspects of the project and will be responsible for the design QA/QC as well as Construction Quality Assurance. The Orders Team includes highly qualified subconsultants that bring specific expertise to enhance the team and ensure a quality project for VDOT. A complete list of team members follows and an organizational chart of the team is included in Section 3.3.2.

Orders Construction Company, Inc. (Orders) - Offeror, Legal Entity, Lead Contractor

Orders is a family-owned business now being managed by third- and fourth-generation highway contractors and Registered Professional Engineers. Orders was founded in 1964 as a general contractor specializing in bridge construction for West Virginia clients and has grown to become a widely diversified supplier of construction services to a broad range of clients from the Mid-Atlantic to the Midwest.

Whitman, Requardt & Associates, LLP (WRA) – Lead Designer and Quality Assurance Management

WRA is a full service engineering firm that was founded over 100 years ago primarily serving state and local governments in the Mid-Atlantic region of the United States. WRA will serve as the Lead Designer for this project and will be responsible for the design QA/QC as well as managing survey work performed by our survey subconsultant. WRA will also be performing Quality Assurance Inspection and Testing for the project. WRA has been performing work for state and local governments in Virginia for over 65 years. WRA is very familiar with this section of I-81 with an office only minutes away in Blacksburg, and having completed the original I-81 Corridor Study for this segment of the interstate in the late 1990s.

Subconsultants

The following team of subconsultants has been carefully selected based on their relevant past experience and established working history of successful projects with VDOT, Orders Construction, and/or WRA:

Quinn Consulting Services, Inc. (QCS) will provide Quality Control Inspection Services for the Orders Team. QCS is a 100% Woman-Owned WBE/DBE firm providing construction inspection services to VDOT for 20 years. They have provided similar services on over 40 Design-Build projects and were awarded VDOT's DBE Consultant Engineering Firm of the year in 2014.

ECS-Mid-Atlantic, LLC (ECS) will provide QC Testing & Lab Services for the Orders Team. Founded in 1988, ECS has a staff of over 600 employees in the Mid-Atlantic region and is currently working on multiple Design-Build projects across the Commonwealth including the VDOT's I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build with the Orders/WRA Design-Build team.

Froehling & Robertson, Inc. (F&R) will provide a Quality Assurance Lab for the Orders Team. F&R was founded in 1881 and is the oldest independent consulting engineering/testing firm in the United States. Their in-house soil, materials, and asphalt laboratories are accredited by AASHTO Materials Reference Laboratory (AMRL) and the US Army Corps of Engineers (USACE).

H&B Surveying and Mapping, LLC (H&B) a Virginia-Certified, DBE/WBE (Woman-Owned Business) founded in 2009 will provide Surveying and Subsurface Utility Locating for the Orders Team. Since 2010, H&B Surveying and Mapping, LLC has teamed with WRA to provide surveying services on over 75 VDOT projects throughout Virginia and they have provided similar services on 10 separate VDOT Design-Build projects.

Bowman Consulting (Bowman) will provide right-of-way acquisition for the project under the leadership of Richard Bennett, the former State Right-of-Way and Utility Manager for VDOT. Bowman has extensive experience performing these services on both VDOT Design-Bid-Build and Design-Build projects. Appraisal Review Services will assist Bowman as a subconsultant.

Access is a full service, fully-integrated, marketing and communication Agency located in Roanoke, Virginia. Intimately familiar with the project area, business leaders, local government representatives and local media, Access will assist the Orders Team with all public outreach and stakeholder communications needs. Their inclusive process relies on strong partnerships for improved communication outcomes.

3.3.1 KEY PERSONNEL

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

The symbol **DB** indicates those proposed personnel that have Design-Build Experience.

Design-Build Project Manager – Charlie Stokes (Orders – 47 years of experience)

DB Charlie Stokes (DBPM) will serve as the project’s DBPM and will have ultimate responsibility for project delivery. He has been constructing VDOT roads and bridges for 47 years, and has served as **DBPM** on **12 Design-Build** projects, 3 of which were for VDOT, including the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek; the Route 60 Main Street Bridge Replacement in Clifton Forge; and the Wolf Creek Bridge Replacement in Giles County. He was also Orders’ Project Manager on the Route 419 and East Main Street Interchange Bridge in Salem, VA and on the Route 23/Kane Avenue in Gate City, VA. Throughout his career Charlie has excelled in bringing large transportation projects to completion on time and within budget on projects ranging from the Capital Beltway to structures over South Holston Lake in Washington County.

Quality Assurance Manager – Brian Henschel, PE, CCM (WRA - 22 years of experience)

DB Brian Henschel, PE, CCM (QAM) will report directly to the DBPM and will have direct, independent access to VDOT. Brian has performed this role previously on the George Mason University Cross Campus Connector Design-Build roadway and bridge project in Fairfax, as well as the Route 636 Relocation PPTA in Augusta County, VA. His relationship with Orders includes managing QC staff for the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build and the Route 501 Bridge Replacement over the James River project. As the QAM, Brian will be responsible for the Quality Assurance program and will coordinate with VDOT, supervise project QA inspection staff, and coordinate with the QA testing firm, Froehling & Robertson, Inc. Through this effort he will ensure conformance with the Contract Documents including the Approved for Construction plans and specifications. Brian will have overall responsibility for the development of, and adherence to, the Design-Build QA/QC Plan including coordination with the Design QA/QC Manager, Mark Vasco, PE. Brian will serve as a direct report to the DBPM, and will function independently from the Construction QC Manager, auditing and monitoring Orders Construction Quality Control Program. He will have the authority to stop construction activities to ensure compliance with the specifications and issue Non-Compliance Reports (NCRs) if necessary. In addition, Brian will submit monthly written reports on the status of the QA Program to both VDOT and the Orders Design-Build Team.

Design Manager – Michael Russell, PE, DBIA (WRA – 28 years of experience)

DB Michael Russell, PE, DBIA (DM) Mike has 28 years of experience designing and managing transportation projects and programs for VDOT. He will also report directly to the DBPM with whom he has enjoyed building and strengthening a strong working relationship since 2003. He is currently the Design

Manager of the Orders Construction Team for the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build project in the Bristol District that is currently under construction, which has almost identical MOT and geological conditions that may be encountered on this project. He will be responsible for providing quality product; meeting all design milestones; continual Design-Build Team coordination; and ensuring the Design QA/QC Manager’s involvement throughout the design phase. Mike will be responsible for ensuring all design work is performed in accordance with current VDOT Policies, Procedures and Guidelines. He will manage all aspects of design including, but not limited to, roadway; structural; hydraulic; traffic; MOT; environmental; and geotechnical. He will assign resources as needed; oversee the design subconsultant for survey; coordinate design and review schedules; develop and implement corrective measures if necessary; and ensure environmental compliance measures are integrated into the design. He will coordinate the design and construction with the Environmental Permitting Coordinator, Taylor Sprenkle, to ensure all project commitments are fulfilled. Mike will maintain involvement in the project during construction to oversee any plan modifications and shop drawings, and review construction activities with the CM as work progresses.

Construction Manager – Earl Adwell (Orders – 45 years of experience)

Earl Adwell (CM) will report to the DBPM and be responsible for the project site during construction. Earl has over 45 years of experience and has been employed with Orders for 40 years. Earl has teamed with the DBPM on 5 major projects in the region. He will be responsible for managing the overall construction process, including construction and quality control. Earl served as Construction Manager on VDOT’s I-81 Maury River Bridge Replacement in Rockbridge County (designed by WRA); Construction Manager on the Avens Bridge over South Holston Lake in Washington County, VA; Construction Manager on the Flannagan Lake Bridge Replacement in Dickenson County, VA; and Superintendent on the Route 640 Bridge and roadway realignment over the Shenandoah River. Earl holds a Competent Person Certificate in trench excavation, scaffolding and is a certified rigger and crane operator.

3.3.2 ORGANIZATIONAL CHART

The Orders Design-Build Team Organizational Chart on Page 8 identifies key personnel members and depicts the reporting structure of the team. Solid lines identify the direct lines of reporting relationships of our team members from the DBPM to the Design, Construction and QA team. Dashed lines represent indirect reporting relationships and obligations to the DBPM and the team members. Furthermore, the reporting structure for the Quality Assurance shows a clear separation between the Construction Quality Control Inspection and field/laboratory testing duties.

As a commitment to the success of the project, Orders has added several “*Value Added*” positions to our team that are in addition to the RFQ requirements. This includes adding an Assistant Design-Build PM and adding Access, *a professional public relations firm*, led by Jeremy Butterfield to assist with public outreach and ongoing project communications. Another unique feature of our structure is the addition of an *MOT Task Force* that will be responsible for continual assessment of the work zone’s operational characteristics and will adjust the MOT/TMP plan as needed.

As a continuation of the functional relationships for Key Personnel described in Section 3.3.1, the following narrative further defines the roles and functional relationships of the additional team members. Each of these team members were carefully chosen based on their extensive experience and well-established working relationships on previous projects.

Assistant Design-Build Project Manager

DB Assistant DBPM/Design-Construction Coordinator/Construction Environmental Manager: Joshua Sproles, PE will be “shadowing” the DBPM and assisting with the delivery of the project as a “*Value Added*”

team member. He has worked for the DBPM since college graduation; he will provide additional support with overall management of the Design-Build contract and will coordinate project reviews with the construction staff during design and processing RFIs during construction. His previous 4 projects working directly with the CM has forged a strong working relationship that will be leveraged on this project in this role. Joshua will assist the DBPM with the initial schedule development and ongoing updates as he is currently doing on VDOT's I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build in Washington County. He will also serve as the Construction Environmental Manager (CEM) and will closely interface with the E&S Control Reviewer, Glen Wilson.

Safety Manager

DB Safety Manager: *Jeff Dixon, CSP* will report to the CM and serve as the Company Safety Director for Orders Construction. Jeff will ensure that this project is operating safely and in accordance with OSHA regulations. Jeff is a Certified Safety Professional and has been working with Orders Construction for 11 years. Jeff will be responsible for safety training to all Orders employees, ensuring they have all the required personal protective equipment. Jeff is also in charge of all pre-employment training and certifications, and compliance with all job-specific safety plans for Orders Construction.

Right-of-Way Manager

DB Right-of-Way Manager: *Richard Bennett* has over 49 years of experience in the right-of-way and utilities sector, including serving as the State Right-of-Way Manager for VDOT. He will report directly to the DBPM and will manage all aspects of right-of-way acquisition.

Utility Manager

DB Utility Manager: *Paul Martin* has more than 27 years of experience in highway and bridge construction, including 12 years specializing in utility relocations for VDOT. Paul has served as WRA's Design-Build lead for utility relocation and coordination on such projects as the I-95 Safety Improvements at Route 3 Design-Build and the I-95 Express Lanes Southern Terminus Extension Design-Build Project. Paul will report to the DBPM and will interact closely with the DM and CM.

Public Relations Manager

Public Relations Manager: *Jeremy Butterfield* has 13 years of experience in the public relations field and is currently the Director of Public Relations with Access. He will report directly to the DBPM as a “*Value Added*” team member and will manage the public outreach and communication plan working very closely with the Salem District Communications staff.

Design

DB Structural/Bridge Engineer: *Jeremy Schlusel, PE* reports to the DM and will be in charge of structural engineering for the project, including the I-81 Bridges and associated retaining walls. Jeremy has over 20 years of experience designing bridge projects for VDOT including the I-81 Bridge Replacements over the New River in the Salem District, I-81 Bridge Replacements over Maury River (Constructed by Orders with Charlie Stokes as the PM) and I-81 Bridge Replacements over Buffalo Creek in the Staunton District, and most recently the VDOT's I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build in Washington County. Jeremy serves as Structure Design lead for all of WRA's VDOT Design-Build projects; he has managed over 200 bridge improvement tasks for VDOT's Structure and Bridge Division under On-Call contracts over the last 10 years. He will lead production efforts for all structural engineering designs including plans, estimates and specifications for the project. Jeremy will also review structural shop drawings and assist the DBPM, CM and DM during construction.

DB Roadway Engineer: Brad Stipes, PE has 29 years of highway design experience and will report to the DM and lead the roadway design efforts for the project. He is currently serving as the lead designer on the I-81 Bridge Replacements over the New River, a \$98 million project (\$58M for the NB bridge currently under construction, and \$40M for the planned SB replacement) in the Salem District. He has extensive working relationships with the Location & Design Staff in the Salem District having worked on numerous Salem District projects for more than 23 years, including WRA's current Statewide On-Call design contract. Brad has worked on numerous highway and roadway projects and understands VDOT policies and procedures, particularly as they relate to interstate projects.

DB Geotechnical Engineer: Jeff Basford, PE has over 16 years of experience in subsurface explorations, geotechnical analysis, design of pavement sections and shallow and deep foundations, slope stability analysis, concrete and geosynthetic reinforced earth retaining structures, and in-situ testing and verification during construction. Jeff is currently the Lead Geotechnical Engineer on the I-81 Bridge Replacements over the New River project in the Salem District, and was the Lead Geotechnical Engineer on both the I-81 Maury River and Buffalo Creek Bridge Replacement projects in the Staunton District, as well as the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build project in the Bristol District. He has also been involved on numerous Design-Build projects for WRA in Virginia and Maryland. Jeff has a thorough understanding of the VDOT Manual of Instruction, Chapter 3. Jeff will report to the DM and collaborate with the Structural Design Engineer and CM.

DB MOT/Traffic Engineer: Dana Trone, PE, PTOE has over 20 years of experience in traffic engineering including development of transportation management plans (TMP); MOT design; lighting; signing; ITS; and pavement marking plans. Dana has developed numerous TMPs for bridges with construction on, and over, interstates in Virginia, including numerous Design-Build projects. She is extensively familiar with the Traffic Engineering Handbook; MUTCD; Highway Safety Design Manual; and the Virginia Work Area Protection Manual. Dana will report to the DM and collaborate directly with the Construction MOT Manager.

DB Drainage/Hydraulics Engineer: David Gertz, PE will report to the DM and lead the design efforts for drainage and SWM. David has over 37 years of experience in roadway drainage design and stormwater management, and has designed numerous projects for VDOT utilizing the new Virginia stormwater regulations that took effect in July 2014. David has worked on VDOT projects as the Lead Drainage/Hydraulics Engineer continuously for the last 25 years. He most recently served as Lead Drainage/Hydraulics Engineer for the Berkmar Extension section of VDOT's Route 29 Solutions Design-Build project in Albemarle County.

DB Environmental Permitting: Taylor Sprenkle, PWD will report to the DM and secure all environmental permits needed for the project. Taylor has over 13 years of experience with environmental reviews and permitting required for transportation projects, including the I-81 Truck Climbing Lanes in Montgomery County and the 17-mile Route 460 project in the City of Suffolk and Isle of Wight County. Taylor will work closely with the CEM, Joshua Sproles, to ensure all permit requirements are fulfilled.

Design QA/QC

DB Design QA/QC Manager: Mark Vasco, PE will report to the DM. Mark will coordinate with the QAM to integrate the Design QA/QC plan into the Design-Build Project QA/QC plan and will ensure that all design quality control procedures are completed in accordance with that plan. He will verify that QC and interdisciplinary reviews, including comment resolution, are made prior to submissions. Mark has more than 33 years of experience in the design of transportation projects with extensive experience in both highway and maintenance of traffic designs, and has extensive experience with VDOT Design Manuals; IIMs; design

standards; and VDOT/AASHTO criteria. Mark recently served as the Design QA/QC Manager on VDOT’s Fall Hill Avenue & Mary Washington Boulevard Extension Design-Build project.

Construction QC

DB Construction QC Manager (CQC): *John Anthony (Bud) Williams* will report to the Construction Manager and has over 18 years of experience inspecting roadway and bridge construction projects. He will be responsible for managing all QC inspectors for Orders, including project documentation and coordinating ECS’s testing lab and technicians. Bud began his career with VDOT as an inspector and has recently completed QC inspection of the Federal Highway Fort Lee Gate A Roundabout Design-Build in Prince George County and VDOT’s I-64 Exit 91 Design-Build project in City of Waynesboro.

Construction

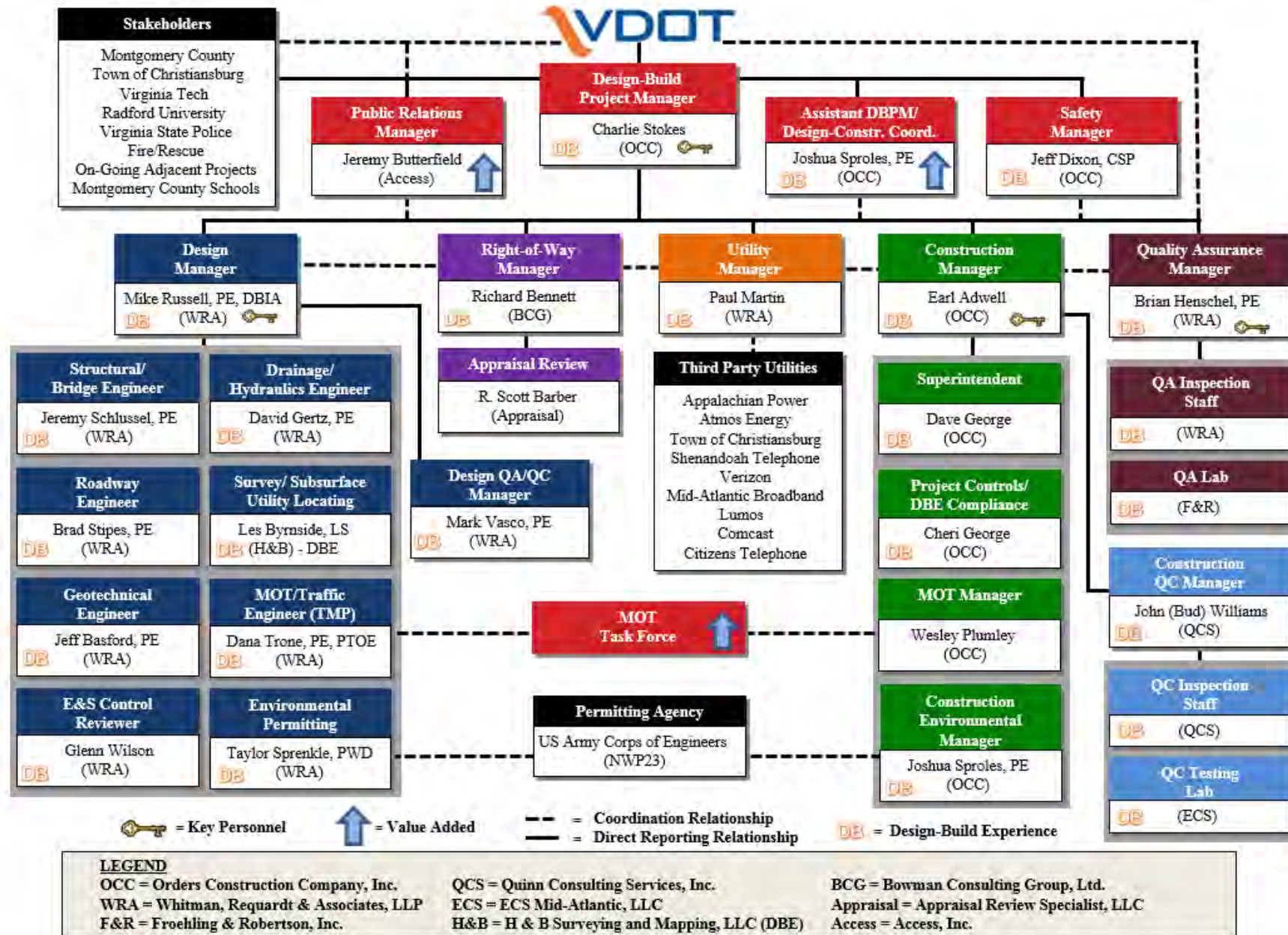
DB Project Controls/DBE Compliance: *Cheri George* will report to the DBPM and currently serves as the Office Manager for the Virginia office of Orders Construction. Cheri oversees day-to-day project controls and DBE compliance for all projects in Virginia. Cheri has served continuously for 26 years in this capacity.

DB Superintendent: *Dave George* will report to CM and will be responsible for all phases of construction, including personnel supervision, job site safety, and subcontractor management. Dave possesses his VDOT Intermediate Work Zone Traffic Control and Virginia DCR’s ESCCC certifications. Dave is the general superintendent for the VDOT’s I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build Project and as the Superintendent for VDOT’s Route 670 “Avens” Bridge Replacement over South Holston Lake and the Route 501 Bridge Replacement over James River projects.

Maintenance of Traffic Task Force: A Task Force dedicated to traffic management will be an effective method to manage the risks associated with the safety of the travelling public and the on-site construction workers. As a “*Value-Added*” component of our team structure, this group will consist of Orders and WRA project staff, VDOT, and Third-Party Stakeholders. The Task Force will meet monthly and as needed to review the current MOT plan to determine if any changes are needed to address current concerns or upcoming activities.

Summary: The Orders Team was carefully assembled based on each firm’s intimate knowledge of the site, existing working relationships internally and with VDOT, and their specific expertise to manage the project risks. The WRA design team has worked together extensively on major I-81 bridge replacement projects successfully managing very similar risks to those on this project including extensive MOT and geotechnical constraints. The risk management plan is developed to adapt quickly with mitigation and contingency plans in place prior to construction beginning. Partnering during construction ensures issues are quickly resolved with minimal impact to the project schedule. The Orders Team relationships forged on previous similar interstate projects such as the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build, the I-81 Maury River Bridge Replacement Project and the I-64 Maury River Bridge project are being leveraged to present a Team to VDOT with a proven track record of effectively managing and delivering Design-Build projects for the Department. These examples of corporate partnership combined with the professional relationship forged between Charlie Stokes (DBPM) and Mike Russell (DM) that dates back to 2003, further illustrates the mutual respect and ability to partner that our team members have firmly in place. The Orders Team has fully embraced the Design-Build program that has evolved over the past several years with VDOT and is a proven leader in the Design-Build arena in Virginia. This partnership has most recently proven evident on the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek that is close to entering the second phase of construction.

3.3.2 ORGANIZATIONAL CHART



3.4

EXPERIENCE OF OFFEROR'S TEAM

3.4 EXPERIENCE OF THE OFFEROR'S TEAM

The Orders Team members have successfully delivered numerous VDOT Design-Bid-Build and Design-Build projects and have a proven track record of completing projects within schedule and budget. Our personnel know what needs to be done, with whom we need to coordinate, and how to make things happen. We bring all of this experience together once again to provide VDOT with a premier team for this project.

Orders/WRA Design-Build Team:

Orders Construction Company, Inc. (Orders) and Whitman, Requardt & Associates, LLP (WRA) have most recently teamed on VDOT's I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build project in the Bristol District. This project is very similar to the Exit 114 project and is currently under construction. Our team developed a very strong and close working relationship years ago by partnering during construction on VDOT's I-81 Maury River Bridge Replacement Project in Rockbridge County and continued that relationship on the I-64 Maury River Bridge Rehabilitation project. These very complex bridge replacement and rehabilitation projects required extensive coordination between the contractor (Orders) and the designer (WRA) during construction. The Maury River project was the first to utilize the now standard "Virginia Abutment" design. This new design feature combined with complex MOT and geotechnical constraints pulled all parties together in a partnering atmosphere to deliver this award-winning project on time and within budget. The I-64 Maury River project introduced a new set of constraints including the unique "Delta-Frame" structure and how the frames deflect during deck removal and replacement. The combination of Orders' extensive traditional and Design-Build contracting experience combined with WRA's expertise in roadway and structures design and extensive VDOT Design-Build experience presents a team that is ideally suited for VDOT's I-81 Bridge Replacement at Exit 114.

3.4.1 Lead Contractor and Lead Designer

Lead Contractor – Orders Construction Company, Inc.:

Orders is a family-owned business, currently being managed by third- and fourth-generation highway contractors and Registered Professional Engineers. With the Orders name and reputation on the line, the commitment to delivering unmatched workmanship begins at the top of the organization and carries through the entire rank and file of our company. This dedication to quality has made Orders the contractor of choice for many public and private owners. To date, Orders has completed over a dozen Design-Build projects. The Replacement of the I-81 Structures at Exit 114 is right "in the wheelhouse" of the type of project Orders' employees tackle every day. Orders has completed numerous projects of similar size and scope to this VDOT project. Further details on three of Orders' recent projects is included in Appendix as Attachment 3.4.1(a). Orders gained valuable experience and knowledge on each of the following VDOT projects:

- I-81 Bridge Replacement over Maury River in Rockbridge County
- Route 60 Main Street Bridge Replacement Design-Build in Clifton Forge
- Route 501 Road Improvements and Bridge Replacement over James River in Bedford & Amherst County

Orders has additional extensive experience with roadway and bridge work, including the following two projects as examples:

Route 614 over Cranes Nest River, Lake Flannagan, in Dickenson County– This VDOT bridge project was over Flannagan Lake in an environmentally sensitive area. Floating barges and large cranes were required. The project included concrete deck and parapet removal over water, heavy structural steel removal, new girders to set, and water line replacement on the bridge.

Thomas B. Pugh Memorial Bridge in Prince, WV – Using leading-edge construction practices, Orders constructed the Thomas B. Pugh Memorial Bridge, the first bridge in WV to incorporate Class H-IC concrete deck. Construction access was limited, making the site tightly constrained and congested and adding to the

complexity of crossing the New River. The construction access and causeway were complex in design and application to meet the environmental restrictions. Steel erection involved hanging 50 girders with minimal access for cranes, which resulted in false work to support girders in some cases that weighed over 60,000 LBS.

In addition to this experience, Orders has a portfolio of over a dozen Design-Build projects completed for satisfied owners. The Management Team of Orders has fully embraced the Design-Build process, allowing the company to showcase its strengths on the multitude of intangible qualifications not considered on low-bid projects. As a result of these intangibles, Orders has been awarded contracts on more than 50% of the Design-Build projects it has pursued, a much higher success rate than traditional low-bid work. Orders excels at building and inspecting its projects with minimal owner oversight and its commitment to quality is the single most important reason Orders is the preferred Design-Build Contractor for many clients.

Lead Designer – Whitman, Requardt & Associates, LLP:

Whitman, Requardt & Associates, LLP (WRA) has provided transportation design services to VDOT for over 65 years and engineering, planning and construction management services in the Mid-Atlantic region for over 100 years. WRA is currently ranked #118 on *Engineering News Record's Top 500 Design Firms* and has one of the largest design groups in Virginia and the region. WRA is a multi-disciplined engineering firm that has experienced staff for roadway, bridge, retaining wall, drainage, river mechanics analysis, traffic engineering, ITS, utility and geotechnical engineering. WRA is currently providing design services to VDOT on numerous projects both standalone and through our on-call design contracts for the Location & Design, Structures & Bridge, Environmental, Transportation and Mobility Planning Divisions.

WRA has completed numerous projects similar in size and scope to the I-81 Bridge Replacement at Exit 114 project. Information on three of WRA's recent projects is included in Appendix as Attachment 3.4.1(a). WRA gained valuable experience and knowledge on each of the VDOT projects, which are listed as follows:

- I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build in Washington County
- I-81 Bridge Replacement over Buffalo Creek in Rockbridge County
- I-81 Bridge Replacement over the New River in Pulaski and Montgomery Counties

WRA has additional extensive experience with roadway and bridge work with similar design constraints to the I-81 Bridge Replacement at Exit 114. Two additional representative projects depicting the extensive expertise in roadway, bridge, geotechnical, and MOT experience include:

I-81 Bridges over Maury River in Rockbridge County, VA – As prime consultant, WRA provided all roadway, bridge, hydraulic, and geotechnical engineering services for the project. The geotechnical investigation included an extensive testing and boring program to locate potential karst features. The Maury River bridges featured an innovative design element for the treatment of the deck joints at the abutments that VDOT has since included as a detail in the Design Guidelines as a special alternative joint detail. The project won an **ACEC Grand Award For Design Excellence**.

Route 123 over Campus Drive (George Mason University) Design-Build – Fairfax County – WRA was retained for the design of the 0.25 miles of Route 123 roadway improvements, new bridge on Route 123 over Campus Drive, retaining walls, geotechnical engineering and utility coordination efforts. For the final design, WRA designed the temporary realignment of Route 123 to facilitate the construction of the new bridge structure over Campus Drive. The new bridge structure is a simple span prestressed concrete structure that is jointless to reduce the long-term maintenance costs. WRA also prepared the geotechnical report for the 1.1 miles of Campus Drive and Route 123 and Braddock Road improvements.

3.5

PROJECT RISKS

3.5 PROJECT RISKS

The Orders Team has carefully reviewed the various documents included in the RFQ Informational Package and completed thorough field investigations to identify the critical risks on the project. The Orders Team has identified the three most significant risks to the project as 1) Operational and Construction Safety; 2) Geotechnical Design in Karst Topography; and 3) Existing Bridge Condition. Please note the following:

RISK #1: OPERATIONAL AND CONSTRUCTION SAFETY

A. Why the Risk is Critical

Operational and Construction Safety is an obvious risk for this project. Several operational and construction safety aspects must be fully evaluated and addressed during detailed project design, and closely followed during construction to ensure safety of the travelling public and construction staff. Operational and Construction Safety Risk is comprised of the following key safety aspects:

➤ ***Major Construction on an Interstate with High-Volume, High-Speed Traffic***

This project requires heavy construction activities to be performed adjacent to high-volume/speed traffic. Safety risks increase as the space between **construction spaces** and **traffic spaces** decreases. Risks are reduced through a solid Maintenance of Traffic Plan that reflects realistic construction spaces and sequences, and with the design of safe traffic patterns through the work zone that are consistent with driver expectancy.

➤ ***Maintaining Safe and Efficient Traffic Flow During Construction***

The project must have a solid Maintenance of Traffic plan that:

- ✓ Is logical from a driver expectancy standpoint
- ✓ Provides for as much separation as possible between construction spaces and traffic spaces
- ✓ Factors in uncontrollable risk elements such as weather and distracted driving
- ✓ Does not adversely impact traffic queues, especially on the I-81 SB to Route 8 off-ramp that routinely back-up onto the mainline of I-81 during peak conditions.

The proposed reconstruction of the existing pavement along I-81 will require a phased Temporary Traffic Control Plan to maintain traffic. Multiple traffic shifts will be required to make the improvements and advance warning and public education of work zone construction operations will help to reduce incidents.

➤ ***Incident Management***

Adding to the hazards of maintaining traffic through a work zone are the safety risks that traffic accidents, equipment failures, or other unanticipated traffic flow interruptions pose.

B. Impacts the Risk Will Have on the Project

➤ ***Safety – The impact is the safety of the travelling public and the construction workers*** – Every year there are thousands of injuries and multiple fatalities in Virginia’s work zones. The extremely constrained work area increases this concern immeasurably. All temporary traffic maintenance strategies and controls must provide for adequate room for construction workers to safely prosecute their work, and provide the travelling public with clear, logical directions to navigate the work zone. The project design must account for Incident Management scenarios, including accident access, vehicle maneuvering and storage, and traffic restoration strategies.

➤ ***Public Notification/Relations*** – Keeping the 52,000 motorists that travel this section of I-81 daily informed of the planned construction activities is a tall order due to the mixture of local traffic, commuters, and longer-distance travelers. As we have seen with many major construction projects, the trend is for more and more information to be demanded by the travelling public and stakeholders. Satisfying this desire for information can be difficult at times and requires a well-thought-out and methodically implemented plan that reaches out extensive distances to alert the travelling public to changing traffic patterns.

C. Mitigation Strategies

Mitigation strategies for the defined risks are as follows:

- **Developing and Monitoring an Effective MOT Plan:** Our Team will develop the MOT plan by reviewing the identified MOT/public safety challenges and then determining how the project can be constructed to reduce or minimize these issues. We will prepare a detailed Transportation Management Plan that will include a TTCP, Public Communications Plan and a Transportation Operations Plan. The I-81 SB to Route 81 off-ramp and the I-81 NB off-ramp are especially important to accommodate. Of special importance is the I-81 SB to Route 8 off-ramp as the Interchange Modification Report indicates that this movement already backs up to I-81 SB under peak conditions. Making sure this is addressed will be a primary focus of our Team during project design. WRA will evaluate temporary improvements to the ramp intersection on Route 8 that will minimize traffic backup on I-81.
- **Traffic Management Task Force:** Representatives from Orders, WRA, VDOT and affected Third-Party Stakeholders will be invited to attend monthly meetings, and as needed, to review the current functioning of MOT on the project. The Orders Team will take input from all parties and incorporate any necessary changes into the MOT plan.
- **Phased Construction and Adequate Separation Between Traveling Public and Construction:** A phased traffic control plan will be required to construct the improvements. During the constructability reviews of the phased traffic control plan, attention will be given to limit the number of traffic shifts required to construct the project.
- **Public Awareness:** Expanding on the Communication Plan required by the TMP, the Orders Team will work closely with the VDOT Salem District Public Affairs staff to provide regular project updates for public distribution of traditional paper media, social media, VDOT’s project website, stakeholder meetings, etc. Traffic pattern changes, delays, and lane closures will be coordinated directly with the Southwest Regional Traffic Operations Center to provide motorists with real-time travel information through the Department’s Virginia 511 traffic information web site and mobile app.



Furthermore, our Team will develop a comprehensive Public Awareness Plan to communicate project work zone information, updates on construction sequencing, construction activities that may impact traffic, and congestion notifications. This plan will incorporate *active* Driver Awareness measures approaching, and within, the work zone and may include the following:

- ✓ Rumble Strips
- ✓ Portable Changeable Message Signs (PCMS)
- ✓ Radar Speed Signs (a.k.a. Driver Feedback Signs)
- ✓ Law Enforcement Presence (the single most effective mitigation of all)



With the Orders Team’s extensive experience on I-81 projects designing, constructing, and maintaining VDOT’s highways, we have the staff and experience to accurately assess how this project will be constructed, and to design safe and efficient MOT plans that support the necessary construction activities.

D. Role of VDOT or Other Agencies

Our Team will work closely with VDOT to address concerns through coordination meetings and reviews. We anticipate VDOT will play an active partnership role with our Team in communicating progress and real-time travel information that affect motorists and other stakeholders during construction.

RISK #2: GEOTECHNICAL DESIGN IN KARST GEOLOGY

A. Why the Risk is Critical

A major risk to the project is encountering an unknown karst feature during construction. This is based on WRA's and Orders' vast experience designing and constructing similar VDOT bridge replacement projects along the I-81 corridor in Virginia located in Karst geology such as:

- I-81 Bridge Replacement over the Maury River - Designed by WRA & Constructed by Orders
- I-81 Bridge Replacement over the Buffalo Creek – Designed by WRA
- I-81 Bridge Replacement over the New River –Designed by WRA
- I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek– Orders/WRA Design-Build

The I-81 Structures over Route 8 are situated over the Lower Ordovician and Upper Cambrian Formations, which consists of carbonate bedrock and fault zones. Zones of this carbonate bedrock tend to dissolve creating solution cavities, sinkholes, rock shelves, and conduits for groundwater flows. A number of these karst features are evident in the region and have been mapped in the vicinity of the proposed project.

B. Impacts the Risk Will Have on the Project

These Karst features have the potential to cause sudden and even potentially catastrophic failures such as the collapse of a bridge or a section of roadway. These features introduce a significant risk to the project because they can lurk below known features, shielded by arching soils or a thin layer of rock and be undetectable at the ground surface with the naked eye and even through conventional soil borings.

C. Mitigation Strategies

Subsurface Investigation – To supplement available soil borings currently being obtained by VDOT, WRA will utilize geophysics to explore a wider view of the subsurface. Electro Resistivity is a preferred technique for locating karst features. Water filled voids and highly fractured rock are indicated by low resistance zones, whereas hard rock provides a signature of high resistance. Air filled voids also provide high resistance, but can be identified based on the surrounding soil response. If a feature is identified and it is in an area which could potentially affect the planned construction, we will investigate it further through a soil boring or hydro-track probe holes. WRA has used this combination of physical sampling and geophysical techniques also referred to as “Ground Truthing”, on several projects along the I-81 corridor including the I-81 Buffalo Creek Bridge Replacement project in Rockbridge County; the I-81 Bridge Replacement over the New River project in Pulaski and Montgomery Counties; the Route 603 Improvement Project in Montgomery County, and the I-81 Bridge Replacement over Halls Bottom Road and Sinking Creek Design-Build in Washington County currently being constructed by Orders.

Modification of Design – In instances where a feature of concern is identified, WRA is well versed in remediating the condition. In cases where there is flexibility in the structure or road alignment, we can shift the pier or roadway alignment away from the feature as was done on the I-81 Buffalo Creek project where the bridge approach was shifted to avoid potential impacts related to a stream that dropped underground. Right-of-Way restrictions on the Exit 114 project will make such adjustments more difficult and may introduce the need for additional retaining walls to accommodate any such adjustments.

In situations where the piers cannot be shifted and the features are isolated, WRA has used reverse filters to create a stable roadway. This technique involves excavating the potential sinkhole to an identifiable throat, then backfilling with riprap and stone varying from a large size at the bottom to small at the top before transitioning to an aggregate suitable for paving. Where the features are less severe or scattered throughout a project, WRA has successfully used pressure grouting and high strength geogrids can be considered to stabilize the feature including on an interstate project in Maryland. The grouting operation involves drilling a pattern of injection holes and injecting various viscosity grouts into the subsurface. This technique provides a very high level of assurance against future issues related to these karst features.

Where specific foundations are influenced by karst features, WRA has installed more redundant systems where many low capacity steel H-piles are driven to support a bridge abutment. Another approach is to install drilled shafts socketed several feet into rock below the karst feature. This approach was taken at one of the south abutments for the I-81 Bridge Replacements over the New River. Micropiles have been used when faced with supporting a structure over a complicated karst feature. Micropile foundations are advantageous because of their flexibility. Casing lengths, grouting sequences and penetration depth can be modified during construction.

D. Role of VDOT or Other Agencies

As with any Design-Build project, the burden is on the Design-Build Team to provide a design that meets the requirement of the contract and provides a durable product. The Department's role will be to stay informed of the conditions which are found along the project and approve planned mitigation measures as needed.

RISK #3: CONDITION OF THE EXISTING BRIDGE

A. Why the Risk is Critical

The existing bridge structures were constructed in 1964 as part of the original I-81 corridor and have had no major rehabilitation work performed on them since their completion. In addition, they are two of the three Structurally Deficient (SD) Bridges in the Salem District (the 3rd SD bridge structure, I-81 NB over New River (Designed by WRA), is currently under construction for its replacement). With the *published* 2016 VDOT traffic counts of 52,000 vpd (combined NB and SB) and 26% trucks, the selected Design-Build Team will be required to maintain two lanes of traffic in each direction at all times which will be a challenge geometrically while trying to minimize the impact to the traffic and keeping the bridge structure in a safe condition. The geometric challenge of maintaining two lanes is accentuated after review of the current conditions and from the Pre-Proposal Meeting about the current deck conditions. The General Condition rating of the deck is "4" and the District is continually on-site to maintain the concrete wearing surface(s) in a safe manner for the travelling public as evidenced by the emergency patch work over a dozen recorded times since 2011. Delamination and spalling of the existing concrete is visibly evident. In addition, it was noticed that the end spans of the bridges are lacking anchor bolts with visible movement of the beams being experienced under loading. This lack of positive connection is causing additional structural movement not accounted for during the original design thus enhancing potential issues with the current deck concrete and its conditions. In addition to the ongoing deck issues, it was noted that the beams are marked that there is evidence of potential fatigue cracking which has led to the General Condition Rating of a "4" on the superstructure and the General Condition Rating of the substructure is also a "4" due to the advance loss of section on the reinforcing steel and significant spalling and delamination. Heavy truck traffic combined with Route 8 commuter traffic and the needs First Responders, Virginia Tech special events and other stakeholder needs dictates these structures are a critical component of the transportation network and must be kept in a safe working manner for the public and the Contractor during construction.



B. Impacts the Risk will have on the Project

The overall General Condition of the existing bridge structure is a risk to the project success to ensure the safe maintenance of the existing structures along with safe working conditions for the Contractor. If a failure of the existing deck were to occur during construction, necessitating emergency repairs along with its associated unplanned temporary lane closures on I-81 would have a significant impact to the project and the travelling public. Closures on I-81 can easily create backups in excess of 5 miles, impacting Exit 118 in the southbound direction and Exit 109 in the northbound direction. Backups of this magnitude will also impact First Responders in the area. Orders has experienced similar conditions on their ongoing Design-Build Project for I-81 over Halls Bottom Road and Sinking Creek in the Bristol District. During the preparatory work, the WRA inspector discovered a large section of the existing bridge deck had broken loose with failure likely to occur

very soon. This particular section was near the edge of a travel lane so one lane was able to be maintained during the Type C patching operation. If the failed section of the deck been located near the middle of the structure, complete closure of I-81 would have been likely. In addition, with the condition of the sub-structure and the exposed reinforcing steel and delaminated concrete, with the shifting of traffic and its associated loading, the live load could create additional section loss, impacting the ability of the bridge to safely carry legal loads.



C. Mitigation Strategies

Our first-hand experience on our current Design-Build project on I-81 in the Bristol District shows that evaluation (field and structural design), monitoring, preventive maintenance and rapid off-hour repairs are the best paths to keeping traffic moving. Immediately upon Notice to Proceed, an inspection of the existing deck, bearings, girders and sub-structure will be performed by our Lead Structural Engineer, Jeremy Schlusell and an experienced deck repair supervisor Steve Mckee. This inspection team will visually determine:

- ✓ If immediate action is necessary
- ✓ If sounding of the deck is required
- ✓ If a shield is needed between any girders over Route 8

Deck

Should immediate action or sounding be required appropriate traffic control will be utilized to:

- ✓ Map the deteriorated areas as Type B or Type C patching
- ✓ Sound each lane
- ✓ Saw/demo required areas
- ✓ Clean/repair reinforcing steel
- ✓ Pour either A4 high early strength concrete or rapid set grout and cure appropriately

Bearings

Following inspection, our structural engineer will determine if there are any issues and will design appropriate remedial action as necessary.

Girders

Due to the existing fatigue cracking, a thorough inspection will be performed and depending on the magnitude of the cracking, a monitoring system will be prescribed. This may include monthly visual inspections or installation of a crack monitoring device. If the cracking is severe enough, temporary repairs will be completed such as stop drilling to prevent the crack from expanding.

Sub-structure

Similar to the concrete deck, the existing piers will be evaluated for their conditions and, depending on the sequence of construction, temporary bents and or repairs may be required to safely support the Live Load at all times on the existing bridge structure.

All areas of the existing bridge structure will have some form of periodic or constant monitoring device established by the structural engineer and a pre-approved repair method/temporary support(s) will be executed as needed. Furthermore, a full complement of concrete deck repair tools with pre-approved VDOT products will be maintained on the project as well as patching materials to include very rapid set grout and cold patching material for patching emergencies.

D. Role of VDOT or Other Agencies

Our Team will work closely with VDOT as the inspections are performed and mitigation plan is put in place. We anticipate VDOT will play an active partnership role with our Team in reviewing and approving this mitigation plan.

APPENDICES AND ATTACHMENTS

3.1.2

SOQ CHECKLIST

ATTACHMENT 3.1.2

Project: 0081-154-733

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

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

ATTACHMENT 3.1.2

Project: 0081-154-733

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	Appx. 3.2.10
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appx. 3.2.10
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appx. 3.2.10
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appx. 3.2.10
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	Appx. 3.2.10
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	Page 1
Offeror's Team Structure				Pages 2-8
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Pages 3-4
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appx. 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appx. 3.3.1
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appx. 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appx. 3.3.1
Organizational chart	NA	Section 3.3.2	yes	Page 8
Organizational chart narrative	NA	Section 3.3.2	yes	Page 4

ATTACHMENT 3.1.2

Project: 0081-154-733

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Experience of Offeror's Team				Pages 9-10
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appx. 3.4.1
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appx. 3.4.1
Project Risk				Pages 11-15
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	Pages 11-15

2.10

FORM C-78-RFQ

ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**


RFQ NO. C00093074DB96
 PROJECT NO.: 0081-154-733, P101, R201, C501, B601, B616

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

Acknowledgement shall be made of receipt of the Request for Qualifications (RFQ) and/or any and all revisions and/or addenda pertaining to the above designated project which are issued by the Department prior to the Statement of Qualifications (SOQ) submission date shown herein. Failure to include this acknowledgement in the SOQ may result in the rejection of your SOQ.

By signing this Attachment 2.10, the Offeror acknowledges receipt of the RFQ and/or following revisions and/or addenda to the RFQ for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover letter of RFQ – July 12, 2017
(Date)
2. Cover letter of RFQ Addendum No. 1 – August 23, 2017
(Date)
3. Cover letter of _____
(Date)

 <hr style="border: 0; border-top: 1px solid black;"/> SIGNATURE	<u>8/28/17</u> <hr style="border: 0; border-top: 1px solid black;"/> DATE
<hr style="border: 0; border-top: 1px solid black;"/> Nathaniel R. Orders <hr style="border: 0; border-top: 1px solid black;"/> PRINTED NAME	<hr style="border: 0; border-top: 1px solid black;"/> President <hr style="border: 0; border-top: 1px solid black;"/> TITLE

3.2.6

AFFILIATED/SUBSIDIARY COMPANIES

ATTACHMENT 3.2.6

State Project No. 0081-154-733

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Affiliate	Paramount Builders, LLC.	505 Sixth Avenue, St. Albans, WV 25177
Affiliate	Central Contracting, Inc.	515 Sixth Avenue, St. Albans, WV 25177
Affiliate	Underground Contractors, Inc.	501 Sixth Avenue, St. Albans, WV 25177
Subsidiary	Summit Corporation	501 Sixth Avenue, St. Albans, WV 25177
Subsidiary	Middle Ridge Properties, LLC.	501 Sixth Avenue, St. Albans, WV 25177

3.2.7 (a) & (b)

PRIMARY & LOWER TIER DEBARMENT FORMS

ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0081-154-733

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

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


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

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

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

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

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

 _____ Signature	<u>8/28/17</u> _____ Date	<u>President</u> _____ Title
---	---------------------------------	------------------------------------

Orders Construction Company, Inc.

Name of Firm


ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

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

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

	<u>01 Sept 2017</u>	<u>Vice President</u>
Signature	Date	Title

Whitman, Requardt & Associates, LLP
Name of Firm


ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-154-733

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

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

	<u>August 29, 2017</u>	<u>Branch Manager</u>
Signature	Date	Title

Froehling & Robertson, Inc.
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

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

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

	8/2/2017	Chief Operating Officer
Signature	Date	Title

Bowman Consulting Group, Ltd.
Name of Firm


ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
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The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

	<u>08-02-2017</u>	<u>Managing Partner</u>
Signature R. Scott Barber	Date	Title

Appraisal Review Specialists, LLC
Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-154-733

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
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The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.


Signature

August 2, 2017
Date

President
Title

Quinn Consulting Services, Inc.
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

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

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



Signature

8/2/2017

Date

Vice President/Branch Manager

Title

ECS Mid-Atlantic, LLC

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

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

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



Signature

August 2, 2017
Date

Vice President
Title

H&B Surveying and Mapping, LLC
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
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The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.



Signature Todd Maroon

8/17/17

Date

President

Title

Access, Inc

Name of Firm

3.2.8

VDOT PREQUALIFICATION EVIDENCE



**Department's List of Prequalified Vendors
Includes All Qualified Levels As Of 8/11/2017**

- O -

Vendor ID: O143
Vendor Name: OLYMPUS PAINTING CONTRACTORS, INC.
Prequal Level: Prequalified (Conditional)
Prequal Exp: 07/31/2018

-- PREQ Address --

556 ANCLOTE ROAD
TARPON SPRINGS, FL 34689-6701
Phone: (727)942-4149
Fax: (727)938-6297

Work Classes (Listed But Not Limited To)

028 - PAINT BRIDGES AND STRUCTURES
050 - JOINT REPAIR / UNDERSEAL PAVEMENT
071 - EPOXY WORK
182 - BRIDGE CLEANING

Bus. Contact: CHRISTU, NIKKI
Email: NIKKI@OLYMPUSPAINTING.COM

-- DBE Information --

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

Vendor ID: O017
Vendor Name: ORDERS CONSTRUCTION COMPANY, INC.
Prequal Level: Prequalified
Prequal Exp: 07/31/2018

-- PREQ Address --

501 6TH AVENUE
ST. ALBANS, WV 25177-0000
Phone: (304)722-4237
Fax: (304)722-4230

Work Classes (Listed But Not Limited To)

002 - GRADING
003 - MAJOR STRUCTURES
007 - MINOR STRUCTURES
019 - ERECT FABRICATED STRUCTURAL MATERIAL
055 - BRIDGE REPAIRS

Bus. Contact: CARR, STEVEN MICHAEL
Email: STEVENC@ORDERSCONSTRUCTION.COM

-- DBE Information --

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

3.2.9

SURETY LETTER



UNDERSTAND. SERVICE. INNOVATE.

USI Insurance Services LLC
1 Hillcrest Drive East
Charleston, WV 25311
www.usi.biz
304-347-0611

August 15, 2017

Stephen D. Kindy, P. E.
Alternative Project Delivery Division
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

**Re: Orders Construction Company, Inc.
St. Albans, WV**

**Project: I-81 Bridge Replacement at Exit 114 RFQ No.: C00093074DB96
A Design-Build Project
Montgomery County/Town of Christiansburg, Virginia
State Project No.: 0081-154-733, P101, R201, C501, B601, B616
Federal Project No.: IM-081-2(992)
Contract ID Number: C00093074DB96**

Dear Mr. Kindy:

Orders Construction Company has made us aware of their desire to become prequalified and to bid on the subject project in April, 2018. It is our understanding that the estimate on the project is \$21,000,000. Orders Construction is capable of obtaining a bond for a project of this magnitude. If Orders Construction is the successful bidder and enters in to a contract to construct this project, we will, according to the terms and conditions of the required bid bond, issue the 100% performance and 100% labor and material payment bonds to warrant the integrity of this design-build project including the warranty period.

Orders Construction's surety credit is underwritten by Zurich Surety. Zurich has an A.M. Best rating of A+(-), Size Category XV (\$2B+), their Federal T-Listing limit is in excess of \$700,000,000, and they are authorized to do business in Commonwealth of Virginia. We have previously issued bonds on Orders' behalf in the \$200,000,000 range. And, there is currently plenty of capacity in Orders' work program to accommodate this work.

This letter is intended for reference purposes and any formal and specific bond approvals will be based on current and pertinent underwriting factors at the time of the request.

If you have questions concerning this matter, please call me at 304-347-0666. Thank you for your consideration.

Sincerely,

Andrew K. Teeter
Sr. Vice President

3.2.10

SCC AND DPOR INFORMATION

ATTACHMENT 3.2.10

State Project No. 0081-154-733

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Orders Construction Company, Inc. (OCC)	F0268500	Foreign Corporation	Active	501 6 th Avenue St Albans, WV 25177	Class A Contractor	2701032711	08/31/2018
Whitman, Requardt & Associates, LLP (WRA)	K000382-4	Limited Liability Partnership	Active	801 South Caroline St Baltimore, MD 21231	Business Entity, ENG, LS, LA, ARC	0407001676	12/31/2017
				1700 Kraft Dr, Suite 1200, Blacksburg, VA 24060	Business Entity Branch Office, ENG	0411000608	02/28/2018
				9030 Stony Point Parkway, Suite 220 Richmond, VA 23235	Business Entity Branch Office, ENG	0411000133	02/28/2018
				1705 Enterprise Dr., Suite 100 Lynchburg, VA 24502	Business Entity Branch Office, ENG	0411000774	02/28/2018
				100 5 th Street, Suite L2000, Bristol, TN 37620	Business Entity Branch Office, ENG	0411001228	02/28/2018
Froehling & Robertson, Inc. (F&R)	00272112	Corporation	Active	1734 Seibel Dr. NE Roanoke, VA 24012	Business Entity Branch Office, ENG	0411000053	02/28/2018

ATTACHMENT 3.2.10

State Project No. 0081-154-733

SCC and DPOR Information

Bowman Consulting Group, LTD (BCG)	04481982	Corporation	Active	650A Nelms Circle Fredericksburg, VA 22406	Business Entity Branch Office, LS, ENG	0411000421	02/28/2018
				3951 Westerre Parkway, Suite 150 Richmond, VA 23233	Business Entity Branch Office, LS, ENG	0411000610	02/28/2018
				650A Nelms Circle Fredericksburg, VA 22406	Appraisal Business	4008001873	03/31/2018
Appraisal Review Specialists, LLC	T0490682	Foreign Limited Liability Company	Active	3058 Mount Vernon Road, Suite 12 Hurricane, WV 25523	Appraisal Business	4008001735	04/30/2018
Quinn Consulting Services, Inc. (QCS)	04925517	Corporation	Active	14160 Newbrook Drive, Suite 220 Chantilly, VA 20151	Business Entity, ENG	0407003733	12/31/2017
ECS-Mid-Atlantic LLC (ECS)	S1208216	Limited Liability Company	Active	7670 Enon Drive, Suite 101, Roanoke, VA 24019	Business Entity Branch Office, ENG	0411000381	02/28/2018
				2119-D North Hamilton Street, Richmond, VA 23230	Business Entity Branch Office, ENG	0411000384	02/28/2018
H & B Surveying & Mapping, LLC (H&B)	S2905604	Limited Liability Company	Active	2105 Electric Road, Suite 103, Roanoke, VA 24018	Business Entity Branch Office, LS	0411001268	02/28/2018
Access, Inc.	04715454	Corporation	Active	N/A	N/A	N/A	N/A

ATTACHMENT 3.2.10

State Project No. 0081-154-733

SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
Whitman, Requardt & Associates, LLP (WRA)	Michael A. Russell	100 5 th Street, Suite L2000, Bristol, TN 37620	17282 Cleveland Rd Abingdon, VA 24211	ENG	0402024814	02/28/2018
Whitman, Requardt & Associates, LLP (WRA)	Brian Henschel	1705 Enterprise Drive, Suite 100 Lynchburg, VA 24502	103 Carol Court Forest, VA 24551	ENG	0402035154	01/31/2019
Whitman, Requardt & Associates, LLP (WRA)	Taylor Sigmund Sprenkle	9030 Stony Point Parkway, Suite 220 Richmond, VA 23235	1233 Windsor Avenue, Richmond, VA 23227	Professional Wetland Delineator	3402000097	09/30/2018
Bowman Consulting Group, LTD (BCG)	Richard Stuchell	650A Nelms Circle Fredericksburg, VA 22406	10012 Shadowridge Ct Fredericksburg, VA 22407	General Real Estate Appraiser	4001011856	11/30/2018
Appraisal Review Specialists, LLC	Rayman Scott Barber	3058 Mount Vernon Road, Suite 12 Hurricane, WV 25523	3058 Mount Vernon Road, Suite 12 Hurricane, WV 25526	General Real Estate Appraiser	4001012258	03/31/2019

SCC INFORMATION (3.2.10.1)

- Orders Construction Company, Inc. (OCC)
- Whitman, Requardt & Associates, LLP (WRA)
- Froehling & Robertson, Inc. (F&R)
- Bowman Consulting Group, LTD (BCG)
- Appraisal Review Specialists, LLC (Appraisal)
- Quinn Consulting Services, Inc. (QCS)
- ECS-Mid-Atlantic LLC (ECS)
- H & B Surveying & Mapping, LLC (H&B)
- Access, Inc. (Access)

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ORDERS CONSTRUCTION COMPANY, INC.

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: F0268500
 Entity Type: Foreign Corporation
 Jurisdiction of Formation: WV
 Date of Formation/Registration: 7/5/1973
 Status: Active
 Shares Authorized: 50000

Select an action

- [File a registered agent change](#)
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Principal Office

PO BOX 1448
 501 6TH AVE
 ST ALBANS WV25177

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Registered Agent/Registered Office

CHARLIE STOKES
 ORDERS CONSTRUCTION COMPANY INC
 605 LITHIA RD
 WYTHEVILLE VA 24382
 WYTHE COUNTY 198
 Status: Active
 Effective Date: 7/8/2015

Screen ID: e1000

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Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That ORDERS CONSTRUCTION COMPANY, INC., a corporation incorporated under the law of West Virginia, 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 July 5, 1973; 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:

June 25, 2013

Joel H. Peck

Joel H. Peck, Clerk of the Commission

Commonwealth of Virginia



State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

On August 10, 2000, a statement of registration as a foreign registered limited liability partnership was filed in the Clerk's Office of the Commission by WHITMAN, REQUARDT & ASSOCIATES, LLP, a Maryland partnership.

As of the date below, this statement of registration is in effect.

Nothing more is hereby certified.

*Signed and Sealed at Richmond on this Date:
August 4, 2017*



Joel H. Peck
Joel H. Peck, Clerk of the Commission



COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

Office of the Clerk

706660645

June 19, 2017

LINDSAY MAHONEY
CSC WILMINGTON
2711 CENTERVILLE RD STE 400
WILMINGTON, DE 19808

RECEIPT

RE: WHITMAN, REQUARDT & ASSOCIATES, LLP

ID: K000382 - 4

DCN: 17-06-19-0583

Dear Customer:

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

The annual continuation report was filed on June 19, 2017.

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
CISKMP



UPA-134-GP
(04/13)

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION
VIRGINIA OR FOREIGN
REGISTERED LIMITED LIABILITY PARTNERSHIP
2017 ANNUAL CONTINUATION REPORT

Filing Due Date:

July 01, 2017

Filing Fee: \$50

1706060645

The undersigned, on behalf of the partnership set forth below, pursuant to Title 50, Chapter 2.2, Article 9.1 of the Code of Virginia, states as follows:

1. The name of the partnership, which is registered as a registered limited liability partnership in Virginia, is:

WHITMAN, REQUARDT & ASSOCIATES, LLP

170619 0583

2. The partnership's SCC ID number is K000382 - 4.
3. The jurisdiction in which the partnership is registered as a registered limited liability partnership is MARYLAND.
4. The principal office address of the partnership according to the records of the Commission is:

801 S CAROLINE ST
BALTIMORE, MD 21231

(Mark the appropriate box.)

- The address listed above is the current address of the partnership's principal office.
 The address listed above is not the current address of the partnership's principal office. The current address, including the street and number, if one is associated with the location, is:

(number/street) (a post office box is not acceptable - see instructions)

(city or town) (state) (zip)

Signed on behalf of the partnership by the following partner, receiver or trustee:

(signature)

Joseph S. Vlaskar

(printed name)

Partner

(title)

6-15-17

(date)

(telephone number (optional))

2017 JUN 19 AM 10:10
SCC-CLERK'S OFFICE
OPERATIONS

Personal Information, such as a social security number, should NOT be included in a business entity document submitted to the Office of the Clerk for filing with the Commission. For more information, see Notice Regarding Personal Identifiable Information at www.scc.virginia.gov/clk/index.aspx.

SEE INSTRUCTIONS ON THE REVERSE

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FROEHLING & ROBERTSON, INCORPORATED

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General

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

Select an action

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Principal Office

3015 DUMBARTON ROAD
 HENRICO VA23228

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Registered Agent/Registered Office

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

Screen ID: e1000

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Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That FROEHLING & ROBERTSON, INCORPORATED is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is October 11, 1924;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
March 28, 2017*

Joel H. Peck

Joel H. Peck, Clerk of the Commission

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BOWMAN CONSULTING GROUP, LTD.

General

SCC ID: 04481982
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 6/7/1995
 Status: Active
 Shares Authorized: 360000

Principal Office

3863 CENTERVIEW DRIVE
 SUITE 300
 CHANTILLY VA20151

Registered Agent/Registered Office

CORPORATION SERVICE COMPANY
 BANK OF AMERICA CENTER, 16TH FLOOR
 1111 E. MAIN STREET
 RICHMOND VA 23219
 RICHMOND CITY 216
 Status: Active
 Effective Date: 8/17/2016

Select an action

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Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

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

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

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



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

Joel H. Peck

Joel H. Peck, Clerk of the Commission

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Appraisal Review Specialists, LLC

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: T0490682
 Entity Type: Foreign Limited Liability Company
 Jurisdiction of Formation: WV
 Date of Formation/Registration: 2/3/2012
 Status: Active

Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File a principal office address change](#)
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Principal Office

3058 MOUNT VERNON RD
 HURRICANE WV25526

Registered Agent/Registered Office

INCORP SERVICES INC
 7288 HANOVER GREEN DR
 MECHANICSVILLE VA 23111
 HANOVER COUNTY 142
 Status: Active
 Effective Date: 2/3/2012

Screen ID: e1000

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Commonwealth of Virginia



State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

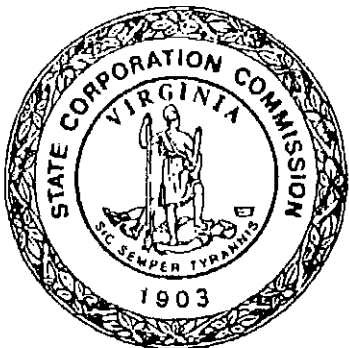
That Appraisal Review Specialists, LLC, a limited liability company organized under the law of West Virginia, obtained a certificate of registration to transact business in Virginia from the Commission on February 3, 2012; and

That it is registered to transact business 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:

June 24, 2013



Joel H. Peck
Joel H. Peck, Clerk of the Commission

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QUINN CONSULTING SERVICES INCORPORATED

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: 04925517
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 10/24/1997
 Status: Active
 Shares Authorized: 5000

Select an action

- [File a registered agent change](#)
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Principal Office

14160 NEWBROOK DRIVE
 SUITE 220
 CHANTILLY VA20151

Registered Agent/Registered Office

JOHN H QUINN JR
 2208 S KNOLL ST
 ARLINGTON VA 22202
 ARLINGTON COUNTY 106
 Status: Active
 Effective Date: 10/24/1997

Screen ID: e1000

Need additional information? Contact scinfo@sc.virginia.gov Website questions? Contact: webmaster@sc.virginia.gov

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Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That QUINN CONSULTING SERVICES INCORPORATED is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is October 24, 1997;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
June 13, 2017*

Joel H. Peck

Joel H. Peck, Clerk of the Commission

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ECS - Mid-Atlantic, LLC

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

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

Select an action

- [File a registered agent change](#)
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- [Resign as registered agent](#)
- [File a principal office address change](#)
- [Pay annual registration fee](#)
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Principal Office

14026 THUNDERBOLT PL STE 100
 CHANTILLY VA20151

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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

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Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

That ECS - Mid-Atlantic, LLC is duly organized as a limited liability company under the law of the Commonwealth of Virginia;

That the date of its organization is April 16, 2004; and

That the limited liability company is in existence 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:
June 7, 2017*



Joel H. Peck

Joel H. Peck, Clerk of the Commission

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H & B Surveying and Mapping, LLC

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: S2905604
 Entity Type: Limited Liability Company
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 4/27/2009
 Status: Active

Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
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Principal Office

612 HULL STREET STE 101B
 RICHMOND VA23224

Registered Agent/Registered Office

TIMOTHY H GUARE
 TIMOTHY H GUARE PLC
 6802 PARAGON PL STE 100
 HENRICO VA 23230
 HENRICO COUNTY 143
 Status: Active
 Effective Date: 7/2/2009

Screen ID: e1000

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Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond, April 27, 2009

This is to certify that the certificate of organization of

H & B Surveying and Mapping, LLC

was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: April 27, 2009



State Corporation Commission

Attest:

Joel H. Beck
Clerk of the Commission

SCC ID: S2905604

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

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

ACCESS, INC.

General

SCC ID: 04715454
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 9/10/1996
 Status: Active
 Shares Authorized: 2000

Principal Office

701 PATTERSON AVE SW
 ROANOKE VA24016

Registered Agent/Registered Office

ROY V CREASY
 213 S JEFFERSON ST STE 915
 ROANOKE VA 24011
 ROANOKE CITY 217
 Status: Active
 Effective Date: 9/10/1996

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[Word \(.doc\) Viewer](#)

Build #: 1.0.0.23229

Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond,

September 10, 1996

This is to Certify that the certificate of incorporation of

ACCESS, INC.

*was this day issued and admitted to record in this office
and that the said corporation is authorized to transact its business
subject to all Virginia laws applicable to the corporation and its
business. Effective date:*

September 10, 1996



State Corporation Commission

William J. Bridge
Clerk of the Commission

DPOR INFORMATION (3.2.10.2)

- Orders Construction Company, Inc. (OCC)
- Whitman, Requardt & Associates, LLP (WRA)
- Froehling & Robertson, Inc. (F&R)
- Bowman Consulting Group, LTD (BCG)
- Appraisal Review Specialists, LLC (Appraisal)
- Quinn Consulting Services, Inc. (QCS)
- ECS-Mid-Atlantic LLC (ECS)
- H & B Surveying & Mapping, LLC (H&B)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

08-31-2018

NUMBER

2701032711

BOARD FOR CONTRACTORS
CLASS A CONTRACTOR
CLASSIFICATIONS H/H



ORDERS CONSTRUCTION COMPANY INC
501 6TH AVENUE
ST ALBANS, WV 25177-1448



Jay W. DeBoer
Jay W. DeBoer Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

CLASS A BOARD FOR CONTRACTORS
CONTRACTOR

CLASSIFICATIONS H/H

NUMBER: 2701032711 EXPIRES: 08-31-2018

ORDERS CONSTRUCTION COMPANY INC
501 6TH AVENUE
ST ALBANS, WV 25177-1448



(FOLD)

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

DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2017

NUMBER

0407001676

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

PROFESSIONS: ENG, LS, LA, ARC



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



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

James W. DeBour
James W. DeBour, Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407001676 EXPIRES: 12-31-2017
PROFESSIONS: ENG, LS, LA, ARC
WHITMAN, REQUARDT AND ASSOCIATES LLP
801 SOUTH CAROLINE STREET
BALTIMORE, MD 21231



(FOLD)

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

DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2018

NUMBER

0411000608

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

BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG



WHITMAN REQUARDT & ASSOCIATES LLP

1700 KRAFT DRIVE

SUITE 1200

BLACKSBURG, VA 24060



Jay W. DeBoer
Jay W. DeBoer, Director

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

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DPOR-LIC (05/2015)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

NUMBER: 0411000608 EXPIRES: 02-28-2018

PROFESSIONS: ENG

WHITMAN REQUARDT & ASSOCIATES LLP

1700 KRAFT DRIVE

SUITE 1200

BLACKSBURG, VA 24060



(FOLD)

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

DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
02-28-2018

NUMBER
0411000133

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

PROFESSIONS: ENG



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



Jay W. DeBoer
Jay W. DeBoer, Director

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DPOR-LIC (05/2015)

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

NUMBER: 0411000133 EXPIRES: 02-28-2018

PROFESSIONS: ENG

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



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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
02-28-2018

NUMBER
0411000774

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

PROFESSIONS: ENG



WHITMAN REQUARDT AND ASSOCIATES LLP
1705 ENTERPRISE DR STE 100
LYNCHBURG, VA 24502



Jan W. DeBoer
Jan W. DeBoer, Director

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

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DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000774 EXPIRES: 02-28-2018
PROFESSIONS: ENG
WHITMAN REQUARDT AND ASSOCIATES LLP
1705 ENTERPRISE DR STE 100
LYNCHBURG, VA 24502



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DPOR-PC (05/2015)

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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
02-28-2018

NUMBER
0411001228

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

PROFESSIONS: ENG



WHITMAN, REQUARDT AND ASSOCIATES LLP
100 5TH ST STE L2000
BRISTOL, TN 37620



Jay W. DeBoer
Jay W. DeBoer, Director

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

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Department of Professional and Occupational Regulation

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BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411001228 EXPIRES: 02-28-2018
PROFESSIONS: ENG
WHITMAN, REQUARDT AND ASSOCIATES LLP
100 5TH ST STE L2000
BRISTOL, TN 37620



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DPOR-PC (05/2015)

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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2018

NUMBER

0411000053

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

PROFESSIONS: ENG



FROEHLING ROBERTSON INC
1734 SEIBEL DR N E
ROANOKE, VA 24012



Jay W. DeBoer
Jay W. DeBoer, Director

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

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DPOR-LIC (05/2015)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APPLSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000053 EXPIRES: 02-28-2018
PROFESSIONS: ENG
FROEHLING ROBERTSON INC
1734 SEIBEL DR N E
ROANOKE, VA 24012



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DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

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EXPIRES ON
02-28-2018

NUMBER
0411000421

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

PROFESSIONS: LS, ENG



BOWMAN CONSULTING GROUP LTD
650A NELMS CIRCLE
FREDERICKSBURG, VA 22406



July W. DeBoer
July W. DeBoer, Director

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

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Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000421 EXPIRES: 02-28-2018
PROFESSIONS: LS, ENG
BOWMAN CONSULTING GROUP LTD
650A NELMS CIRCLE
FREDERICKSBURG, VA 22406



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DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

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EXPIRES ON
02-28-2018

NUMBER
0411000610

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

PROFESSIONS: ENG, LS



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



Jay W. DeBoer
Jay W. DeBoer Director

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

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COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APPLSCIDLA
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NUMBER: 0411000610 EXPIRES: 02-28-2018
PROFESSIONS: ENG, LS
BOWMAN CONSULTING GROUP LTD
3951 WESTERRE PKWY
SUITE 150
RICHMOND, VA 23233



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Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
03-31-2018

NUMBER
4008001873

REAL ESTATE APPRAISER BOARD
APPRAISAL BUSINESS REGISTRATION



BOWMAN CONSULTING GROUP LTD
650 A NELMS CIRCLE
FREDERICKSBURG, VA 22406



Jay W. DeBoer
Jay W. DeBoer Director

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

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DPOR-LIC (05/2015)

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 COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

REAL ESTATE APPRAISER BOARD
APPRAISAL BUSINESS REGISTRATION
NUMBER: 4008001873 EXPIRES: 03-31-2018

BOWMAN CONSULTING GROUP LTD
650 A NELMS CIRCLE
FREDERICKSBURG, VA 22406



(FOLD)

COMMONWEALTH of VIRGINIA

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

EXPIRES ON
04-30-2018

NUMBER
4008001735

**REAL ESTATE APPRAISER BOARD
APPRAISAL BUSINESS REGISTRATION**



APPRAISAL REVIEW SPECIALISTS LLC
3058 MOUNT VERNON ROAD
SUITE 12
HURRICANE, WV 25523



Jay W. DeBoer
Jay W. DeBoer, Director

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

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DPOR-LIC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
12-31-2017

NUMBER
0407003733

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

PROFESSIONS: ENG



QUINN CONSULTING SERVICES INC
14160 NEWBROOK DR STE 220
CHANTILLY, VA 20151



Jay W. DeBoer
Jay W. DeBoer, Director

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

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DPOR-LIC (05/2015)

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DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR AP/ELSC/DLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407003733 EXPIRES: 12-31-2017
PROFESSIONS: ENG
QUINN CONSULTING SERVICES INC
14160 NEWBROOK DR STE 220
CHANTILLY, VA 20151



(FOLD)

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

DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
02-28-2018

NUMBER
0411000381

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

PROFESSIONS: ENG



ECS-MID-ATLANTIC LLC
7670 ENON DR STE 101
ROANOKE, VA 24019



Jay W. DeBoer
Jay W. DeBoer, Director

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

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DPOR-LIC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2018

NUMBER

0411000384

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



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

Jay W. DeBoer
Jay W. DeBoer Director

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DPOR-LIC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2018

NUMBER

0411001268

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

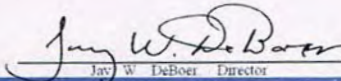
PROFESSIONS: LS



H & B SURVEYING & MAPPING LLC
2105 ELECTRIC RD SW STE 103
ROANOKE, VA 24018



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


Jay W. DeBoer Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

DPOR INFORMATION FOR INDIVIDUALS (3.2.10.3 and 3.2.10.4)

- Michael Russell (WRA)
- Brian Henschel (WRA)
- Taylor Sprenkle (WRA)
- Richard Stuchell (BCG)
- Rayman Scott Barber (Appraisal)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-28-2018

NUMBER

0402024814

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



MICHAEL A RUSSELL
17282 CLEVELAND RD
ABINGDON, VA 24211



Jan W. DeBoer
Jan W. DeBoer, Director

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

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DPOR-LIC (05/2015)

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR AP/ELSC/DLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402024814 EXPIRES: 02-28-2018

MICHAEL A RUSSELL
17282 CLEVELAND RD
ABINGDON, VA 24211



(FOLD)

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

DPOR-PC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

01-31-2019

NUMBER

0402035154

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



BRIAN ANDREW HENSCHEL
103 CAROL CT
FOREST, VA 24551



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


Jay W. DeBoer, Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
09-30-2018

NUMBER
3402000097

BOARD FOR PROFESSIONAL SOIL SCIENTISTS, WETLAND PROFESSIONALS & GEOLOGISTS
PROFESSIONAL WETLAND DELINEATOR CERTIFICATION



TAYLOR SIGMUND SPRENKLE
* EEE CONSULTING INC.
1233 WINDSOR AVENUE
RICHMOND, VA 23227



Jay W. DeBoer
Jay W. DeBoer, Director

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

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DPOR-LIC (05/2015)
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COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR PROFESSIONAL SOIL SCIENTISTS, WETLAND
PROFESSIONALS & GEOLOGISTS
PROFESSIONAL WETLAND DELINEATOR CERTIFICATION
NUMBER: 3402000097 EXPIRES: 09-30-2018

TAYLOR SIGMUND SPRENKLE
EEE CONSULTING INC.
1233 WINDSOR AVENUE
RICHMOND, VA 23227



(FOLD)

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

DPOR-PC (05/2015)

*Mr. Sprenkle is no longer with EEE - current DPOR records reflect this and screen capture of the updated records follow on the next page.

DPOR License Lookup License Number

3402000097

License Details

Name	SPRENKLE, TAYLOR SIGMUND
License Number	3402000097
License Description	Professional Wetland Delineator Certification
Rank	Professional Wetland Delineator
Address	RICHMOND, VA 23227
Initial Certification Date	2008-09-05
Expiration Date	2018-09-30

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DPOR License Lookup build 1,192 (built 2016-06-23 09:13:05).

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

11-30-2018

NUMBER

4001011856

REAL ESTATE APPRAISER BOARD

CERTIFIED GENERAL REAL ESTATE APPRAISER



RICHARD DAVID STUCHELL
10012 SHADOWRIDGE COURT
FREDERICKSBURG, VA 22407



James W. DeBoer
James W. DeBoer Director

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

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COMMONWEALTH of VIRGINIA

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

EXPIRES ON
03-31-2019

NUMBER
4001012258

REAL ESTATE APPRAISER BOARD
CERTIFIED GENERAL REAL ESTATE APPRAISER



RAYMAN SCOTT BARBER
3058 MOUNT VERNON RD
HURRICANE, WV 25526



Jay W. DeBoer
Jay W. DeBoer, Director

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

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DPOR-LIC (02/2017)
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 COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

REAL ESTATE APPRAISER BOARD
CERTIFIED GENERAL REAL ESTATE APPRAISER
NUMBER: 4001012258 EXPIRES: 03-31-2019

RAYMAN SCOTT BARBER
3058 MOUNT VERNON RD
HURRICANE, WV 25526



(FOLD)

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DPOR-PC (02/2017)

3.3.1

KEY PERSONNEL RESUMES

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Charlie Stokes, Vice President
b. Project Assignment: Design-Build Project Manager (DBPM)
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : Orders Construction Company, Inc. (Full-Time)
d. Employment History: With this Firm <u>7</u> Years With Other Firms <u>41</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Orders Construction Company, Inc. – Vice President, 2010 – Present General responsibilities include overseeing the Virginia Division Operations, all aspects of bid-build and Design-Build process from procurement to project completion. Charlie manages and controls all disciplines of the Design-Build process including: contract administration, design, right-of-way, environmental permitting, utilities, construction, and quality control (QC) and quality assurance (QA) inspection. Charlie also manages the procurement of all materials, equipment, services and labor required for the projects. Additionally, he coordinates with third parties; maintains project budgets and schedules; prepares and leads various project meetings for both project staff and the public; and facilitates project dispute resolution and avoidance. Charlie is currently serving as Design-Build Project Manager on his second VDOT Design-Build project with Orders. Corte Construction Company – President, 1992 – 2010 General responsibilities included project procurement of public and private bid-build and Design-Build projects; project management of grading, bridge, and tunneling projects; daily operations management; resource allocation; scheduling; OSHA compliance; and project quality. Served as Design-Build Project Manager for nine Design-Build projects in the Mid-Atlantic region, one of which was for VDOT.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Pittsburgh, Pittsburgh, PA / NA / NA / NA
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) I-81/Route 419 Interchange Project, Roanoke County, VA – VDOT – <i>Project Manager</i> Management of the project which consisted of: Widening of North and Southbound Route 419 over Interstate 81, with additional lanes. Ramp modifications included widening and adding lanes to the Southbound and Northbound on and off ramps. Acceleration and deceleration lanes on I-81 were extended. Route 419 was widened and turn lanes were added. Traffic signals were added to the Route 419 intersection at the on and off-ramps. Four lanes of I-81 were mandated to be open at all times during a 6:00 AM to 7:00 PM period. Mr. Stokes was responsible for all facets of the project from daily operations; resource management; scheduling; quality; safety; partnering and final acceptance. Charlie also managed the procurement of all materials, equipment, services and labor required for the project. Relevance to the Exit 114 DB project: Interstate and interchange construction with high traffic volumes. Firm: Corte/Fort Chiswell Construction Companies, Inc. Dates: 2003 – 2004 Route 60 Main Street Bridge Replacement, Clifton Forge, VA – VDOT – <i>Design-Build Project Manager</i> This Design-Build project was to replace the Route 60 bridge in downtown Clifton Forge, VA. This project involved replacing a bridge, which abuts commercial buildings on both sides, on Route 60 Westbound over Smith Creek in downtown Clifton Forge and rebuilding Main Street from Commercial Avenue to Ridgeway Street. The project also

involved changing Route 60 Business from a one-way (Eastbound only) to a two-way road and removing a traffic island that separated Route 60 Business East and Route 60 West (Main Street). Additionally, traffic signals were added at the intersection of Route 60 and Commercial Avenue. Mr. Stokes was responsible for overall management of all facets of the project, including, design, environmental permitting and compliance, utility relocation and coordination, daily construction operations and scheduling; resource and manpower allocation; contract administration; safety; project quality and quality management; traffic control; communications with the public/public outreach. Charlie also managed the procurement of all materials, equipment, services and labor required for the project.

Relevance to the Exit 114 DB project: VDOT Design-Build Project, bridge construction, difficult bridge access, and public outreach **Firm:** Orders Construction Company, Inc. | **Dates:** March 2011 – January 2013

I-81 Exit 7 Interchange Improvements Project, City of Bristol, VA – VDOT – Project Manager

This project involved the widening of Old Airport Road, the Northbound Interstate 81 off-ramp, and the Bridge over Beaver Creek at Exit 7 on Interstate 81, located in Bristol, VA. This project consisted of 6,000 cubic yards of excavation, roadway drainage features, a double box culvert extension, utility relocations, 10,000 square yards of asphalt paving, 1,500 linear feet of curb & gutter, widening a 116 linear feet bridge, constructing a 225 linear feet RW-3 retaining wall, signing, and guardrail. Exit 7 is one of the most congested interchanges in the area and the project mandated that all traffic be kept moving through the project with limited off-hour interruptions. By altering the contract transportation management plan, Orders Construction worked with the Virginia Department of Transportation to complete this project with minimal impact to motorists. The project also required bridge (bearing pile) and retaining wall foundations in the karst conditions of the area. Orders was able to design the temporary shoring to work and meet standards in the unstable karst terrain conditions on this project. Mr. Stokes was responsible for all facets of the project from daily operations; resource management; scheduling; quality; safety; partnering and final acceptance. Charlie also manages the procurement of all materials, equipment, services and labor required for the project.

Relevance to the Exit 114 DB project: Interstate and interchange construction, limited access for material and equipment, bridge construction, and retaining walls. **Firm:** Orders Construction Company, Inc. | **Dates:** March 2014 – September 2015


* 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.

Not Applicable

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: Brian A. Henschel, P.E., CCM, PMP	
b. Project Assignment: Quality Assurance Manager (QAM)	
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) :	
Whitman, Requardt & Associates, LLP (Full Time)	
d. Employment History: With this Firm <u>7</u> Years With Other Firms <u>15</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):	
Whitman, Requardt & Associates, LLP – Vice President, August 2010 to Present General Responsibilities: Responsible for serving roles of Quality Assurance Manager, Quality Control Manager, Project Manager, Responsible Engineer, and Engineering Support on major transportation & utility contracts in Virginia. He serves as a QAM; writes and implements QA/QC Plans on Design-Build and PPTA projects in accordance with VDOT's Minimum Guidelines for QA and QC; and manages QA inspection / engineering staff assigned to VDOT & municipality/locality Design-Build, Design-Bid-Build and related construction management contracts, providing QA inspection and monitoring Contractor's QC program. He issues non-compliance reports and oversees the AR process and corrective measures. He provides scheduling, constructability and specification interpretation support to VDOT and other clients, manages and supports construction projects to ensure compliance with contract requirements including materials testing and sampling, facilitates progress meetings, performs site visits to monitor progress and recommends field changes, resolves disputes, performs cost and schedule analysis for work orders and changes. He provides pay application/estimate review and certification, makes staffing decisions, and inspects work for compliance with plans and specifications. He performs final inspections, creates project punchlists, and oversees project close-out. He resolves disputes and negotiates changes. He has served in QA and QC roles on eight (8) Design-Build/PPTA projects , with five (5) being VDOT projects.	
Virginia Department of Transportation – Design-Build Project Manager / Area Construction Engineer / Project Controls Engineer, April 2004 to August 2010 General Responsibilities: Served roles in the VDOT Lynchburg District. As DBPM, he managed all phases of the contract for five VDOT Design-Build contracts . He assisted in writing technical specifications for RFP; led the QA/QC Plan review; administered the contract and all specifications; assigned and managed processes and testing frequencies of IA/IV program; accepted proposed corrections for non-compliances; and oversaw reporting and sampling. He also reviewed and approved pay applications, and reviewed/signed-off on completed plans. As ACE, he completed over 90 projects worth >\$200 million, including three (3) Route 29 Madison Heights Bypass projects, each between \$35M and \$40M in value. He exceeded on-time, on-budget and CQIP goals; ensured compliance with plans and specs; assigned staffing on project; ensured QA testing and inspection met quality and specification requirements; monitored contractor's QC program; and coordinated with IA/IV testing and sampling. Mr. Henschel analyzed and approved work orders; reviewed and responded to NOI's and claims; and coordinated with all project stakeholders. As Project Controls Engineer, he performed constructability and bidability reviews, developed CEI budgets, and performed CTDRs and CPM schedules for over 100 projects.	
McDonough Bolyard Peck, Inc. – Senior Engineer/Project Controls Engineer/Project Inspector, May 1994 to 2004 General Responsibilities: Office Engineer/Claims Analyst/Project Inspector for VDOT and other public clients. Mr. Henschel assigned inspection activities, performed project documentation, analyzed work orders, coordinated with FHWA, led partnering meetings, reviewed/approved schedules, resolved field disputes, and negotiated changes and work orders with the Contractor. Lead Project Inspector & Office Engineer on \$32M VDOT Madison Heights Bypass Sweet Briar Interchange. He oversaw field inspection, performed materials testing and managed QA materials testing and reporting, performed constructability reviews, analyzed NOI's and claims, and provided detailed reports for use in negotiations and litigation for VDOT.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:	
Virginia Polytechnic Institute and State University, Virginia/M.S./2007/Civil Engineering Virginia Polytechnic Institute and State University, Virginia/B.S./1997/Civil Engineering	

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

2001 / Professional Engineer / #0402035154; 2010 / Certified Construction Manager (CCM)

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

1. *Note your role, responsibility, and specific job duties for each project, not those of the firm.*

2. *Note whether experience is with current firm or with other firm.*

3. *Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.*

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

Greenview Drive Widening Design-Build Project, Lynchburg, VA – VDOT – Quality Assurance Manager

Responsibility/Specific Job Duties: Mr. Henschel served as the **Quality Assurance Manager** responsible for ensuring project quality on the \$10.8 million multi-phase roadway and intersection widening and realignment VDOT Design-Build project for the Lynchburg District, including multiple MOT phases, widened and reconstructed roadway with horizontal and vertical alignment improvements, lighting, a signalized and realigned intersection with added turn lanes, and environmental permits. The project was delivered according to VDOT Design-Build requirements and Mr. Henschel was responsible for providing all QA functions for construction, including developing and implementing the QA/QC Plan, documentation and reporting, material sampling and testing, inspection and approval of the work, diaries and checklists in accordance with the VDOT Minimum Guidelines, issuing non-conformance reports and overseeing correction of the non-compliances and the AR Plan, monitoring the Quality Control program and ensuring compliance with testing and inspection frequencies, certification of pay applications and ensuring the project was built according to plans, specifications and all VDOT requirements. He was responsible for the Materials Book, including issuing DBT certifications and VDOT review. Coordinated IA/IV inspections with VDOT, CQIP review, and for FHWA inspection.

Relevance to Exit 114 Design-Build: Quality Assurance Manager role, VDOT Design-Build, FHWA requirements, VDOT Standards and the Minimum Guideline requirements, roadway widening, utilities, QA/QC Plan development and implementation. **Client:** VDOT / Branch Highways | **Date:** February 2014 –Oct. 2017 (Est.) | **Cost:** **\$10.8M**

Augusta County Route 636 Relocation PPTA Project, Fishersville, VA – Quality Assurance Manager

Responsibility/Specific Job Duties: Mr. Henschel served as the **Quality Assurance Manager** responsible for ensuring project quality on the \$14 million PPTA project for Augusta County, including 200,000 CY of grading, new and widened roadway, a signalized intersection, and a **bridge** over the Buckingham Branch Railroad. The project was delivered according to VDOT Design-Build requirements with VDOT oversight, and Mr. Henschel was responsible for providing all QA functions for construction, including developing and implementing the QA/QC Plan, documentation and reporting, material sampling and testing, inspection and approval of the work, diaries and checklists in accordance with the VDOT Minimum Guidelines, issuing non-conformance reports and overseeing correction of non-compliances and the AR Plan, monitoring the Quality Control program and ensuring compliance with testing and inspection frequencies, certification of pay applications and ensuring the project was built according to plans, specifications and all VDOT requirements. He managed the QA staff and all QA team assignments. He was responsible for the project Materials Book, including issuing LT/DBT certifications and VDOT review. He coordinated IA/IV inspections with VDOT.

Relevance to Exit 114 Design-Build: Quality Assurance Manager role, Design-Build to VDOT Standards and VDOT's Minimum Guideline for Design-Build requirements, bridge construction, roadway construction, utility relocations, QA/QC Plan development and implementation; coordination with VDOT IA/IV
Client: Augusta County / Branch Highways | **Date:** January 2013 – May 2015 | **Cost:** **\$14M**

George Mason University Cross Campus Connector Design-Build, Fairfax, VA – Quality Assurance Manager

Responsibility/Specific Job Duties: Mr. Henschel was the Quality Assurance Manager responsible for ensuring project quality on the \$14 million Design-Build project for George Mason University for work within VDOT Right-of-Way, the intersection of Campus Drive and Braddock Road, and the **new Route 123 Bridges** over Campus Drive. Included realigned signalized intersections and turn lanes. The project was delivered using VDOT Design-Build requirements with VDOT oversight and Mr. Henschel was responsible for providing all QA functions for construction, including developing and implementing the QA/QC Plan, documentation/reporting, material sampling/testing, inspection and approval, monitoring the Quality Control program and ensuring compliance with testing and inspection frequencies, issuing non-compliance reports for defective and non-conforming work and overseeing corrections of non-compliances, and ensuring the project is built in accordance with the plans and specifications and all VDOT requirements.


Relevance to Exit 114 Design-Build: Quality Assurance Manager role, Design-Build to VDOT Standards and the Minimum Guideline requirements, bridge construction, roadway construction, utility relocations, complex MOT, QA/QC Plan development and implementation; coordination with VDOT IA/IV
Client: George Mason University / Branch Highways | **Date:** April 2013 – October 2015 | **Cost:** **\$14M**

* 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. *Not Applicable*

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: Mike Russell, PE, DBIA, Vice President
b. Project Assignment: Design Manager (DM)
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : Whitman, Requardt & Associates, LLP (Full Time) 
d. Employment History: With this Firm <u>2</u> Years With Other Firms <u>26</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Whitman, Requardt & Associates, LLP – Vice President, December 2014 – Present General Responsibilities: Mr. Russell is currently a Vice-President with Whitman, Requardt & Associates, LLP where he is primarily responsible for managing transportation projects in Central and Western Virginia. He currently serves as WRA’s Design Manager on major Design-Build projects and Project Manager on major interstate and other transportation projects in the region. Virginia Department of Transportation – District Administrator, January 2011 – December 2014 General Responsibilities: Mr. Russell became the Bristol District Administrator in 2011 and provided executive leadership and direction to the Department’s 623 employees in the 12 county Bristol District including 87 miles of I-81. He served as an extension of the Commissioner’s Office with direct oversight of a Six-Year construction program valued at over \$500M and an annual maintenance and operation budget averaging \$170M per year. He maintained a high level of involvement in the oversight and design of key projects in the District providing design guidance and construction claim resolution. He worked proactively with staff to resolve design and construction issues to ensure the advancement of the District’s program. The major highlights of the construction program were the \$2.8B Coalfields Expressway and Corridor Q programs. Virginia Department of Transportation – PE Manager/PIM, December 2007 – January 2011 General Responsibilities: Mr. Russell became the Salem District Assistant District Administrator for Preliminary Engineering, Planning, and Investment Management in 2008 and led the District's Preliminary Engineering staff including Location & Design, Environmental, and Right-of-Way sections. He was responsible for all engineering functions to ensure compliance with all state and federal transportation and environmental standards and policies and led several projects on I-81 during this timeframe. In addition to the P.E. Manager role, he led the District's Planning & Investment Management staff including Land Use, Land Development, Planning, and Programming. Virginia Department of Transportation – Location & Design Engineer, November 2004 – December 2007 General Responsibilities: Mr. Russell became the Salem District Location & Design Engineer in 2005 and subsequently led and managed design staff responsible for the preparation of highway, right-of-way and construction plans, including survey, roadway and hydraulic design. He coordinated with right-of-way, environmental, bridge, traffic, and materials sections to ensure a cohesive and collaborative design for all projects. He provided engineering oversight to ensure projects were developed in accordance with applicable state and federal standards. As District L&D Engineer he was responsible for the design of multiple projects, from small projects costing less than \$1 million to very complex projects costing \$100 million including multiple projects on the I-81 corridor. His collaborative and hands-on approach to project management and design guided the design teams to significantly improve the on-time and on-budget performance of the District’s projects and Dashboard performance measures while maintaining a problem solving mindset of the team. Virginia Department of Transportation – Transportation Engineer, November 2003 – November 2004 General Responsibilities: Mr. Russell became the Wytheville Resident Engineer in 2004. He was responsible for all construction and maintenance activities in Wythe and Grayson Counties. In addition to having geographic responsibility for all VDOT activities in Wythe and Grayson counties, he served as the Department’s Responsible Charge Engineer for construction activities and ensured compliance with plans, specifications, environmental requirements and contract documents. He reviewed and accepted independent work order estimates and analysis while focusing on successful field resolution of disputes by providing technical analyses of issues, and negotiating and implementing partnering with contractors to settle conflicts.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute and State University, Virginia/B.S./1989/Civil Engineering
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1994 / Professional Engineer / #0402024814
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p> <p>I-81 Halls Bottom Road Bridge Replacement DB, Washington County, VA – VDOT – Design Manager Responsibility/Specific Job Duties: As Design Manager, Mr. Russell is responsible for all design elements of the replacement of two bridges on I-81 over Halls Bottom Road in Washington County, Virginia. He is responsible for roadway design, coordinating all individual design elements, ensuring that the design conforms with contract requirements and delivering the project in accordance with the project’s QA/QC plan. With design complete, the project is currently under construction within an existing right-of-way requiring a complex MOT plan utilizing the existing median to temporarily carry north and southbound traffic while the existing bridges are replaced. The efficient design replaces the twin 4-span 220’ long bridges with 140’ single span structures utilizing a “true MSE” abutment design. Mr. Russell managed an aggressive design schedule allowing construction to begin only 3.5 months after NTP.</p> <p>Relevance to Exit 114 Design-Build: VDOT Design-Build with identical: roadway; survey; structures and bridges; environmental; geotechnical; hydraulics; traffic control devices; TMP; public involvement/relations; QA/QC; construction engineering and inspection; project management. Client: Orders Construction Company, Inc. Date: May 2016 – September 2019 Cost: \$11.2M</p> <p>Route 29 Solutions DB – Berkmar Avenue Extension, Albemarle County, VA – VDOT – Project Manager/Element Design Lead Responsibility/Specific Job Duties: As Project Manager, Mr. Russell is responsible for roadway design and for coordinating all design elements of the Berkmar Avenue Extension portion of the Route 29 Solutions Design-Build Project. His role on the project was Design Element Lead responsible for the design of the 2.5-mile Urban Connector roadway including a 716’ long bridge over the South Fork of the Rivanna River. The Design-Build project was delivered on an accelerated schedule with right-of-way plans completed in just six months. Mr. Russell accelerated design efforts needed to advanced right-of-way approvals and VSMP permits to allow clearing activities to occur before the time of year restrictions of the Northern Long-Eared Bat, which was listed as endangered after the award of the contract. All design activities were delivered in accordance with the project’s QA/QC plan and Construction Engineering support included review of all shop drawings.</p> <p>Relevance to Exit 114 Design-Build: VDOT Design-Build; roadway; survey; structures and bridges; environmental; geotechnical; hydraulics; traffic control devices; TMP; public involvement/relations; QA/QC; project management. Client: Rummel Klepper & Kahl, LLP Date: December 2014 – October 2017 Cost: \$32M</p> <p>I-81 Bridge Replacement over the New River and Route 232 over I-81, Montgomery and Pulaski Counties, VA – VDOT – Project Manager Responsibility/Specific Job Duties: As Project Manager, Mr. Russell was responsible for the roadway design and coordination of all design disciplines for the project, which includes 1.72 miles of improvements to the existing I-81, replacement of the existing two-lane bridges over the New River with three-lane bridges in each direction and the replacement of the Route 232 overpass bridge at Exit 105. The I-81 bridges are approximately 1,600 feet long and are 80 feet above the river. I-81 will be widened to provide deceleration and acceleration lanes along I-81. The widening of the mainline bridges and the associated MOT also require the replacement of the Route 232 Bridge over I-81. Mr. Russell is providing oversight and coordination for all design elements and management of subconsultants.</p> <p>Relevance to Exit 114 Design-Build: VDOT project, roadway; survey; structures and bridges; environmental; geotechnical; hydraulics; traffic control devices; TMP; ROW; utilities; public involvement/relations; QA/QC; project management. Client: VDOT Date: December 2014 – on going Cost: \$58M (NB); \$40M (SB)</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>
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.
a. Name & Title: Earl Adwell, Construction Manager
b. Project Assignment: Construction Manager (CM)
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : Orders Construction Company, Inc. (Full-Time)
d. Employment History: With this Firm 40 Years With Other Firms 5 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): Orders Construction Company, Inc. – Construction Manager/ Project Superintendent, 1977 – Present General responsibilities include coordination with the design team, constructability reviews of design drawings, on-site management of all aspects of daily construction activities, ensuring compliance with approved plans and specifications, communication with stakeholders, coordination/management of subcontractors and material suppliers, scheduling, MOT and E&S review and compliance, management of quality control activities, and OSHA compliance.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Ronceverte High School, Ronceverte, WV / High School Diploma / 1965 / NA
f. Active Registration: Year First Registered/ Discipline/VA Registration #: Earl will obtain both VDOT Erosion and Sediment Control Contractor Certification (ESCCC) and Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification prior to commencement of construction.
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) I-81 over Maury River, Rockbridge County, VA – VDOT – Construction Manager This award-winning project which won the VDOT Staunton District's 2006 Award for Excellence in Construction replaced twin bridges and widened I-81 through the Maury River segment of Rockbridge County. With the high traffic volume of I-81 and the near proximity to Lexington, VMI and Washington and Lee University, traffic control and public outreach were paramount to the success. The Maury River project had twin bridges that included more than 100,000 SF of deck surface, Virginia Style Abutments, and major excavation to widen I-81. This project was performed at the same time as a similar project to the south over Buffalo Creek which made coordination of construction and traffic control a constant endeavor. A full-time safety patrol service was utilized and the project met or exceeded all expectations. Earl worked closely with the WRA design staff during construction of the project. As Construction Manager, Earl was responsible on-site management of all aspects of daily construction activities, ensuring compliance with approved plans and specifications, communication with stakeholders, coordination/management of subcontractors and material suppliers, scheduling, MOT and E&S review and compliance, management of quality control activities, and OSHA compliance. Relevance to the Exit 114 DB project: Complex Transportation Management Plan, structure construction done in phases, other nearby major project coordination. In addition Earl and his team, met and exceeded VDOT'S expectations for major structure work and realignments on a heavily traveled I-81, managed risks and beat an aggressive construction schedule. Firm: Orders Construction Company, Inc. Dates: March 2004 – December 2006 WV Route 5 Annamoriah Bridge Design-Build, Calhoun County, WV – WVDOT – Construction Manager Earl served as Construction Manager for this unique Fast Track Design-Build project. The tight confines of the work area to permit two way traffic on Rte. 5 to remain made access to abutment on pile construction and the 2 piers on 78"

diameter drilled shafts in cofferdams challenging. To construction this structure adjacent to the existing required a radial structure with large embankments utilizing borrow excavation. As Construction Manager, Earl was responsible for coordination with the design team, constructability reviews of design drawings, on-site management of all aspects of daily construction activities, ensuring compliance with approved plans and specifications, communication with stakeholders, coordination/management of subcontractors and material suppliers, scheduling, MOT and E&S review and compliance, management of quality control activities, and OSHA compliance. The project was completed on-time and within budget.

Relevance to the Exit 114 DB project: Design-Build, tight access, pre-bored pile, environmentally sensitive area, existing structure maintenance, and an accelerated project schedule. **Firm:** Orders Construction Company, Inc. |

Dates: April 2011 – April 2013

Route 501 Bridge Replacement over James River, Bedford/Amherst Co., VA – VDOT – Construction Manager

Earl managed the construction of this 926 linear foot bridge over the James River and CSX railroad. This project had abutments and piers found on both spread footers and drilled shafts. Nearly 6,000 SF of MSE wall was constructed for the Route 501 and Route 130 roadway re-alignment. Earl managed all construction activities as well as the difficult task of keeping the public moving. Additionally, he was responsible for ensuring compliance with approved plans and specifications, communication with stakeholders, coordination/management of subcontractors and material suppliers, scheduling, MOT and E&S review and compliance, management of quality control activities, and OSHA compliance.

Relevance to the Exit 114 DB project: Earthwork, bridge construction, and difficult bridge access. **Firm:** Orders Construction Company, Inc. | **Dates:** December 2014 – March 2017

* 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.

Earl is currently serving as Construction Manager over two active VDOT Bid-Build projects:

1. Route 663 Bridge Replacement over North Fork of Shenandoah River, Shenandoah County, Anticipated Completion: Summer 2018*
2. Route 624 Bridge Replacement over Shenandoah River, Warren County, Anticipated Completion: Summer 2018*

*These projects will be completed prior to the VDOT Exit 114 Design-Build project getting underway. As necessary these Bid-Build projects can be managed by supervisors working under Earl's guidance at such a time Earl moves into the Construction Manager role on the Exit 114 Design-Build project.

3.4.1

LEAD CONTRACTOR WORK HISTORY FORMS

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: I-81 Bridge Replacement Over Maury River Location: Rockbridge County, VA	Name: Whitman, Requardt & Associates, LLP	Name of Client/ Owner: Virginia Department of Transportation (VDOT) Phone: (540) 332-9074 Project Manager: Randy Kiser Phone: (540) 332-9075 Email: randy.kiser@vdot.virginia.gov	12/2006	12/2006	\$17,736	\$18,991 (including incentive payment)	\$18,991

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

Relevance to the I-81 Bridge Replacement at Exit 114 Project

- ✓ Roadway
- ✓ Bridge
- ✓ Geotechnical
- ✓ Karst Topography
- ✓ Environmental
- ✓ MOT & TMP
- ✓ Public Outreach

PROJECT DESCRIPTION

Orders served as general contractor on this project for the replacement and widening of twin bridges over the Maury River on a heavily traveled section of I-81 in Rockbridge County, VA. This project included significant roadway work, including approach roadways being widened to accommodate maintenance of traffic and future widening of I-81. Multiple traffic shifts were required to adjust the approach alignment to accommodate the wider bridges. The 800' long bridge structures totaled more than 100,000 square feet of deck area and included innovative and complex expansion devices at each end known as the Virginia Abutment, designed by Whitman Requardt & Associates, LLP (WRA). Other facets were significant rock excavation, roadway drainage, asphalt paving, signing, guardrail, and a new traffic management system. Additionally, a full-time "Safety Service Patrol" was used due to the high traffic volumes. This relatively simple accommodation reduced incident clearance times significantly during the construction duration.

Evidence of good performance – Orders partnered with VDOT and strived continually to improve upon the aggressive construction schedule and earned an early completion incentive of more than \$400,000. This project also won the 2006 *Award for Excellence in Construction* from the VDOT Staunton District.

LESSONS LEARNED include the unique goals and priorities toward which VDOT strives on major bridge projects, and how to meet and exceed VDOT's standards. In addition, Orders gained valuable experience working in and adjacent to a heavily traveled road and development of TMP for the safety of their workers and the traveling public. This experience with traffic control and MOT will carry over to the I-81 Exit 114 project. Partnering was significant to this project because everyone understood the value of finishing on time. Orders' partnered with VDOT and WRA to compress the project schedule and to resolve design/construction issues quickly. This experience will apply as Orders keeps the project at hand on schedule. Orders was attentive to environmental concerns related to the installation of cofferdams for bridge piers. Regulators were pleased the river was spanned with a temporary bridge. Orders will continue this practice of partnering and being attentive to the risks at the I-81 Exit 114 project. Additionally, while working with WRA on the construction of piers and abutments foundations, Orders learned much about the karst substrata in the area and how to mitigate design and construction issues. Many key staff from Orders including Charlie Stokes and Earl Adwell will apply these lessons learned to the I-81 Bridge Replacement at Exit 114 Project



Orders Team Advantage

Orders is proposing the same Construction Manager and Roadway, Bridge, Geotechnical and Hydraulics Design Team for the I-81 Bridge Replacement at Exit 114 project ensuring a proven integrated team approach to the project, which will allow the Lessons Learned to be applied directly to the project.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: Route 60 Main Street Bridge Replacement Location: Town of Clifton Forge, Alleghany County, VA	Name: Clark Nexsen, Inc.	Name of Client/ Owner: Virginia Department of Transportation (VDOT) Phone: (800) 367-7623 Project Manager: George Bezold Phone: (540) 462-6990 Email: george.bezold@vdot.virginia.gov	12/2012	10/2012	\$3,488	\$3,488	\$3,488

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

Relevance to the I-81 Bridge Replacement at Exit 114 Project

- ✓ *Design-Build*
- ✓ *Roadway*
- ✓ *Bridge*
- ✓ *Geotechnical*
- ✓ *Karst Topography*
- ✓ *Hydraulics & SWM*
- ✓ *MOT & TMP*
- ✓ *Public Outreach*

PROJECT DESCRIPTION

Orders was general contractor on this design-build project to replace the Main Street Bridge in downtown Clifton Forge. The greatest challenge was to build the bridge which directly abuts old historical and commercial buildings on both sides and also provide public access to these buildings throughout construction. The contract also included the reconstruction of Main Street, reconfiguration of two-way traffic flow on Ridgeway Street, and the addition of traffic signals at the intersection of Route 60 and Commercial Avenue. Orders worked closely with the entire design-build team, the Town of Clifton Forge, and VDOT and resolved several unforeseen issues during construction without a single change order to the project and still completed the project *two months ahead of schedule*.

be replaced. The theater merited special consideration in Orders' demolition and erection plans, and construction impacts were tracked through the installation of vibration monitors on the structure. The construction phase of this project was much more streamlined and coherent than traditional design-bid-build.

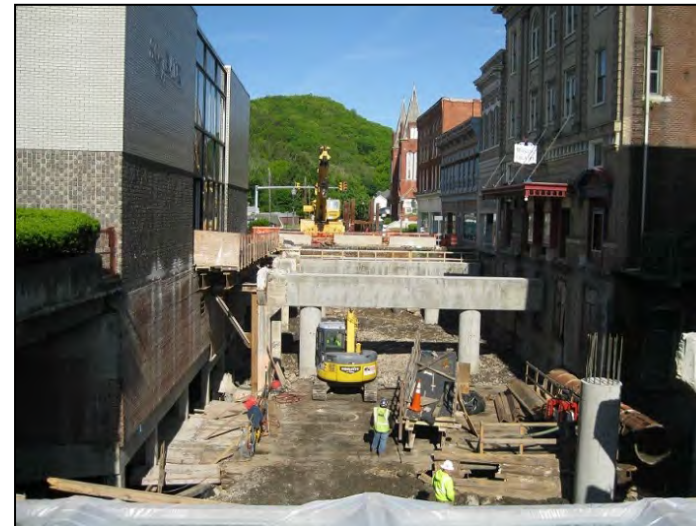
PROJECT ACCOLADES

The Route 60 Design Build project received the **2014 ACEC Engineering Excellence Honor Award**; was presented as the **Small Transportation Project of the Year** at the San Jose, CA DBIA conference in 2014; and the **APWA Mid-Atlantic Public Works Project of the Year**.

Evidence of good performance – The project completed ahead of schedule, quality was in the forefront; and there were no deficiencies. Through careful management of public relations with affected businesses and city officials, all stakeholders remain supportive of the project, in spite of its effect on the downtown area.

LESSONS LEARNED

Truck traffic was one of the big concerns at Clifton Forge, and the project had tight constraints on the Route 60 detour. The computer program Auto Turn was used to ensure that large trucks could navigate the roadway. While the westbound Route 60 bridge was being replaced, Orders constructed a two-way traffic system on Clifton Forge's Ridgeway Street by widening turns and reconfiguring parking arrangements to allow truck and bus traffic to navigate the town. Elevated temporary walkways were also designed and implemented to allow pedestrian traffic to access local businesses on Main Street while the bridge structure was being replaced. Also, well-planned signage and pavement markings prevented traffic accidents on the detour. This experience will apply at the Exit 114 project as the risks of traffic control and MOT are handled. Additionally, the Clifton Forge project was constrained by limited right-of-way needed to accomplish widening. At Clifton Forge there were also unique requirements of working in a historic district. Downtown Clifton Forge is on the National Register of Historic Places, and the historic Masonic Theater was one of the structures touching the bridge to



Orders Team Advantage

Orders is proposing the same Design-Build Project Manager and Assistant Project Manager for the I-81 Bridge Replacement at Exit 114 project ensuring a proven integrated team approach to the project, which will allow the Lessons Learned to be applied directly to the project.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: Route 501 Road Improvements and Bridge Replacement over the James River Location: Bedford & Amherst County, VA	Name: AECOM	Name of Client/ Owner: Virginia Department of Transportation (VDOT) Phone: (434) 946-0548 Project Manager: Larry Nash Phone: (434) 942-9256 Email: larry.nash@vdot.virginia.gov	04/2017	03/2017	\$16,829	\$16,862	\$16,862

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

Relevance to the I-81 Bridge Replacement at Exit 114 Project

- ✓ Roadway
- ✓ Bridge
- ✓ MOT
- ✓ Geotechnical
- ✓ Environmental
- ✓ Public Outreach
- ✓ Key Stakeholders

PROJECT DESCRIPTION

Orders served as general contractor for this 926 linear feet bridge over the CSX Railroad and the James River. This project had one abutment founded on rock and one on drilled shafts. One of the four piers was founded on drilled shafts and the other three were on rock. A tie-back wall was used to support the live CSX Railroad during Pier 1 excavation and drilled shaft construction. Four cofferdams were required and all substructure concrete was designed using "mass concrete". The span of 163 feet from Abutment A to Pier 1 was over the CSX Railroad, with an elevation difference from Abutment A bearing to top of Pier 1 footing nearly 72 feet, constituting high piers on the river. Nearly 2 million pounds of structural steel and ¾ of a million pounds of reinforcing steel went into this structure. The structure had a curved radius that required both crown and super elevated deck construction. MSE Walls were used to support Route 501 re-alignment. Both Route 501 and Route 130 were re-aligned and widened in phases

to keep traffic moving during the nearly 40,000 cubic yards of excavation and rock scaling of Route 130. Orders opted to incorporate barges and floating crane platforms in lieu of 2 causeways in the river.

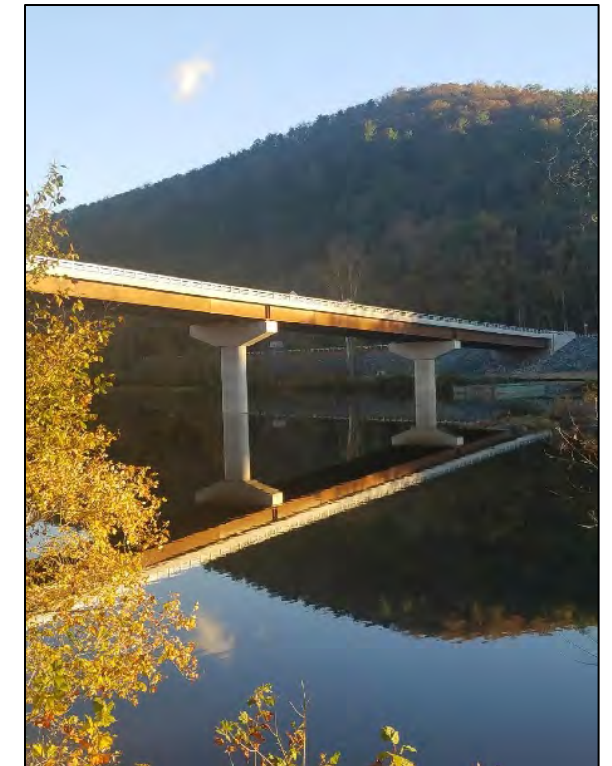
Evidence of good performance – This project completed ahead of schedule and under budget. Acclaimed "Mass Concrete" operations which led to various "how to" seminars and the project was presented at the 2015 ACI Conference Board Meeting in Chicago, Illinois. Working relationships and excellent communication with the VDOT Lynchburg District Staff led to the determination that no formal partnering follow-up meetings would be required, as partnering was an everyday occurrence on this project.

Orders Team Advantage

Orders is proposing the same Construction Manager, Project Manager, and Assistant Project Manager for the I-81 Bridge Replacement at Exit 114 project. These relationships will carry over to the project, which will allow the Lessons Learned to be applied directly to the project.

LESSONS LEARNED

Orders gained valuable experience through working close with VDOT to make this a successful project. Orders took the lead on sharing information and working with CSX Railroad and their consultant, the Alfred Benesch & Company to expedite work and maintain flow for the railroad. Working closely with VDOT to ensure that the project had no impacts to the Hydro-Power Plants, one located ½ mile upstream and one located ½ mile downstream of the project. Working with VDOT Traffic Staff to ensure that truck traffic to the massive Big Island Georgia Pacific Plant would flow uninterrupted. Building sound working relationships with the inspection staff and Lynchburg District Representatives make problem solving much simpler and avoids issue escalation. The staff of this project, Charlie Stokes, Joshua Sproles, and Earl Adwell will carry these lessons to the I-81 Bridge Replacement Exit 114 Project.



3.4.2

LEAD DESIGNER WORK HISTORY FORMS

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-81 Bridge Replacement over Halls Bottom Road Sinking Creek Design Build Location: Bristol, Virginia	Name: Orders Construction Company, Inc.	Name of Client: Virginia Department of Transportation (VDOT) Phone: (276) 228-2154 Project Manager: Craig Jones Phone: (276) 228-2154 Email: craig.jones@vdot.virginia.gov	04/2016	08/2018	\$11,284	\$11,354 (with owner approved change orders)	\$850

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

Relevance to the I-81 Bridge Replacement at Exit 114 Project

- ✓ *Design-Build*
- ✓ *Roadway*
- ✓ *Bridge*
- ✓ *Environmental Permits*
- ✓ *Hydraulics and SWM*
- ✓ *Geotechnical*
- ✓ *MOT & TMP*
- ✓ *Public Involvement*
- ✓ *Design QA/QC*
- ✓ *Construction Engineering*
- ✓ *Project Management*

WRA's Bristol, TN and Richmond & Blacksburg, VA design groups prepared roadway and bridge construction improvements designs including twin 140-foot long bridges to carry I-81 over Halls Bottom Road and Sinking Creek as part of a Design-Build project led by VDOT's Bristol District. The Design Build project was managed from our nearby Bristol, TN office with the same Design Manager (Mike Russell) as is being proposed for the Exit 114 project. The purpose of the project is identical to that of the Exit 114 project – to replace the existing structurally deficient bridges using a Design Build delivery method. The existing 4-span bridges are being replaced with single span structures incorporating MSE walls to shorten the original bridge length and reducing long term maintenance cost of the structures.

The design incorporated the project's requirements to not preclude future widening of I-81 and correcting a substandard vertical curve while performing all work within the existing right of way. This necessitated constructing a portion of the permanent NB bridge in the median to carry both NB and SB traffic in subsequent phases. This first phase of construction in the median is nearly complete. The design elements for roadway, bridge, MOT, geotechnical and drainage are **virtually identical** to what will be encountered on the I-81 Bridge Replacement at Exit 114 project.

The design of the structures and MOT very carefully accommodated the extremely narrow median as shown in the picture to the left, there was virtually no remaining space between the phase 1 bridge and the existing structures. Partial demolition of the existing NB bridge along with reduced lane widths and temporary traffic shifts along the mainline to provide adequate room to construct the bridge. Temporary detours to the median and associated temporary drainage were carefully designed to accommodate the 70mph work zone design speed.

Due to the karst geology in the general area of the site, the adjacent sinking stream and visible sinkholes in the area WRA contracted with Forest Environmental Services, Inc., who performed an electro-resistivity analysis

of the site. Although low resistive values (typically indicative of clay deposits) were measured to depths of 40 feet, correlating the resistivity data with the soil borings revealed that the rock in the area was conductive.

Due to the shallow bedrock underlying the project, the competency of the rock confirmed through our geophysical studies, and the reduced bridge span, a "True MSE Abutment" was designed for the project. The spread abutments were designed to rest on MSE fill specifically designed to resist the added abutment load. The subgrade below the MSE walls were designed to be excavated to rock and aggregate fill used as the reinforced fill. This excavation places the leveling pad for the walls below the adjacent stream and reduces settlements for the bridge similar to a pile foundation. The single span jointless bridges utilized steel girders and buried approach slabs to reduce long term maintenance needs.

The project also includes the installation of a storm drain under active lanes of I-81. Close observations of the soil boring drilling operation enabled us to identify rock fill used in the embankment, which is not explicitly apparent when reviewing the splitspoon samples and would have interfered with any trenchless installation of the storm drain. This information prompted recommendations to alter the location and elevation of the trenchless installation of the storm drain, which was ultimately recommended to be installed by conventional auger boring methods. A photo of this installation is shown above.



WRA Team Advantage
Teaming with Orders again as the Design-Builder, WRA is proposing the same Design Manager for the I-81 Bridge Replacement at Exit 114 as was used on the I-81 Bridge Replacement over Halls Bottom Road Design Build as well as the majority of the rest of the design team. This will ensure an integrated team approach to the project that has a proven track record of delivering high quality and innovative roadway and bridge designs on schedule.

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-81 Bridges over Buffalo Creek and Maury River – VDOT Contract No. 99LD299 Location: Rockbridge County, Virginia	Name: Buffalo Fairfields Echols, Inc. (Fairfield Skanska, Inc.) Maury Orders Construction Company	Name of Client: Virginia Department of Transportation (VDOT) Phone: (540) 332-7724 Project Manager: Wayne Nolde Phone: (540) 332-7724 Email: wayne.nolde@vdot.virginia.gov	Buffalo 08/2004 Maury 02/2004	Buffalo 07/2007 Maury 11/2006	Buffalo \$27,151 Maury \$17,736	Buffalo \$27,073 Maury \$18,184	\$2,221

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

Relevance to the I-81 Bridge Replacement at Exit 114 Project

- ✓ *Design-Build*
- ✓ *Roadway*
- ✓ *Bridge*
- ✓ *Environmental Permits*
- ✓ *Hydraulics and SWM*
- ✓ *Geotechnical*
- ✓ *MOT & TMP*
- ✓ *Public Involvement*
- ✓ *Design QA/QC*
- ✓ *Construction Engineering*
- ✓ *Project Management*

WRA's Role – WRA was the prime designer for the I-81 bridge replacement projects for both the Buffalo Creek and Maury River bridges under a single design contract No. 99LD299.

WRA completed approximately 90% of the design from our Richmond, VA office. The existing bridges had reduced shoulder width and were classified as functional obsolete. The projects were to be the first part of the I-81 reconstruction efforts and were designed to widen I-81 from four- to six-lanes.

Roadway Design – Each bridge required the total reconstruction of approximately one mile of the interstate facility. The design required total replacement of the existing pavement section, which required the roadway typical section to be shifted to the median to maintain two travel-lanes during construction. The design utilized an 8' high temporary wire MSE retaining walls to support a change in grade.

Hydraulic Analysis – The project required a detailed hydraulic analysis of both Buffalo Creek and Maury River to ensure the project had no impact to the 100-year flood elevation. The project

design needed to carefully consider the karst geologic features along the corridor. Five stormwater management facilities were designed for the projects and all existing CM drainage pipes were replaced, requiring the boring and jacking of several pipes. The projects also included the design of the extension of three box culverts.

Geotechnical Engineering – WRA provided all geotechnical engineering services for the projects, which included an extensive testing and boring program to locate potential karst features. Our geologists performed extensive site visits and used dye testing to identify underground stream features that may impact the project design. At the Buffalo Creek northbound bridge it was determined the existing median contained a major underground stream network. The bridge and roadway improvements were shifted to the outside of the existing northbound I-81 lanes to avoid the karst features. WRA provided a detailed geotechnical report including the design of a major embankments, rock cut slopes and bridge foundations.

Structural Design – The structural design of the two I-81 bridges over the Buffalo Creek gorge with a depth well over 100 feet on I-81 was a main focus of the design. The bridges are three-lanes wide and were on independent alignments and grades. The NBL bridge was the more challenging design due to the requirement that it be constructed in two stages just downstream from the existing bridge. Alignment studies also revealed the need to raise the profiles of the bridges approximately 8 feet to meet current FHWA

Interstate Design Standards. The design consists of continuous hybrid steel plate girder bridges with a length of 606' for the NB and 584' SB. The NBL Bridge is on a curved alignment while the SBL Bridge is on a tangent alignment. Both bridges required tall piers of up to 110 feet in height due to the depth of the gorge.

The Maury River bridges are three-lanes wide. The new bridges are on parallel alignments and are of different lengths and layouts due to the topography and constraints of the site. The NBL bridge is 825 feet in length and the SBL bridge is 743 feet in length. They are on tangent alignments, but the NBL bridge has a 1°-45' curve in the southernmost end-span. The bridges have fully-continuous hybrid steel superstructures with 73-inch deep plate girders. Both the Buffalo Creek and Maury River bridges featured an innovative design element for the treatment of the deck joints at the abutments. The ends of the steel girders are encased in a concrete diaphragm that is integral with the deck and located just beyond the bearings. The deck joints are tooth expansion joints that are located on the abutment side of the concrete diaphragm. VDOT has since included the detail in the Design Guidelines as a joint detail. This innovative design solution eliminates deck joints on the bridge, significantly reducing future maintenance costs and impacts to traffic operations on I-81 for future repairs to the deck joints. ***Buffalo Creek was awarded the VDOT Virginia Statewide Construction Quality Award, NPHQ Award "Breaking the Mold" and the ACEC Grand Award for Design Excellence. Maury River was awarded the ACEC Grand Award for Design Excellence.***



Maintenance of Traffic – The sequence of construction and MOT required all existing travel lanes to remain open during construction. This required a phased construction of the bridges. The Buffalo Creek northbound bridge was constructed in two phases, while the southbound bridge was shifted into the median and constructed in a single phase. The Maury River bridges were replaced by first constructing the new northbound bridge to the east and then shifting the northbound traffic onto the new structure. The southbound traffic was then shifted onto the old existing northbound bridge while the new southbound structure was constructed.

WRA Team Advantage

WRA's experience Designing Bridge Replacement on I-81 is unmatched. Team members responsible for roadway, structures and geotechnical are also proposed for the Exit 114 project. This experience will be leveraged extensively during the design on the MOT, Roadway and Bridges.

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-81 Bridge Replacements over New River and Route 232 Bridge over I-81 Location: Montgomery and Pulaski Counties, Virginia	Name: Vecellio and Grogan	Name of Client: Virginia Department of Transportation (VDOT) Phone: (540) 387-5332 Project Manager: Mr. Timothy Dowdy Phone: (540) 387-5332 Email: timothy.dowdy@vdot.virginia.gov	11/2016 (I-81 NB)	05/2020 (I-81 NB)	\$58,000 (I-81 NB)	\$58,000 (I-81 NB)	\$4,200

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

- Relevance to the I-81 Bridge Replacement at Exit 114 Project**
- ✓ Interstate Bridge Replacement Project
 - ✓ Roadway
 - ✓ Retaining Walls
 - ✓ Future I-81 Widening
 - ✓ Environmental Permits
 - ✓ Hydraulics and SWM
 - ✓ Geotechnical
 - ✓ TMP
 - ✓ Public Involvement
 - ✓ Design QA/QC
 - ✓ Construction Engineering
 - ✓ Project Management

VDOT retained WRA as the prime designer to provide comprehensive planning and engineering design services to VDOT for the replacement of two 1,600-foot bridges that carry Interstate 81 traffic over the New River, and replacement of the Route 232 Bridge over I-81. Services include planning and design of I-81 bridge replacements and approaches; bridge replacement of the Route 232 bridge over I-81; traffic data collection, forecasting/analysis, and preparation of an Interchange Modification Report for FHWA; hydrologic and hydraulic analyses; flood plain studies; surveys; and all aspects of public involvement, including individual meetings with project stakeholders to cultivate understanding and support of the project's goals and objectives. WRA is responsible for all aspects of project planning and design, as well as support during construction in the form of shop drawing reviews, addressing requests for information, and assisting the Department with technical support during construction. WRA is the prime designer on the project, and the majority of design efforts have been accomplished by WRA staff in our Blacksburg, and Richmond, VA offices and our Bristol, TN office.

Roadway Design – The project required extensive roadway approach designs for I-81 NB; I-81 SB; and Route 232 to accommodate Maintenance of Traffic and Ultimate Conditions. The ramp connections for the I-81 Exit 105 interchange were tweaked to provide for both temporary and

permanent conditions as well. The reconstruction of the Route 232 bridge posed unique challenges in the planning for maintaining traffic that WRA addressed with optimized geometric design and special pier protection systems.

Bridge Design – This project includes replacement of the existing I-81 bridges over the New River with a new 7-span, continuous, haunched structural steel superstructure resting on dual hammerhead piers with a total length of approximately 1,670 feet. The bridges carry three lanes with shoulders each north and southbound. The bridges incorporate jointless concepts by utilizing the Virginia style abutments (developed by WRA), which encase the end of the structural steel with a floating concrete backwall and a tooth joint in the abutment. The northbound bridge will be constructed in two phases, and the southbound bridge in a single phase. Also included in the project is the reconstruction of the Route 232 bridge over I-81, which includes a complete replacement structure 300 feet long with a two-span continuous, steel superstructure on a conventional pier with semi-integral abutments. WRA worked closely with VDOT to confirm that the design of the proposed bridges would accommodate future widening of I-81 and included proposed widening concepts in the Stage I Bridge Report.

Geotechnical Design – The project area is situated in complex geological formations, including the Pulaski fault and karst topography. The known presence of karst topography required extensive subsurface analysis and varied pier foundation designs to minimize the risk during construction. Retaining walls are required to eliminate shoulders from spilling down large existing fill slopes.

Additionally, as the project entered final design significant changes to the stormwater management regulations had a profound impact on the design of stormwater management basins requiring additional geotechnical investigations for those design features.

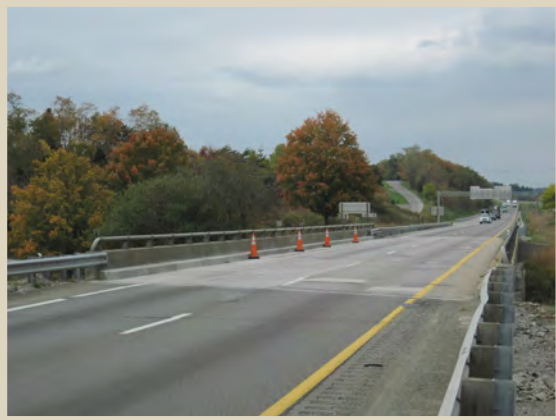
Drainage/H&HA/SWM Design – With the bridges spanning the New River and its tributaries paralleling I-81 leading to the New River, extensive modelling of the New River was required to ensure all applicable impacts of the construction were considered. The phasing of the project introduced a need to model each phase independently to ensure no-rise of the 100-year flood elevation of the river. Due to the project construction phasing described above, Phase 1 SWM design was designed in accordance with Performance Based Criteria and Phase 2 SWM was designed in accordance with new Runoff Reduction Method Criteria.

TMP – The sequence of construction and maintenance of traffic requires two lanes of traffic to be maintained during construction with only minimal nighttime lane closures permitted. Short durations of the Route 232 off ramp is incorporated to facilitate the construction of the Route 232 bridge. All traffic impacts were carefully coordinated with the Southwest Regional Operations group with additional restrictions placed on construction activities to coincide with high traffic events associated with nearby Virginia Tech and Radford University. The project incorporates long term high-speed crossovers in the second phase when southbound traffic will be shifted on to the newly constructed northbound bridge, which is designed to accommodate four lanes of traffic during that phase. Construction vehicle access from the mainline I-81 was carefully considered and improvements to the mainline shoulder incorporated both for long-term incident management along I-81 but also to serve as an acceleration lane for construction vehicles. As noted earlier, the phasing of the project during final design necessitated the development of independent MOT plans for the two phases of the project.

Public Involvement – WRA provided all presentation materials and participated in the Design Public Hearing for the project. Due to the adjacent New River and City of Radford property, several stakeholder meetings were needed to ensure the public's understanding and support of the project.



WRA Team Advantage
WRA is proposing this same core Roadway, Bridge, and Geotechnical Design Team for the I-81 Bridge Replacement at Exit 114 project ensuring a proven integrated team approach to the project, which will allow the Lessons Learned to be applied directly to the project.



in conjunction with



Subconsultants:

